

# Individual Behavioral Factors that Place Adolescents at Risk for HIV Infection

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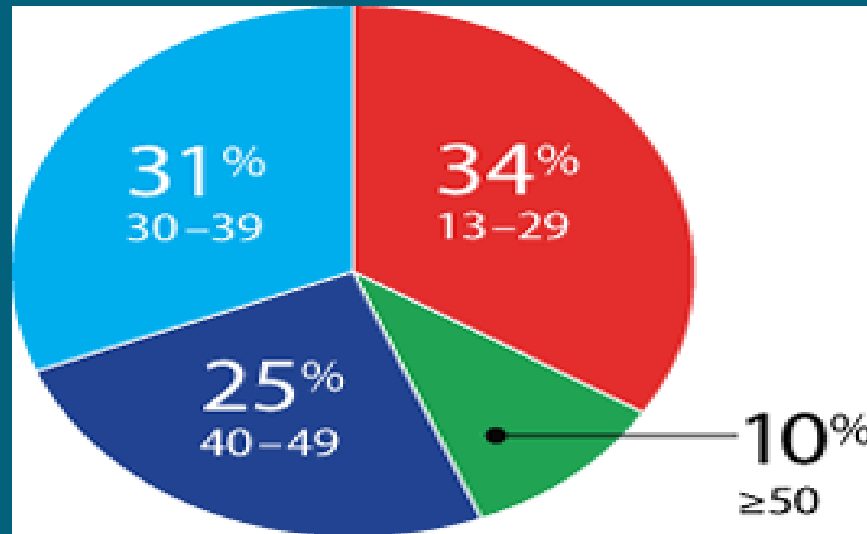
# HIV and AIDS Among Adolescents

# New CDC HIV Estimates

- In August, 2008, the CDC released new estimates of HIV infection in the United States which demonstrated that the epidemic was much worse than originally expected.
- The CDC estimates that there are 1,106,400 adults and adolescents currently living with HIV/AIDS.
- The CDC also reported that the number of new infections in 2006 was estimated to be 56,300 — a jump from the previously reported 40,000.

# Adolescents and HIV

- In 2006, the CDC estimates that more than 1/3 of all new infections occurred in Adolescents and Young Adults ages 13-29.
- Most impacted = Female adolescents of color and male adolescents who have sex with other males.
- Both populations: experience varying degrees of social control and power, and experience oppression in the form of sexism, racism, and heterosexism.



Trends in HIV Infection in 2006, by Age

# CDC HIV Diagnoses: Adolescents (ages 13-24) from 1999-2003\*

- New HIV diagnoses among females decreased ( $p = .027$ ).
- New HIV diagnoses among males increased ( $p < .005$ ).
- Most significant increases among males:
  - 16-19 years of age ( $p = .004$ )
  - 20-24 years of age ( $p = .004$ )
- Modes of transmission for males:
  - Only male-to-male sexual contact increased ( $p < .0001$ ).

\*Rangel, Gavin, Reed, Fowler, & Lee, 2006

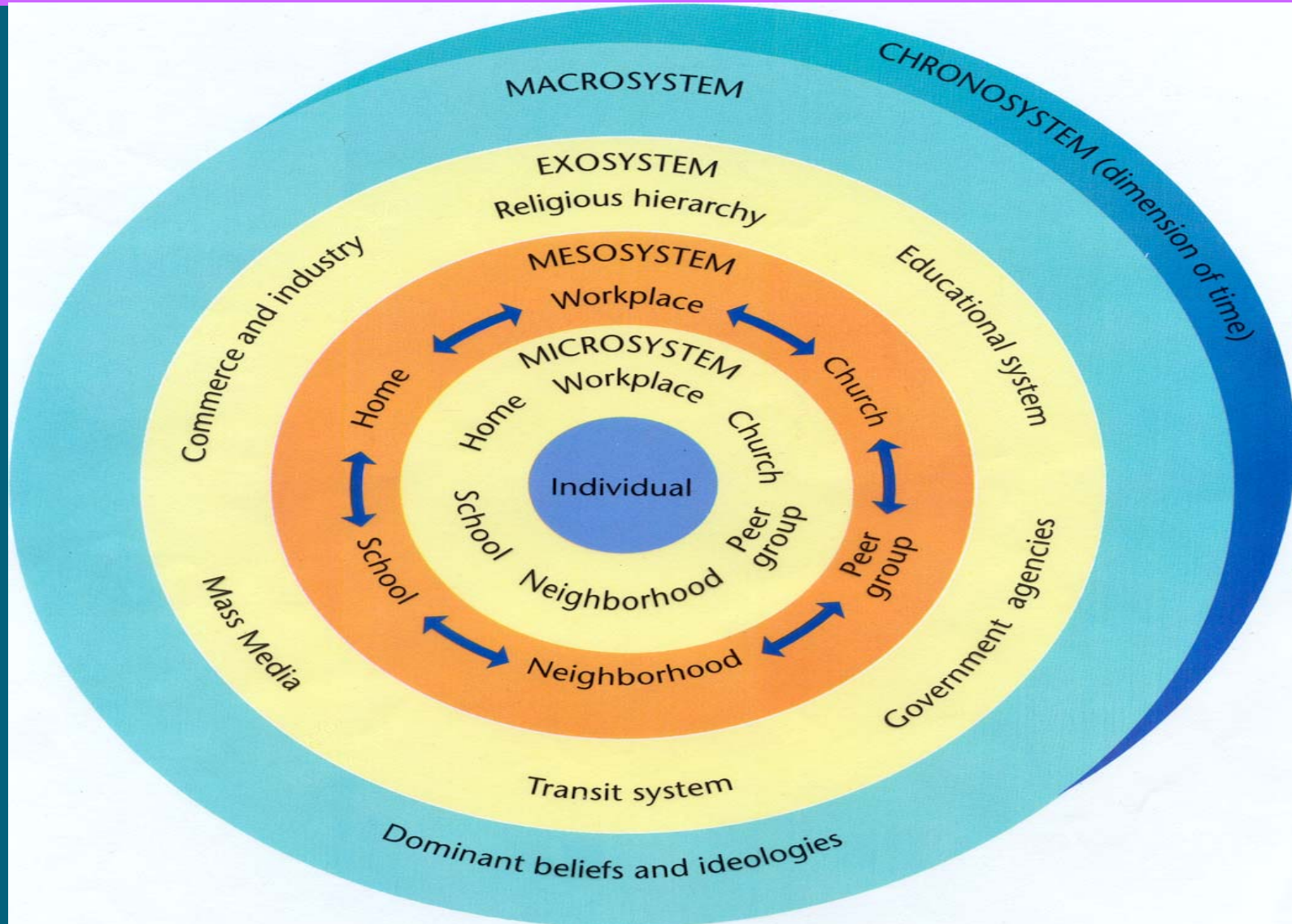
# CDC HIV Diagnoses: YMSM 2001-2004\*

- **Increases in HIV Infection Rates:**
  - Males 13-19 years: Increased 14% per year ( $p<.01$ ).
  - Males 20-24 years: Increased 13% per year ( $p<.01$ ).
  - These rates were higher than for all other ages of men.
- **Ethnic differences in HIV Diagnosis—Youth Ages 13-19 in 2004:**
  - African American 19 times higher than White
  - Latino 5 times higher than White

*\*Hall, Byers, Ling, & Espinoza, 2007*

# Adolescent Development

# Bronfenbrenner's Ecological Systems Theory of Human Development





# Adolescence vs. Emerging Adulthood

- Adolescence is often broadly defined as the developmental period between puberty and adulthood
  - Usually starting from age 10-12, going up to 18-20
- “Emerging adulthood” has been used to describe the period between the ages of 18-29 when persons are beyond adolescence, but are not quite mature adults (Arnett, 2000; 2001; 2004). It is the age of:
  - 1. *Identity explorations, of trying out various possibilities, especially in love and work.*
  - 2. *instability.*
  - 3. *the most self-focused age of life.*
  - 4. *feeling in-between, in transition, neither adolescent nor adult.*

# Adolescent Development

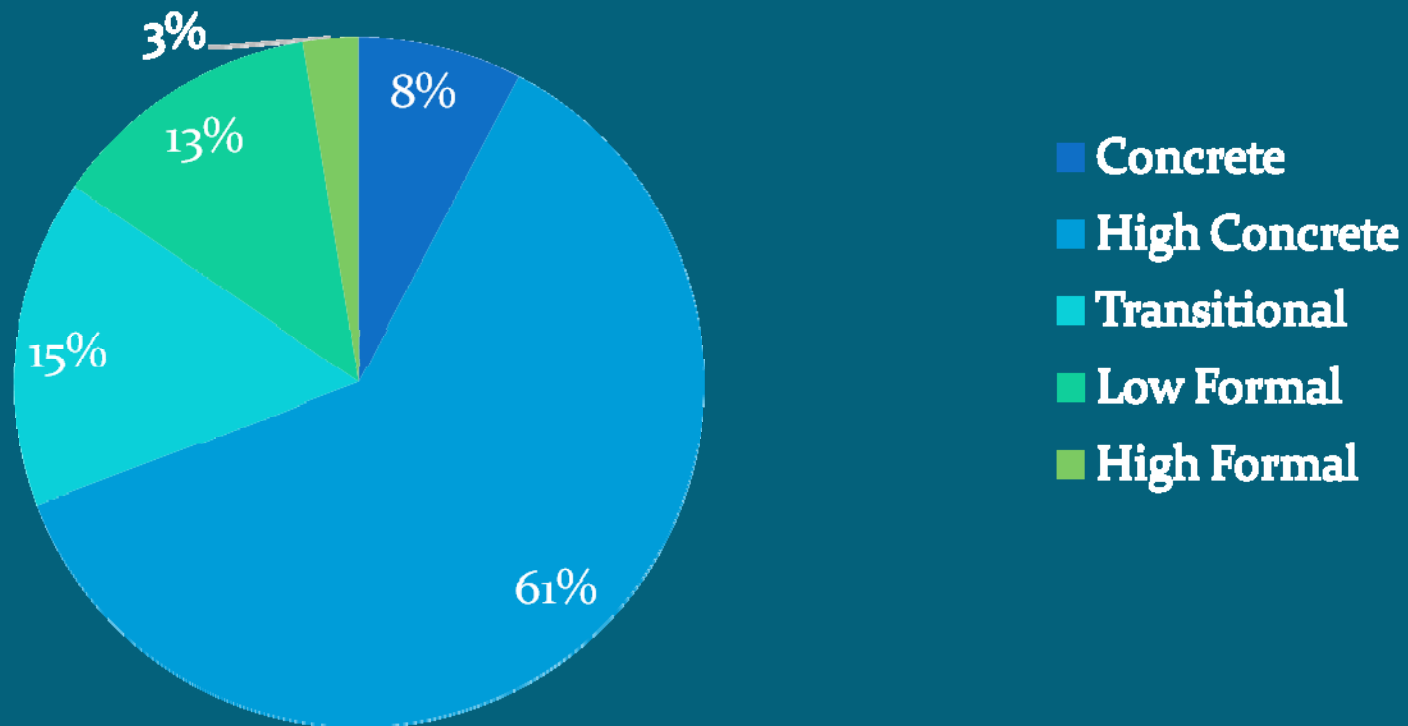
- A time of transitions:
  - Biological changes
    - Sexual maturation and physical growth
  - Cognitive changes
    - Qualitative changes in the way adolescents think
    - Quantitative changes in intelligence and information processing
  - Psychological changes
    - Development of identity, emotions, self-concept, and self-esteem
  - Social changes
    - Social relationships, dating, moral judgment, and value clarification

# Cognitive Development

- Adolescence is marked by the emergence of Formal Operational Thought (Piaget, 1955)
  - Introspection
    - Thinking about thinking
  - Abstract thinking
    - Going beyond what is concrete to what is possible
  - Logical thinking
    - Being able to consider all facts and ideas to form conclusions
  - Hypothetical reasoning
    - Formulating hypotheses and examining evidence for them
- Formal reasoning allows youth to
  - Become more aware of the complexities of health and illness
  - More sophisticated thinking about internal and external factors impacting their health

# Cognitive Development

- Is formal operational thought really achieved?
  - On Arlin Test of Formal Reasoning (n = 42; mean age 20)



# Cognitive Development

- A growing body of neurobiological research and imaging studies suggest that adolescents may be especially prone to engage in risky behaviors, including sexual risk and substance abuse, due to developmental changes in the brain (Galvan et al., 2006; 2007).
- Biologically based changes in neural systems of emotion and motivation leads to (Dahl, 2004):
  - Proclivity toward high-intensity emotional states
  - Greater inclination to seek experiences that create high-intensity feelings (i.e. sensation seeking)
  - Predilection for risks, increased desire for novelty and thrills
  - Impulsive decision-making

# Psychological Development

- Major psychological issues of adolescence
  - Identity Development
  - Autonomy
  - Intimacy
  - Sexuality
  - Achievement
  - Contextual influences
  - Families, peers, school

# Onset of Mental Health Problems

- Depression among adolescents is common, episodic
  - Associated with difficulties in relationships, impaired school and work performance.
  - Can be a temporary response to many situations and stresses.
- In adolescents, depressed mood is common because of:
  - The normal process of maturing and the associated stress
  - The influence of sex hormones
  - Need for independence creates conflicts with parents
- It may also be a reaction to a disturbing event, such as:
  - The death of a friend or relative
  - A breakup with a boyfriend or girlfriend
  - Failure at school

# Social Development

- Social development needs of adolescence:
  - Need to establish caring, meaningful relationships
  - Need to broaden childhood friendships by meeting new people of differing backgrounds, experiences, and ideas
  - Need to find acceptance, belonging, recognition, and status in social groups
  - Need to learn about, adopt, and practice dating patterns and skills that contribute to personal development
  - Need to find acceptable masculine and feminine role models



# Adolescent Sexuality

- For adolescents, sexuality is related to accomplishing important developmental tasks:
  1. Becoming independent of parents (autonomy)
  2. Establishing one's own moral system (moral development)
  3. Establishing an identity—especially a sexual identity (identity development)
  4. Developing the capacity for an intimate relationship

# Adolescent Risk Behavior

# Adolescence and Sexual Risk Behavior

- Adolescence is a developmental period characterized by experimentation and risk taking behavior
  - may partially be driven by invincibility beliefs (Stevenson et al., 1995).
- Feelings of invulnerability to threat, disease and disaster help serve the developmental needs of declaring one's autonomy as well as exploration of different identities (Schulenberg et al., 1997; Stevenson et al., 1995).
- However, these beliefs could result in poor motivation to have protected sex.
- Very young adolescents may not have the cognitive maturity necessary to anticipate consequences of unprotected sex (Salazar et al., 2004; Smith, 1997; Cothran & White, 2002).

# Adolescent Sexual Activity

- Sexual activity involves a wide range of behaviors.
- Adolescents today are considerably more likely to experiment more with a variety of sexual techniques.
- Serial monogamy vs. concurrency?
  - Serial monogamy is characterized by a series of long- or short-term, exclusive sexual relationships entered into consecutively over the lifespan
  - Sexual concurrency is characterized by maintaining sexual partnerships that overlap in time.
    - Commonly reported among youth
    - Need for “back-up” partner; socially distinct partners (school boyfriend vs. neighborhood guy)
    - Greatly increases risk for STIs and HIV

# Youth Risk Behavior Surveillance System (YRBS)

- These data are from the national survey, 39 state surveys, and 22 local surveys conducted among students in grades 9--12 during January--December 2007.
- 47.8% of students had had sexual intercourse during their lifetime.
- Overall, the prevalence of having had vaginal sexual intercourse was higher among African American (66.5%) than White (43.7%) and Latino/a (52.0%) students.
  - African American Males: 72.6%
  - Latino Males: 58.2%
  - White Males: 43.6%
  - African American Females: 60.9%
  - Latina Females: 45.8%
  - White Females: 43.7%
- 7.1% of students had vaginal sexual intercourse for the first time before age 13 years

# Youth Risk Behavior Surveillance System

(continued)

- 14.9% of students had had sexual intercourse during their lifetime with >4 sex partners.
- Approximately one third (35.0%) of students nationwide had had sexual intercourse during the 3 months preceding the survey (i.e., currently sexually active).
- Among currently sexually active students, 61.5% reported that either they or their partner had used a condom during last sexual intercourse. These rates were highest among African American males (74%).
- Among currently sexually active students, 16.0% reported either they or their partner had used birth control pills to prevent pregnancy before last sexual intercourse.

# Substance Use

- Approximately 26% of high school students report alcohol use and 9% report cannabis use before age 13, with rates of use steadily increasing with age (CDC, 2006).
  - By the time teens reach the 12<sup>th</sup> grade, 58% report having been drunk, 37% report binge drinking (5+ drinks once or twice each weekend in the last 30 days) (Eaton et al., 2006; Johnston et al., 2006).
- More than 1 in 4 adolescents have used some illicit drug other than marijuana by the 12<sup>th</sup> grade (Johnston et al., 2006).
  - Nonmedical prescription drug use, particularly Vicodin, has skyrocketed in the adolescent population. In 2008, 15% of 12<sup>th</sup> graders reported prescription drug use.
- Among currently sexually active students, 22.5% had drunk alcohol or used drugs before last sexual intercourse (YRBS).

# Psychopathology and HIV Risk

- Adolescents with psychiatric problems have an *elevated* risk for contracting HIV (Brown et al. 1997; Donenberg et al., 2001, 2002, 2004; Diclemente et al., 1993).
- A number of factors have been attributed to this increased risk:
  - not personalizing the risk of HIV – “won’t happen to me”
  - high rates of drug/alcohol use which can impair decision making abilities
  - a high prevalence of sexual activities with multiple or high risk partners along with inconsistent condom use.
  - having peers with high-risk norms (McFarlane et al. 1995)
  - impaired judgment/cognitive deficits
  - exposure to adverse conditions like homelessness



# HIV Prevention among Adolescents

# Adolescent HIV Prevention

- Provide clear messages about modes of transmission & condom use.
- Teach and practice communication skills.
- Address the range of social, cultural, economic, and political forces that impact risk/protection.
- Encourage openness in discussing sexuality.
- Address role of substance use in increasing sexual risk.
- Address role of psychological factors (e.g., self-esteem, depression).
- Involve the family (when possible).
- Explore the role of historical, psychological, and structural factors that influence sexual risk/protection.
- Make programs fun, interactive, and interesting.

# Factors to Address in HIV Prevention Programs for Youth

- **Developmental (cognitive, identity, autonomy)**
- **Linguistic/Language (ethnic, youth)**
- **Social (friends, peers)**
- **Community/Environmental (neighborhood, city)**
- **Culture (ethnic, youth, lgbt)**
- **Societal (oppression, marginalization)**

# Prevention at Multiple Levels

- Individual level
  - Focus on changing risky behaviors
- Couple/family level
- Community level
  - Community-level programs can reach large numbers of people and can therefore be cost-effective
- Policy/legal level
  - Changing structural factors such as poverty, discrimination and lack of power for women.

# Bronfenbrenner's Ecological Systems Theory of Human Development

