ADOLESCENT WELLNESS EXAM: OVERCOMING RELUCTANCE ON BOTH SIDES BY BUILDING RAPPORT USING EVERY OPPORTUNITY TO PROMOTE HEALTHY CHOICES

CLINICAL REFERENCE
The following Clinical Reference Document provides the evidence to support the Adolescent Wellness Exam Time Tool. The following bookmarks are available to move around the Clinical Reference Document. You may also download a printable version for future reference.

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1. INTRODUCTION

Adolescence has traditionally been thought of as a time of good health. However, adolescents comprise an important group with unique needs. [1]

- Throughout the 1990s, there was increasing evidence of unacceptably high morbidity and mortality among adolescents from injuries, suicide, sexually transmitted diseases, substance abuse, and other conditions associated with high risk behaviors. [1]
- Health care systems typically are not designed to ensure that adolescents receive the primary and preventive care that might ameliorate the negative consequences of health-damaging behaviors. [1]

The leading causes of morbidity and mortality among adolescents have social and behavioral determinants. Thus, much of adolescent disability and death can be attributed to preventable risk factors. [2]
In order to shift the focus of care to prevention, clinical preventive services guidelines have been developed by the American Medical Association and more recently by the American Academy of Pediatrics.

Both sets of recommendations—Guidelines for Adolescent Preventive Services (GAPS) (1997) and Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents (2008)—address delivery of health services, health guidance, screening, and immunizations. [3]

Well-child care is a true art; it requires providers to not only have a good understanding of normal growth, development, nutrition, and behavior, but also to have a rapport with the child and the family that is supportive.

- There is no “best” way to eat or grow, and it is important to provide guidance that is respectful of family and cultural variations. The goal is not perfect growth, perfect parenting, or even perfect children -- but rather a “good enough” approach that optimizes quality of life for all. [4]
- Adolescence is a time when adolescent-parent dynamics change and when adolescents are confronted with increasing opportunities to engage in risk-taking behaviors such as sexual behavior and substance use.
- Despite clear recommendations regarding preventive counseling, many adolescents do not receive adequate preventive care.

Changes in adolescent morbidity and mortality during the past several decades have created a health crisis for today’s youth. [3]

- Unintended pregnancy, sexually transmitted diseases (including HIV), alcohol and drug abuse, and eating disorders are just some of the health problems faced by an increasing number of adolescents from all sectors of society. [3]
- Requires a fundamental change in the emphasis of adolescent services – a change whereby a greater number of services are directed at the primary and secondary prevention of the major health threats facing today’s youth. [3]

Approximately 3 out of 4 adolescents 12 to 19 years old report engaging in at least one risk behavior. [1]

- Often, these risky behaviors remain unidentified until an adolescent develops health problems, such as a sexually transmitted disease, that require acute medical care. [5-8]

Primary care providers for adolescents are in a unique position to screen for risky behaviors and to provide anticipatory guidance and brief counseling. [9]

The Healthy People 2010 objectives for adolescents show the wide range of issues adolescents, parents, and providers face: [10]

- **Reduce the proportion of children and adolescents with disabilities who are reported to be sad, unhappy, or depressed.**
- **Reduce pregnancies among adolescent females.**
- **Reduce the number of cases of HIV infection among adolescents and adults.**
- **Reduce deaths caused by motor vehicle crashes.**
- **Increase use of safety belts.**
- **Reduce homicides.**
- **Reduce physical fighting among adolescents.**
- **Reduce weapon carrying by adolescents on school property.**
- **Reduce deaths of adolescents and young adults.**
- **Reduce the suicide rate.**
- **Reduce the rate of suicide attempts by adolescents.**
- **Increase the proportion of children with mental health problems who receive treatment.**
- **Reduce the proportion of children and adolescents who are overweight or obese.**
- **Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiopulmonary fitness 3 or more days per week for 20 or more minutes per occasion.**
- **Reduce the proportion of adolescents and young adults with Chlamydia trachomatis infections.**
- **Increase the proportion of adolescents who abstain from sexual intercourse or use condoms consistently and correctly if currently sexually active.**
- **Reduce deaths and injuries caused by alcohol- and drug-related motor vehicle crashes.**
- Reduce the proportion of adolescents who report that they rode, during the previous 30 days, with a driver who had been drinking alcohol.
- Reduce past-month use of illicit substances.
- Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.
- Reduce tobacco use by adolescents.

2. ADOLESCENT MORBIDITY/ MORTALITY

Leading Causes of Death
In the US, injuries are the leading cause of disability and death for people aged 1 to 44 years.
- Approximately 73% of deaths in adolescents aged 10-24 years are attributed to injuries from only four causes: motor vehicle crashes (30%), all other unintentional injuries (16%), homicide (16%), and suicide (12%). [11]

Unintentional injuries are the leading cause of death in both males and females: [12]
- 37% of deaths in males, 10-14 years old
- 47% in males, 15-19 years
- 33% in females, 10-14 years
- 51% in females, 15-19 years

Malignant neoplasms are the second leading cause in females and early adolescent males: [12]
- 12% of deaths in males, 10-14 years old
- 15% in females, 10-14 years
- 7% in females, 15-19 years

Assaults become the second leading cause of death in males over 14 years: [12]
- 20% of deaths in males, 15-19 years old

Suicide is the seventh leading cause of death in males: [12]
- 7% of deaths in males, 10-14 years old
- 13% in males, 15-19 years

In females, suicide causes 5% of deaths in 10-14 year olds and 8% in 15-19 year olds. [12]

Accidents, assaults and suicide combined make up: [12]
- 52% of deaths in males 10-14 years old,
- 80% of deaths in males 15-19 years,
- 43% of deaths in females 10-14 years, and
- 67% of deaths in females 15-19 years

Obesity
Obesity is a serious health concern for children and adolescents. Obese children and adolescents are at risk for health problems during their youth and as adults. [13]
- Overweight and obesity in children and adolescents should no longer be regarded as variations of normality, but as diseases with an extremely high risk for the development of atherosclerosis and cardiovascular complications in adulthood. [14]
- Overweight and obesity in childhood are highly associated with multiple comorbidities, including elevated blood pressure, dyslipidemia, reduced insulin sensitivity and alterations of large and minor vessels. [14]

Childhood obesity is associated with increasing rates of conditions that almost exclusively have been seen in adults until recently, such as type 2 diabetes and the metabolic syndrome. [15,16]
- Children and adolescents who are overweight are more likely to be overweight or obese as adults; [17] one study showed that children who became obese by age 8 were more severely obese as adults. [18]

CVD Risk Factors
1 in 4 youths aged 10–19 years had at least two CVD risk factors; higher rates in American Indians (2 in 3), Asian/Pacific Islanders, African Americans, and Hispanics (all 1 in 3), vs. 1 in 6 non-Hispanic whites. [19]

**Tobacco Use**
Cigarette smoking by young people leads to immediate and serious health problems including respiratory and nonrespiratory effects, addiction to nicotine, and the associated risk of other drug use.[20,21]
- Smoking at an early age increases the risk of lung cancer. For most smoking-related cancers, the risk rises as the individual continues to smoke.[20,21]
- Cigarette smoking causes heart disease, stroke, chronic lung disease, and cancers of the lung, mouth, pharynx, esophagus, and bladder.[20,21]
- Use of smokeless tobacco causes cancers of the mouth, pharynx and esophagus; gum recession; and an increased risk for health disease and stroke.[20,21]
- Smoking cigars increases the risk of oral, laryngeal, esophageal, and lung cancers. [21]

**Nicotine Addiction Among Young People**
- The younger people begin smoking cigarettes, the more likely they are to become strongly addicted to nicotine. Of all addictive behaviors, cigarette smoking is the one most likely to become established during adolescence. [21]
- Among high school students who are current smokers, 51% have tried to quit smoking during the past 12 months. [22]

**Diet**
Childhood eating patterns affect adult health, and many problems such as obesity, dyslipidemia, osteoporosis, and adult-onset diabetes can be linked to childhood diets. [23]
- Early indicators of atherosclerosis, the most common cause of heart disease, begin as early as childhood and adolescence. Atherosclerosis is related to high blood cholesterol levels, which are associated with poor dietary habits. [24]
- Osteoporosis is associated with inadequate intake of calcium. [25]
- Type 2 diabetes, formerly known as adult onset diabetes, has become increasingly prevalent among children and adolescents as rates of overweight and obesity rise. [26]
- A CDC study estimated that one in three American children born in 2000 will develop diabetes in their lifetime. [27]
- Overweight and obesity, influenced by poor diet and inactivity, are significantly associated with an increased risk of diabetes, high blood pressure, high cholesterol, asthma, joint problems, and poor health status. [28]

**Sexual Behaviors**
Vaginal, anal, and oral intercourse place young people at risk for HIV infection and other sexually transmitted diseases (STDs). Vaginal intercourse carries the additional risk of pregnancy. In the US:
- In 2004, an estimated 4,883 young people aged 13-24 in the 33 states reporting to CDC were diagnosed with HIV/AIDS, representing about 13% of the persons diagnosed that year. [29]
- Each year, there are approximately 19 million new STD infections, and almost half of them are among youth aged 15 to 24. [30]
- Evidence from the National Health and Nutrition Examination Survey (NHANES) suggests that 1 in 4 teenage girls have a sexually transmitted disease. [31]
- 3.2 million teenage girls are infected with at least one of the most common sexually transmitted diseases (human papillomavirus (HPV), chlamydia, herpes simplex virus, and trichomoniasis). [31]
- In 2000, 13% of all pregnancies, or 831,000, occurred among adolescents aged 15-19. [32]

**Physical Activity**
Physical activity reduces the risk of premature mortality in general, and of coronary heart disease, hypertension, colon cancer, and diabetes mellitus in particular. [33]
- Regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem, and may improve blood pressure and cholesterol levels. [34]
- Positive experiences with physical activity at a young age help lay the basis for being regularly active throughout life. [33]
The U.S. Department of Health and Human Services (HHS) recommends that children and adolescents engage in:

“One hour or more of moderate or vigorous aerobic physical activity a day, including vigorous intensity physical activity at least three days a week. Examples of moderate intensity aerobic activities include hiking, skateboarding, bicycle riding and brisk walking. Vigorous intensity aerobic activities include bicycle riding, jumping rope, running and sports such as soccer, basketball and ice or field hockey.

Children and adolescents should incorporate muscle-strengthening activities, such as rope climbing, sit-ups, and tug-of war, three days a week.

Bone-strengthening activities, such as jumping rope, running and skipping, are recommended three days a week.” [35]

Benefits of Regular Physical Activity [33]
- Helps build and maintain healthy bones and muscles.
- Helps reduce the risk of developing obesity and chronic diseases such as diabetes and cardiovascular disease.
- Reduces feelings of depression and anxiety and promotes psychological well-being.

Long-Term Consequences of Physical Inactivity
- Overweight and obesity, influenced by physical inactivity and poor diet, are significantly associated with an increased risk of diabetes, high blood pressure, high cholesterol, asthma, arthritis, and poor health status. [36]
- Physical inactivity increases the risk of dying prematurely, dying of heart disease, and developing diabetes, colon cancer, and high blood pressure. [33]

Among 4,508 respondents aged 12 to 19 years from the 1999-2002 NHANES, sedentary activities were positively associated with systolic blood pressure (SBP). [37]
- Each increase in sedentary activity by 1 hour was associated with an increase in SBP by about 0.2 mm Hg.
- BMI was positively associated with SBP after adjustment for confounding factors.

Skin Cancer
- The most common form of cancer in the United States
- Melanoma is more common than any non-skin cancer among people between 25 and 29 years old.
- Malignant melanoma causes more than 75% of all deaths from skin cancer; can spread to other parts of the body quickly. When detected in its earliest stages and treated properly, however, it is highly curable. [38]

Exposure to the sun's ultraviolet (UV) rays appears to be the most important environmental factor in developing skin cancer. This makes skin cancer a largely preventable disease when sun protective practices and behaviors are consistently applied and used. UV rays from artificial sources of light, such as tanning beds and sun lamps are just as dangerous as those from the sun, and should also be avoided. Unfortunately, despite the fact that both tanning and burning can increase one's risk of skin cancer, most Americans do not protect themselves from UV rays. [39]

The following increase a person's risk of developing skin cancer:
- Light skin color, hair color or eye color
- Family history of skin cancer
- Personal history of skin cancer
- Chronic exposure to the sun
- History of sunburns early in life
- Certain types and a large number of moles
- Freckles, which indicate sun sensitivity and sun damage [39]

3. PREVALENCE OF RISK BEHAVIORS IN ADOLESCENTS
Overall
About 3 out of 4 adolescents, 12 to 19 years old, reports engaging in at least one risk behavior. [42,41]
- But most (63%) of them have not discussed such risks with their doctors. [41]

Among High School Students -- 2009 Youth Risk Behavior Survey (YRBS) Results
The national YRBS is conducted every two years during the spring semester and provides data representative of students in public and private schools throughout the United States. [22]
- To find current national and local data, visit http://apps.nccd.cdc.gov/yrbss.

Unintentional Injuries and Violence
10% Rarely or never wore a seat belt
28% Rode with a drinking driver during the past month
18% Carried a weapon during the past month
32% Were in a physical fight during the past year
6% Attempted suicide during the past year

Alcohol and Other Drug Use
42% Drank alcohol during the past month
24% Reported episodic heavy drinking during the past month
21% Used marijuana during the past month
6% Ever used cocaine
12% Ever used inhalants

Sexual Behaviors
46% Ever had sexual intercourse
14% Had sexual intercourse with ≥ 4 people
34% Had sexual intercourse during the past three months
39% Did not use a condom during last sexual intercourse (among those who had intercourse in last 3 months)
80% Did not use birth control pills during last sexual intercourse (among those who had intercourse in last 3 months)

Tobacco Use
46% Ever tried cigarette smoking
20% Smoked cigarettes during the past month
7% Smoked cigarettes on ≥ 20 days during the past month
9% Used smokeless tobacco during the past month
14% Smoked cigars during the past month

Dietary Behaviors
78% Ate fruits and vegetables < 5 times/day during the past 7 days
86% Drank milk < 3 glasses/day during the past 7 days

Physical Activity
63% Did not meet currently recommended levels of physical activity
44% Did not attend physical education class
67% Did not attend physical education class daily

Overweight
16% Overweight (between 85th and 95th percentile for BMI by age and gender)
12% Obese (above the 95th percentile for BMI by age and gender)

Trend in Overweight 1971-2006 (12-19 yrs) [43]
1971–1974: 6%
1976–1980: 5%
1988–1994: 11%
1999–2002: 16%
2003–2006: 18%

OTHER DATA

Suicide
The percentage of high school students who seriously considered suicide has declined since 1991, but the percentage who attempted suicide (7%–9%) and the percentage who attempted suicide that required medical attention (2%–3%) has remained stable [42]
Percent of students who seriously considered suicide: 14.5% (2007) [42]
  • Has been decreasing over last decade (24.1% in 1995)
  • Males: 10.3% (consistent from grade 9-12)
  • Females: 18.7% (rate declines slightly from 19% in grade 9 and 22% in grade 10 to 16.7% in grade 12)
Percent of students who actually attempted suicide: 6.9% [42]
  • Has only declined slightly from 8.4% in 2005
  • Males: 4.6% (somewhat higher in grades 9 and 10)
  • Females: 9.3% (highest rate in grade 10 - 11.2%, lowest in grade 12 - 6.5%)
Two factors predict risk for repeat suicide attempts among youths: [43]
  • more severe clinical depression and
  • caregivers who exert more parental control.

Injury Behaviors and Violence
Highly associated with injuries are adolescent behaviors such as physical fights, carrying weapons, making a suicide plan, and not using seatbelts.
In 2005:
  • 36% of high school students had been in a physical fight in the past 12 months,
  • 19% had carried a weapon in the past 30 days,
  • 13% had made a plan about how they would attempt suicide in the past 12 months, and
  • 10% never or rarely wore a seat belt when riding in a car. [22]
Significant variation in bicycle helmet use among racial/ethnic groups, but even among Whites—the highest users—more than a third of adolescents rarely or never use helmets, placing them at risk of head injury (2001 California Health Interview Survey -- adolescents aged 12 to 17 years). [44]

Alcohol
About 1 in 5 adolescents age 16–17 years, and more than 2 in 5 age 18–25 years, reported binge alcohol use in 2007. [42]
2007: [42]
Use of any alcohol last 12 months - age 12 and over: 51%
Binge drinking last 12 months - over age 12: 23%
Heavy alcohol use:

<table>
<thead>
<tr>
<th>Age</th>
<th>Any</th>
<th>Binge</th>
<th>Heavy</th>
</tr>
</thead>
<tbody>
<tr>
<td>12–13 years</td>
<td>3.5</td>
<td>1.5</td>
<td>0.1</td>
</tr>
<tr>
<td>14–15 years</td>
<td>14.7</td>
<td>7.8</td>
<td>1.4</td>
</tr>
<tr>
<td>16–17 years</td>
<td>29.0</td>
<td>19.4</td>
<td>5.4</td>
</tr>
<tr>
<td>18–25 years</td>
<td>61.2</td>
<td>41.8</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Drugs
One in five 18–25 year olds reported using illicit drugs in the past month. [42]
In 2007: [42]
Use of any illicit drug last 12 months - age 12 and over:  8%
Use of marijuana last 12 months - over age 12:  6%
Use of other psychotropic drugs:   3%

Use of selected substances in the past month: (2007 data)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Any</th>
<th>Marijuana</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>12–13 years</td>
<td>3.3</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>14–15 years</td>
<td>8.9</td>
<td>5.7</td>
<td>3.4</td>
</tr>
<tr>
<td>16–17 years</td>
<td>16.0</td>
<td>13.1</td>
<td>4.9</td>
</tr>
<tr>
<td>18–25 years</td>
<td>19.7</td>
<td>16.4</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**Tobacco**
Use of any tobacco last 12 months age 12 and over:  29% [42]

By age group in 2007: [42]

<table>
<thead>
<tr>
<th>Age Group</th>
<th>12–13 years</th>
<th>14–15 years</th>
<th>16–17 years</th>
<th>18–25 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>2.4</td>
<td>10.8</td>
<td>23.4</td>
<td>41.8</td>
</tr>
</tbody>
</table>

Every day, approximately 4,000 American youth aged 12-17 try their first cigarette. [45]

- If current patterns of smoking behavior continue, an estimated 6.4 million of today's children can be expected to die prematurely from a smoking-related disease. [46]

**2008 Alcohol, Tobacco and Drug Use by grade:** Percentages similar for males and females [42]

<table>
<thead>
<tr>
<th></th>
<th>8th</th>
<th>10th</th>
<th>12th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>15.9%</td>
<td>28.8%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Binge drinking (last 2 wks)</td>
<td>8.1%</td>
<td>16.0%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>6.8%</td>
<td>12.3%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>5.8%</td>
<td>13.8%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>0.8%</td>
<td>1.2%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Inhalants</td>
<td>4.1%</td>
<td>2.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>0.8%</td>
<td>1.1%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

**Sexual Risk Behaviors**

In 2009:

- 46% of high school students had ever had sexual intercourse, and
- 14% had had four or more sex partners during their life.
- 39% of currently sexually active did not use a condom during last sexual intercourse. [22]

In 2002:

- 11% of males and females aged 15-19 had engaged in anal sex with someone of the opposite sex,
- 3% of males aged 15-19 had had anal sex with a male,
- 55% of males and 54% of females aged 15-19 had engaged in oral sex with someone of the opposite sex. [47]

**Eating Disorders**

Eating disorders, particularly anorexia nervosa and bulimia nervosa, are significant causes of morbidity and mortality among adolescent females and young women.[48]
In young women, the risk of developing anorexia is 0.5 to 1 percent, and mortality is estimated at 4 to 10 percent. [49,50]

In the same population, the risk of developing bulimia is 2 to 5 percent, [51,52] and the incidence of disordered eating that does not meet strict criteria for eating disorders may be twice that of the above conditions. [53]

Frequent dieting and desire for weight loss occur much more commonly than overt eating disorders. In 2009, the Youth Risk Behavior Surveillance Survey [54] reported that 62 percent of students in the United States had exercised to lose weight or to keep from gaining weight, and 40 percent of students had restricted caloric intake in an attempt to lose weight.

Many adolescents and young adults who do not meet the strict diagnostic criteria for eating disorders have disordered eating patterns, which can have a significant adverse impact on health. The distinction between normal dieting and disordered eating is based on whether the patient has a distorted body image. [48].

Attention to key elements of the history and characteristic findings on physical exam can help the primary care provider in timely diagnosis. [55]

Altered body image and fear of being overweight are key features that help distinguish eating disorders from other disease states. [56]

**Healthy Eating Habits**

Most young people are not following the recommendations set forth in the Dietary Guidelines for Americans:

- 2 out of 3 exceed dietary guidelines recommendations for fat intake. [57]
- Nearly 3 in 4 exceed recommendations for saturated fat intake. [57]
- 4 out of 5 high school students do not eat the recommended 5 or more servings of fruits and vegetables per day (excluding french fries and potato chips). [22]
- 3 out 5 do not meet the recommendation for fiber. [58]
- More than 8 in 10 adolescent females do not consume enough calcium. [59]
- During the last 25 years, consumption of milk, the largest source of calcium, has decreased 36% among adolescent females. [60]
- Average daily soft drink consumption almost doubled among adolescent females, and almost tripled among adolescent males from the mid 1980s to mid 1990s. [57]
- The percentage of young people who eat breakfast decreases with age; only 77% of adolescents ages 12–19 eat breakfast. [57]
  - Research suggests that not having breakfast can affect children's intellectual performance. [61]

Data suggest that older children who consume greater quantities of fried foods away from home are heavier, have greater total energy intakes, and have poorer diet quality. [63]

All ethnic groups consumed a substantial amount of soda and fewer servings of fruit, vegetables, and milk than recommended for a healthy diet (2001 California Health Interview Survey -- adolescents aged 12 to 17 years). [64]

**Rising Overweight and Obesity**

The prevalence of obesity among children aged 6–11 has more than doubled in the past 20 years and among adolescents aged 12–19 has more than tripled. [65,66]

- A large number of high school students use unhealthy methods to lose or maintain weight. A nationwide survey found that during the 30 days preceding the survey, 11% of students went without eating for 24 hours or more; 4% had vomited or taken laxatives in order to lose weight; and 5% had taken diet pills, powders, or liquids without a doctor's advice. [22]

**Physical Activity**
The U.S. Departments of Health and Human Services (HHS) and Agriculture recommend that young people (ages 6–19) engage in at least 60 minutes of physical activity on most, preferably all, days of the week. [67]

- 28% of high school girls and 46% of high school boys had participated in at least 60 minutes per day of physical activity on 5 or more of the 7 days preceding the survey. [68]
- All youth in a study representative of 5,801 adolescents aged 12 to 17 years in the 2001 California Health Interview Survey, spent more time watching television and playing video games per day than the 2-hour maximum recommended by the AAP. [69]
- Among students in grades 9-12, 25% used computer three or more hours/day other than for school work and 33% watched television three or more hours/day on an average school day [22]
- Participation in physical activity declines as children get older. [22]
- 72% of 9th grade students, but only 44% of 12th grade students, attended physical education classes in 2009. [22]
- And, only 47% of 9th grade and 22% of 12th grade students had PE class daily. [22]

Sun Exposure
Effective sun protection is practiced by less than one-third of U.S. youth.

- A survey by the American Cancer Society of youth aged 11–18 years showed that, on sunny days:
  - 32% wore sunglasses,
  - 21% wore long pants,
  - 22% tried to stay in the shade, and
  - 31% used sunscreen, over half with a sun protection factor (SPF) of 15 or more when at the beach or pool. [70]
- Another survey of parents of children under 12 years found that approximately 43% of white children experienced at least one sunburn in the past year. [71]
- Sunscreen use was infrequent across ethnic and racial groups in the 2001 California Health Interview Survey (adolescents aged 12 to 17 years). [72]

4. PREVALENCE OF PREVENTIVE CARE

Office Visits
The majority of adolescents visit a health care provider once a year, providing an ideal opportunity to integrate prevention into clinical encounters. [73]

- Approximately 69% of adolescents, 12 to 19 years old, reported having a primary care visit during the last year. [74]
- 3 out of 4 children had contact with a doctor or other health professional at some time during the past 6 months. [75]
- Only half of children with no health insurance have any contact with a HCP. [75]
- 1 in 8 uninsured children had not had contact with a doctor or other health professional in more than 2 years compared with 1 in 50 children with private insurance coverage and 1 in 25 children with Medicaid or other public coverage. [75]
- 14% of 6-17 yr olds did not see a HCP in last year [76]
- 36% of those had no health insurance [76]

Adolescents (particularly boys and minorities) aged 13 to 18 had the lowest rates of outpatient visits among all age groups. [77]
- Adolescent males had fewer health care visits at older ages, with a sharp decline in visits after the age 16, whereas adolescent females had a greater number of visits at older ages. [77]
- In early adolescence, both sexes had a similar volume of visits by age but in later adolescence females had far more outpatient visits than males. [77]

Preventive Care Visits
Adolescents visit physicians infrequently. When they do, few receive counseling on critical adolescent health issues. Both family physicians and pediatricians have room for improvement. [78]
- Physicians must incorporate health counseling into the exams for which the adolescents do come. [78]
• Data from the National Ambulatory Medical Care Survey for the 3-year period 1995-1997 showed that 16% of family physician visits and 22% of pediatrician visits for adolescents included counseling about any of the seven areas studied. [78]

Overall, between 1 in 3 and 1 in 6 adolescents had preventive care visits. [79,82]

Only about 1 in 15 adolescent visits was for preventive care.
• 1997-2000 National Ambulatory Medical Care and National Hospital Ambulatory Medical Care Surveys showed that, of 23,378 adolescent ambulatory visits for patients aged 11-21 years, only 6.5% were for well care. [80]
• 1994-2003 National Ambulatory Medical Care and National Hospital Ambulatory Medical Care Surveys, only 9% of adolescent visits were for preventive care. [77]
• Preventive visits declined somewhat after age 13 and more substantially after age 17. [77]
• Late adolescent males had the fewest preventive visits - 6% of all visits. [77]
• Late adolescent females had the most visits, but only 3% were for preventive care. [77]
• Early adolescents (11-14 years old) had 3 times more preventive visits than late adolescents. [77]

Prevalence of Counseling and Screening
Of adolescents, 12 to 19 years old, who had a primary care visit during the last year:
• Between 41% and 53% reported receiving counseling along 1 of the 5 content dimensions of anticipatory guidance. [74]
• At least 1 health-habit counseling service was delivered during only 38% of visits. [81]

The National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey showed that, in 1997-2000, counseling services were documented for 39% of all adolescent (age 13-18) general medical/physical examination visits. Diet [26% of visits] and exercise [22%] were the most frequent counseling topics. [82]
• Counseling for other topics ranged from a low of 3% to 20%, with skin cancer prevention, HIV/STD transmission, and family planning/contraception ranking the lowest. [82]

20% to 31% of adolescent visits with health care providers included counseling or screening interventions. [83]

A cross-sectional study of pediatric and family medicine practices demonstrated low levels of preventive service, and substantial variation.
• Only 39% of children received 3 of the 4 recommended preventive services measured (practice range: 2-88%). [84]
• Few practices demonstrated evidence of a systematic approach to prevention. For example, only 1 in 4 practices used >1 of 5 recommended preventive service delivery strategies. [84]

Counseling has been shown to occur more frequently at acute than well visits for diet (72% vs. 28%), exercise (52% vs. 23%), HIV/STD (14% vs. 6.2%), and family planning (FP) (24% vs. 10%). [80]

The bottom line is that providers may screen for some risky behaviors, but there is much inconsistency in screening across risk areas. [85,86]

Vaccinations
• The 2002 NCQA and HEDIS showed that compliance with immunization rates for all recommended vaccines was only 24% for adolescents (compared with 60% for children).
• By excluding the varicella vaccine, these rates increased to 44% for adolescents. [87]

Confidentiality
Nearly half (46%) of adolescents, 12 to 19 years old, who had primary care visits in the last year reported that they were at least partly private. [74]
• Privacy was associated with greater odds of receiving counseling for risk behaviors in general, sexual activity, and emotional health and relationships. Those with private preventive care visits were 2 to 3 times more likely to receive the counseling than those whose visits were not private. [74]
Those engaging in risk behaviors were almost 50% less likely to report private preventive care visits than those reporting no risk behaviors. [74]

Many adolescents have not had a private and confidential visit with their provider. Having a private and confidential visit was also associated with receipt of counseling. [88]

Overall, the odds of receiving preventive counseling and screening for adolescents who reported having private time with providers were higher than for adolescents who did not meet privately. [89]

5. FACTORS THAT AFFECT FREQUENCY OF COUNSELING

Studies have found that physician gender [90], patient socioeconomic status [91], or gender [92], and other practice factors, such as insurance case mix and patient volume [93] affect preventive service delivery.

Minority Race/Ethnicity -- Less counseling

Physicians reported, on average, counseling at 11% to 15% fewer visits for minority children than for white children. [94]

- Black and Latino children were 32% to 37% less likely to receive counseling than white children, and black children were 35% less likely to receive screening services.
- Black or Latino receiving counseling at 61% of visits, compared with 72% for white children

<table>
<thead>
<tr>
<th>INCIDENCE OF COUNSELING AND SCREENING (%) [94]</th>
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<tbody>
<tr>
<td>TYPE OF COUNSELING</td>
</tr>
<tr>
<td>Tobacco cessation</td>
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<tr>
<td>Growth and development</td>
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<tr>
<td>Injury prevention</td>
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- Exercise counseling occurred less frequently among black children. [95]
- Younger and nonwhite adolescents were less likely to be counseled about smoking than older and white teens. [96]

Presence of Health Insurance -- More counseling

- Counseling is less frequent for children without health insurance.
- Half of publicly insured minority children received no preventive counseling. [94]

Diagnosis of Obesity -- Increases Counseling

Evidence shows that when adolescents are diagnosed with obesity, doctors seem to take wellness more seriously:

- Blood pressure assessment is more frequent
- Diet and exercise counseling are more likely to be provided.

The problem is that clinicians often overlook obesity during well child visits. A diagnosis occurred in only 1% of 33,000 well child visits reported in the National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey 1997 to 2000. [95]
Physician Characteristics
- Pediatricians reported diet counseling more frequently (44%) than general practice physicians (21%) or other physicians (9%). [95]
- Exercise counseling was reported in 20% of visits with pediatricians, 16% of visits with general/family practitioners, and 6% of other physicians. Exercise counseling occurred less frequently among black children. [95]
- A survey of pediatricians and family physicians showed that family physicians were more likely than pediatricians to provide smoking cessation counseling (25.1% vs. 11.7%) or to direct nursing staff to counsel patients (17.1% vs. 10.9%). [96]

Women physicians seem to have a greater orientation toward prevention than their male counterparts.
- Female physicians provide more counseling and immunization services to all of their patients. [97]
- Female physicians reported having spent more time with adolescent patients and more often spent time alone with adolescent patients than did male physicians. [98]

High-volume practices are more efficient than low-volume practices but at a cost of lower rates of preventive services delivery, lower patient satisfaction, and a less positive doctor-patient relationship.
- High-volume practices had 30% shorter visits and scheduled one third fewer patients for well care. [99]
- Patients of high-volume physicians had lower up-to-date rates of preventive services and scored lower on measures of satisfaction and the doctor-patient relationship. [99]

A survey of pediatric providers (pediatricians and nurse practitioners) showed that providers’ self-efficacy to screen adolescents for risky behaviors was significantly related to both clinician self-report and independent adolescent reports of screening during well-visits. [100]
  - These findings point to the importance of enhancing clinicians’ sense of competence to deliver adolescent preventive services.

6. TYPE OF COUNSELING PROVIDED

The Young Adult Health Care Survey of over 4,000 adolescents enrolled in managed care organizations showed that the average preventive counseling and screening scores ranged from 18.2% for discussing risky behavior topics to 50.4% for discussing diet, weight, and exercise topics. [101]

Cross-sectional study of community family practices -- the most frequently delivered counseling service with adolescents was exercise advice (13%). [102]

The percentage of adolescents screened by their primary care providers for: [103]
- seatbelt use - 38%
- helmet use - 27%
- tobacco use - 64%
- alcohol use - 59%
- sexual behavior - 61%

Rates of Screening and Counseling: [104]
- Screening
  - Tobacco  71%
  - Alcohol  67%
  - Drugs  65%
  - Sexual behavior  57%
  - Seatbelt  43%
  - Helmet  42%
- Counseling
  - Tobacco  65%
  - Alcohol  59%
A systematic assessment of the value of clinical preventive services recommended for average-risk adolescents showed that the highest ranked services with the lowest delivery rates are: 1) offering adolescents an anti-tobacco message or advice to quit, 2) counseling adolescents on alcohol and drug abstinence, and 3) screening young women for chlamydial infection. [105]

**Counseling - Diet**
- Just over a third (38%) of youth 10 to 18 years old reported discussing sugar-sweetened beverages, fast food consumption or television viewing (41%) with their clinicians during an annual physical exam. [106]

**Counseling - Overweight**
- In a review of family practice visits excess weight was mentioned in 17% of encounters with overweight patients, while weight loss counseling occurred with only 8% of overweight children. [107]
- Strategies that increase the likelihood of patients identifying weight as a problem, or that provide clinicians with a way to "medicalize" obesity, are likely to increase the frequency of weight loss counseling in primary care visits.
- A random sample of a nationally representative sample found that approximately half of pediatricians reportedly always counseled about maintaining a healthy weight. [108]
- Those who did were more likely to be women, to spend more time with patients during well-care visits, and to conduct more well-care visits per week from patients in one particular age group. [108]
- The frequency of counseling might be improved by increasing the amount of time the patient spends during office visits with the pediatrician or with other professional staff, such as nurses or dietitians.
- In a survey of 14-18-year-olds seen for well care visits in pediatric and family medicine practices:
  - Nearly 1 in 3 adolescents were "at risk" or overweight.
  - 1 in 4 was attempting to lose weight, but only 1 in 8 was actually overweight. [109]
- Many adolescents misclassify their body image, and hence perceive their body image to be different from their actual BMI; clinicians should discuss body image with all adolescents, not just those at risk for eating disorders. [109]

**Recognition and Diagnosis of Overweight and Obesity**
Obesity is under-diagnosed in children and adolescents.
- A retrospective study of claims data from a large pediatric integrated delivery system, showed that only 43% of obese children had a diagnosis of obesity. [110]
- In another review of well child visits, only 29% of children with a BMI > the 95th percentile for gender and age were diagnosed as overweight by the physician. [111]

BMI plotting may increase recognition in mildly overweight children. [112]
- Pediatricians identified OW/OB in 27% of children with a BMI at the 85th to 94th percentile and 86% of children with a BMI at or above the 95th percentile. [112]
- Only 41% of growth charts were current, and 6.1% had BMI plotted. [112]
- OW/OB identification was significantly associated with diet counseling (OR, 7.46) and exercise counseling (OR, 5.57). [112]

**Counseling - Smoking**
- A more recent survey of pediatricians and family physicians showed that 9 out of 10 asked adolescents about smoking but were less likely to ask about peer smoking (2 in 5) or smokeless tobacco use (1 in 3). 8 in 10 assessed motivation to quit, but fewer than 1 in 3 provided further counseling. [113]
- Data from the National Ambulatory Medical Care Surveys showed that physicians frequently identified adolescents' smoking status (72% of visits) but rarely counseled them about smoking (17% of visits by adolescent smokers). [114]
A survey of pediatricians and family physicians showed that family physicians were more likely than pediatricians to provide smoking cessation counseling (25.1% vs. 11.7%) or to direct nursing staff to counsel patients (17.1% vs. 10.9%). [115]

But 8 in 10 pediatricians and nearly 6 in 10 family physicians did neither. [115]

**Counseling - Suicide**

Cross-sectional survey of pediatricians and family physicians -- nearly half (47%) reported that at least one of their adolescent patients attempted suicide in the previous year; however the US Preventive Services Task Force has determined that there is insufficient evidence to recommend either for or against suicide risk screening. [116]

**Counseling - Sex**

A survey of family physicians showed that: [117]

- 79% asked adolescent patients about contraceptive use,
- 73% about condom use,
- 72% about sexual relationships, and
- 61% about sexual behaviors.
- 36% asked teens when they thought sex was appropriate, and
- 30% discussed sexual orientation.
- 76% discussed adolescents' risks of HIV,
- 78% advised adolescent patients to use condoms,
- 21% gave handouts about HIV, and
- 9% gave condoms to adolescent patients.

Factors associated with preventive reproductive counseling included: [117]

- Discussion of confidentiality,
- More-recent medical school graduation,
- Placing a high value on the AAFP recommendations,
- Having read AAP guidelines, and
- Female gender.

**Blood Pressure Screening**

Hypertension and prehypertension are frequently undiagnosed in the pediatric population. [118]

- Of children and adolescents with hypertension, only 26% had a diagnosis of hypertension or elevated blood pressure documented in the electronic medical record.
- Of those who had prehypertension, only 11% had an appropriate diagnosis documented.
- The 1996 National Ambulatory Medical Care Survey of well visits for children aged 3-18 showed that BP screening was 61% in 1996. [119]

**Disconnect Between What Docs Say They Provide and What Adolescents Say They Receive**

Adolescents report receiving substantially less counseling and screening services than reported by their clinicians. [120]

- 58%, 63%, and 69% of adolescents recalled having discussed alcohol, cigarettes, or sexual behavior with their clinicians at their most recent well visits.
- In contrast, the clinicians reported delivering these services to >90% of adolescents they see.

Clinicians often over-report the services that they provide to patients. [121-123]

There is evidence that many adolescents would like to discuss drugs (65%), STDs (61%), smoking (59%), and good eating habits (57%) with their physicians, but physicians focused on topics they felt more comfortable with -- eating habits (49%), weight (43%), and exercise (41%). [124]

**7. ENHANCING DELIVERY OF PREVENTIVE SERVICES**

Take advantage of illness visits to promote prevention
• Illness visits are important opportunities to deliver preventive services, particularly health habit counseling, to patients. [125]
• Observations of illness visits to 138 community family physicians showed that preventive services were delivered during 39% of visits for chronic illness and 30% of visits for acute illness.
• Opportunistic health habits counseling is more suitable to this approach; can take advantage of teachable moments. [126]
• Can be an efficient and effective way to deliver preventive care.
• Two methods for opportunistic preventive service delivery:
  o use the close of the visit to arrange follow-up preventive care, and
  o use a stepwise conversational device to link the presenting problem to relevant health habit advice [127]

Linking vaccinations to preventive counseling
• New immunization recommendations can be used as a hook to bring adolescents into the clinic for visits, during which other clinical preventive services can be provided. [128]
• Need to account for the extra time required.

Use more non-physician health educators
• Nearly 9 in 10 pediatricians report that they are the main providers of anticipatory guidance and screening for adolescent patients. [129]
• Over half report that, in an ideal system that maximized effectiveness and efficiency, nonphysicians would provide these services. [129]

Use more telephone and e-mail communication
• Most (79%-93%) also believe that at least some anticipatory guidance could be conducted through telephone or e-mail communication. [129]
• Majority think that a system that is less reliant on physicians and face-to-face office visits would be a more effective and efficient way to provide preventive care.

Better and more consistent reimbursement
• Reimbursement levels for pediatric services vary widely across states.
• Immunization and well-visit rates are positively linked with reimbursement rates. [130]
• Coding for pediatrics 2008

More training in specific adolescent health issues
• Primary care providers report insufficient training as the most significant barrier to their delivery of preventive health care to adolescents. [131]
• Specialized clinician training and charting tools have been associated with increases in rates of screening and counseling of adolescents about risky behaviors, such as substance abuse, unsafe sex, and risky vehicle use. [132]
• Training to increase the delivery of preventive services, along with customized adolescent screening and provider charting forms, and the resources of a health educator resulted in an average increase in recommended preventive screening rates from 47% to 94%. [133]
• Counseling in all areas also increased significantly, with an average increase in counseling rates from 39% to 91%. [133]
• Two 4-hour workshops on clinical preventive services for adolescents resulted in significant increases in screening for seatbelt use (from 38% to 56%), helmet use (from 27% to 45%), tobacco use (from 64% to 76%), alcohol use (from 59% to 76%), and sexual behavior (from 61% to 75%). [134]
• Enabled providers to provide preventive services for multiple behaviors in a routine outpatient visit as recommended by national guidelines.
• A training workshop to increase screening and counseling of adolescents, combined with screening and charting tools, resulted in increased screening and counseling rates (average screening rate increased from 58% to 83%; counseling rates increased from 52% to 78%). [132]
Training, resource materials, patient questionnaires, and clinician manuals for implementing GAPS recommendations, increased preventive services at community health centers: physical or sexual abuse (10% before to 22% after), sexual orientation (13% to 27%), fighting (6% to 21%), peer relations (37% to 52%), suicide (7% to 22%), eating disorders (11% to 28%), weapons (5% to 22%), depression (16% to 34%), smokeless tobacco (10% to 29%), and immunizations (19% to 48%). [135]

More tools to aid in counseling
Use of a concerns checklist aids in addressing personal health concerns during adolescent preventive health visits. [136]
- Helps to identify previously undetected health issues, particularly psychosocial and behavioral.

Self-efficacy for obesity counseling was lower for those who lacked non-MD staff reimbursement, on-site dietitian, or patient educational materials. [137]
- Respondents chose better counseling tools (96%) as the most helpful clinical resource for obesity management.

Customized office systems for preventive services
- Computerized health assessments with individualized feedback, combined with automatically selected educational videos on a laptop computer and a printout of a prioritized problems list for a health counselor to review with the adolescent, followed by further counseling and physical examinations, as indicated, from a nurse was shown to be a feasible, economical, and acceptable alternative to traditional clinical practice for screening young people for health-compromising behaviors and providing individualized health education and routine physical examinations. [138]
- A team of 2 counselors and 1 nurse provided comprehensive screening, health counseling, and physical examinations to 1 patient every 10 minutes.
- Model identified risk behaviors at levels consistent with local behavioral data, and addressed and documented them significantly more often than in traditional settings.
- Subjects (71%) preferred the computer-assisted visits to standard office visits, and 92% felt the amount of time spent was acceptable. [138]
- An office-based quality improvement system involving a combination of chart prescreening, risk assessment forms, Post-it prompts, flow-sheets, reminder/recall systems, patient education materials, and redistributing responsibilities among office staff resulted in clinically and statistically significant improvements in the overall rates for all preventive services except tuberculosis screening. [139]

Increase wellness counseling in sports physicals
Nearly 7 million students take part in high school sports activities each year. [140]
- Most require pre-participation sports physicals.
- Most insurance payers reimburse one preventive exam annually or provide fixed-dollar support for preventive services for a calendar year.
- If patient has not had a full preventive service in the last 12 months, inform the parent when a sports physical is requested that a full preventive service is recommended and that the sports physical form can be filled out in conjunction with the preventive visit.

If the patient’s preventive service benefit has been used up or the health plan won’t pay for a sports physical under any circumstances, set a fee and instruct your scheduler to inform anyone wishing to schedule a sports physical that it must be paid for at the time of service.
- It may help to develop a patient handout to emphasize the importance of a well-child exam. [141]

8. BARRIERS TO PROVIDING COUNSELING

Belief that children will not be forthright with physicians
- Most common perceived barrier to counseling was belief that children would not provide accurate responses due to the presence of parents (86%) or the fear that parents would be notified of their answers (74%). [142]
Poor confidence to deliver preventive services

Pediatric providers’ (pediatricians and nurse-practitioners) self-efficacy to screen for risky behaviors is significantly related to screening during well-visits. [143]

- Poor provider confidence in ability to deliver preventive services is correlated with lower rates of screening for tobacco use, alcohol use, sexual behavior, seat belt use, and helmet use. [143]
- Over half of pediatricians and a quarter of family physicians reported lack of counseling skills as a barrier to providing smoking interventions. [142]
- Pediatricians often feel ineffective at counseling for weight management. [144]
- Most providers do not routinely screen for suicide or associated risk factors; lack of training and a screening tool are cited as reasons why. [145]
- Perceived self-efficacy was the mediating factor on frequency of violence prevention counseling for all topics. [146]
- Pediatricians reported spending insufficient time on VP counseling. Confidence and perceived self-efficacy levels varied by VP topic, but for all topics pediatricians felt more confident discussing than effective at changing behaviors. [146]
- Another survey found that only 12% of practicing members of the North Carolina Pediatrics Society were confident in obesity management. [147]

These findings point to the importance of enhancing clinicians’ sense of competence to deliver adolescent preventive services.

Lack of training

Barriers to guideline implementation include physician knowledge, physician attitudes, and external factors. These factors are linked to training. [148,149]

- Almost half (45%) of primary care clinicians cite insufficient training as the most significant barrier to the delivery of health care to adolescents. [150]

Lack of tools and resources

Lack of appropriate screening tools are also a major barrier to the delivery of preventive services. Those that exist are often too lengthy to be feasible, or too narrow in focus. [151]

- Even with adequate knowledge and attitudes, external barriers, such as a lack of tools or reminder systems, affect a provider’s ability to follow recommendations. [150]

9. THE WELLNESS VISIT -- ISSUES TO COVER

Awareness of the domains of adolescent development: Physiological, psychological, social and potential problems. [Bright Futures, Third Ed, 2008]

Early (11-14 yrs):
- Physiological: onset of puberty, growth spurt, menarche in females
- Psychological: preoccupation with body changes, sexual identity, questioning independence, parental control still strong
- Social: same sex peer affiliation, parental relationship, other adult role models, transition to middle school, extracurricular activities, differences between home culture and others home culture
- Potential problems: delayed puberty, acne, orthopedic problems, school problems, depression, unintended pregnancy, initiation of tobacco, alcohol and drug use.

Middle (15-17 yrs):
- Physiological: ovulation (females), growth spurt (males)
- Psychological: idealism, sense of invincibility or narcissism, sexual identity, beginning of cognitive capacity to provide legal consent
- Social: beginning emotional emancipation, increasing peer group power, conflict over parental control, interest in sex, initiation of driving, risk taking behavior, transition to high school, reduced involvement in extracurricular activities, conflict with family values
- Potential problems: experimentation with risk behaviors (e.g., sex, drinking, drugs, smoking), auto crashes, unintended pregnancy, menstrual disorders, acne, short stature (males), conflict with parents, overweight, inactivity, poor eating habits, eating disorders

Late (18-21 yrs):
- Physiological: growth completed
- Psychological: future orientation, emotional independence, unmasking psychiatric disorders, capacity for empathy, intimacy, and reciprocity in interpersonal relationships, self identity, legally capable of providing consent, legal age for some things (e.g., voting) but not others (e.g., drinking)
- Social: individual over peer relationships, transition in parent-child relationships, transition out of home, preparation for further education, career, marriage, parenting
- Potential problems: eating disorders, depression, auto crashes, suicide, unintended pregnancy, acne, smoking, alcohol or drug dependence

10. COMMUNICATING WITH TEENS

Here are some recommendations for communicating with teens:

**Don't be afraid to address sensitive issues.** Drugs, sexual concerns, and emotional conditions are more common than illness. Most teens will not volunteer information about sexual activity, use of birth control, safe sex practices, and sexual orientation. By talking about these topics openly, you are telling the adolescent that it is okay to discuss them. [152]

**Ask nontthreatening open-ended questions or general statements.** Helpful to say, "Many teenagers feel pressure from their friends to use drugs or alcohol. Have you experienced this?" [152,153]

**Look for hidden agendas.** The real reason for the visit may not be apparent at first, such as the teenaged girl who is concerned about being pregnant but initially complains only of symptoms of nausea and fatigue and may not volunteer that her period is 4 weeks late. [154]

**Assess for emotional conditions.** Depression, anxiety, suicidal thoughts, eating disorders, and problems with peer groups or with family are issues that need to be identified. Ask about functioning at home, school performance, and peer relationships. Questions should be directed to the parents and the teen; begin discussion with parents and teen together; follow-up with the adolescent alone. [152]

**Offer additional resources.** For those adolescents whose problems are complex or out of your scope of practice, community resources and referral sources need to be identified to ensure continuity of care. [155]

The HEADSS assessment is a good guide for talking about the context of a teen’s life [155a]. HEADSS is an acronym for the topics that the physician wants to be sure to cover: home, education (i.e., school), activities/employment, drugs, suicidality and sex. Recently the HEADSS assessment was expanded to HEEADSSS to include questions about eating and safety [155b].

It is important to discuss confidentiality and its legal boundaries when establishing rapport and before taking a history. If a question is answered positively, it is important to continue the dialogue with follow-up questions. Below are examples of questions that may be used to cover the different subject areas [155b]:

**Home**
Where do you live? How long have you lived there? Who lives at home with you? Do you have any pets? Do you feel safe at home? Do you feel safe in your neighborhood? Are there any guns or other weapons at home?

**Education**
Where do you go to school? Have you changed schools recently? What grade are you in? What do you like or not like about school? What is your favorite or least favorite class? Do you feel safe at school?
What are your grades like? What were your grades like last year? Do you have an IEP (individual education plan) in place? What do you want to do after finishing school?

**Activities/Employment**
What do you do for fun? What do you and your friends do together? Do you have a best friend? Are you in any clubs or teams? Do you have a job? What is your workplace environment like? Do you drive? Do you exercise? Do you feel comfortable with your body or weight? Do you feel comfortable with your eating habits?

**Drugs**
Do any of your friends smoke or drink? Do you know anyone who smokes or drinks? Have you ever tried? Have you ever used other drugs (cocaine, methamphetamine, ecstasy, heroin)?

**Suicidality**
Have you ever been so sad you thought about hurting yourself? Have you ever run away from home? Have you ever cut yourself intentionally?

**Sex**
Have you ever dated anyone? Boys, girls, or both? Have you ever kissed anyone? Have you ever had sex? Has anyone ever touched you in a way you did not want to be touched or forced you to do something you did not want to do sexually?

11. **CONFIDENTIALITY**

Doctor-patient confidentiality is a precept of adolescent medicine. [156]

- In general, providers honor the privacy of adolescents unless there is evidence that the youngster is engaging in dangerous activities.

Concerns about confidentiality discourage many adolescents from seeking necessary medical care and counseling, and create barriers to open communication between patient and the provider. [157] Common problems are related to billing and reimbursement procedures, scheduling notification and privacy of medical records. [157a, 157b]

**Need to inform adolescents about rights to confidentiality**
Most adolescents are not aware of their right to confidentiality. [158]

- A majority of teens surveyed had health concerns that they wished to keep private from their parents, and 1 in 4 would not seek medical care if their parents found out about it.
- Just over half would go to their regular physician for questions about pregnancy, the acquired immunodeficiency syndrome, or substance abuse.
- On the other hand, 9 out of 10 would not be concerned if their parents were informed about their annual physical examination results or their clinician’s findings in regard to certain physical ailments.
- But, over half had never discussed confidentiality with their clinicians, and only one third knew about their right to confidential medical care. [158]

**Need to discuss confidentiality policies with parents present**
It is vital to have policies in place which respect adolescent privacy, and to make these policies clear to the adolescents and families who seek their services. [159]

- Confidentiality policies are best discussed with the family and the adolescent either at the first visit, or in materials given to the family prior to the visit. [160]
- The provider should educate parents to encourage their adolescents toward personal responsibility in health care and to be supportive of the adolescent's rights to confidentiality. [157]

**Need for private consultations**
The clinician-adolescent patient relationship is best served when the care is open and honest. Difficult and sensitive issues may not be resolved unless there is confidentiality. Confidentiality must be offered to the teen and accepted by the teen. [160]

- The provider should offer the adolescent an opportunity for examination and counseling separate from parents/guardians.
- Having the teen and clinician alone for the history and physical examination helps to assure confidentiality.

Confidential health care for adolescents is essential.

- Protection of confidentiality is vital in order to address issues such as depression, suicide, substance abuse, domestic violence, unintended pregnancy and sexual orientation. [157]
  - The physician should make a reasonable effort to encourage the adolescent to involve parents or guardians in healthcare decisions. [157]
- This is the optimal situation in most cases.

The law protects confidentiality

Recent judicial decisions support confidentiality without a minimum age in adolescents who are "sufficiently mature". [161]

- The determination that the adolescent is "mature" is an important factor. The law generally upholds a provider's determination of maturity of a patient. [162]
- "Mature" usually means age fourteen years or older. [163]
- The law supports that such individuals can decide whether and when their parents should be informed. [161]

Most of the general provisions of the HIPAA Privacy Rule, that affects the confidentiality of health care information, are relevant to adolescents. [164]

- At age 18, adolescents are legally able to consent to their own health care. There are no restrictions, and care should be completely confidential. [163]
- **Emancipated minors** may also consent to their own medical care.
- **Mature minors** may consent to medical care (except for surgery or other risky procedures) assuming that their clinician feels they are mature and have the intelligence and understanding to give informed consent to the care. [163]

State laws vary -- health care providers must be aware of their state's standards.

- Every state has some combination of laws, regulations, court decisions or constitutional provisions that govern the confidentiality of medical information. [163]
- Confidentiality and privacy of health information is also protected by some federal statutes as well as professional codes of ethics promulgated by the American Medical Association.
- A few states allow the release of confidential information to parents without the adolescent’s permission.
- Others mandate the reporting of physical or sexual abuse of minors again with or without the consent of the minor adolescent.
- In a recent survey from The Alan Guttmacher Institute, the following were noted in regard to a teen’s right to consent to reproductive healthcare: [163]
  - No state required parental notification or consent for a teenager to have contraceptive services, prenatal care or evaluation for STIs.
  - No state required parental notification or consent for a teenager to have treatment for alcohol and drug abuse or outpatient mental health services.
  - The majority of states required either parental consent or notification for teenagers under 18 to have an abortion.
- In general, especially in areas where the adolescent has the legal right to give consent, confidentiality must be maintained. [157]

Limitations of the extent of confidentiality should be explained.

There are circumstances when confidentiality may be broken. [157, 163]

- Even if the teen asks that confidentiality be maintained, the clinician is obligated to break confidentiality if the teen’s life is in danger, or if the teen is threatening the life of another individual.
• Also if there is evidence of abuse or diagnosis of certain communicable diseases, this must be reported to the proper authorities.
• In these situations, the judgment of the clinician is essential in determining when confidentiality must be broken.

Importance of confidentiality
• Many adolescents have not had a private and confidential visit with their provider. [165]
• Having a private and confidential visit was also associated with receipt of counseling. [165]
• Adolescents are not receiving sufficient counseling about risks and risky behavior, [165]
• Less than half of adolescent preventive care visits were private. [166]
• Private visits were 2 to 3 times more likely to include counseling for risk behaviors in general, especially sexual activity, emotional health and relationships. [166]
• Providers need to seek opportunities to ensure privacy for the adolescents during their preventive care visits so that much-needed counseling can be provided.

Other information about confidentiality:

12. GUIDELINES

Various guidelines for adolescent preventive care recommend screening and counseling to promote healthy behaviors and reduce risks. The Guidelines for Adolescent Preventive Services [GAPS] has been the standard since 1994. [167]

Bright Futures, from the AAP is the most recent, published in 2008. [168]

GAPS -- Guidelines for Adolescent Preventative Services [167]
- Published by the AMA in 1994; the adolescent version of the US Preventive Services Task Force recommendations for adults.
- Designed to help providers deliver service to adolescents more effectively.
- The recommendations include the following 4 areas: [167]
  1. Delivery of Health Services
     - Adolescent should be seen annually; services should be developmentally appropriate and sensitive to individual and cultural differences.
     - Policies should be established regarding confidential care and how the parent should be involved, made clear to the whole family.
  2. Health Guidance
     - Anticipatory guidance should be provided to adolescents and parents, including:
       - adolescent development (physical, sexual, and emotional),
       - effective parenting,
       - risk reduction (driving, weapons, recreational activities, and use of tobacco, alcohol, and other substances),
       - good health habits (diet and exercise), and
       - responsible sexual behavior.
  3. Screening
     - Adolescents should be screened annually for:
       - hypertension;
       - hyperlipidemia (if at risk);
       - eating disorders (anorexia, bulimia, and obesity);
       - use of tobacco, alcohol and other substances;
       - involvement in sexually risky behaviors (and STDs and HIV if appropriate);
       - cervical cancer (if the female adolescent is sexually active);
       - depression and suicidal intention;
- abuse (physical, emotional, or sexual);
- school problems; and
- tuberculosis (if in a high-risk group).

4. **Immunizations**
   - Review to ensure that immunizations are up to date.
   - At some time during adolescence, give dt (every 10 years).
   - Varicella history reviewed to determine the need for varicella vaccine.
   - Tuberculosis testing offered to high-risk teens.
   - Influenza vaccine offered, especially with risk factors such as asthma.

**BRIGHT FUTURES** [168]
- Similar to GAPS but more up to date; published by the AAP in 2008.
- Focuses on specific age-appropriate health and developmental issues.
- Extends GAPS to provide more guidance on issues of communication with adolescent and parent.
- Top priority is to attend to concerns of parent or youth

**Five priority health supervision topics recommended for each visit:** [168]
- Includes issues specific to each stage of adolescence (early, middle, late)

1. Developmental Observation:
   - Observation of parent-child interaction, parent present,
   - Developmental surveillance,
   - School performance questions
2. Physical Exam:
   - Complete physical exam, including specific issues at each visit
3. Screening:
   - Universal and selective screening procedures and risk assessment
4. Immunizations:
   - Provides CDC/NIP and AAP websites for current schedules
5. Anticipatory Guidance:
   - Presents guidance for families, organized by 5 priorities for each visit
   - Provides sample questions, guidance for parent and adolescent

**Six core concepts for improving the way each visit is carried out:** [168]
1. Building Effective Partnerships
   - Model and encourage open, supportive communication with youth and family
   - Identify health issues through active listening and "fact finding"
   - Affirm strengths of child and family
   - Identify shared goals
   - Develop joint plan of action based on stated goals
   - Follow-up to sustain partnership
2. Fostering Family Centered Communication
   - Provides lists of effective behaviors, active listening skills
3. Promoting Health and Preventing Illness
   - Identify relevant health promotion topics
   - Give personalized guidance
   - Incorporate family and community resources
   - Come to closure
4. Managing Time for Health Promotion
   - Maximize time for health promotion
   - Clarify health professionals goals for visit
   - Identify family’s needs and concerns for visit
   - Work with the family to prioritize goals for visit
   - Suggest other options for addressing unmet goals
5. Educating Families Through Teachable Moments
   - Small, brief bits of information directed to a specific need
   - Teachable moment appears when the info can be added to a related topic
6. Advocating for Children, Families and Communities
13. RESOURCES

GUIDELINES:
Bright Futures
www.brightfutures.aap.org

The Guidelines For Adolescent Preventive Services (GAPS)

ORGANIZATIONS:
Maternal and Child Health Bureau http://www.brightfutures.org
Society for Adolescent Medicine http://www.adolescenthealth.org
Centers for Disease Control and Prevention http://www.cdc.gov/health/adolescent.htm
Advocates for Youth http://www.advocatesforyouth.org
Alan Guttmacher Institute http://www.agi-usa.org/sections/youth.html
American Academy of Child and Adolescent Psychiatry http://www.aacap.org
American Academy of Pediatrics http://www.aap.org/

PERCENTILES:
BMI Calculation: Tables for children and adolescents to get percentile ranking
http://www.cdc.gov/nccdphp/dnpa/bmi/00binaries/bmi-checkbook.pdf

Blood Pressure table to determine percentile ranking for diagnosis

INFORMATION:
CDC -- Healthy Schools, Healthy Youth
http://www.cdc.gov/HealthyYouth/index.htm
  ▪ Information on various relevant topics

CDC Division of Adolescent and School Health (DASH)
  ▪ Mission is to prevent the most serious health risks among children, adolescents, and young adults.
  ▪ Website includes links to various programs

Youth Risk Behavior Surveillance System
  ▪ Monitors behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States.
http://www.cdc.gov/HealthyYouth/yrbs/index.htm

Registries of Programs Effective in Reducing Youth Risk Behaviors
Various federal agencies have identified youth-related programs that they consider worthy of recommendation based on expert opinion or a review of design and research evidence. These programs focus on different health topics, risk behaviors, and settings including alcohol and other drug use.
http://www.cdc.gov/HealthyYouth/AdolescentHealth/registries.htm
CDC Info Links -- Information, stats, programs, resources

- Alcohol / Drug Use: [http://www.cdc.gov/HealthyYouth/alcoholdrug/index.htm](http://www.cdc.gov/HealthyYouth/alcoholdrug/index.htm)
- Sexual Behaviors: [http://www.cdc.gov/HealthyYouth/sexualbehaviors/index.htm](http://www.cdc.gov/HealthyYouth/sexualbehaviors/index.htm)
- Tobacco Use: [http://www.cdc.gov/HealthyYouth/tobacco/index.htm#1](http://www.cdc.gov/HealthyYouth/tobacco/index.htm#1)
- Violence: [http://www.cdc.gov/ncipc/dvp/YVP/default.htm](http://www.cdc.gov/ncipc/dvp/YVP/default.htm)
- Nutrition: [http://www.cdc.gov/HealthyYouth/nutrition/index.htm](http://www.cdc.gov/HealthyYouth/nutrition/index.htm)
- Physical Activity: [http://www.cdc.gov/HealthyYouth/physicalactivity/index.htm](http://www.cdc.gov/HealthyYouth/physicalactivity/index.htm)
- Asthma: [http://www.cdc.gov/HealthyYouth/asthma/index.htm](http://www.cdc.gov/HealthyYouth/asthma/index.htm)
- Skin Cancer: [http://www.cdc.gov/HealthyYouth/skincancer/index.htm](http://www.cdc.gov/HealthyYouth/skincancer/index.htm)
- Sun Protection: [http://www.cdc.gov/chooseyourcover](http://www.cdc.gov/chooseyourcover)

STATISTICS:

Sample Patient Handout Stressing the Importance of the Annual Wellness Exam in Addition to a Sports Physical

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BRIGHT FUTURES -- RECOMMENDED SCREENING</strong></td>
</tr>
<tr>
<td>Test</td>
</tr>
<tr>
<td>Universal:</td>
</tr>
<tr>
<td>Vision (once during each stage)</td>
</tr>
<tr>
<td>Dyslipidemia (once during late adol)</td>
</tr>
<tr>
<td>Selective:</td>
</tr>
<tr>
<td>Vision (between universal screening)</td>
</tr>
<tr>
<td>Hearing</td>
</tr>
<tr>
<td>Anemia</td>
</tr>
<tr>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Dyslipidemia</td>
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<tr>
<td>STIs</td>
</tr>
<tr>
<td>STIs</td>
</tr>
<tr>
<td>Pregnancy</td>
</tr>
<tr>
<td>Cervical dysplasia</td>
</tr>
<tr>
<td>Alcohol or drug use</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BRIGHT FUTURES -- ANTICIPATORY GUIDANCE RECOMMENDATIONS</strong></td>
</tr>
</tbody>
</table>
## Physical Growth and Development

<table>
<thead>
<tr>
<th>Early</th>
<th>Middle</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brush teeth twice daily; floss once</td>
<td>Brush teeth twice daily; floss once</td>
<td>Brush teeth twice daily; floss once</td>
</tr>
<tr>
<td>Physically active 60 min/day</td>
<td>Physically active 60 min/day</td>
<td>Physically active 60 min/day</td>
</tr>
<tr>
<td>Limit non-academic screen time ≤ 2 hrs/day</td>
<td>Limit non-academic screen time ≤ 2 hrs/day</td>
<td>Limit non-academic screen time ≤ 2 hrs/day</td>
</tr>
<tr>
<td>3+ servings low fat milk/other dairy per day</td>
<td>3+ servings low fat milk/other dairy per day</td>
<td>3+ servings low fat milk/other dairy per day</td>
</tr>
<tr>
<td>Eat with family</td>
<td>Eat with family</td>
<td>Eat with family</td>
</tr>
<tr>
<td>3 meals/day, esp. breakfast; healthy food choices</td>
<td></td>
<td>3 meals/day, esp. breakfast; healthy food choices</td>
</tr>
<tr>
<td>Protect hearing</td>
<td>Protect hearing</td>
<td>Protect hearing</td>
</tr>
</tbody>
</table>

## Social and Academic Competence

<table>
<thead>
<tr>
<th>Early</th>
<th>Middle</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay connected with family</td>
<td>Stay connected with family, friends</td>
<td></td>
</tr>
<tr>
<td>Follow family rules, curfews</td>
<td>Follow family rules, curfews</td>
<td>Recognize that some friendships change</td>
</tr>
<tr>
<td>Explore new interests, activities, including helping others</td>
<td>Explore new interests, activities, including helping others</td>
<td>Get involved with the community</td>
</tr>
<tr>
<td>Take responsibility for school work</td>
<td>Take responsibility for school work</td>
<td>Take responsibility for getting to school/work on time</td>
</tr>
<tr>
<td>Talk to parent/trusted adult about problems at school</td>
<td>Talk to parent/trusted adult about problems at school</td>
<td>Consider future education/work plans</td>
</tr>
</tbody>
</table>

## Emotional Well-Being

<table>
<thead>
<tr>
<th>Early</th>
<th>Middle</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find ways to deal with stress</td>
<td>Find ways to deal with stress</td>
<td>Find ways to deal with stress</td>
</tr>
<tr>
<td>Everyone has hard times and disappointments; usually temporary; talk with parent/trusted adult if causing problems</td>
<td>Everyone has hard times and disappointments; usually temporary; talk with parent/trusted adult if causing problems</td>
<td>Everyone has hard times and disappointments; usually temporary; talk with parent/trusted adult or me if can't get back on track</td>
</tr>
<tr>
<td>Get accurate info about physical development, sexual feelings, sexuality; talk to parent/trusted adult or me</td>
<td>Get accurate info about physical development, sexual feelings, sexuality; talk to parent/trusted adult or me; do you have any questions?</td>
<td>Practice problem solving and responsible decision-making</td>
</tr>
<tr>
<td>Sexuality is important to normal development; do you have any questions?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Risk Reduction

<table>
<thead>
<tr>
<th>Early</th>
<th>Middle</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't smoke, drink or use drugs</td>
<td>Don't smoke, drink or use drugs</td>
<td>Don't smoke, drink or use drugs/steroids/diet pills</td>
</tr>
<tr>
<td>Avoid situations with drugs/alcohol</td>
<td>Avoid situations with drugs/alcohol</td>
<td>Avoid situations with drugs/alcohol</td>
</tr>
<tr>
<td>Support friends who don't use</td>
<td>Support friends who don't use</td>
<td>Support friends who don't use</td>
</tr>
<tr>
<td>Talk with me if concerned about your own or family member's use</td>
<td>Talk with me if concerned about your own or family member's use</td>
<td>Think through decisions about sex; consider role of alcohol/drug use and avoid risky places and relationships</td>
</tr>
<tr>
<td>The safest way to prevent pregnancy and STIs is to not have sex, including oral sex</td>
<td>Abstaining from sexual intercourse, including oral sex, is safest way to prevent pregnancy and STIs; plan for how to avoid sex in risky situations</td>
<td>If sexually active, protect against STIs/pregnancy; have a plan for decisions about sex in risky situations</td>
</tr>
<tr>
<td>If sexually active, protect against STIs/pregnancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have a plan for avoiding risky situations; if sexually active,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
14. REFERENCES


