

# Fact or Fiction? Substance Abuse Knowledge and Education in Adolescents



# Background

- AMA defined 21 critical objectives to improve adolescent health in their *Healthy Youth 2010* report
- Included in these objectives are tobacco use, use of illicit substances, binge drinking, and riding in a vehicle with persons under the influence of alcohol
- Reducing the number of HIV/AIDS infections is also a targeted outcome

# Background

- 57% of kids have tried cigarettes by 12<sup>th</sup> grade, and 27% of 12<sup>th</sup> graders are smokers
- Binge drinking increased ~4% amongst 8<sup>th</sup> through 12<sup>th</sup> grade students in the 1990s
- In 2002, 24% of drivers age 15-20 who were killed in car crashes were intoxicated
- In 1998, 10% of children age 12-17 admitted using illicit drugs in the month prior to being surveyed

# Background

- It is widely believed that use of tobacco, alcohol, and/or marijuana can lead to even higher risk substance abuse
- High risk substances are not only potentially lethal by themselves but can also lead to transmission of HIV

SO HOW DO WE BEST PREVENT  
SUBSTANCE USE/ABUSE IN CHILDREN?

# Purpose

- Determine the level of knowledge of adolescents about common substances of abuse and the dangers of these substances
- Assess attitudes of children and their parents/guardians about the current climate of substance abuse
- Establish an educational plan for adolescents regarding the dangers of substance abuse

# Methods

- Recruited 4<sup>th</sup> and 5<sup>th</sup> grade students in Ogle County to take part in this project
- Obtained consent from the school principal as well as the parents/guardians to allow the students to participate
- Sent home an independently designed survey to the parents/guardians to assess their attitudes regarding substance abuse

# Methods

- Students were asked about their general knowledge of common substances of abuse as well as their attitudes regarding drug use
- They were then asked about the physiological dangers of substance abuse on a survey adapted from **Adolescent Substance Abuse Prevention Program (ASAP)**
- Education about the dangers of substance abuse was done during remaining class time

# Methods

- Education consisted of:
  - Informal review of answers of True/False survey
  - Presentation of educational posters on the physiological dangers of:
    - Tobacco
    - Alcohol
    - Marijuana
    - Cocaine
    - Methamphetamines
    - Steroids
    - Heroin
    - Inhalants
  - Provided “Tips for Teens” pamphlets on these same substances

# Methods

- Posters review both short- and long-term effects of the use of these substances
- Posters also indicate organs that are affected by using these drugs
- Pictures of healthy and diseased organs were used to illustrate potential damage done by substance abuse

# Results

- Of 280 surveys distributed, only 99 were returned by the parents/guardians
- Parental/guardian surveys were primarily submitted by females
- 41 female students participated
  - 27 in 4<sup>th</sup> grade
  - 14 in 5<sup>th</sup> grade
- 53 male students took part in the project
  - 26 in 4<sup>th</sup> grade
  - 27 in 5<sup>th</sup> grade

# Results

- Parental/guardian surveys showed:
  - Lack of response by **181** parents/guardians
  - Only 62% feel that they are aware of what is being taught to their student at school about drugs and alcohol
  - Everyone agreed, however, that the primary responsibility for education on this subject lies with the parents/guardians
  - Over 80% believe that 4<sup>th</sup> and 5<sup>th</sup> grade is an appropriate age to begin education about substance abuse, although many commented that earlier education should take place
  - Many admitted not being sure what to teach their children on this subject

# Results

- Of the 4<sup>th</sup> grade students surveyed (n=53):
  - 31% of the boys admitted to knowing someone who uses or has used drugs or alcohol
  - 33% of the girls indicated knowledge of individuals who use or have used drugs or alcohol
  - 1 student admitted to having tried drugs or alcohol
- Of the 5<sup>th</sup> grade students surveyed (n=41):
  - 44% of the boys admitted to knowing someone who uses or has used drugs or alcohol
  - 64% of the girls indicated knowledge of individuals who use or have used drugs or alcohol
  - 5 students admitted to having tried drugs or alcohol
- 5<sup>th</sup> grade students on average indicate feeling more aware of the dangers of substance abuse than 4<sup>th</sup> graders
- However, they also more strongly believe there is a drug problem in the school system

# Results

- Only 11% of 4<sup>th</sup> graders and 32% of 5<sup>th</sup> graders surveyed believe that most teenagers DO NOT use drugs or alcohol
- Most also think that legal drugs are safer than illegal/street drugs
- Many students can name at least 2 common substances of abuse
- Yet, they remain naïve about the dangers of these substances

# Results -- % of correct answers

## ■ 4th grade

- Alcohol – 53%
- Tobacco – 49%
- Marijuana – 28%
- Cocaine – 36%
- Crystal Meth – 22%
- Inhalants – 25%
- Steroids – 37%
- Heroin – 29%
- Over-the-counter medications – 21%

## ■ 5th grade

- Alcohol – 60%
- Tobacco – 62%
- Marijuana – 59%
- Cocaine – 65%
- Crystal Meth – 44%
- Inhalants – 59%
- Steroids – 40%
- Heroin – 49%
- Over-the-counter medications – 22%

# Discussion

- Significant lack of participation led to a smaller population than expected
  - Parental/guardian indifference?
  - Lack of student interest on the subject?
  - Other possibilities
- Even so, the data indicate exposures to substances of abuse as early as 4<sup>th</sup> grade
- Some experimentation with drugs or alcohol has occurred by this age as well
- Although improving, a lack of knowledge about the dangers of substance abuse continues to exist
  - Better knowledge comparing 4<sup>th</sup> to 5<sup>th</sup> grade students
  - Result of education or exposure?

# Limitations

- Students and parents/guardians are self-reporting their attitudes and behaviors
- Only one school was used as a study site, thus it may not be an adequate sample
- Are true/false questions the best method of assessing knowledge about the dangers of substance abuse?
- Did the students fully understand the questions?

# Suggestion for Further Study

- Involve more schools as study sites to obtain a better sample size and more diverse population
- Evaluate value of educational sessions using pre- and post-tests
- Perform follow-up surveys during the next school year to assess the impact of the education in the long-term
- Use medical students at Mt. Morris primary care clinic to provide continuing education through high school