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May 14-15, 2010 • Orlando, FL

Adolescents, HIV, and Sex: Oh My!

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Disclosure of Financial Relationships

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This slide set has been peer-reviewed to ensure that there are no conflicts of interest represented in the presentation.

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SOURCE:
Centers for Disease Control and Prevention, 2008

- ~15,000,000 cases of STDs per year in US
- 2/3 occur in individuals <25 y/o
- Chlamydia and trichomonas are most common bacterial STIs
- Human Papilloma Virus (HPV) epidemic
- 1 out of 4 US 14-19 y/o females with STI
- Half of new HIV cases diagnosed yearly found in individuals <25 y/o



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Adolescents are:



- Not children
- Not adults
- Childlike in thought and behavior maybe
- Adult physically perhaps
- Ongoing brain changes and cognitive maturation



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MILESTONES OF ADOLESCENT DEVELOPMENT

- Body image concerns/puberty: early adolescence mostly, cognitive changes begin
- Independence/emancipation: ongoing throughout, risk-taking during middle adolescence
- Identity formation (including *sexual identity*): ongoing
- Future orientation/delineation of functional role: late adolescence mostly, mortality issues, abstract thoughts

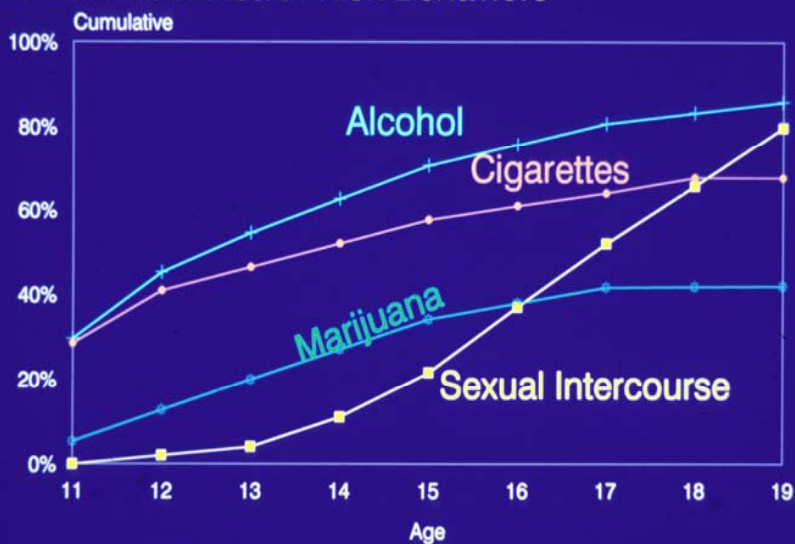
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Involvement in Health Risk Behaviors



Sources: See LIT Module 1 reference list

CDC/AHP 2003 Prevention Messages Review

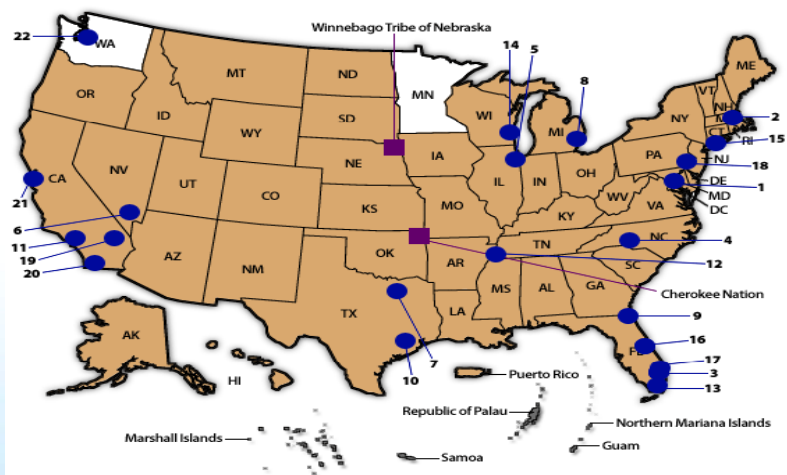
- Despite adolescents' greater risk of STDs, providers often fail to inquire about sexual behavior, assess risk, counsel about risk reduction, screen for asymptomatic infections
- Incorporate HIV testing into primary care services
- Should be tailored to the client's personal risk; interactive counseling approaches are effective
- Should include specific actions necessary to avoid acquisition or transmission of STDs and HIV, including ABCs (abstinence, be faithful, condom use)
- Clients seeking evaluation or treatment for STDs should be informed which specific tests will be performed, and HIV testing should be encouraged



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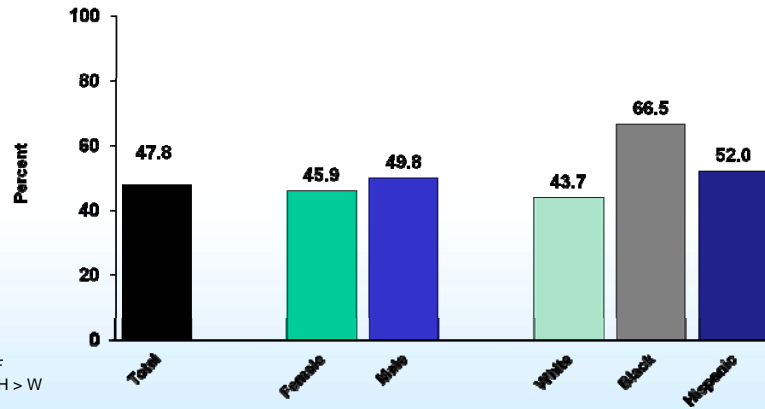
CDC—Youth Risk Behavior Survey (YRBS) State, Territory, and District Participation Map 2007



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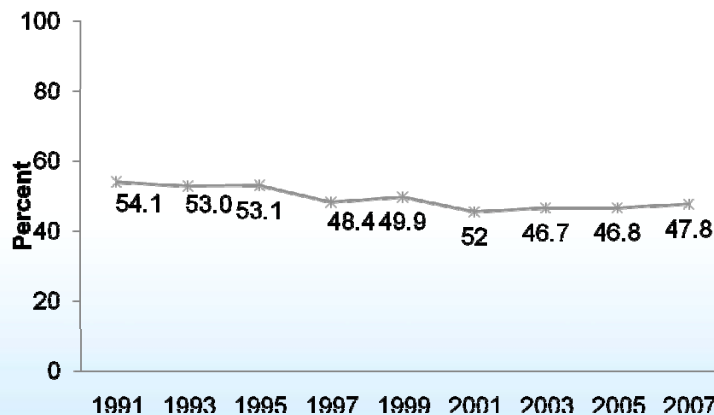
Percentage of High School Students Who Ever Had Sexual Intercourse, by Sex* and Race/Ethnicity,** 2007



National Youth Risk Behavior Survey, 2007

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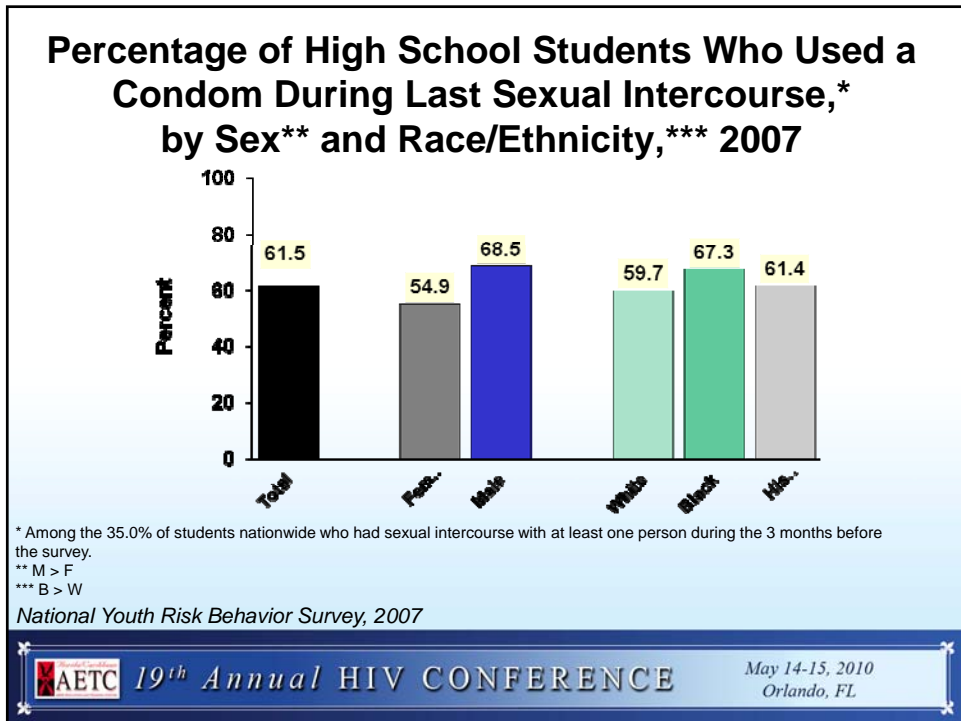
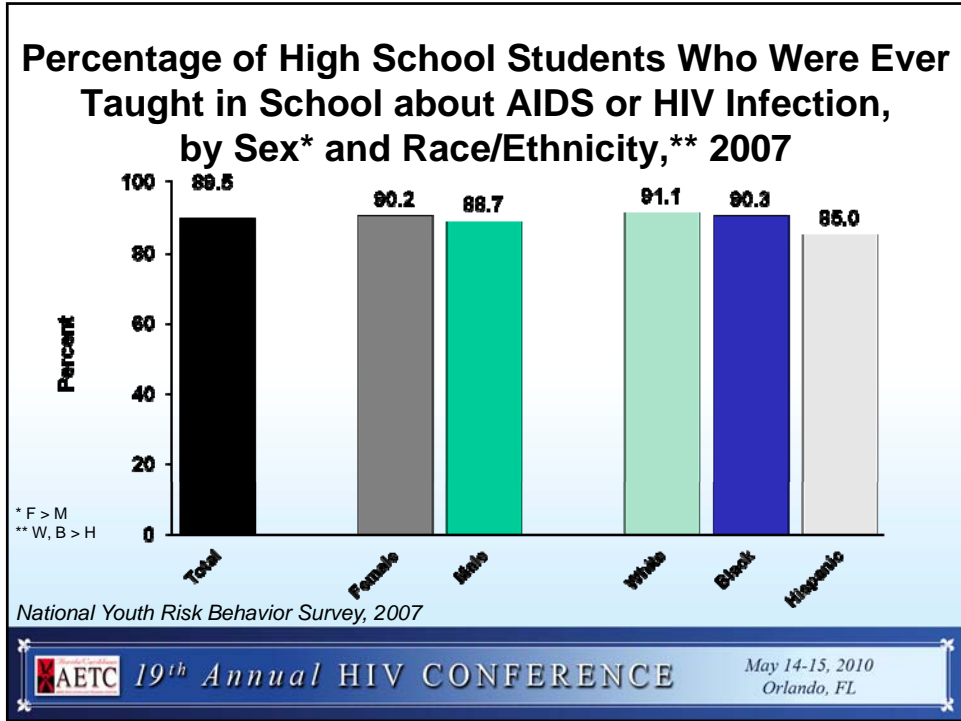
Percentage of High School Students Who Ever Had Sexual Intercourse, 1991–2007



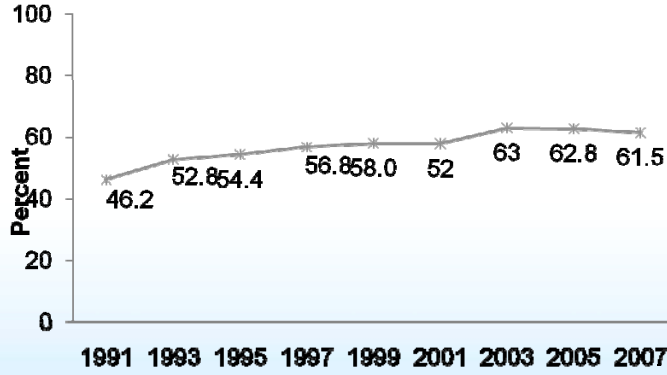
¹ Decreased 1991-2007, p < .05

National Youth Risk Behavior Surveys, 1991 – 2007

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Percentage of High School Students Who Used a Condom During Last Sexual Intercourse,* 1991 – 2007

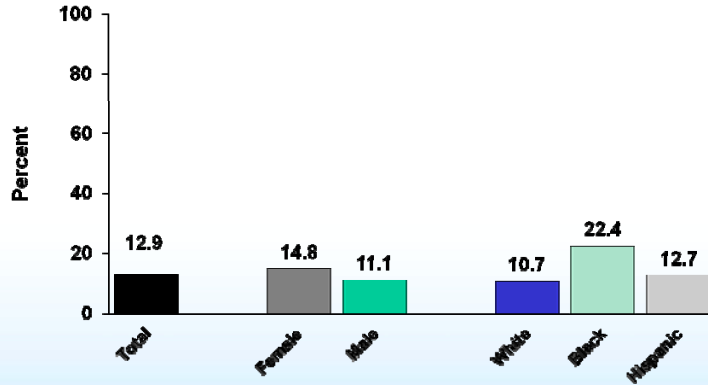


* Among students who had sexual intercourse with at least one person during the 3 months before the survey.
 † Increased 1991-2003, no change 2003-2007, p < .05

National Youth Risk Behavior Surveys, 1991 – 2007

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Percentage of High School Students Who Were Tested for HIV*-- by Sex** and Race/Ethnicity,*** 2007

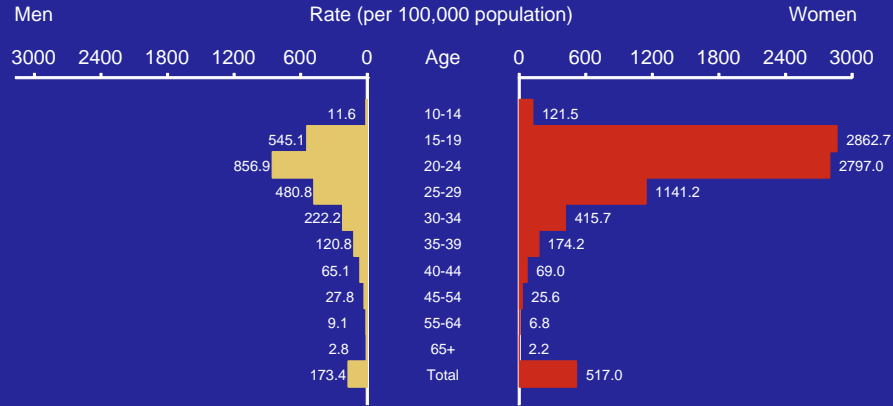


* Does not include tests conducted when donating blood.
 ** F > M
 *** B > W, H

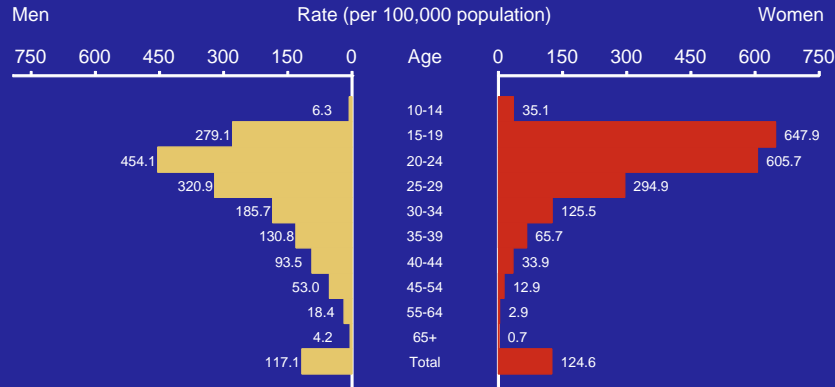
National Youth Risk Behavior Survey, 2007

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Chlamydia — Age- and sex-specific rates: United States, CDC 2006



Gonorrhea — Age- and sex-specific rates: United States, CDC 2006



US HPV Statistics



1. Centers for Disease Control and Prevention. Rockville, Md: CDC National Prevention Information Network; 2004.
 2. Cates W Jr, and the American Social Health Association Panel. *Sex Transm Dis.* 1999;26(suppl):S2–S7. 3. Weinstock H, Berman S, Cates W Jr. *Perspect Sex Reprod Health.* 2004;36:6–10. 4. Burk RD, Ho GYF, Beardsley L, Lempa M, Peters M, Bierman R. *J Infect Dis.* 1996;174:679–689. 5. Bauer HM, Ting Y, Greer CE, et al. *JAMA.* 1991;265:472–477.



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Role of Men in HPV Transmission

- Men acquire and transmit HPV.¹
- Risk factors for HPV acquisition and/or transmission by men include:
 - Young age (peak age group 25–29 years of age)^{2,3}
 - Recent multiple sexual partners^{2,4}
 - Sexual partner with CIN⁵
 - Lack of circumcision^{2,6}
 - Receptive anal intercourse⁴

1. Castellsagué X, Bosch FX, Muñoz N. *Salud Publica Mex.* 2003;45(suppl 3):S345–353. 2. Svare EI, Kjaer SK, Worm AM, Østerlind A, Meijer CJLM, van den Brule AJC. *Sex Transm Infect.* 2002;78:215–218. 3. Insinga RP, Dasbach EF, Myers ER. *Clin Infect Dis.* 2003;36:1397–1403. 4. Chin-Hong PV, Vittinghoff E, Cranston RD, et al. *J Infect Dis.* 2004;190:2070–2076. 5. Bleeker MC, Hogewoning CJ, Voorhorst FJ, et al. *Int J Cancer.* 2005;113:36–41. 6. Castellsagué X, Bosch FX, Muñoz N, et al. *N Engl J Med.* 2002;346:1105–1112.

Estimated Numbers of HIV/AIDS Cases among Male Adolescents and Young Adults, by Transmission Category 2004–2007—34 States

Transmission category	13–19 years		20–24 years	
	N	%	N	%
Male-to-male sexual contact	3,171	87	10,226	83
Injection drug use	122	3	558	5
Male-to-male sexual contact and injection drug use	130	4	551	4
High-risk heterosexual contact*	221	6	910	7
Other/not identified [†]	7	<1	19	<1
Total	3,651		12,264	



Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 34 states with confidential name-based HIV infection reporting since at least 2003. Data have been adjusted for reporting delays and missing risk-factor information.
 *Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.
 †Includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.



Estimated Numbers of HIV/AIDS Cases among Female Adolescents and Young Adults, by Transmission Category 2004–2007—34 States

Transmission category	13–19 years		20–24 years	
	N	%	N	%
Injection drug use	219	11	555	13
High-risk heterosexual contact*	1,694	88	3,846	87
Other/not identified [†]	7	<1	16	<1
Total	1,920		4,417	



Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 34 states with confidential name-based HIV infection reporting since at least 2003. Data have been adjusted for reporting delays and missing risk-factor information.
 *Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.
 †Includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.





Courtesy Jim Oleske

Pediatric HIV Infection in the United States

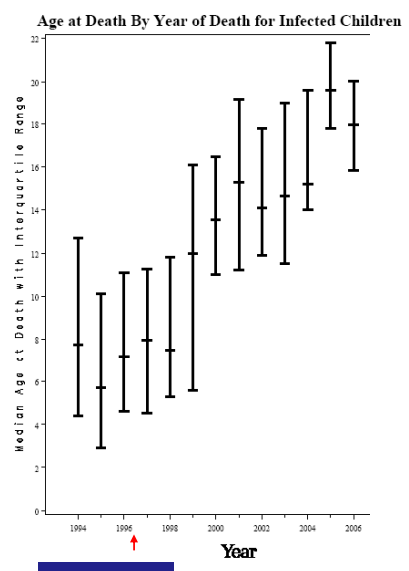
- With effective prevention of most new perinatal HIV infection, it is estimated that <250 newly infected infants are born annually in the U.S. (<2% MTCT rate)
- Effective therapies for HIV in children have prolonged life and quality of life (*Lee GM et al. Pediatrics 2006;117:273-83*).
- The median age of over 3,500 HIV-infected children followed at pediatric clinical trials sites is 14.8 years (*219 study summary July 23 2007*).


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Age at Death (1994-2006) in HIV-Infected Children Enrolled in PACTG 219 Long-Term Follow-Up Study

**3,553 children
Median f/u 5.3 yrs
298 deaths**

**Mean age at death 1994:
8.9 years**



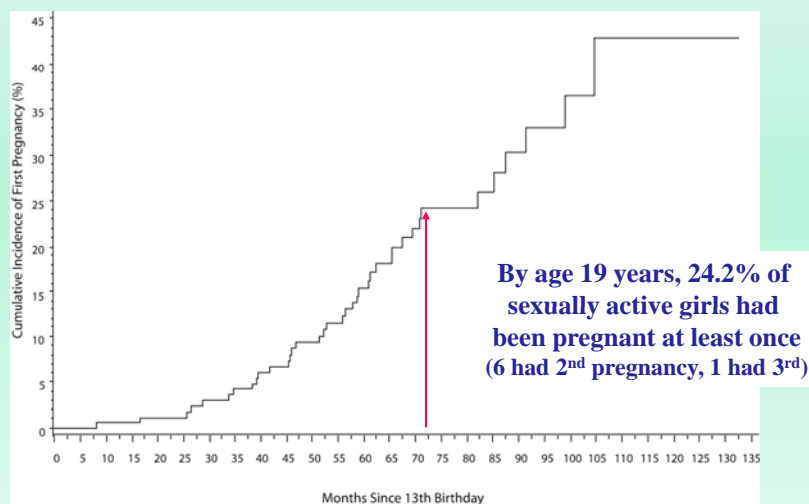
**Mean age at death 2006:
18.2 years**



Courtesy Mike Brady, Paige Williams

HAART Era

Cumulative Incidence of First Pregnancy in 174 Perinatally HIV-Infected Sexually Active Girls Age >13 Years, PACTG 219C
Brogly SB et al. Am J Public Health 2007;97:1047-1052



Review of Existing Florida Laws

- **Minors**

- Confidential health care permitted for STDs, family planning concerns, substance abuse problems, and mental health issues (743).
- Child deemed mature by clinician does NOT need parental consent to be tested for HIV (381)(usually age 11 y/o), since HIV is considered STD in Florida (384.3).
- HIV testing requires informed consent by all (381).
- “Emancipated minor” definition (743).
- Florida law establishes that HIV testing is within the standard of care for providers attending pregnant women.
- Counseling should include a discussion of the availability of treatment to prevent HIV transmission to the child for women who are HIV-positive.



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Emancipated Minor

- **Married**
- **Pregnant – limited to treatment for pregnancy**
- **Parent – limited to treatment of infant/child**
- **Member of military**
- **Self-supporting**
- **Criminal conviction as an adult**
- **Court determination of adult status**



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Confidentiality: Practical Applications

- **Age appropriate office décor and atmosphere**
- **Characteristics of office personnel**
- **Advance notice to parents and patients**
- **Office signage, brochures, letters, etc.**
- **Defining “privacy” and “confidentiality” for youth patients and parents**
- **Confirming maturation process/health consumer support**
- **Communication/contact information for youth**
- **Medical records issues and billing/insurance concerns**



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Attitudes of Interviewer

- Respecting youth as *the patient*, not the parent
- Understanding confidence that parents place in clinicians
- Exhibiting genuine interest and concern
- Showing ability to listen with non-judgmental demeanor
- Being observant of youth's non-verbal communications
- Awareness of own body language
- Avoiding over-identification and argument
- Refraining from giving "advice"; rather, provide education
- Remembering important role in youth's life



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HEADS

- **H:** Home
- **E:** Education (may include employment)
- **E:** Eating practices
- **A:** Activities (including sports/exercise)
- **D:** Drugs and other substances
- **D:** Depression (including mental health)
- **S:** Sexuality and sexual activities
- **S:** Suicide (including depression and mental health)
- **S:** Safety practices
- **S:** Savagery (including violence and criminal/legal)

• (adapted from Goldenring and Rosen, 2004)



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Sexual History

- **Comfort with confidentiality and privacy precepts**
- **Establishment of “need to know”**
- **Non-judgmental questioning manner**
- **Gender-neutral questions about sexual practices/activities**
- **Contraception knowledge and use**
- **History of STDs? Symptoms of STDs presently?**
- **History of molestation/abuse, forced sex, rape, etc.**
- **Sexuality concerns**
- ***Any questions from patient?***



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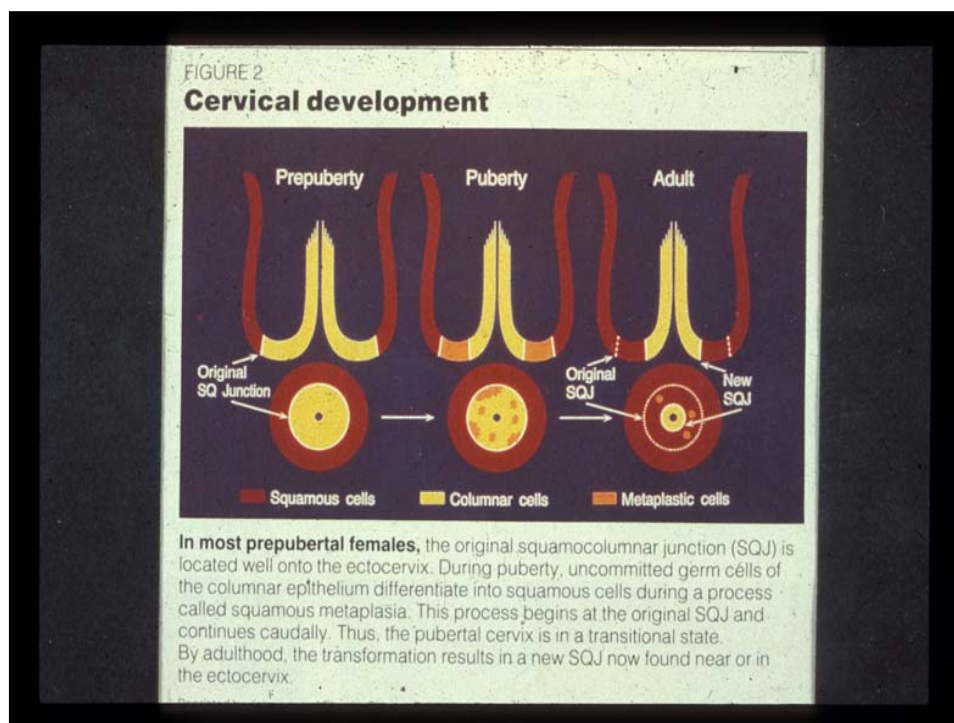
Physical Exam for Adolescents

- **Privacy and modesty importance**
- **Further history-taking opportunity**
- **Assurance of normalcy of changes (especially for patient)**
- **Growth monitoring, including weight and BMI**
- **Tanner staging (Sex Maturity Rating)**
- **Blood pressure, scoliosis screening, vision testing**
- **Pelvic examination for females?**
- **Rectal exam not routine, but considered**
- **Opportunity for education, prevention counseling, etc.**



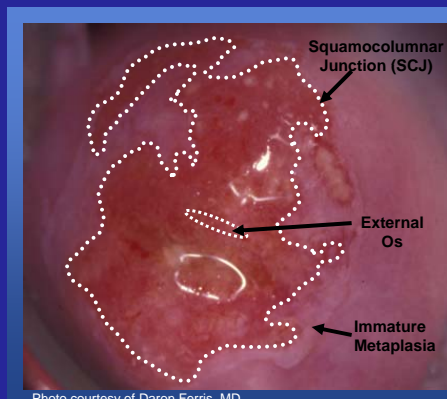
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Biological Factors Increasing Susceptibility of Female Adolescents to HPV Infection

- Inadequate production of cervical mucus, which may act as a barrier against infection^{1,2}
- Immature columnar epithelial cells in the transformation zone of the cervix are especially susceptible to HPV^{1,2}
- Incomplete local immunity against certain infections^{1,2}
- Increased susceptibility to minor trauma during sexual intercourse^{1,2}



1. Kahn JA. *Curr Opin Pediatr.* 2001;13:303–309. 2. Rager KM, Kahn JA. *Curr Women Health Rep.* 2002;2:468–475.

ACOG

Pap Smear—Revised Recommendations, 11/09

- Women should have their first cancer screening at age 21.
- Moving the baseline cervical screening to age 21 is a conservative approach to avoid unnecessary treatment of adolescents which can have economic, emotional, and future childbearing effects.
- Women from ages 21 to 30 be screened every two years instead of annually, using either the standard Pap or liquid-based cytology.
- Women age 30 and older who have had three consecutive negative cervical cytology test results may be screened once every three years with either the Pap or liquid-based cytology.
- Women with certain risk factors may need more frequent screening, including those who have HIV, are immunosuppressed, were exposed to diethylstilbestrol (DES) in utero, and have been treated for cervical intraepithelial neoplasia (CIN) 2, CIN 3, or cervical cancer.



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Testing for STIs

- **No single test detects all STIs.**
- **No test is perfect (false positive, false negative).**
- **Teens often think that clinics routinely test STIs.**
- **Screening tests (when no symptoms are present).**
 - HPV (visual examination; Pap smear, ThinPrep)
 - Chlamydia, gonorrhea (tests on genital secretions, at affected sites, or urine). Includes culture, DFA, NAAT.
 - HIV, syphilis (specific tests)
 - No reliable test for herpes when symptoms are absent



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Prevention for Youth

- **Sexual activity is NOT a requirement for friendship or social acceptance.**
- **Not everyone is “doing it”.**
- **Abstinence works best.**
- **This does NOT mean life-long celibacy.**
- **There are alternatives to intercourse.**
- **Use condoms for all sexual activities every time.**



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Prevention for Youth

- **Continued school-based risk reduction education (including abstinence information).**
- **Greater efforts to reach out-of-school youth (drop-outs, homeless/runaway, juvenile offenders).**
- **Targeted efforts toward young gay/bisexual males.**
- **Partnering with community-based programs.**
- **Integrating with substance abuse programs.**
- **Attending to treatments and condom availability.**
- **Assuring Hepatitis B and HPV immunizations.**
- **Sustained efforts!**



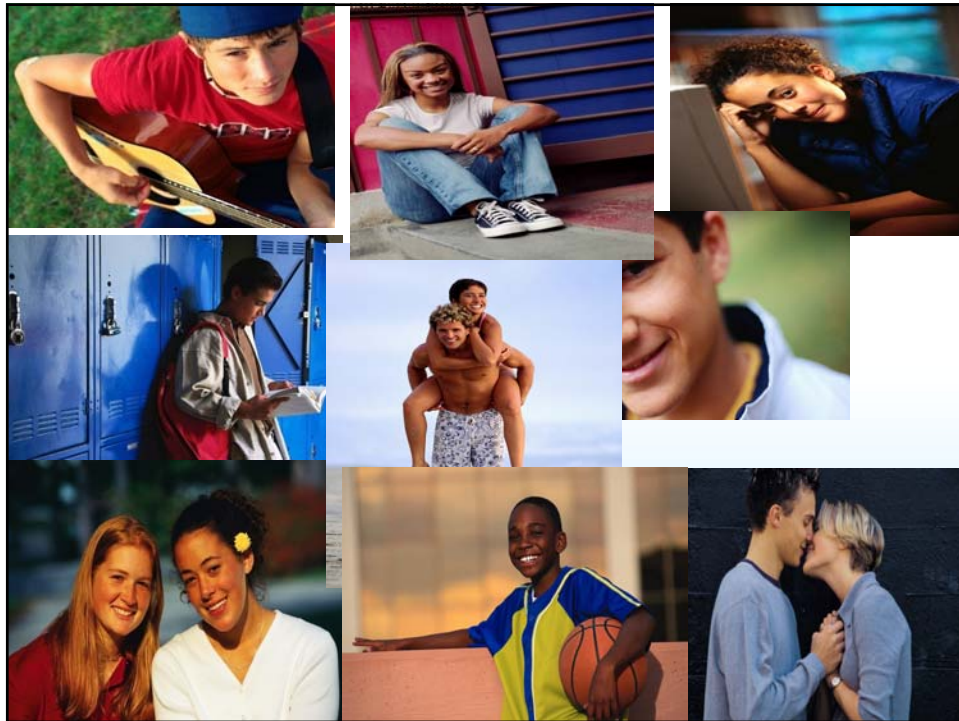
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RESOURCES

- CDC Website: www.cdc.gov
- Florida Department of Health: www.doh.state.fl.us
- Advocates for Youth: www.advocatesforyouth.org
- Kaiser Family Foundation: www.kff.org
- **Adolescent Health Care: A Practical Guide (Fifth Ed)**, Neinstein LS, et. al. Lippincott, Williams & Wilkins, Philadelphia PA, 2008, Chapters 60-67 (pp767-859).
- **Sexually Transmitted Diseases Treatment Guidelines; MMWR 55 (RR-11)**, CDC, 2006; 1-94.

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