

Strategies for early identification of adolescent substance abuse

Anthony Dekker, DO
Anthony.dekker@ihs.gov
Indian Health Service

2009 Arizona Collaborative for Adolescent Health

Disclosure of Financial Relationships

- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity.
- I do not intend to discuss an unapproved/investigative use of a commercial product/ device in my presentation.

2009 Arizona Collaborative for Adolescent Health

Disclosure

- Anthony Dekker, DO has presented numerous programs on Chronic Pain Management and Addiction Medicine. The opinions of Dr Dekker are not necessarily the opinions of the Indian Health Service or the USPHS. Dr Dekker has no conflicts to report.

2009 Arizona Collaborative for Adolescent Health

Learning Objectives

1. State the demographics of Arizona alcohol and substance use and abuse.
2. Recognize at least three early signs of alcohol and substance use, especially prescription drugs.
3. Identify the impact of adolescent cognitive development on decision-making involving risk behavior including alcohol and substance abuse.
4. Describe at least two communication skills necessary in interacting early, middle and late adolescents.
5. Advise parents and adolescents on substance use and treatment.

2009 Arizona Collaborative for Adolescent Health

2005 Arizona Teens

- 79% had at least one drink of alcohol on one or more days during their life.
- 27% had their first drink of alcohol, other than a few sips, before age 13.
- 47% had at least one drink of alcohol on one or more occasion in the past 30 days.
- 31% had five or more drinks of alcohol in a row (i.e. binge drinking) in the past 30 days.
- 8% had at least one drink of alcohol on school property on one or more of the past 30 days

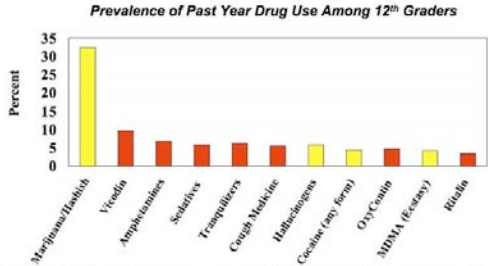
2009 Arizona Collaborative for Adolescent Health

Data Sources

- 2005 National Survey on Drug and Alcohol Use (NSDUH) data from Substance Abuse and Mental Health Services Administration (SAMHSA)
- Drug and Alcohol Services Information Systems 2/11/2007
- NIDA 'Monitoring the Future' study, 2008 data

2009 Arizona Collaborative for Adolescent Health

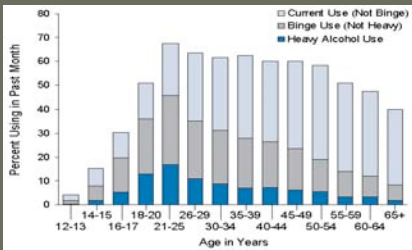
Prescription/Over-the-Counter Drugs Account for 7 Out of 11 of the Most Frequently Abused Drugs



In 2008, 15.4% of 12th graders reported abusing prescription drugs within the past year.

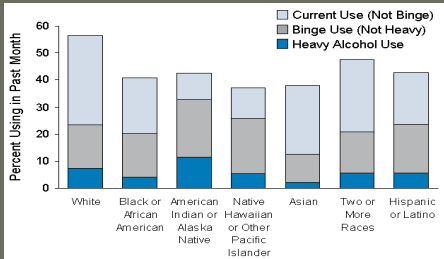
SOURCE: University of Michigan, 2008 Monitoring the Future Study

U.S. Alcohol Use By Age



Current= 1 drink in last 30 days, binge= 5 or more drinks at one time in 30 days, heavy= 5 or more drinks 5 times in 30 days. **2005 National Survey on Drug Use & Health**
2009 Arizona Collaborative for Adolescent Health

U.S. Alcohol Use by Race



2005 National Survey on Drug Use & Health
2009 Arizona Collaborative for Adolescent Health

Age at Onset of Alcohol USE

- First use of alcohol at under 15 y.o. predicts a fourfold increase in lifetime risk for alcohol dependence
- Data gathered from US general population
- Each year that first use is delayed results in decreased risk of alcohol dependence
- Native American communities have varying but LOWER age at onset

2009 Arizona Collaborative for Adolescent Health

AI Age at First INTOXICATION

Age <12	No probs 3%	Abuse 5%	Dependence 92%
13	7%	13%	80%
14	11%	19%	70%
15	19%	22%	59%
16	15%	22%	63%
17	32%	22%	46%
18	39%	20%	41%
19	22%	17%	61%
20	29%	43%	29%
21 and up	72%	15%	12%

2009 Arizona Collaborative for Adolescent Health

Age at onset of alcohol DEPENDENCE

- 2001-2002 NIAAA study
- 40,000 face to face interviews
- 4778 alcohol-dependent patients
 - 15% diagnosable <18 y.o.
 - 47% diagnosable <21 y.o.
 - 66% diagnosable <25 y.o.
- Earlier onset predicts LESS likelihood of ever seeking treatment and MORE severe course

2009 Arizona Collaborative for Adolescent Health

Neurobiology of Alcohol

- Ralph Hingson, Boston University School of Public Health and its Youth Alcohol Prevention Center. "This analysis suggests that interventions that delay drinking onset may not only reduce the acute consequences of drinking among youth, but may help reduce alcohol dependence among adolescents and adults"

2009 Arizona Collaborative for Adolescent Health

Findings

- 47% of who drank before age 14 developed alcohol dependence compared to 9% of those who started after age 21.
- Survey with 43,000 adults
- Reference:
Hingson, R. W., Heeren, T., Winter, M. R. (2006) Age at Drinking Onset and Alcohol Dependence Age at Onset, Duration, and Severity. Arch Pediatr Adolesc Med., 160(7): 739-746.

2009 Arizona Collaborative for Adolescent Health

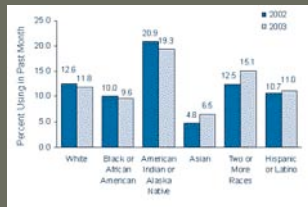
Defining the "Standard Drink"

- A standard drink = 14 g ethanol
 - 12 oz of regular beer or cooler (5% alcohol)
 - 5 oz of table wine (12% alcohol)
 - 1.5 oz of hard liquor (40% alcohol, 80 proof)
 - The average person metabolizes about 1 standard drink per hour



2009 Arizona Collaborative for Adolescent Health
Source: National Institute on Alcohol Abuse and Alcoholism, Bethesda, Md: NIAAA, 2004. NIH Publication No. 04-3769

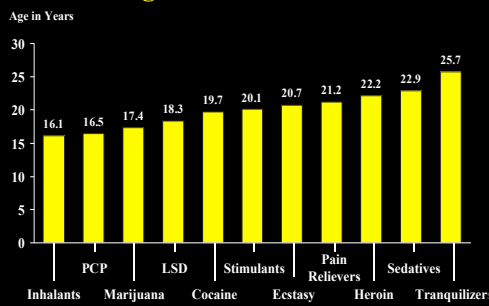
U.S. Past Month Illicit Drug Use by Race: Age 12-17



2003 National Survey on Drug Use & Health: Results

2009 Arizona Collaborative for Adolescent Health

Fig 5.2 Mean Age at First Use for Specific Illicit Drugs among Past Year Initiates Aged 12 to 49: 2005



2009 Arizona Collaborative for Adolescent Health

Marijuana and Psychosis

- Sweden, Netherlands: 2 retrospective reviews
- New Zealand: 2 studies, prospective from birth
- Cannabis use in adolescence associated with 2-3 x increase in schizophrenia risk
- Population-attributable risk of schizophrenia = 8% (removal of cannabis would have led to 8% reduction in schizophrenia cases)

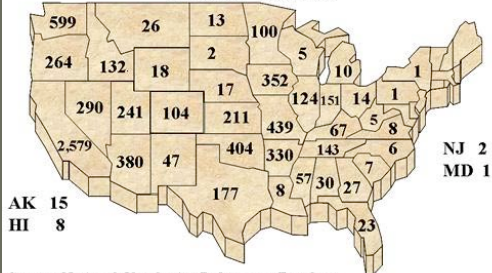
2009 Arizona Collaborative for Adolescent Health

Methamphetamine

- In May 2006, San Carlos Apache Chairwoman Kathleen Wesley-Kitcheyan reported to the Senate Committee on Indian Affairs that of 256 babies born in San Carlos in 2004, 64 tested positive for methamphetamine, and
- Deputy IHS director Robert McSwain reported the number of methamphetamine-related IHS patient services **more than doubled** between 2000 and 2005

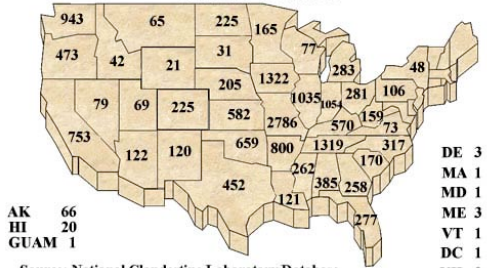
2009 Arizona Collaborative for Adolescent Health

Total of All Meth Clandestine Laboratory Incidents Including Labs, Dumpsites, Chem/Glass/Equipment
Calendar Year 1999



Source: National Clandestine Laboratory Database
Total: 7,438 / 43 States Reporting
Dates: 01/01/99 to 12/31/99

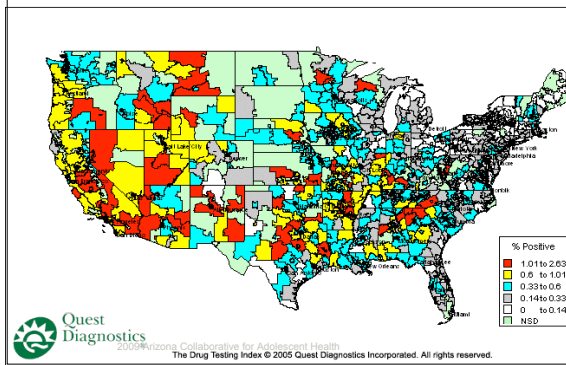
Total of All Meth Clandestine Laboratory Incidents Including Labs, Dumpsites, Chem/Glass/Equipment
Calendar Year 2004



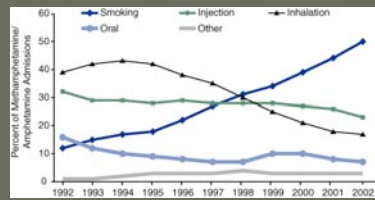
Source: National Clandestine Laboratory Database
Total: 17,033
Dates: 01/01/04 to 12/31/04

2009 Arizona Collaborative for Adolescent Health

Amphetamines Positivity by 3-Digit Zipcode January - December 2004



Amphetamines: Trends in Administration Route



Source Where Psychotherapeutics Were Obtained for Most Recent Nonmedical Use among Past Year Users Aged 12 or Older: 2005

