

**State of Iowa  
Substance Use  
Epidemiological Profile**

**Iowa Epidemiological Outcome Workgroup**

**March 2007**

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In honor of Kristina Barber – who passed on too young  
but left her fingerprints throughout this Epidemiological Profile.

## Executive Summary

In 2006, the Iowa Department of Public Health received funding from the federal Department of Health and Human Services, Substance Abuse and Mental Health Administration's Center for Substance Abuse Prevention, for a State Epidemiological Outcome Workgroup (Workgroup) to develop a state epidemiological profile. The Workgroup included representatives from agencies directly involved with preventing substance abuse in the state. To identify, analyze and select indicators for inclusion in Iowa's epidemiological profile, a separate Data Task Group was formed, which developed criteria for selecting adequate indicators for the profile. The criteria included:

- Data available at State (Iowa) level;
- Sample covers all geographic areas;
- Sample covers age range;
- Data collected at least every two years;
- Measures directly related to or strongly associated with ATOD use;
- Data pertain to consumption or consequence; and
- Data sets have adequate sample size.

The Data Task Group recommended inclusion of approximately forty indicators in the profile, which were largely approved by the Workgroup. Key indicator findings include:

- **Alcohol** is the most frequently used substance in Iowa and across the United States, 54.04% (approximately 1,328,000) of Iowa residents 12 years of age or older are current alcohol users.
- **Alcohol** is the most cited substance of choice by individuals entering substance abuse treatment in Iowa.
- **Binge Alcohol** use (five or more drinks of alcohol once or twice a week) is viewed as less of a risk by Iowans than others in the United States.
- The rate of current **alcohol** use by Iowa adults is similar to the national rate, whereas binge drinking rates in Iowa are significantly higher.
- Among youth, the Iowa rate of current **alcohol** use is similar to the national rate.
- Iowa reports a **binge drinking** rate among 12-to-17-year-old youth that is about 30% higher than the national rate.
- While there is a downward trend in **alcohol** use by youth over the last few years, more than 15% of all students surveyed in 2005 reported using alcohol before turning 13. For every five 11<sup>th</sup>-graders in Iowa, two drank alcohol within the past month.
- Approximately 115 Iowa deaths per year are caused by **alcoholic** cirrhosis, a death rate hovering around 4 per 100,000 from 2003 to 2005.
- The percentage of Iowans aged 12 or older who reported **alcohol** dependence or abuse was significantly higher than the national percentage.
- One-quarter to one-third of all traffic fatalities involved a driver with a Blood **Alcohol** Content (BAC) greater than 0.01.

- Approximately 20,000 **drunkenness and liquor law arrests** were recorded in 2005, the majority of these arrests involved 18-24 year olds.
- **Operating While Intoxicated** arrests per 100,000 Iowans neared 500 in 2004, the highest rate in at least 5 years.
- **Tobacco** use prevalence in Iowa is similar to that of the nation.
- Approximately 800,000 Iowans over the age of 12 use **tobacco**, the majority of which is cigarette use.
- The reported rate of mothers using **tobacco** during pregnancy in Iowa has been between 15-17% of all pregnancies since 2002.
- Youth **tobacco** use in Iowa appears to be on the decline, as evidenced by the number of youth reporting first use of cigarettes before the age of 13, past 30-day use, amount of heavy smoking, and perceived risk of cigarette use.
- **Lung cancer** death rates are on the rise in Iowa. White men aged 55 to 64 years are most at risk to die of lung cancer.
- **Illicit drug** use in Iowa appears to be holding steady at a level lower than the national prevalence.
- Marijuana is the **illicit drug** used by the most Iowans; methamphetamine is second.
- Current **marijuana** use by adults in Iowa is significantly lower than the national rate.
- 18-to-25-year-old Iowans are four times more likely to use **marijuana** than older Iowans, and twice as likely to use marijuana as 12-to-17-year-olds.
- Iowa adults' perception of risk associated with **marijuana** use was similar to the perception of adults nationally.
- **Marijuana** use by 6<sup>th</sup>-, 8<sup>th</sup>-, and 11<sup>th</sup>-graders has decreased significantly between 1999 and 2005.
- The **illicit drug** dependence or abuse rate in Iowa has remained unchanged over the last couple of years, and is similar to the national rate.
- **Drug arrests** have remained stable in Iowa over the past couple of years.
- **Marijuana** accounted for almost two-thirds of all drug arrests in Iowa during 2005.
- **Drug use** is incriminated in the spread of HIV/AIDS infection; approximately 20% of new Iowa HIV/AIDS cases may be linked to illicit drug use in 2005.

Iowa has a binge drinking problem, but its current alcohol and tobacco use rates are similar to the national rate. Use of illicit drugs in Iowa appears to be lower than the national rate.

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## **Introduction**

The State of Iowa supports a rich and diverse cultural population and history. Iowa became the 29th State in 1846. It is known as the Hawkeye State and Des Moines is the capital city. It is home to 13 public and 44 private institutes of higher learning, the rare Loess Hills, and the world famous Iowa State Fair. Iowa is bordered by two great American rivers, the Mississippi and the Missouri on its east and west sides, which made the State part of the Lewis and Clark Expedition. It has a rich agricultural tradition and ranks first in the nation in corn, egg, and pork production, and second in soybean and red meat production from its 93,000 farms.

Iowa is home to nearly 3,000,000 residents; and was home to many famous individuals such as Herbert Hoover, John Wayne, Glenn Miller, Meredith Wilson and Grant Wood, to name a few. While best know for its agricultural roots, Iowa hosts the worlds most advanced Virtual Reality Technology Center, has advanced ethanol as an alternative fuel, and the Iowa Caucuses make it an important political stop for Presidential candidates. Iowa hosted the first National Special Olympics, and is home to the Hy-Vee World Cup Triathlon, the Iowa Corn Indy 250, and the Drake Relays.

The State of Iowa, through its Department of Public Health, undertook a systematic process to identify and analyze substance use and abuse data. This epidemiological profile is the result of a process to identify substance abuse issues for prioritizing prevention services. This report is divided into two major sections that summarize high-quality data reflecting both consumption patterns and consequences of using various substances.

Iowa faces many challenges in effectively addressing substance abuse and mental health problems. The state spent an estimated \$3,678,682,400 in 1998 on burdens imposed by substance abuse (Shoveling Up Report, 2001). An updated figure is expected in the summer of 2007, when the Shoveling Up Report, 2006 is due for release. This figure includes substance abuse costs incurred in such programs as health and mental health, corrections, child and family welfare. The amount spent on research, prevention, and treatment in Iowa is less than one half of the national average (Shoveling Up Report).

## **Background**

In 2006, the Iowa Department of Public Health (IDPH) received funding from the federal Department of Health and Human Services, Substance Abuse and Mental Health Administration's (SAMHSA's) Center for Substance Abuse Prevention (CSAP), for a State Epidemiological Outcome Workgroup (SEOW). IDPH's Division of Behavioral Health and Professional Licensure is the Single State Agency for Substance Abuse prevention. It administers the funding and activities of the SEOW. SAMHSA intends the SEOW to help Iowa initiate preliminary processes to establish the Strategic Prevention Framework as the basis for ongoing state substance abuse prevention needs and outcomes monitoring. The SEOW process involves forming an epidemiological team to assess, analyze, interpret, and communicate data about Iowa substance consumption patterns and

consequences. The two major products resulting from the SEOW's work are the state epidemiological profile, and plans for a system to accommodate the ongoing collection of data for monitoring prevention outcomes.

### **Process**

Former IDPH Deputy Director Janet Zwick formed the Epidemiological Workgroup (Workgroup), by inviting representatives from agencies directly involved with preventing substance abuse in the state. The members of the Workgroup include representatives from:

The Governor's Office of Drug Control Policy  
Iowa Department of Public Health  
Iowa Department of Education  
Iowa Department of Corrections  
Division of Criminal and Juvenile Justice Planning  
Iowa Consortium for Substance Abuse Research and Evaluation at the University of Iowa (Consortium)

A separate Data Task Group was formed to identify, analyze and select indicators for inclusion in Iowa's epidemiological profile. This smaller Data Task Group was, in practice, a sub-group of the Workgroup, with added members of an existing data committee from the Iowa Collaboration for Youth Development. The Data Task Group's findings and recommendations were forwarded to the Workgroup, which made final decisions about which data should be included in the epidemiological profile. The Data Task Group consists of individuals with extensive experience in using specific state- and federal-level data collection processes and data sets. This Data Task Group includes representatives from:

Iowa Department of Public Health  
Iowa Department of Education  
Iowa Department of Public Safety  
Governor's Traffic Safety Bureau  
Division of Criminal and Juvenile Justice Planning  
Iowa Consortium

The Workgroup responsible for producing the Iowa epidemiological profile decided to emphasize applicable National Outcome Measures (NOMs) in the list of indicators. The Data Task Group compiled an original list of approximately 300 indicators for consideration (See Appendix 2 beginning on page 43 for the complete indicators list). This extensive list of potential indicators was created from indicators used by other states involved in the Strategic Prevention Framework State Incentive Grant process, and from Iowa Data Task Group recommendations. The Data Task Group identified potential data sources for each indicator, where possible, and determined their quality and characteristics. They developed criteria as a guideline for selecting indicators to be included in the profile. The following criteria were used in the selection process:

- Data available at State (Iowa) level;
- Sample covers all geographic areas;
- Sample covers age range;
- Data collected at least every two years;
- Measures directly related or strongly associated with ATOD use;
- Data pertain to consumption or consequence; and
- Data sets have adequate sample size.

Additional criteria were applied where similar indicators existed:

- Historical data available;
- Data available at local level;
- Limited redundancy between indicators (some redundancy is acceptable); and
- Closeness to consequence (where applicable).

After the master indicators list was complete and the selection criteria developed, the Data Task Group began to select indicators for the profile (See Appendix 1 beginning on page 41 for the list of indicators included in the Epidemiological Profile). This process took two months and involved frequent member interaction: three in-person meetings; one conference call; and numerous e-mails. Each member submitted comments about the indicators via e-mail and participated in meeting discussions during the selection process. Members suggested data sources, and assisted with securing state-level data.

The Data Task Group analyzed the potential indicators, arranging them according to consumption or consequence for alcohol, tobacco, and illicit drugs. Most of the indicators were discarded for at least one of the following reasons:

- No useful data source was available;
- Significant problems existed with the data source, such as inadequate sample size, unavailability of raw data, and inconsistent reporting; and
- There was a lack of strong relationship or association between ATOD use and a given consequence.

The Data Task Group inventoried potential databases from national sources and state-compiled datasets. Some national datasets were expected to be valid and have integrity, but the Data Task Group found they were not representative of the state because of small or replacement population samples. The Data Task Group decided to use state-level datasets because they were more representative. They included the Behavioral Risk Factor Surveillance System (BRFSS), Vitals Records, birth and death certificates, Hospital Inpatient and Outpatient data, and the IYS (See Appendix 3 beginning on page 51 for the list of datasets in this Epidemiological Profile).

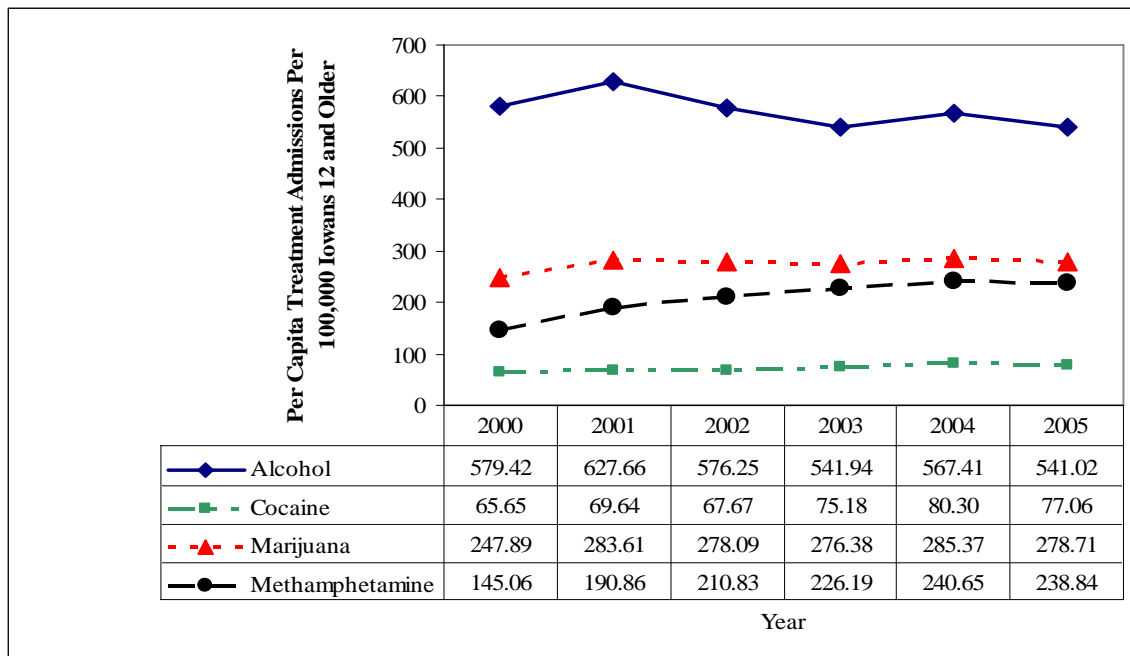
## Results

### *Alcohol*

Alcohol is the substance most frequently used by adults and youth in Iowa and across the United States. The National Survey on Drug Use and Health (NSDUH 2004) found that 54.04% (approximately 1,328,000) of Iowa residents 12 years of age or older had used alcohol during the past month. Of these Iowans, it was estimated that more than one-half (699,000) consumed five or more drinks on at least one occasion during the past month. Of Iowans 12 years of age and older, 28.42% had binge on alcohol during the past month. These figures demonstrate Iowa's large problem with alcohol use. The 2004 NSDUH estimated that more than one-third (33.78%) of Iowans aged 12 years or older felt that five or more drinks of alcohol once or twice a week was a great risk. The national rate for people 12 or older was 41.30%. This difference shows that alcohol use is not deemed as high a risk in Iowa as across the nation.

Alcohol is the most cited substance of choice by individuals on admission to Iowa substance abuse treatment services, reinforcing alcohol as the primary substance of choice in Iowa. Marijuana, methamphetamine, and cocaine are the next most cited substances (Figure 1). These data only reflect the primary substance of choice at admission, so additional substance use is not reported.

**Figure 1:** Primary Substance of Use as Reported upon Entry into Treatment



Source: SARS

## Adult Consumption Patterns

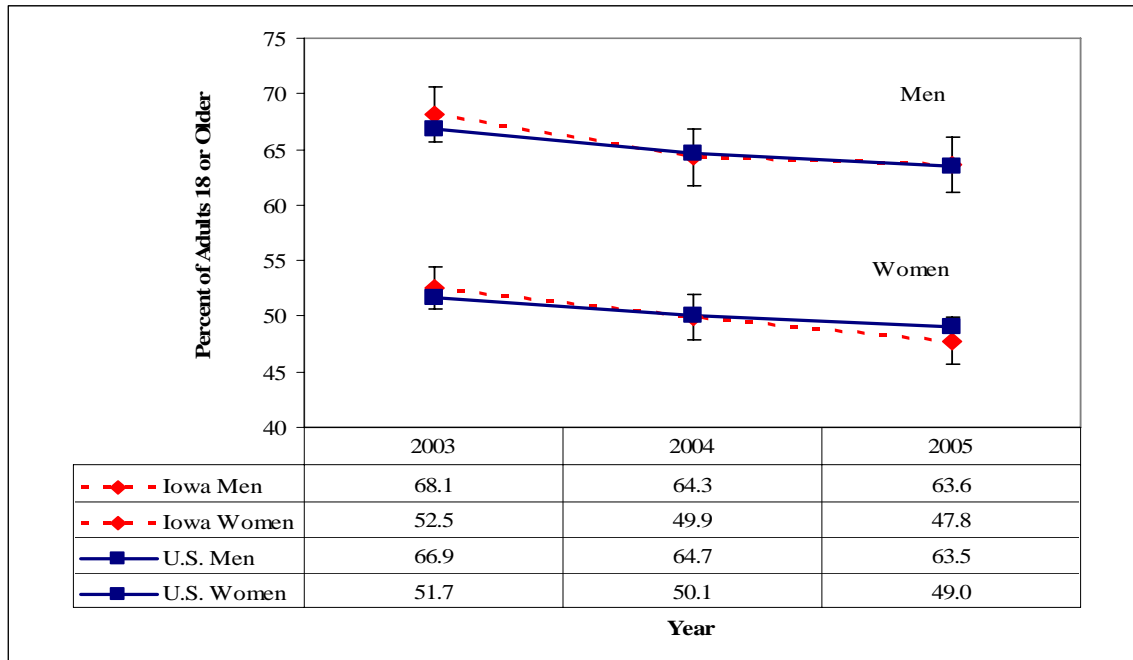
In 2004, more than one-half of Iowa adults had consumed alcohol in the past month as reported in the BRFSS and the NSDUH. More Iowa men than women reported past 30-day alcohol use, similar to the national rates. Estimates based on the 2005 BRFSS show no significant difference between usage rates of men or women at the national and Iowa levels. There is no significant difference in Iowa men's and women's usage rates from year to year (Figure 2). There is no significant difference between Iowa and United States 2005 BRFSS data by age group, as grouped by the BRFSS (Table 1).

Binge drinking, defined by BRFSS as consumption of five or more drinks on one occasion, is significantly higher in Iowa than in the United States. Iowa binge drinking rates, estimated by the 2005 BRFSS for women (9.6%) and men (28.1%), are higher than the respective national figures (Figure 3). Heavy drinking is defined in the BRFSS as the consumption of more than 2 drinks per day by adult men and more than one drink per day by adult women. In 2005, adult men in Iowa had a significantly higher rate of heavy drinking than the national rate. There was no real difference between the heavy drinking rate for Iowa women and women nationally (Figure 4). Fewer Iowans over age 12 view the consumption of five or more drinks of alcohol once or twice a week as a great risk, compared with the national rate. This difference is significant based on the 2002-2003 NSDUH and the 2003-2004 NSDUH (Figure 5). The lower perception of great risk in Iowa versus the United States echoes the difference between Iowa and United States binge drinking rates.

Due to the small number of minority Iowa participants in the NSDUH and BRFSS, and the small Iowa sample sizes, no meaningful comparisons among racial groups can be drawn. Gender strongly relates to alcohol consumption patterns. Men are more likely than women to be current alcohol consumers, to engage in binge drinking, and to be heavy drinkers. This gender effect occurs at both state and national levels.

Women who use alcohol during pregnancy increase the risk of adverse health effects for their babies. In Iowa, 0.7% of pregnant women who gave birth in 2005 reported they used alcohol (Figure 6). This information was collected and reported on birth certificates. This reporting method does not include women who did not have live births because of termination of pregnancy. As a result, the real effect of alcohol on pregnancies cannot be estimated. Some mothers may hesitate to report using alcohol while pregnant because of potential legal or social ramifications, making alcohol usage underreported.

**Figure 2: Alcohol Use in Past 30 Days**



Source: BRFSS

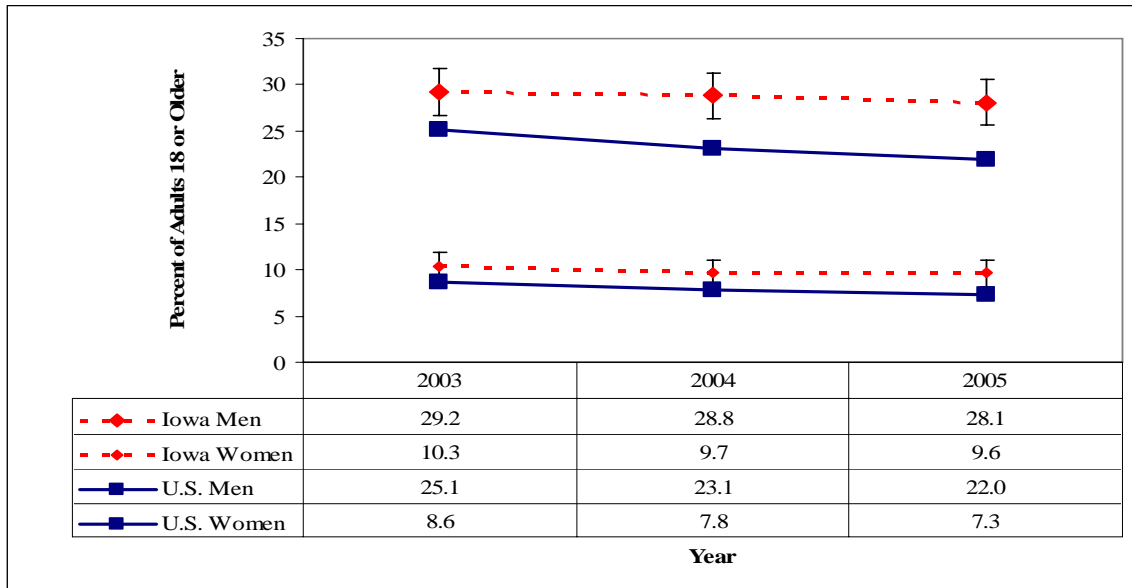
Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Table 1: Percent Reporting Past-30-Day Alcohol Use by Age**

Area and Year	Age					
	18-24	25-34	35-44	45-54	55-64	65+
Iowa 2003	66	71.3	67.1	62.7	56.9	40.4
Iowa 2004	60.8	67.3	65.2	59.6	52.4	37.2
Iowa 2005	58.1	63.3	64.8	58.2	52.4	37.6
U.S. 2003	61.6	64.7	63.8	61	55.4	42.7
U.S. 2004	59.8	63.4	61.1	58.7	53.5	40.2
U.S. 2005	56.4	62.6	61.3	59.1	53.3	39.5

Source: BRFSS

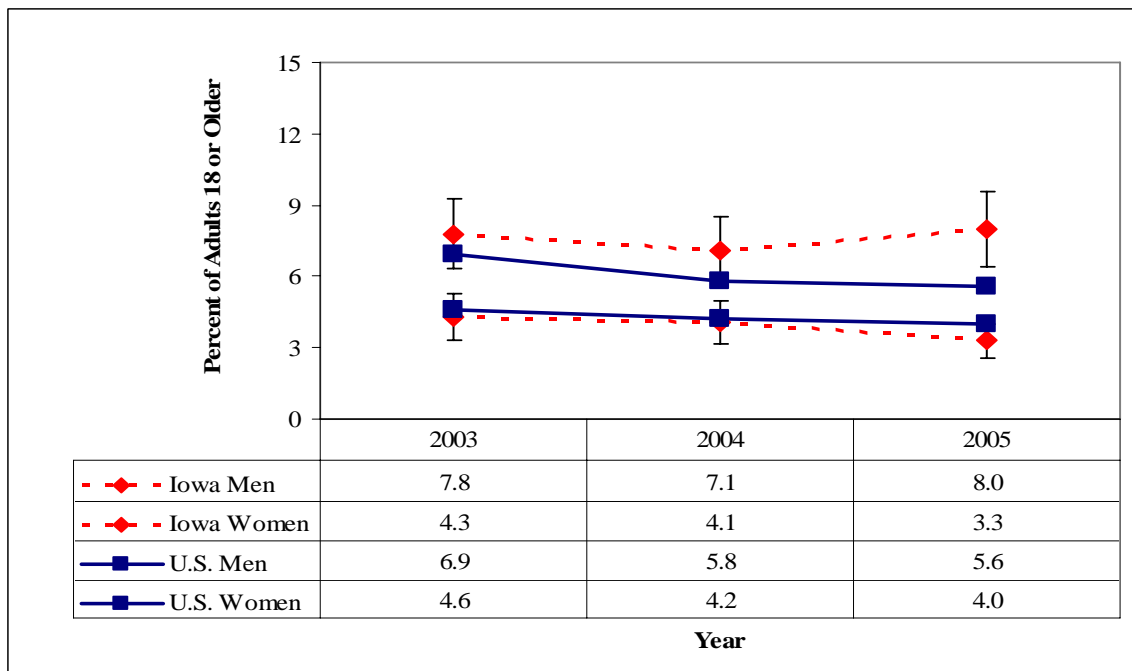
**Figure 3: Percent of Adults Binge Drinking in Past Month**



Source: BRFSS

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

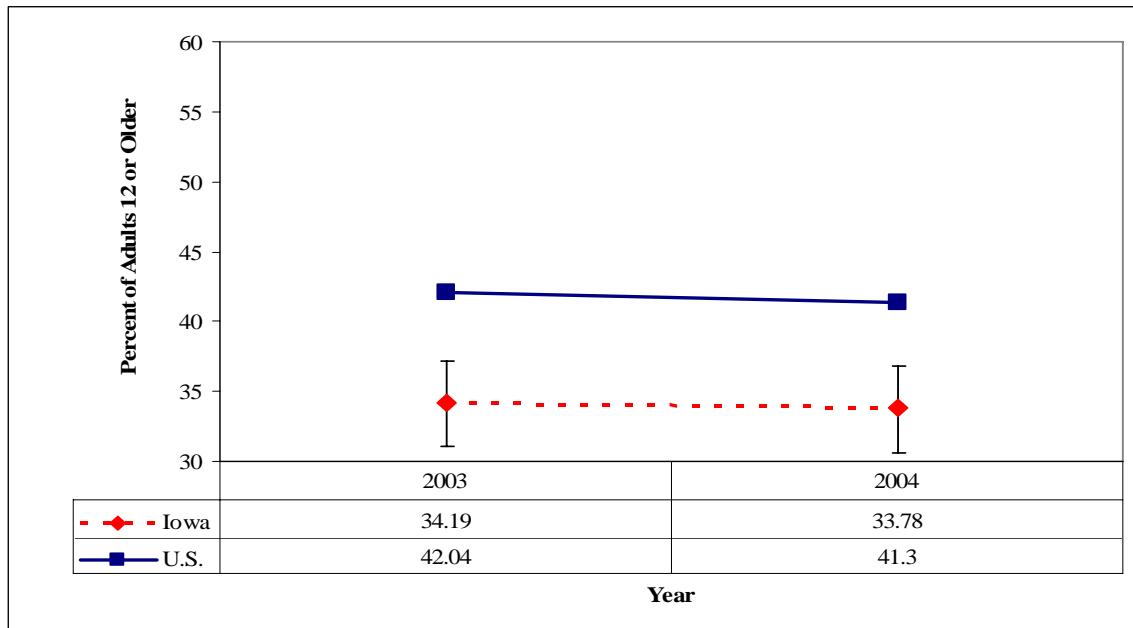
**Figure 4: Percent of Adults Heavy Drinking in Past Month**



Source: BRFSS

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

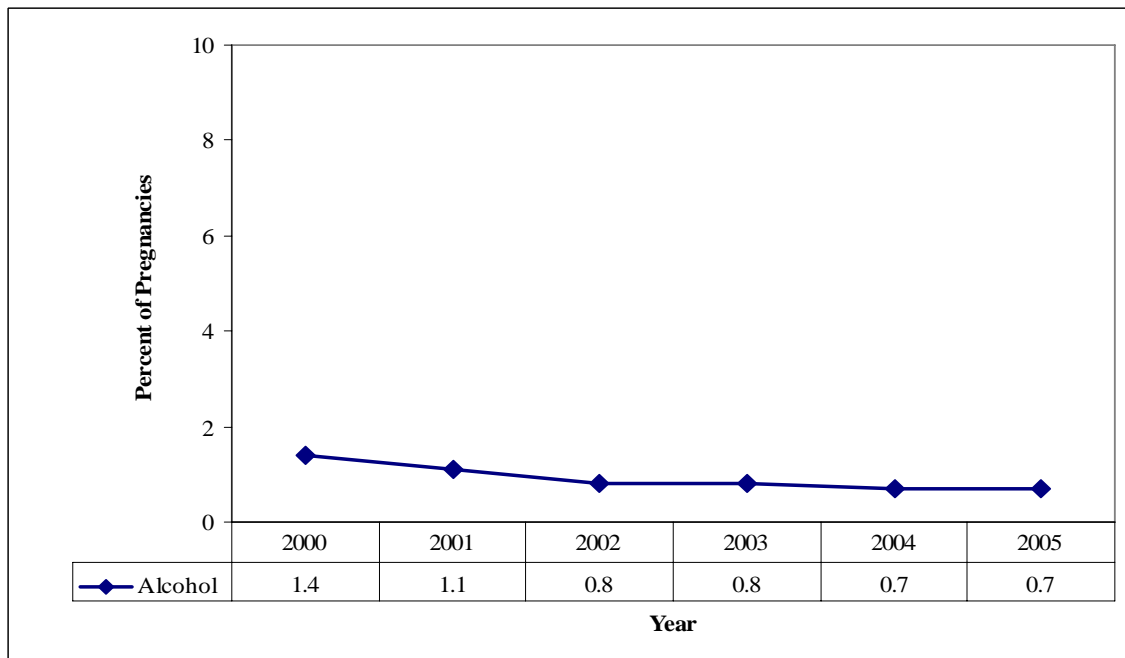
**Figure 5: Perceived Risk of Alcohol Use (Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week)**



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Figure 6: Percent of Mothers Reporting Alcohol Use during Pregnancy**



Source: Vital Records



## Youth Consumption Patterns

The Iowa Youth Survey (IYS) is a triennial census assessment of Iowa's 6<sup>th</sup>-, 8<sup>th</sup>-, and 11<sup>th</sup>-grade students' attitudes toward substance use and actual usage. The IYS was last completed, in 2005, by a total of 98,246 Iowa students from 390 school districts. The IYS is used to report youth consumption patterns in this profile because it is much more reflective of Iowa than the national surveys, which represent Iowa with very small sample sizes, collapse data from multiple years to generate reports, or use data from "similar" states to generate Iowa reports. National survey methods may not adequately reflect Iowa youth ATOD use and beliefs.

The reported rate of alcohol use before age 13 has fallen from 1999 to 2005 (Figure 7). However, over 15% of all students surveyed in 2005 reported using alcohol before turning 13. Past 30-day use of alcohol has also fallen for each grade reported in the IYS since 1999 (Figure 8). The downward trend is positive, but the overall number of youth reporting past 30-day use is still alarming. For every five 11<sup>th</sup> graders in Iowa, two drank alcohol in the past month.

Even though the IYS shows a downward trend in past 30-day alcohol use, Iowa teens continue to use alcohol at a similar rate as teens nationally. According to the 2004 NSDUH, there is no real difference in the rate of past 30-day alcohol use by 12- to 17-year-olds in Iowa (19.60%) and nationwide (17.65%).

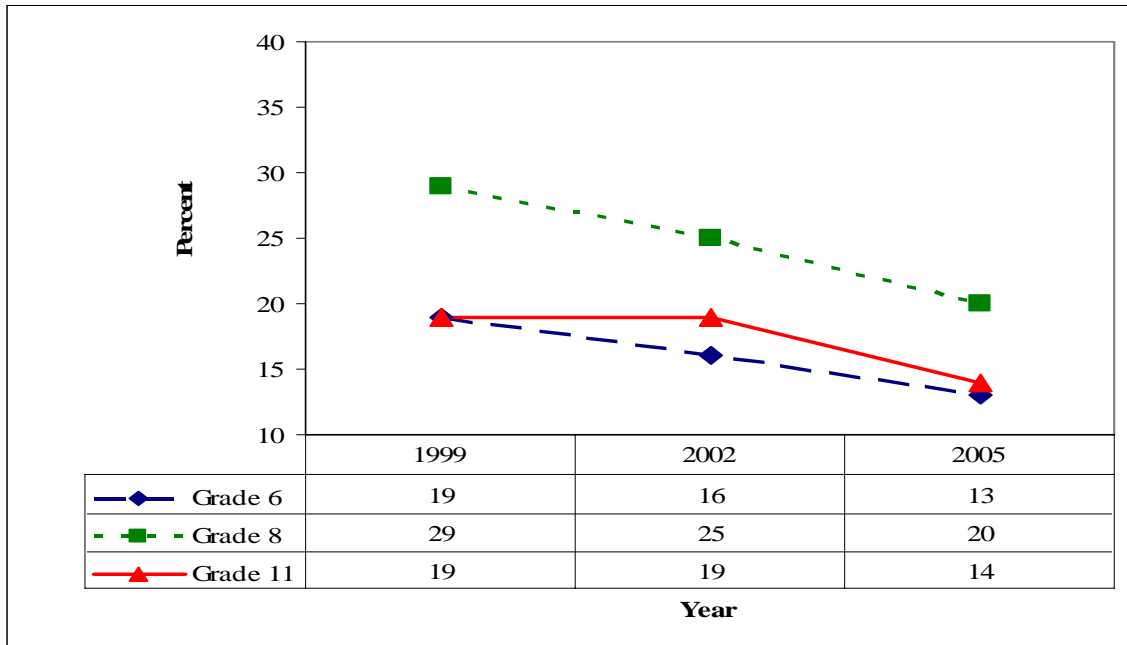
Binge drinking by 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> graders over the past 30 days as reported on the IYS has decreased since 1999 (Figure 9). Iowa reports a significantly higher binge drinking rate among youth than the national rate. According to the 2004 NSUDH, 14.08 percent of 12-to 17-year-old Iowans versus 10.86% of 12- to 17-year-olds nationally had at least one episode of binge drinking in the past 30 days. This finding reflects Iowa's above-average adult binge drinking rate.

The IYS asks youth if they drove a motor vehicle after using any amount of alcohol or other drugs in the past 30 days. The reported percent encompasses youth who reported driving whether or not they had a legal driver's license. IYS data do not differentiate between substances or between levels of drug use. As with other measures of youth alcohol use, the reported percentage of youth driving after using any amount of alcohol or other drugs has decreased from 1999 to 2005 (Figure 10). Although the rate of youth driving after using alcohol or other drugs has decreased, many Iowa youth still place their lives at risk by driving after using alcohol or other drugs.

The IYS perceived risk of alcohol use question reads as follows: "How much do you think you risk harming yourself if you drink 3 or more drinks of alcohol nearly every day?" The majority of 6<sup>th</sup>-, 8<sup>th</sup>-, and 11<sup>th</sup>-graders in Iowa feel there is great or moderate risk associated with drinking a considerable amount of alcohol on a regular basis (Figure 11). The expected response to this heavily weighted question would be near 100%, especially for teenagers. Perception of risk among Iowa secondary school students about heavy alcohol use is lower than expected. Female respondents perceived greater risk of

alcohol use than males (Table 2). The gender difference remained relatively stable from 1999 to 2005.

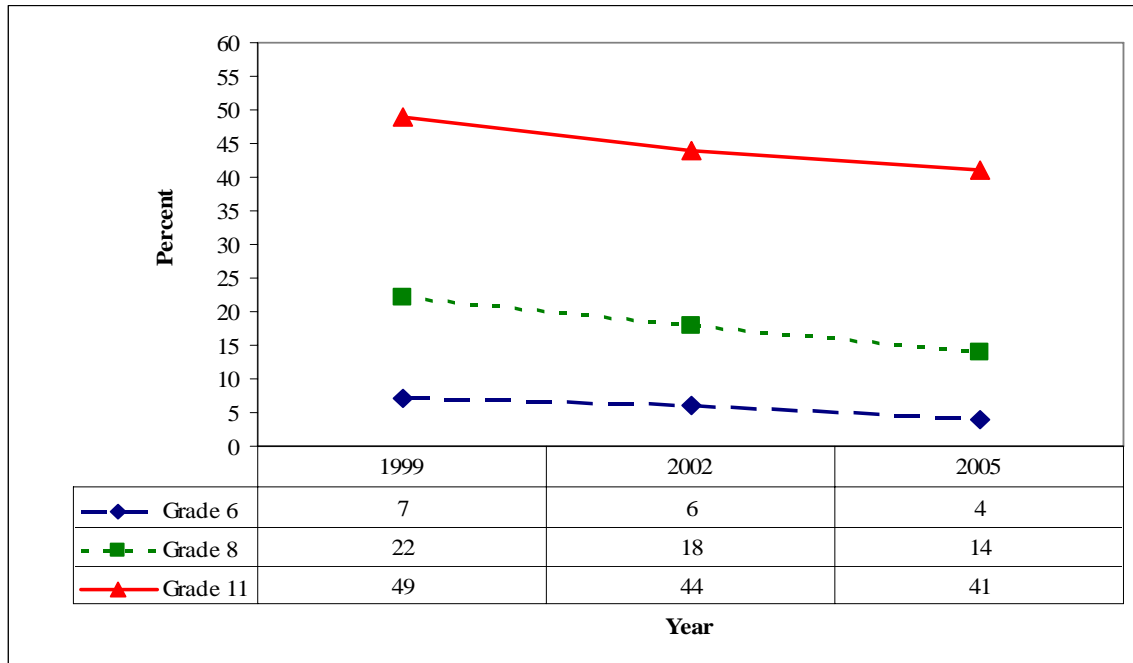
**Figure 7:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting First Use of Alcohol before Age 13



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

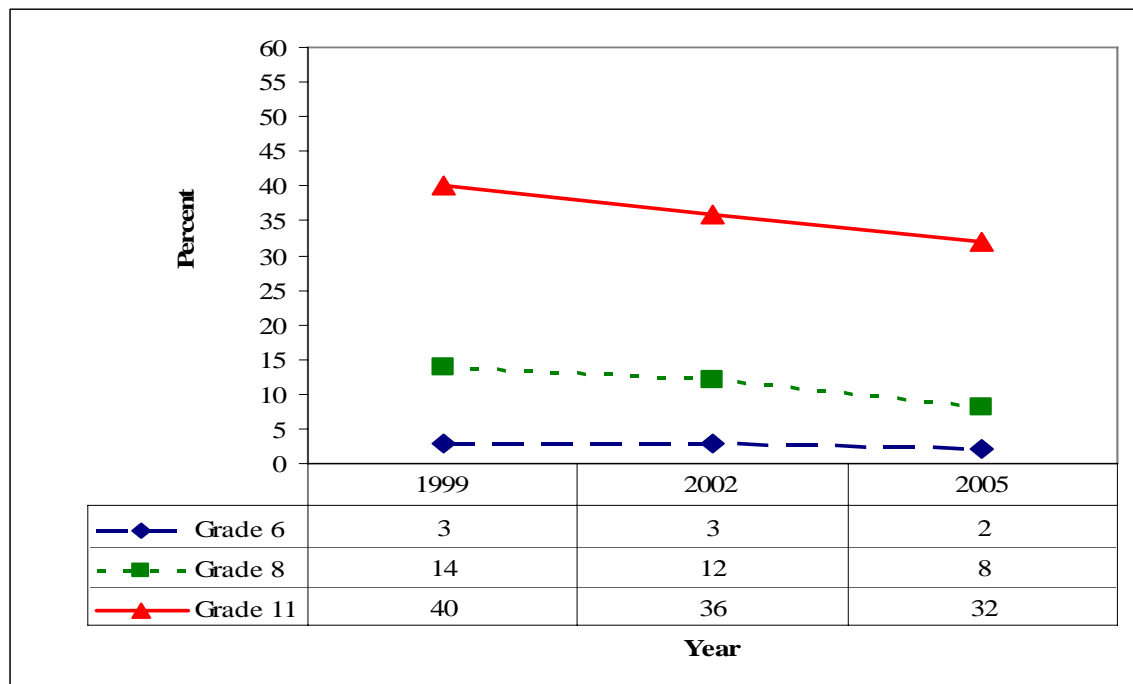
**Figure 8: Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting Past 30-Day Use of Alcohol**



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

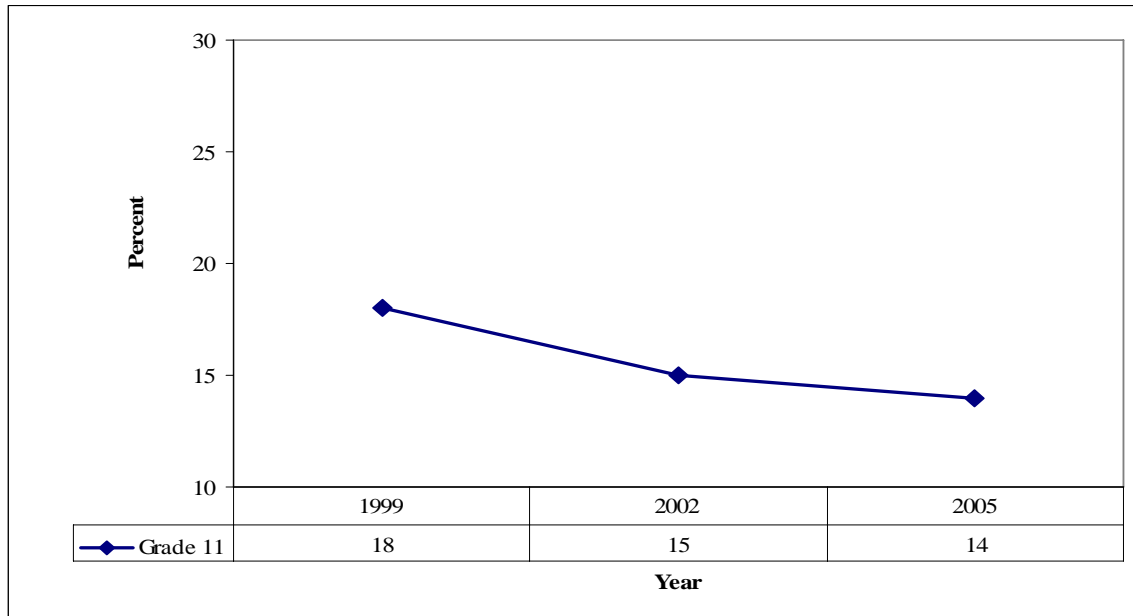
**Figure 9: Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting Binge Drinking – Past 30 Days**



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

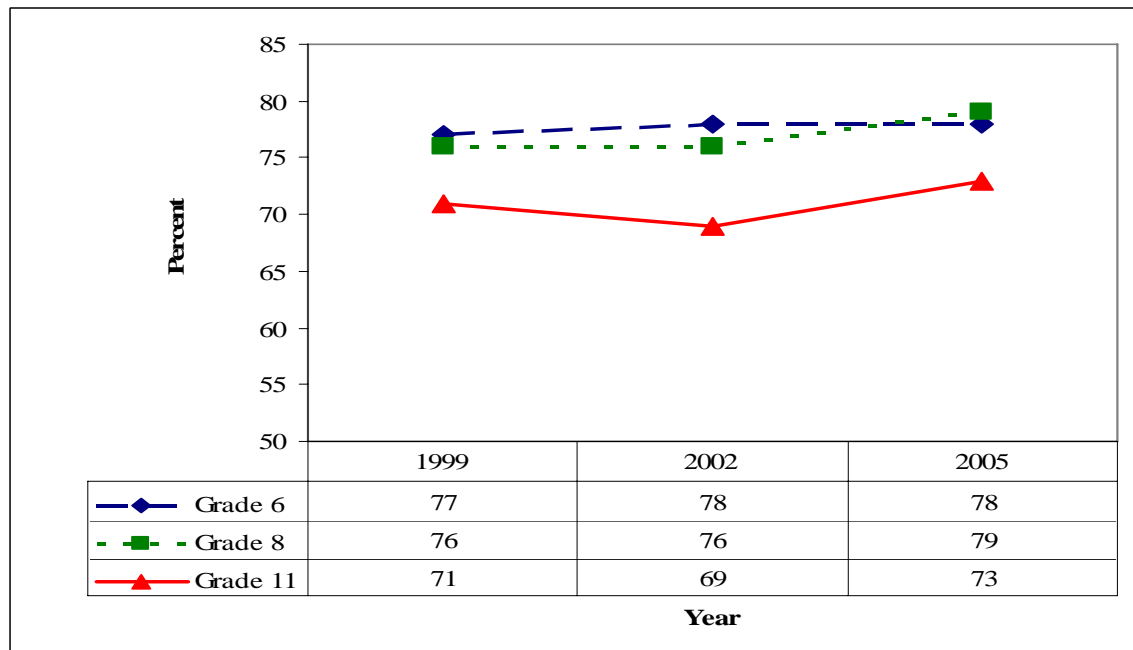
**Figure 10:** Percent of 11<sup>th</sup>-Graders Reporting Driving after Using Any Amount of Alcohol or Other Drugs



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

**Figure 11:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Perceiving Alcohol Use as a Moderate or Great Risk



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

**Table 2:** Percent of Perceived Moderate or Great Risk of Alcohol Use by Gender

Gender	Year		
	1999	2002	2005
Males	70	71	73
Females	79	78	80

Source: IYS

### Alcohol Consequences

Approximately 20,000 drunkenness and liquor law arrests were recorded in 2005. These numbers were similar to those reported in 2004 (Figure 12). Drunkenness is defined as, “To drink alcoholic beverages to the extent that one’s mental faculties and physical coordination are substantially impaired.” Drunkenness does not include driving under the influence offenses. A liquor law violation is defined as, “The violation of laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages.” Liquor law violations do not include driving under the influence or drunkenness offenses.

The overall number of liquor law arrests has fallen each year between 2003 and 2005. Iowans under the age of 25 years old make up the majority of liquor law arrests each year (Table 3). The number of drunkenness arrests increased from 2003 to 2004 but was almost the same between 2004 and 2005. The single largest age group of drunkenness arrests each year was 18-to 24-year-olds (Table 4). The number of convictions for alcohol-related offenses in Iowa has remained relatively stable between 2003 and 2005. A slight increase in the number of convictions for alcohol sales or providing of alcohol to minors has offset a slight decrease in the number of consumption convictions (Figure 13).

The number of Operating While Intoxicated (OWI) arrests per 100,000 Iowans neared 500 in 2004, the highest rate in at least 5 years (Figure 14). The terms OWI and DUI (Driving Under the Influence) are often used interchangeably. Jurisdictions across the country use one term or the other. The definition of DUI found in the FBI Uniform Crime Reports is, “Driving or operating a motor vehicle or common carrier while mentally or physically impaired as the result of consuming an alcoholic beverage or using a drug or narcotic.” In Iowa, the method used to assess impairment is to test the blood alcohol content (BAC). As of July 1, 2003, the “legal limit” in Iowa is .08 BAC, lowered from .10 BAC. The change in the legal BAC limit may be responsible for the notable increase in the OWI arrest rate per 100,000 Iowans from 2003 to 2004. Other possible reasons for the increase could be improved law enforcement or zero tolerance policies toward motor vehicle-alcohol offenses. Iowa recorded more than 14,000 OWI arrests during 2004.

Approximately 476,000 youth were enrolled in Iowa public schools for the 2003-2004, 2004-2005, and 2005-2006 school years (Project EASIER). The statewide attendance rate was approximately 95% in both 2003-2004 and 2004-2005; attendance data for the most recently completed school year is not yet available (Certified Annual Report). Suspensions and expulsions for alcohol and drugs were not reported consistently across

the three most recently completed school years. During the 2004-2005 school years, suspensions and expulsions for alcohol were not tabulated. Without these alcohol data, the total number of alcohol and drug suspensions and expulsions cannot be calculated for the 2004-2005 school year. The numbers of alcohol suspensions and expulsions in 2003-2004 and 2005-2006 were similar. The number of drug expulsions and suspensions varied more, but also remained relatively stable. The rate of suspensions and expulsions for alcohol and drugs per 100,000 students increased from 242.29 in 2003-2004 to 302.72 in 2005-2006 (Figure 15).

Approximately 115 Iowa deaths per year are caused by alcoholic cirrhosis (ICD 10 code K70), for a death rate hovering around 4 per 100,000 from 2003-2005 (Figure 16). This rate is quite low compared with the lung cancer death rate of approximately 65 per 100,000 Iowans from 2003-2005. Further analyses suggest that age and gender were the most significant predictors of cirrhosis deaths (Table 5). Males are two to three times more likely to die of alcoholic cirrhosis than females. Cirrhosis rates did not differ among race or ethnicity groups. Alcoholic cirrhosis is not manifested for decades after excessive drinking. Today's alcohol usage might not be reflected in alcoholic cirrhosis death rates for 20 or more years, making it difficult to use the rates to implement policies and practices that impact alcoholic cirrhosis.

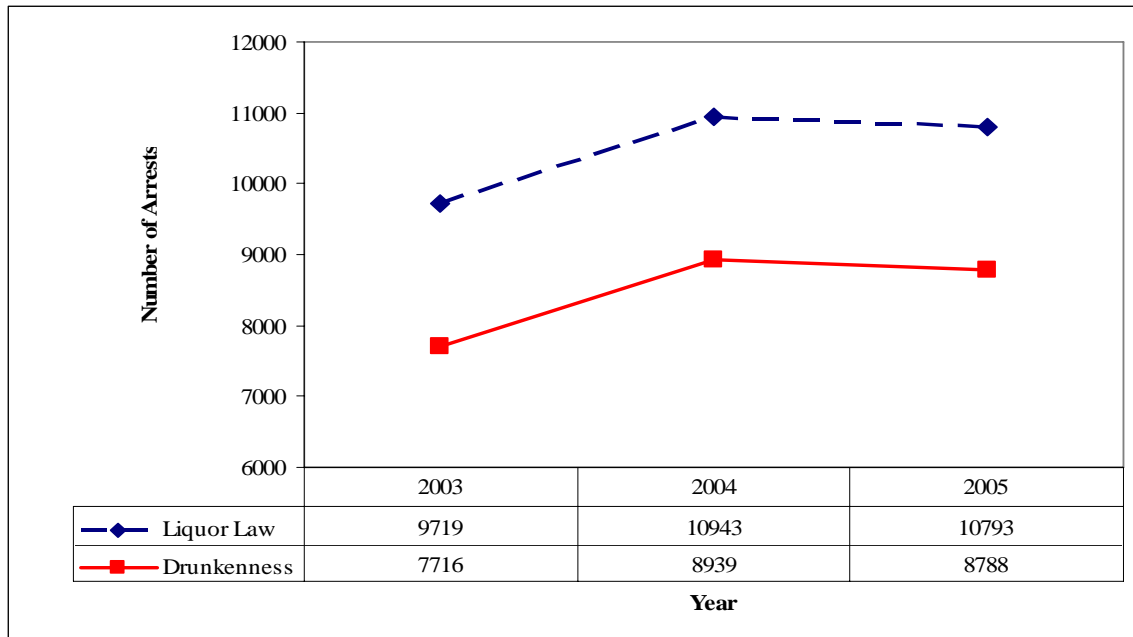
Between 2000 and 2005, approximately one-quarter to one-third of Iowa traffic fatalities involved an "alcohol-involved driver," defined as having a Blood Alcohol Content (BAC) greater than 0.01. The rate of alcohol-related traffic fatalities has remained relatively constant since 2000 (Figure 17).

A recent study found that, of suicide victims who were tested for alcohol or drugs, approximately 33.3% were positive for alcohol and 16.4% were positive for opiates (Centers 2006). The number of suicides in Iowa increased from 2000-2004, averaging approximately 320 suicides per year during that period. Adjusted for population, the overall suicide rate in Iowa has climbed steadily since 2000. The suicide rate for Iowans under age 19 fell, while the suicide rate for adults rose, since 2000. The 2004 suicide rate was 11.5 per 100,000 (Figure 18).

Iowans' 2003-2004 (NSDUH) past year alcohol dependence or abuse rate remained statistically unchanged from the 2002-2003 rate. Based on data from the 2003-2004 NSDUH, the percent of Iowans aged 12 or older who reported alcohol dependence or abuse was significantly higher than the national total (Figure 19). The NSDUH uses the DSM-IV definitions of dependence and abuse.

The number of Iowa domestic violence cases where alcohol was present has remained stable from 2003-2005 (Table 6). The number of domestic violence cases with alcohol involvement has hovered around 1,200, comprising 15-18% of the total number of domestic violence cases.

**Figure 12: Drunkenness and Liquor Law Arrests**



Source: Incident Based Uniform Crime Reporting System

**Table 3: Number of Liquor Law Arrests by Age**

Year	Age							Total
	<18	18-24	25-34	35-44	45-54	55-64	>64	
2003	2417	8315	842	693	474	104	29	12877
2004	2187	7569	614	496	290	59	19	11240
2005	2071	7230	688	533	353	69	15	10961

Source: Incident Based Uniform Crime Reporting System

Note: 11 cases removed due to unrecorded age.

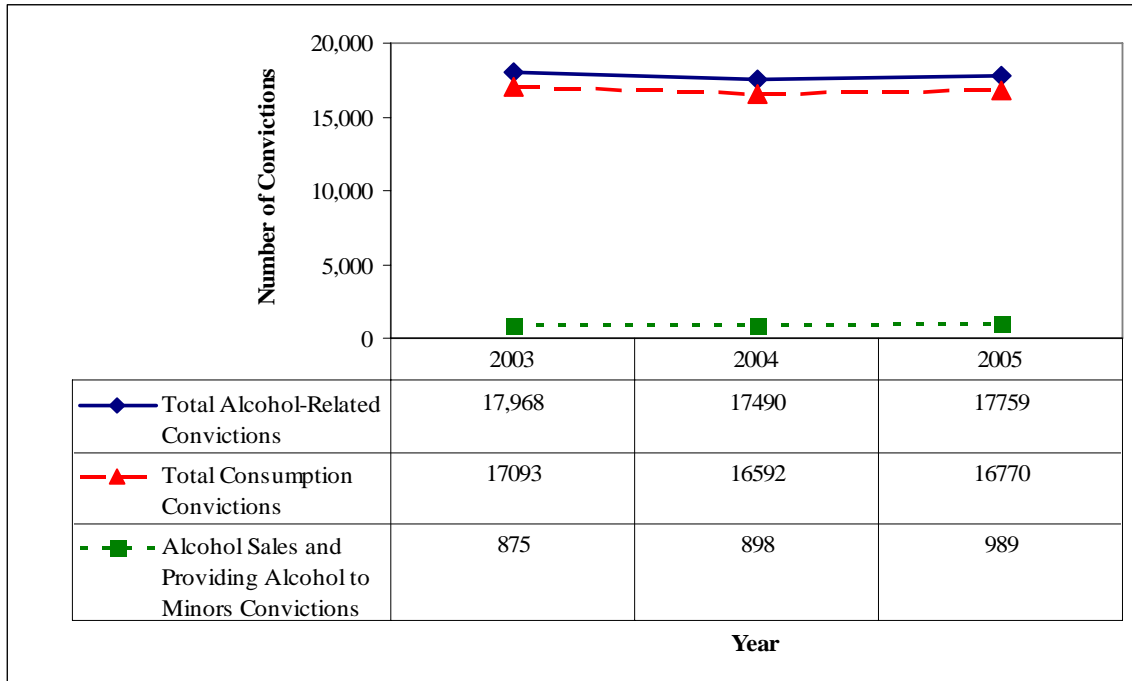
**Table 4: Number of Drunkenness Arrests by Age**

Year	Age							Total
	<18	18-24	25-34	35-44	45-54	55-64	>64	
2003	227	2790	1593	1678	1122	264	38	7716
2004	237	3197	1864	1900	1364	339	38	8939
2005	253	3025	2038	1705	1381	316	67	8788

Source: Incident Based Uniform Crime Reporting System

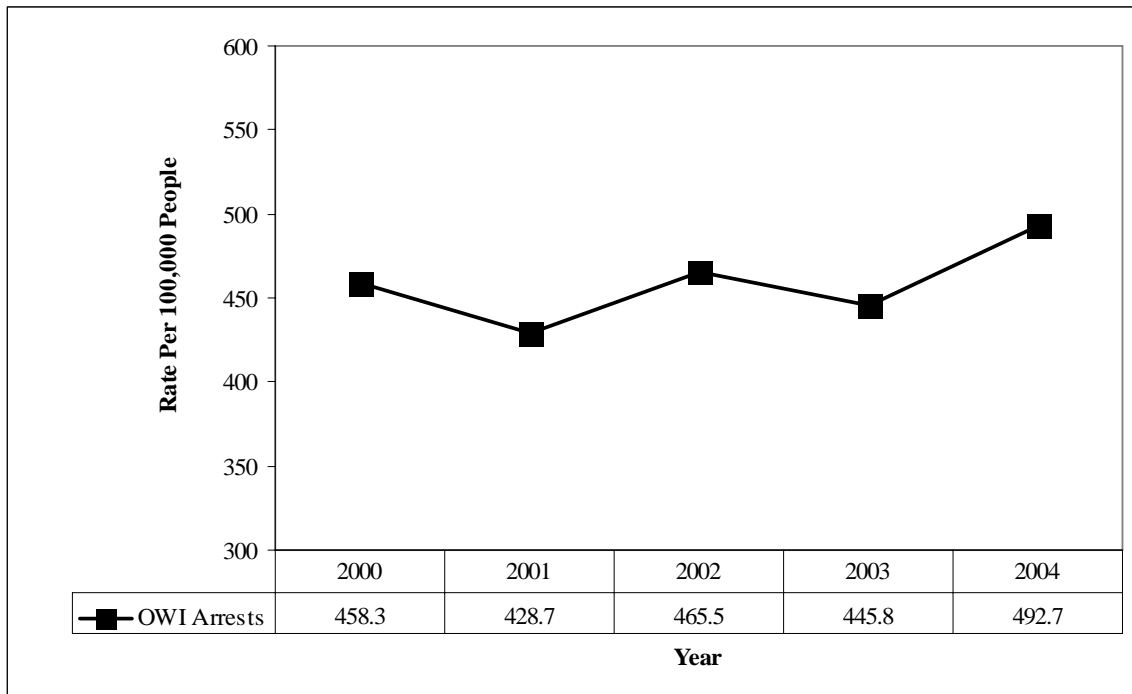
Note: 7 cases removed due to unrecorded age.

**Figure 13: Number of Convictions for Alcohol-Related Offenses**



Source: Iowa Court Information System, Justice Data Warehouse

**Figure 14: Rate of Operating While Intoxicated Arrests per 100,000 Iowans**

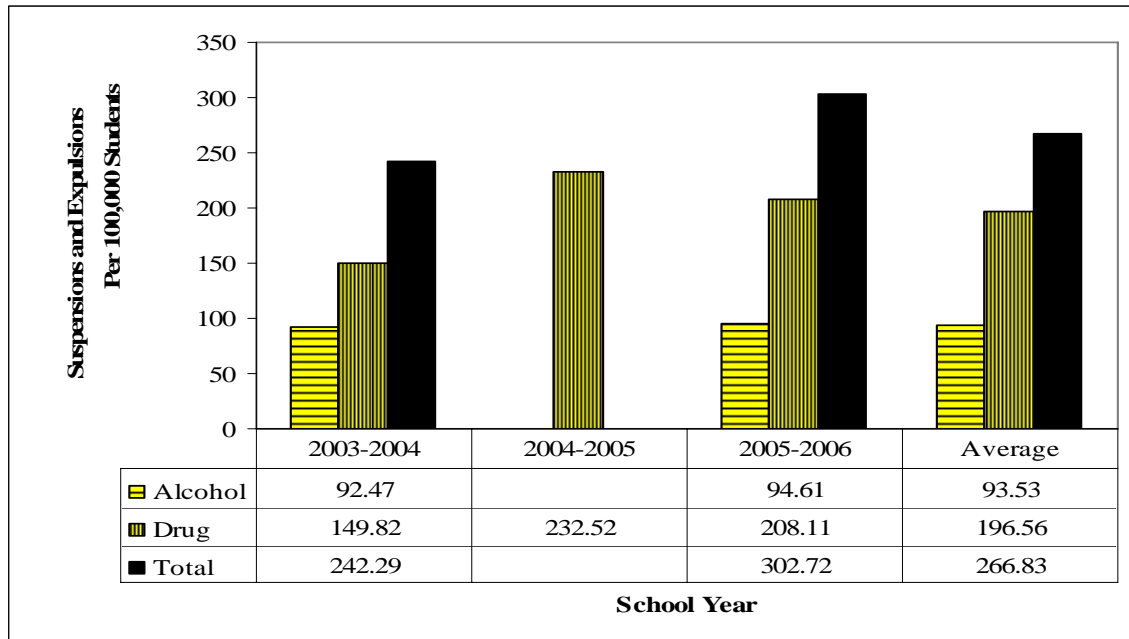


Source: Incident Based Uniform Crime Reporting System

Note: As of July 1, 2003, the “legal limit” in Iowa is .08 BAC, lowered from .10 BAC.



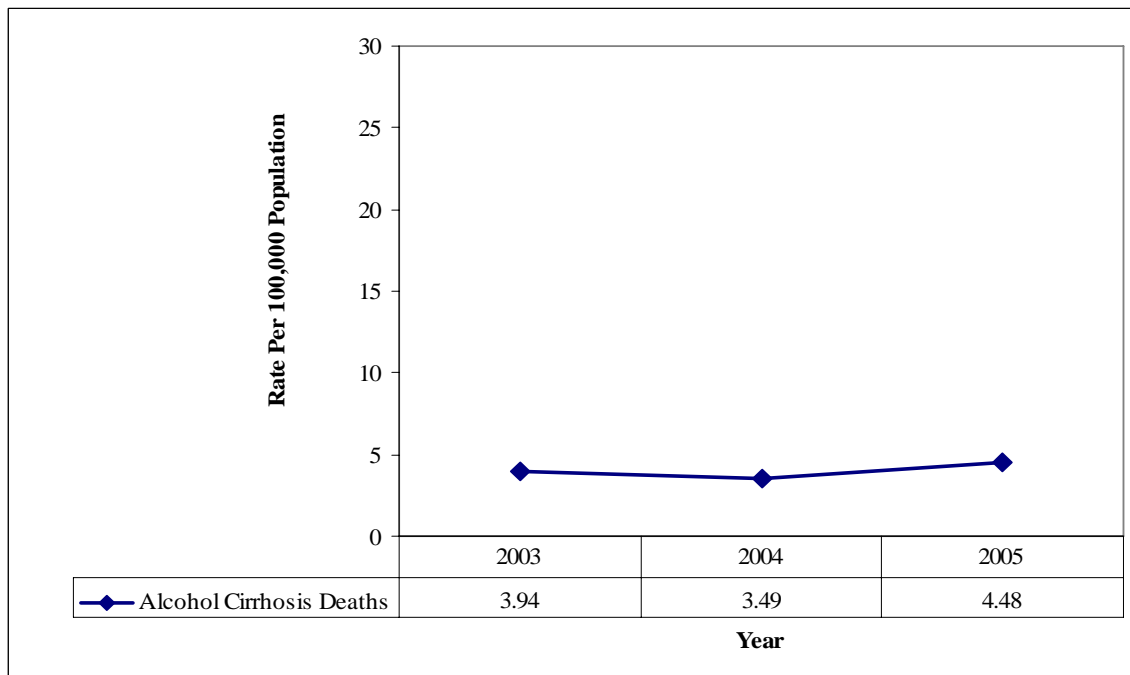
**Figure 15:** School Suspensions and Expulsions per 100,000 Students Due to Alcohol or Drugs



Source: Project EASIER

Note: Alcohol suspensions and expulsions were not reported during school year 2004-2005.

**Figure 16:** Alcoholic Cirrhosis Deaths per 100,000



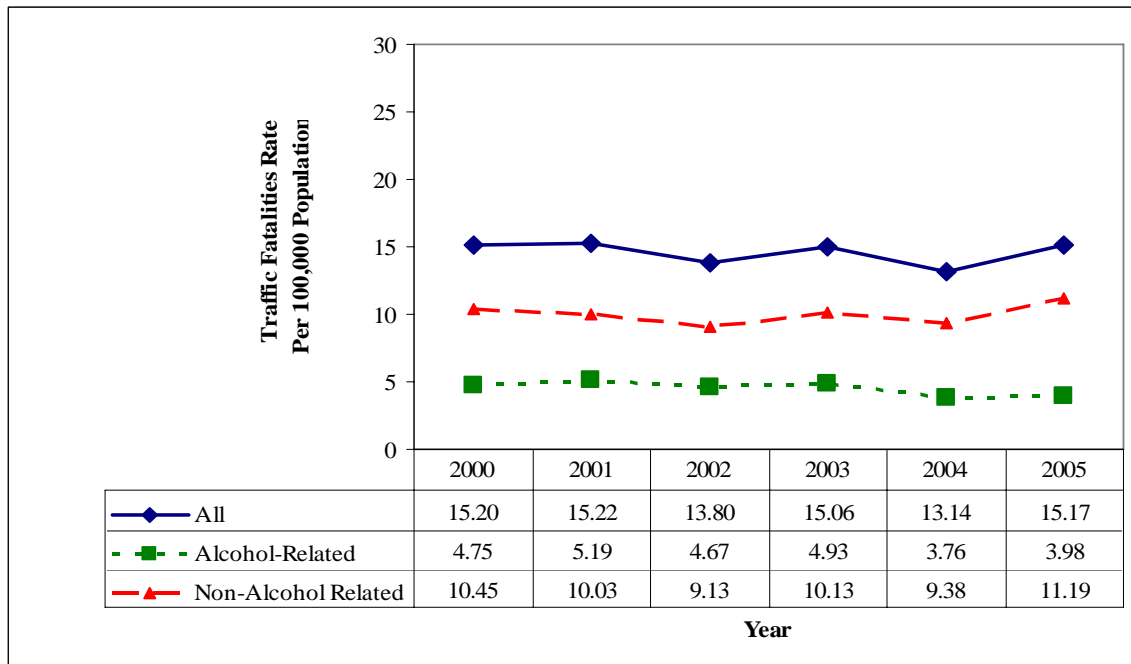
Source: Vital Records

**Table 5:** Alcoholic Cirrhosis Death Rate per 100,000 Iowans by Characteristics

Characteristics	2003	2004	2005	Average
<b>Race/Ethnicity</b>				
White	3.9	3.5	4.5	4.0
Black	6.3	0.0	3.0	3.1
Hispanic	2.1	2.0	4.8	3.0
Other	9.7	11.6	11.3	10.9
<b>Gender</b>				
Female	1.6	1.8	2.5	2.0
Male	6.4	5.2	6.6	6.1
<b>Age</b>				
<20	0.0	0.0	0.0	0.0
20-54	3.7	2.9	5.0	3.9
55-64	10.4	10.3	9.5	10.1
>65	7.4	6.9	6.9	7.1

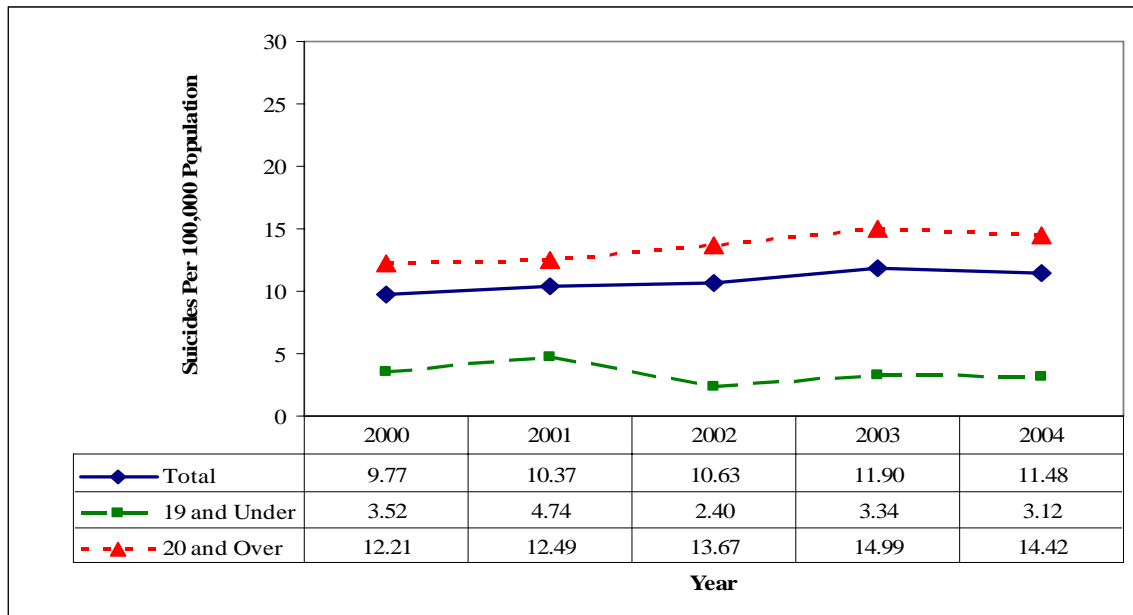
Source: Vital Records

**Figure 17:** Traffic Fatalities per 100,000



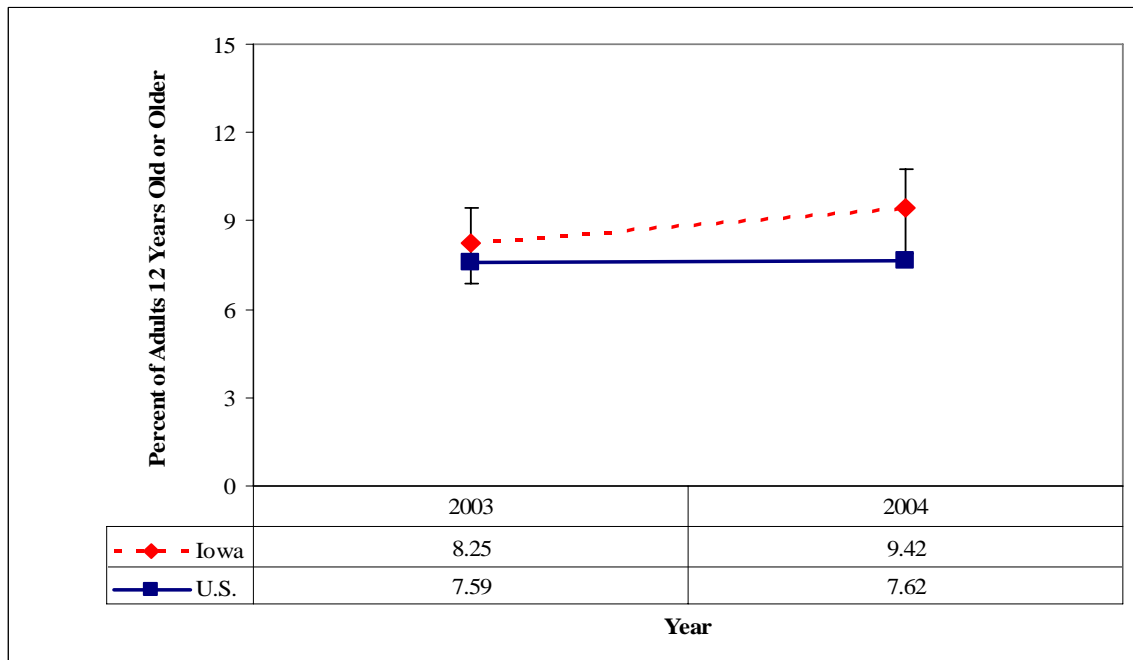
Source: FARS

**Figure 18:** Suicides per 100,000



Source: Vital Records

**Figure 19:** Percent of Adults Past-Year Alcohol Dependence or Abuse



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Table 6:** Alcohol Involvement in Domestic Abuse Incidents

	2003	2004	2005
Number of Cases	1,219	1,230	1,191
Percent of Total Cases	15	18	16

Source: Incident Based Uniform Crime Reporting System

## ***Tobacco***

### Adult Consumption Patterns

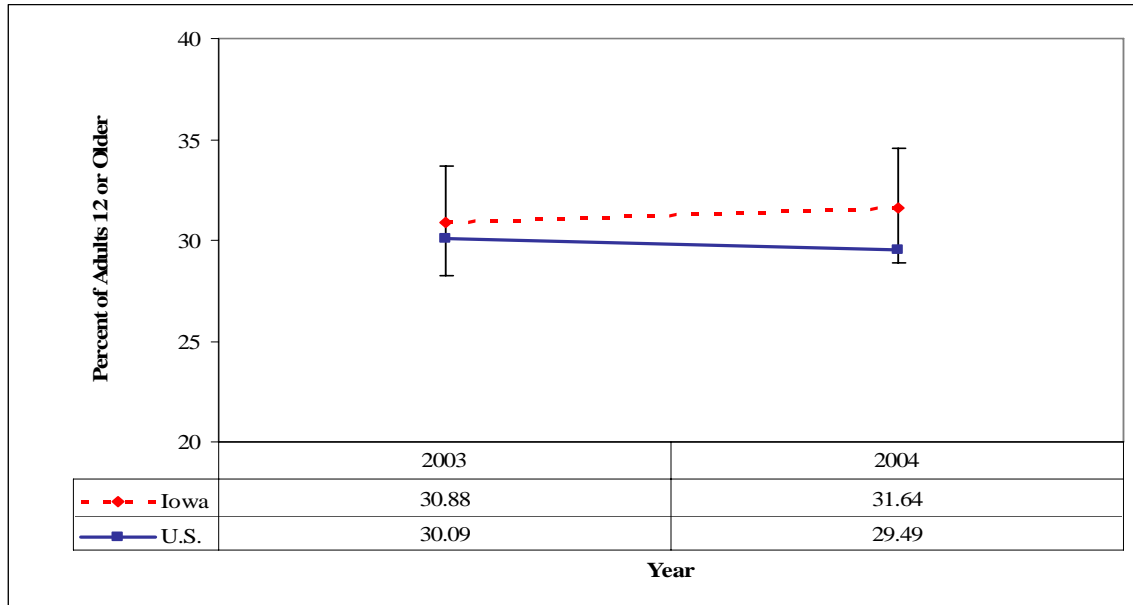
Based upon NSDUH estimates, adult tobacco use in Iowa remained unchanged from 2003 to 2004, and was similar to national tobacco usage rates. Due to the small sample size and the weighting approach used by the NSDUH, no additional analysis (breaking out race, gender, or age) can be conducted on Iowa tobacco use data.

The 2003-2004 NSDUH estimates that approximately 778,000 Iowans over age 12 used tobacco; cigarette usage comprised the majority of this estimate (668,000). National and state rates of 30-day tobacco use did not differ significantly, nor is there significant difference between the 2003 and 2004 Iowa rates (Figure 20). Tobacco use, as defined by the NSDUH, includes cigarettes, smokeless tobacco (chewing tobacco or snuff), cigars, or pipe tobacco. Cigarette use mirrors overall tobacco use rates for Iowa and the U.S. from 2003-2004, with no significant difference between years or between Iowa and national rates (Figure 21).

According to the 2003-2004 NSDUH, approximately two-thirds of Iowans over age 12 feel that smoking at least one pack of cigarettes per day is very risky. This rate was virtually the same as in the 2002-2003 NSDUH, but is significantly lower than the national rate (Figure 22).

The rate of Iowa mothers reporting using tobacco during pregnancy has been stable since 2002, hovering between 15-17% of all pregnancies since 2002 (Figure 23). This information was collected and reported on birth certificates, and does not include women who did not have live births. This reporting method may under-report tobacco usage, since mothers may hesitate to report using tobacco while pregnant due to potential legal or social ramifications. The rate of tobacco use during pregnancy is approximately 20 times higher than the rate of alcohol use.

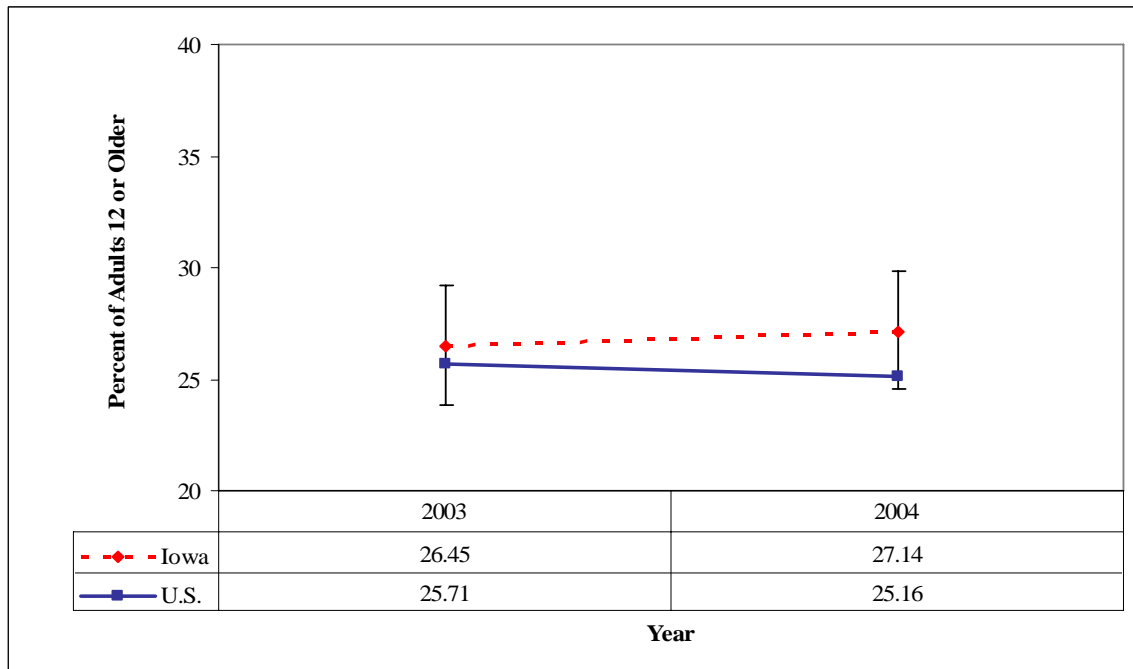
**Figure 20: Percent of Adults 12 or Older Past 30-Day Tobacco Use**



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Figure 21: Percent of Adults 12 or Older Past 30-Day Cigarette Use**

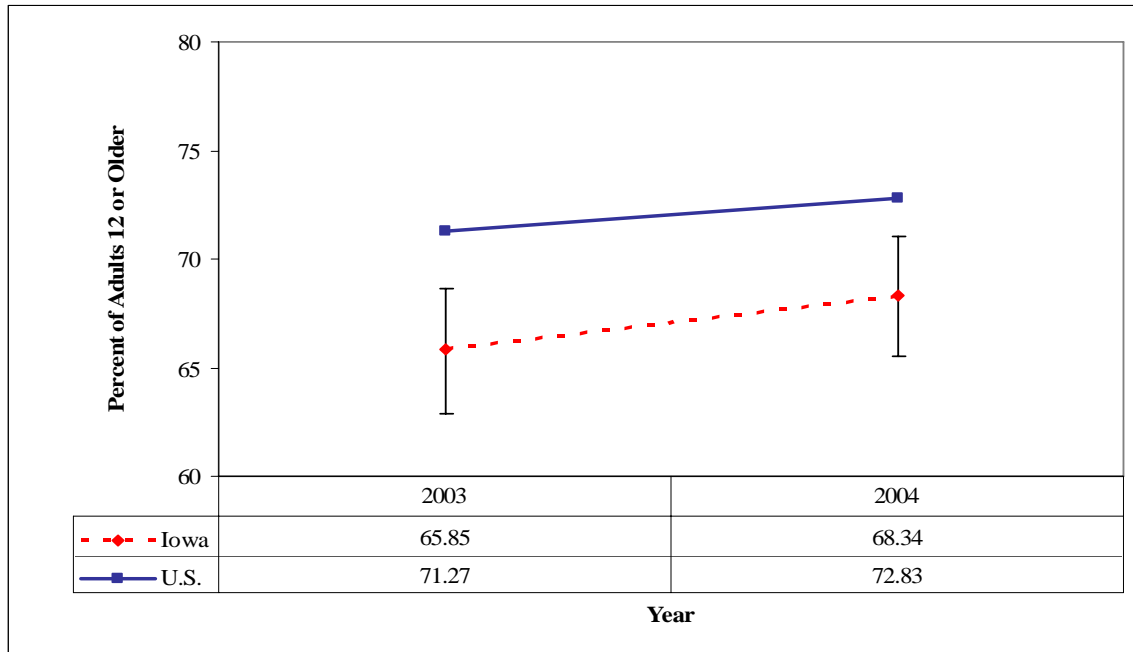


Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Figure 22: Percent of Adults 12 or Older Perception of Great Risk of Smoking One or**

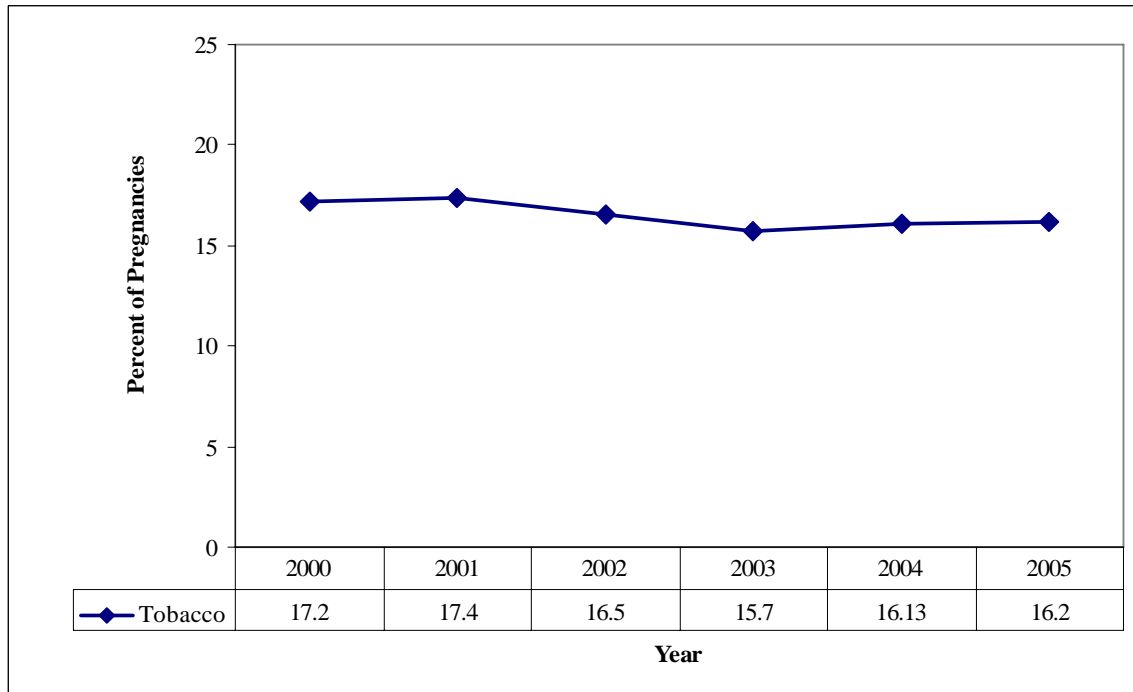
## More Packs of Cigarettes per Day



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Figure 23:** Percent of Mothers Reporting Tobacco Use during Pregnancy



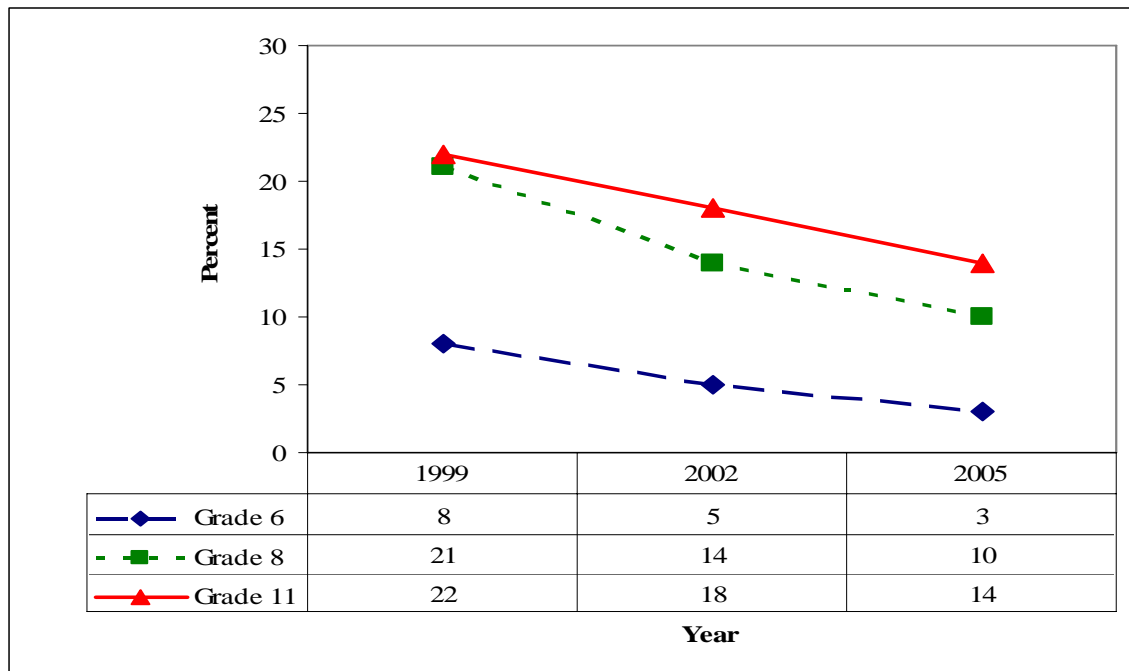
Source: Vital Records

Youth Consumption Patterns

Youth tobacco use in Iowa appears to be on the decline, as evidenced by the number of youth reporting first use of cigarettes before age 13, past 30-day use, amount of heavy smoking, and perceived risk of cigarette use.

The percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-graders who first used cigarettes before age 13, has decreased each time the IYS has been administered since 1999 (Figure 24). Reported past 30-day cigarette use for the same populations has also decreased on each IYS, with the exception that 2% of 6<sup>th</sup> graders reported cigarette use in both 2002 and 2005 (Figure 25). Iowa and national heavy smoking rates do not differ significantly. The Iowa rate of heavy smoking decreased significantly between 1997 and 2005 (Figure 26). 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-grade students responded similarly when asked, “How much do you think you risk harming yourself if you smoke cigarettes every day?” “Great Risk” and “Moderate Risk” response options were combined for Figure 27. Perceived risk of cigarette use does not appear to differ by gender among middle- and high-school youth (Table 7).

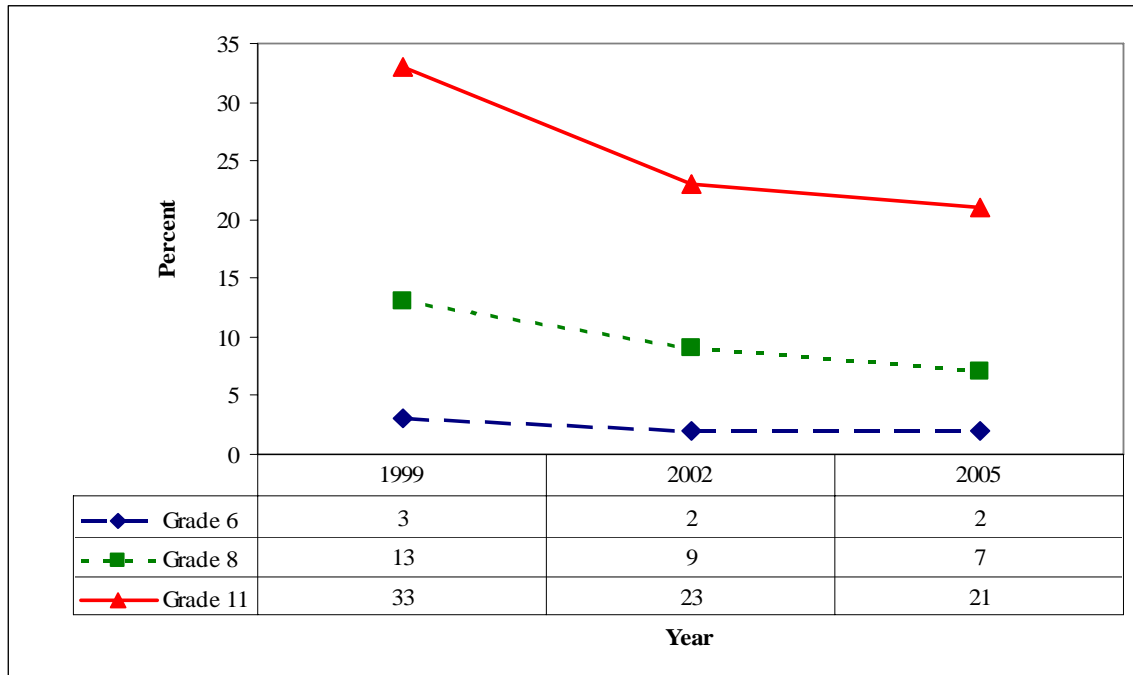
**Figure 24:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting First Use of Cigarettes before Age 13



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

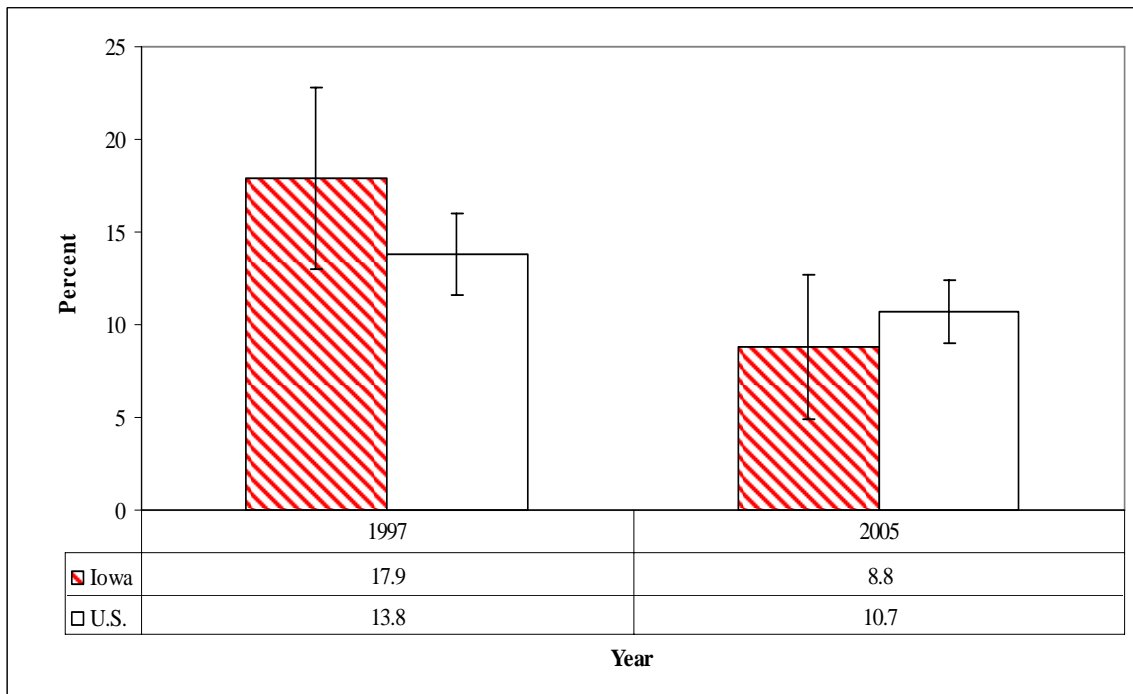
**Figure 25:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting Past 30-Day Cigarette Use



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

**Figure 26:** Heavy Smoking among Youth

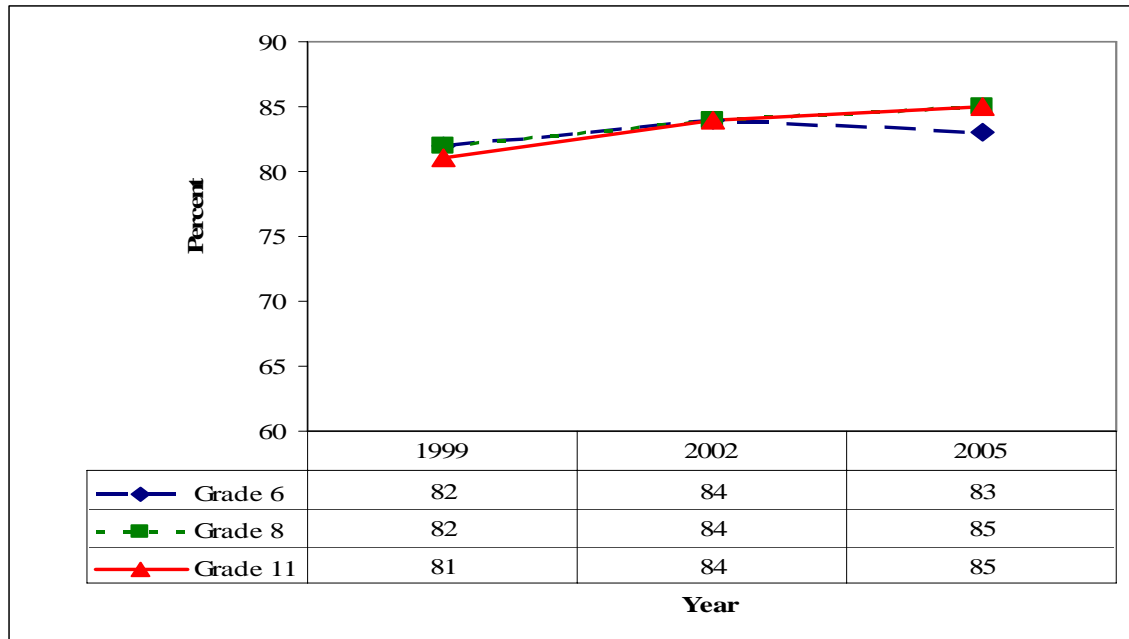


Source: YRBSS

Note: Confidence intervals allow comparison of Iowa and U.S. results.



**Figure 27:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Perceiving Cigarette Use as a Moderate or Great Risk



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

**Table 7:** Percent of Perceived Moderate or Great Risk of Cigarette Use by Gender

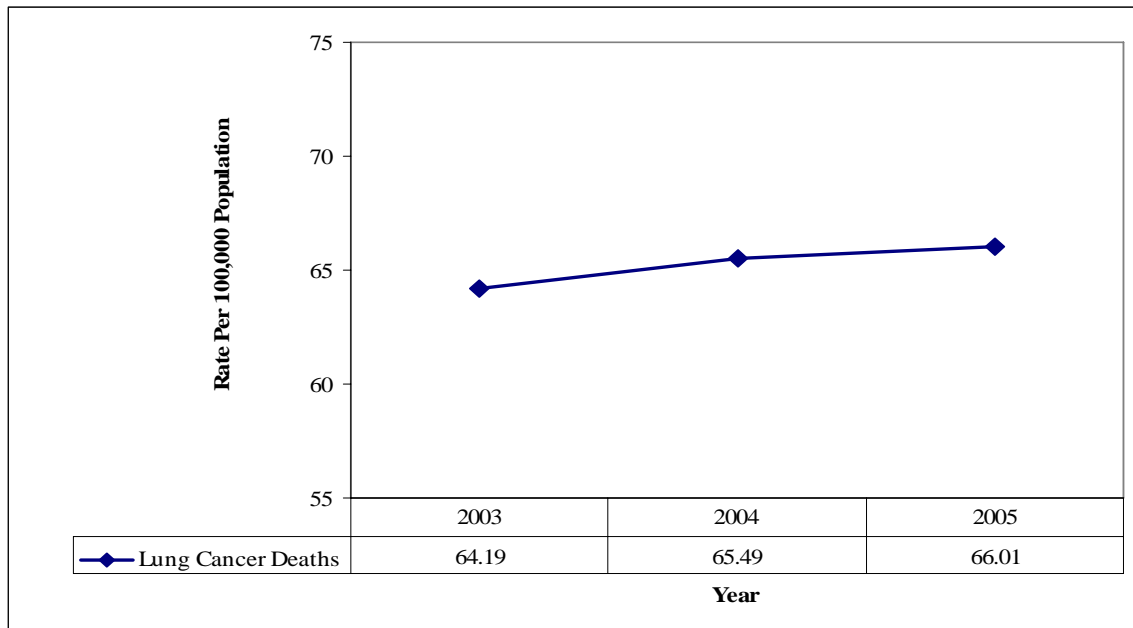
Gender	Year		
	1999	2002	2005
Males	80	82	83
Females	83	85	85

Source: IYS

### Tobacco Consequences

Iowa lacks tobacco consequence data meeting the criteria developed by the Data Task Group. Lung cancer deaths is the only indicator that met all requirements for inclusion in the Profile. The lung cancer death rate has risen slightly from 2003 to 2005 (Figure 28). The lung cancer death rate was greater for Whites than any other racial/ethnic group. The rate average was 69.3 per 100,000 for Whites; it averaged 45.7 and 5.6 per 100,000 for Black and Hispanic populations. Males were more likely affected than females. The 55- to 64-year age group had the highest risk of death (Table 8).

**Figure 28:** Lung Cancer Deaths per 100,000



Source: Vital Records

**Table 8:** Lung Cancer Deaths per 100,000 Iowans by Characteristics

Characteristics	2003	2004	2005	Average
<b>Race/Ethnicity</b>				
White	68.2	69.6	70.2	69.3
Black	42.4	50.9	43.7	45.7
Hispanic	4.2	3.0	9.6	5.6
Other	31.4	30.2	27.1	29.6
<b>Gender</b>				
Female	51.9	52.9	53.9	52.9
Male	76.9	78.5	78.5	78.0
<b>Age</b>				
<20	0.0	0.0	0.0	0.0
20-54	10.7	11.2	11.3	11.1
55-64	111.1	113.4	109.9	111.5
>65	326.7	330.2	332.5	329.8

Source: Vital Records

## *Illicit Drugs*

Illicit drug use in Iowa appears to be holding steady, and its prevalence is lower than the national total. The illicit drug used by the most Iowans is marijuana, followed by methamphetamine (Figure 1 and Table 9). Marijuana is also the most widely used illicit drug in the United States – approximately 14.6 million Americans aged 12 and older reported past 30 day marijuana use.

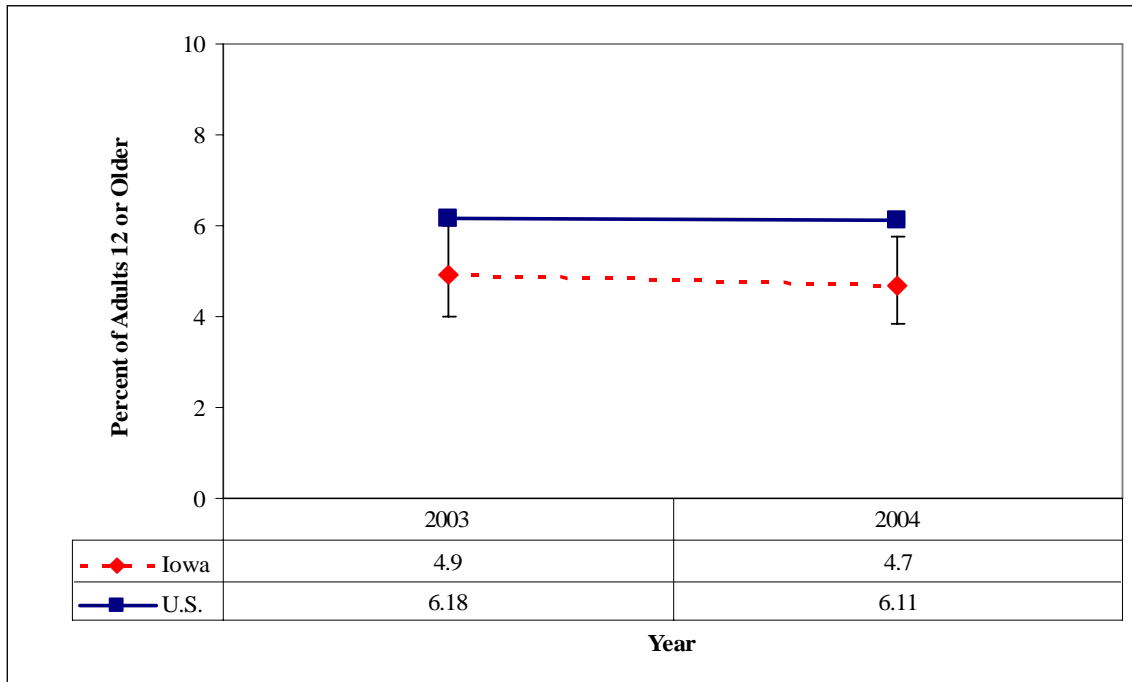
### Adult Consumption Patterns

Iowans' current use of marijuana (past 30 days) remained essentially unchanged between the 2002-2003 and 2003-2004 NSDUH. According to 2003-2004 NSDUH data, 4.7% of Iowans over age 12 reported current marijuana use. These usage patterns are significantly lower than the national estimate of 6.1%. Iowans 18-25 years old are approximately four times more likely to be current marijuana users than those 26 years old and older, and twice as likely to use marijuana as those between ages 12-17 (Figure 29).

Iowans' current use of illicit drugs other than marijuana (past 30 days) also remained unchanged from the 2002-2003 NSDUH to the 2003-2004 NSDUH. Data from the 2003-2004 NSDUH showed no significant difference between the percent of Iowans age 12 and older reporting current use of an illicit drug other than marijuana and the national total (Figure 30).

Iowans perceive the risk of smoking marijuana at least once a month similar to the rest of the nation. The 2003-2004 NSDUH estimated that 41.44% of Iowans believed that it was a great risk to smoke marijuana at least once a month. There is no statistical difference between the Iowa results and the national estimate of 39.74% (Figure 31).

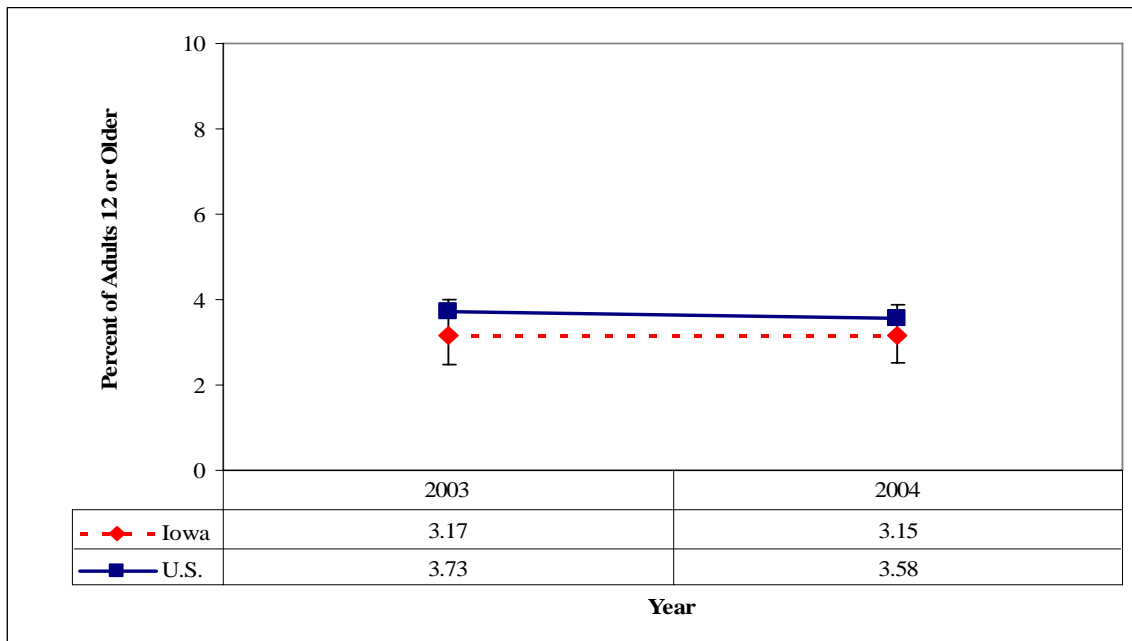
**Figure 29: Percent of Adults Past-Month Marijuana Use**



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

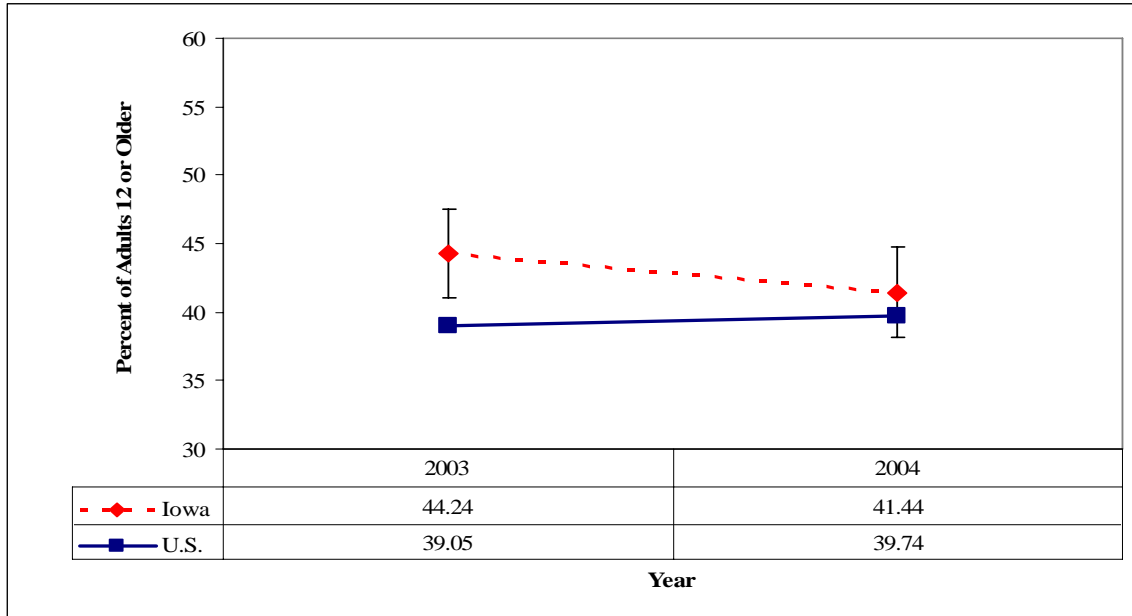
**Figure 30: Percent of Adults Past-Month Illicit Drug Use other than Marijuana**



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Figure 31:** Percent of Adults Perceiving Great Risk from Smoking Marijuana Once a Month



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

### Youth Consumption Patterns

The 2003-2004 NSDUH estimated that 21,000 Iowans 12-17 years old used illicit drugs including marijuana, cocaine, heroin, hallucinogens, inhalants, and prescription psychotherapeutics in a month. This estimate includes 16,000 12-to 17-year-old marijuana users. The 2005 IYS shows that marijuana was the most widely used illicit drug, with 13% of 11<sup>th</sup>-graders reporting current use (Table 9). Marijuana use by 6<sup>th</sup>-, 8<sup>th</sup>-, and 11<sup>th</sup>-graders has decreased significantly between 1999 and 2005 (Figure 32).

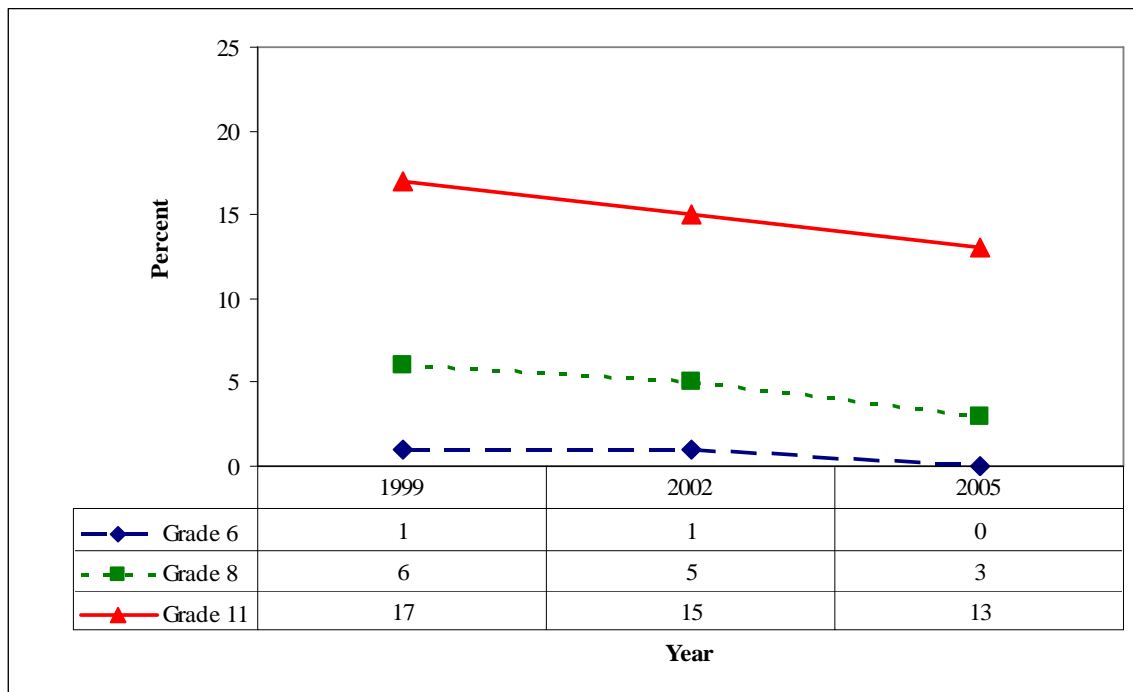
The IYS asks the question, “How much do you think you risk harming yourself if you smoke marijuana once a week?” 80% of 6<sup>th</sup>- and 8<sup>th</sup>-graders, and 70% of 11<sup>th</sup>-graders responded “Great Risk” or “Moderate Risk” to this question in 2005 (Figure 33). Female students were about 5% more likely to respond “Great Risk” or “Moderate Risk” than male students in 2005 (Table 10). The percent of students reporting first use of marijuana before age 13 decreased for all three grades between 2002 and 2005 (Figure 34).

**Table 9:** Percent of Youth Reporting Current Drug Use - 2005

Substance Type	Grade		
	6	8	11
Marijuana	0	3	13
Inhalants	2	3	2
Cocaine	0	1	2
Methamphetamine	0	1	2
Amphetamines	0	0	1
Steroids	0	0	1

Source: IYS, p. 86

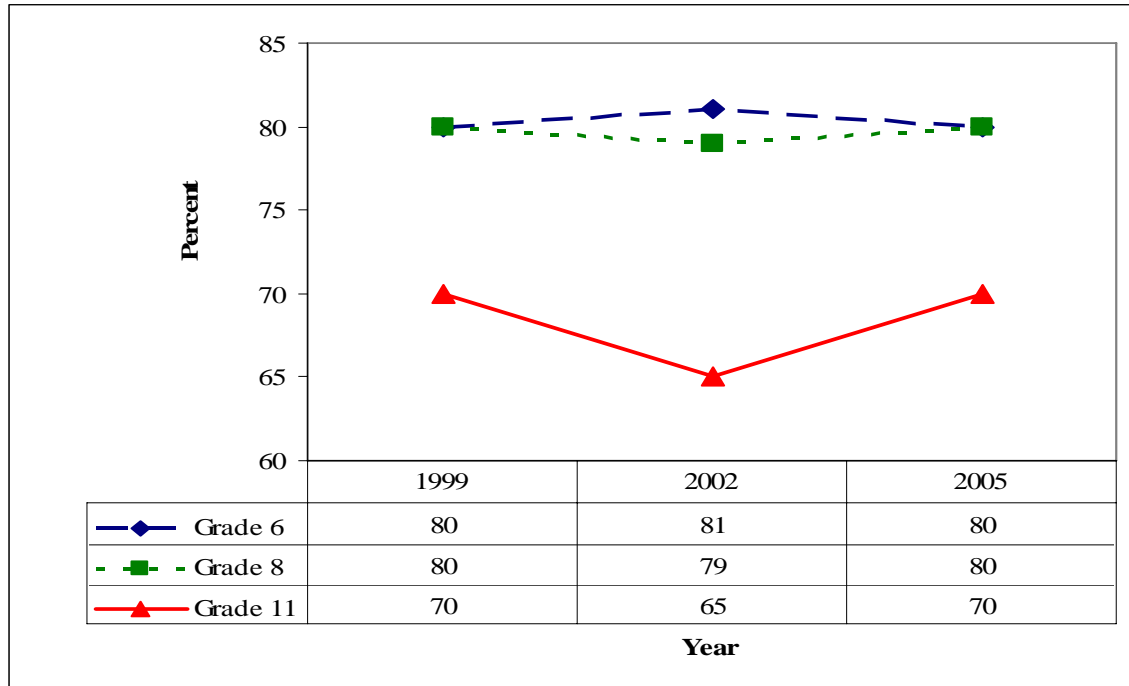
**Figure 32:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting Past 30-Day Marijuana Use



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

**Figure 33:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Perceiving Marijuana Use as a Moderate or Great Risk



Source: IYS

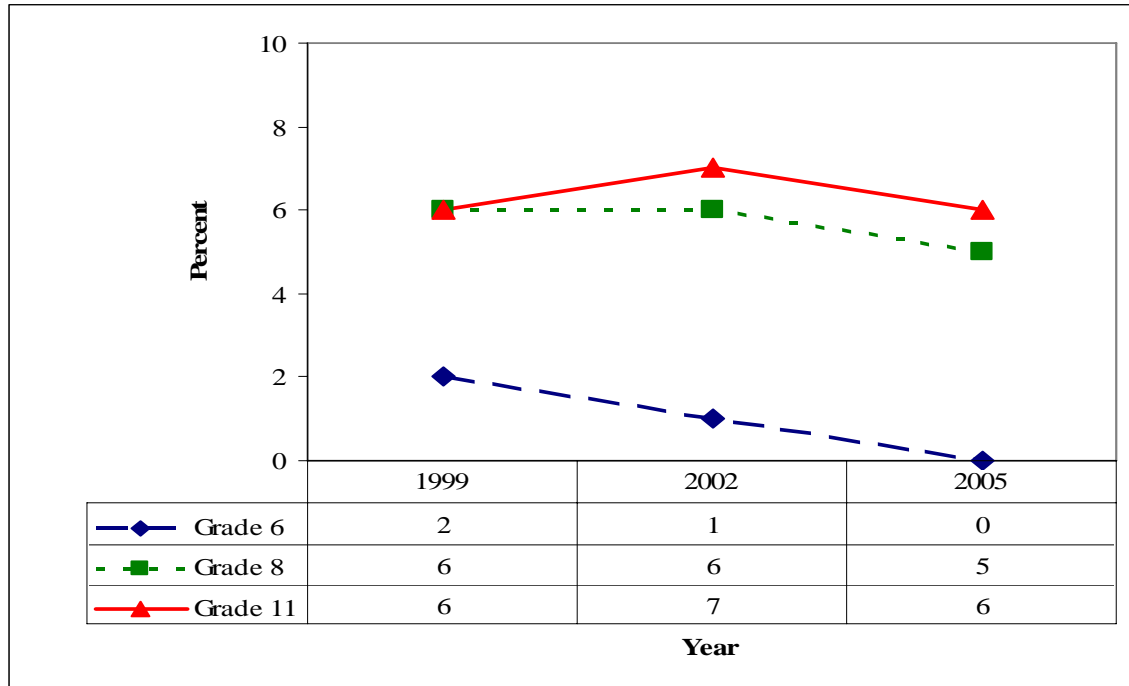
Note: Error bars are too small to represent and are less than +/- 1%.

**Table 10:** Perceived Moderate or Great Risk of Marijuana Use by Gender

Gender	Year		
	1999	2002	2005
Males	73	72	74
Females	79	77	79

Source: IYS

**Figure 34:** Percent of 6<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-Graders Reporting First Use of Marijuana before Age 13



Source: IYS

Note: Error bars are too small to represent and are less than +/- 1%.

### Illicit Drug Consequences

Past year illicit drug dependence or abuse in Iowa remained stable from the 2002-2003 NSDUH to the 2003-2004 NSDUH. Data from the 2003-2004 NSDUH showed no statistical difference between the percent of Iowans age 12 and older reporting illicit drug dependence or abuse (2.73%) and the national total (2.96%) (Figure 35). The NSDUH uses the DSM-IV definitions of dependence and abuse.

Drug arrests per 100,000 have remained stable from 2003 to 2005, between 451 and 457 drug arrests per 100,000 (Figure 36). Marijuana was the most frequent cause of drug arrests, accounting for almost two-thirds of drug arrests in Iowa during 2005. The only other substance resulting in more than 1,000 arrests in 2005 was methamphetamine (Table 11).

The percent of confirmed or founded child abuse cases with the presence of illegal drugs in Iowa has remained stable since 2003 (Figure 37). The number of confirmed or founded child abuse cases involving manufacturing methamphetamine in the presence of a minor has decreased annually from 2003 to 2005 (Figure 38). Many circumstances besides a change in the use of illegal substances could influence these numbers, including funding for law enforcement and the Department of Human Services, detection technology advances, changes in the Iowa code, and public awareness and pressure. The enactment in May of 2005 of the Iowa Pseudoephedrine Control Act, which required selling pseudoephedrine products from behind the counter rather than on store shelves,

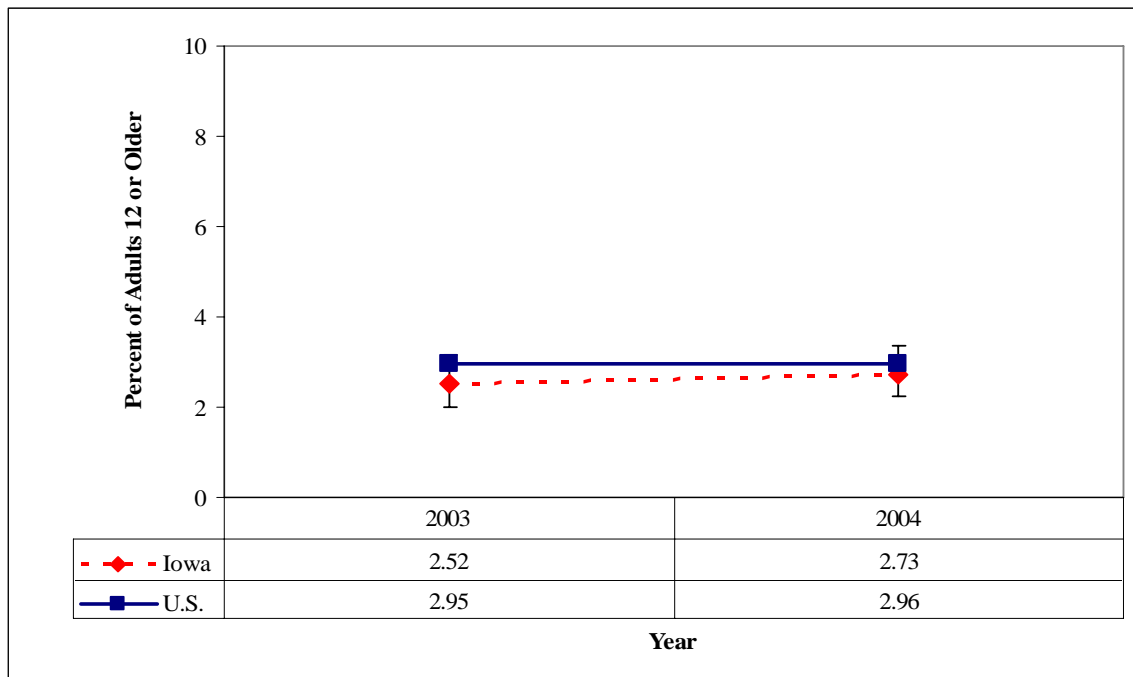


probably helped to decrease the number child abuse cases involving manufacturing methamphetamine in the presence of a minor.

These numbers included each confirmed type of abuse on each report of abuse for each child. Each child may be confirmed to have suffered multiple types of abuse on a single report, and each child may have multiple reports. Presence of an illegal drug is defined as the presence of an illegal drug in a child’s body as a direct and foreseeable consequence of the acts or omissions of the person responsible for the child’s care. Illegal drugs used in this definition include cocaine, heroin, amphetamine, methamphetamine, marijuana, other illegal drugs, or combinations or derivatives of illegal drugs not prescribed by a health practitioner. Manufacturing methamphetamine in the presence of a minor is defined in Iowa Code 232.2 subsection 6, paragraph p. It occurs when the person responsible for the care of a child manufactures a dangerous substance or has possession of the methamphetamine precursors, ephedrine or pseudoephedrine, with the intent to use the product as a precursor or intermediary to a dangerous substance in the presence of a child.

Drugs are incriminated in the spread of HIV/AIDS infection. The AIDS registry has identified 1,372 HIV or AIDS adult/adolescent cases living in Iowa, of which 11% are injecting drug users (IDU) and 8% are men who have sex with men and inject drugs (MSM/IDU). 8% of the 113 new adult/adolescent HIV cases identified in 2005 were IDU; 12% were MSM/IDU.

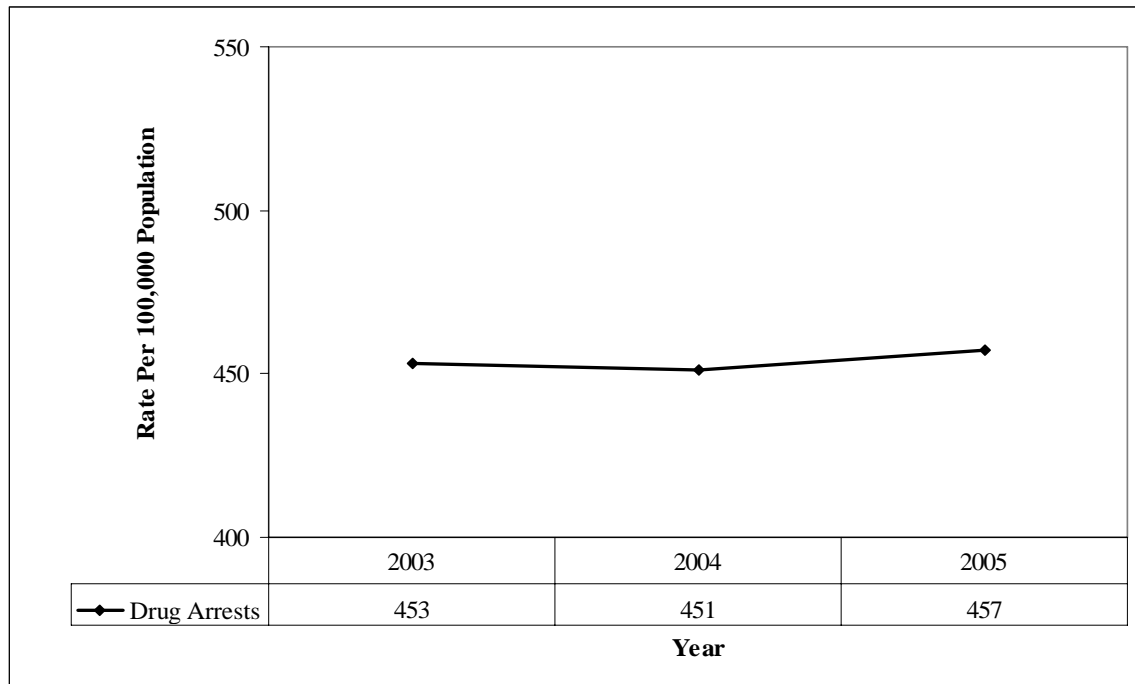
**Figure 35:** Percent of Adults Past-Year Illicit Drug Dependence or Abuse



Source: NSDUH

Note: Confidence intervals allow comparison of Iowa and U.S. results. The data source provided the confidence intervals for Iowa, but not for the U.S.

**Figure 36: Drug Arrests per 100,000**



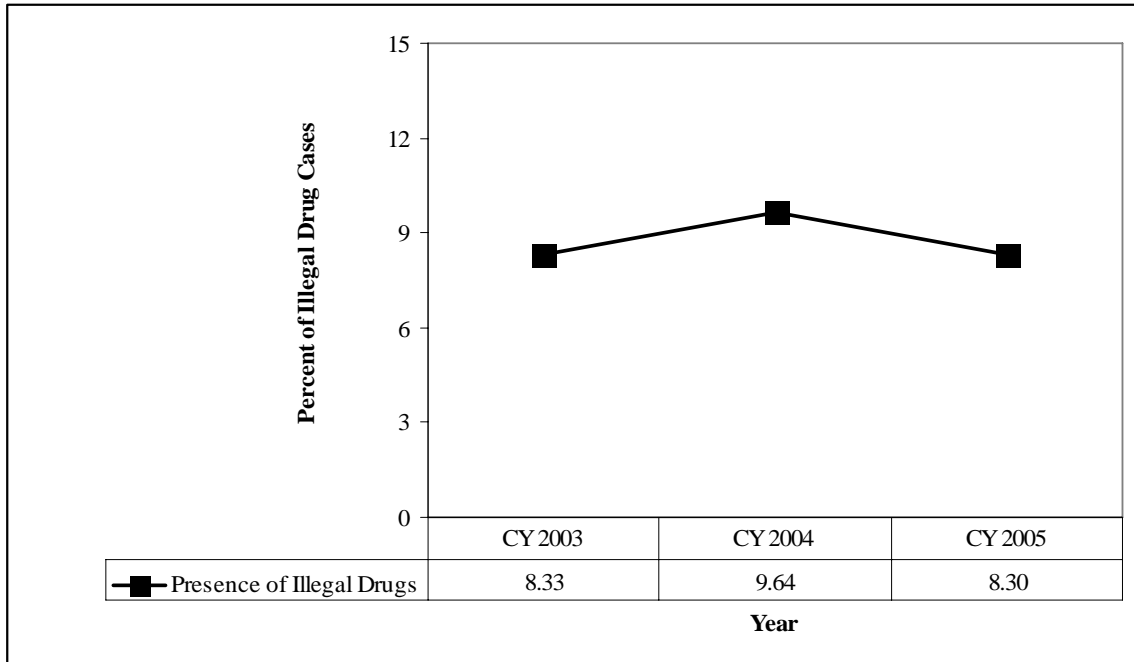
Source: Incident Based Uniform Crime Reporting System

**Table 11: Number of Drug Arrests by Listed Substance**

Drug	Year		
	2003	2004	2005
Marijuana	8670	8483	8830
Methamphetamine	2699	2604	2410
Crack	534	648	667
Other Drugs	386	478	495
Cocaine	408	430	455
Unknown	320	325	313
Other Narcotics	82	113	177
Other Hallucinogens	42	77	76
Other Stimulants	91	76	47
Other Depressants	31	30	42
Heroin	20	19	29
Barbiturates	6	9	7
Opium	18	1	7
Morphine	5	4	6
LSD	5	14	3
Hashish	15	2	2
PCP	0	6	1
Total	13332	13319	13567

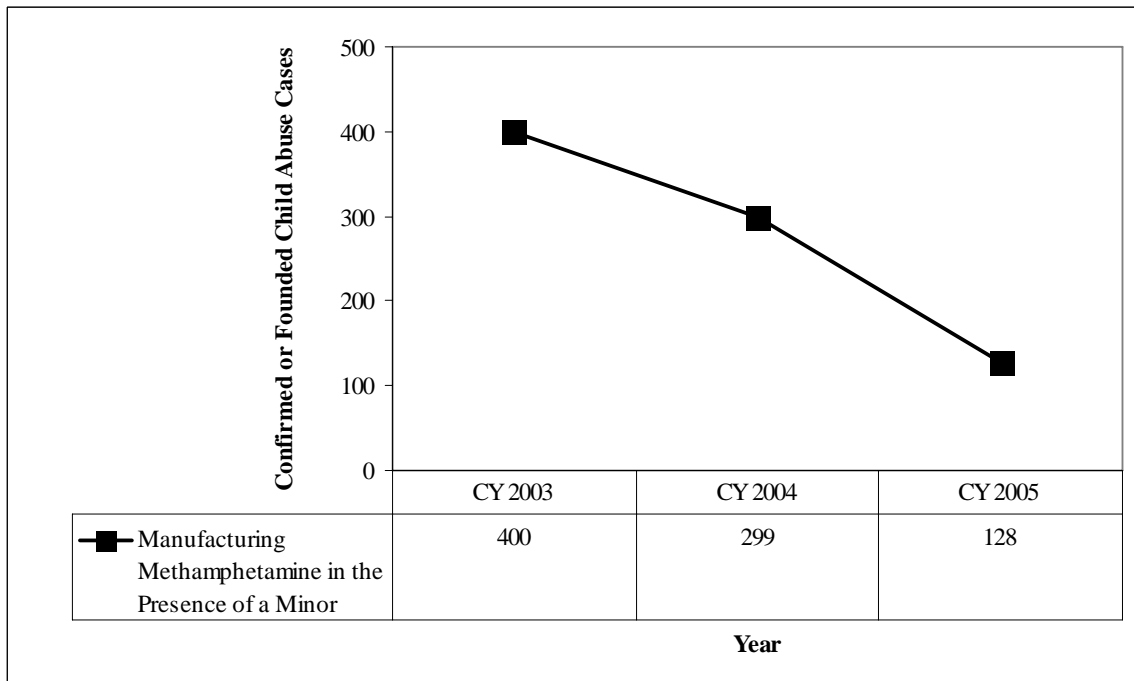
Source: Incident Based Uniform Crime Reporting System

**Figure 37:** Percent of Illegal Drug Cases Out of All Confirmed or Founded Child Abuse Cases



Source: Iowa Department of Human Services

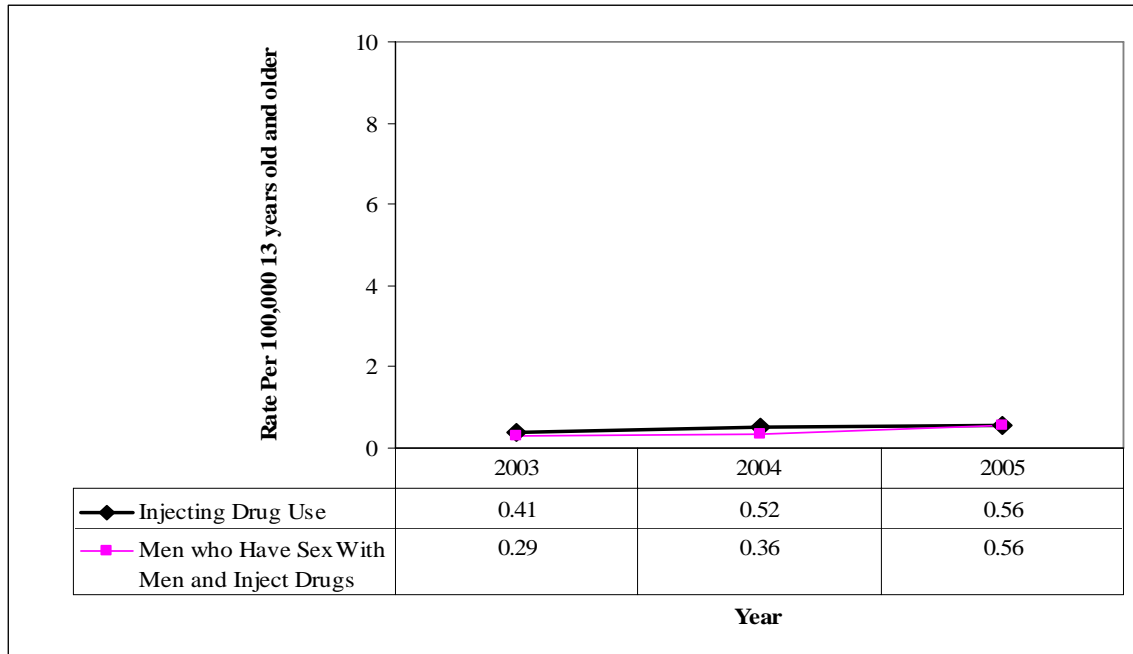
**Figure 38:** Number of Confirmed or Founded Child Abuse Cases Involving Manufacturing Methamphetamine in the Presence of a Minor



Source: Iowa Department of Human Services

Note: The Iowa Pseudoephedrine Control Act took effect in May 2005. This Act required that pseudoephedrine products be sold from behind the counter.

**Figure 39:** Reported New HIV Cases per 100,000 due to Drug Use



Source: HIV/AIDS

## Discussion

### *General Comments*

Iowa is a rural state with many of the same social and substance abuse problems as other rural states: erosion of rural life resulting from disappearance of the family farm, subsequent decaying of the infrastructure of small towns, isolated communities, growing dependence on the gambling industry, and a state budget that is not adequate for addressing substance abuse issues. Bars are sometimes the only viable businesses in small towns with a declining commercial base, and drinking alcohol is a common component of the social life in these communities.

Iowa is among the small number of states not dominated by a major metropolitan area. It is instead comprised of rural areas, small towns, and small cities. Its population is markedly older than most states, better educated, and less likely to be members of minority groups. In the future, it will be necessary to expand the current state-wide epidemiological profile to understand how Iowa's fairly unique demographic and geographic characteristics affect substance use and abuse data in different areas of the state. Consideration of Iowa's unique population is important in comparing state or local data with national data.

Iowa has a large higher education system. It has only three state-supported universities, but all three have more than 20,000 students at the undergraduate and graduate levels. This situation results in three small cities with extraordinarily large numbers of students

and young adults concentrated in one place, and engaged in a lifestyle where alcohol is widely accessible and accepted. Iowa has an unusually large number of private four-year colleges, ranging in size from very small to large, and ten state-supported two-year colleges and vocational schools.

The burden of substance abuse, as demonstrated by the consequences data presented in this report, is staggering both financially and in human suffering. The consumption data are disturbing in that Iowans heavy use rates are considerably higher than national averages. The cause of this high rate of alcohol use and abuse may be intuitively understood from the data on attitudes toward use and abuse of alcohol, namely, that Iowans have markedly higher levels of acceptance of drinking and lower fear of adverse consequences compared with other Americans. It is in the best interest of all citizens of Iowa to reduce the state's burden of substance abuse and dependence.

### ***Process***

This report uses national- and state-level datasets inventoried from potential databases. Although the national SEDS datasets were expected to be valid and to have integrity, the Data Task Group found that estimates were often not representative of the State of Iowa because of small or replacement population samples and because they did not contain current data. The Data Task Group decided to use some of the state-level datasets initially used to populate the SEDS. These state data sets are more representative and current.

### ***Consumption Patterns of Alcohol, Tobacco, and Other Drugs in Iowa***

#### Alcohol

Alcohol is the most widely used substance among youth and adults in Iowa. Approximately 1.3 million Iowa residents 12 years of age or older used alcohol in the past month, and more than one-half of these Iowans had at least one episode of binge drinking during the same period (NSDUH, 2004). Adult alcohol use in Iowa has remained relatively stable over the past couple of years. The rate of current alcohol use in Iowa is similar to the national rate, whereas binge drinking rates in Iowa are significantly higher. Adults in Iowa perceive binge drinking as less of a risk than adults across the nation (34% vs. 41%).

Underage drinking is a critical issue in Iowa. Iowa places in the top fifth of the states for both underage use of alcohol and underage binge drinking. The social culture in many of Iowa's rural areas and college towns accepts underage drinking as a rite of passage that is part of life activities in small communities. Many community events and activities center on or include drinking alcohol, glorify drinking and may even promote underage drinking. Many parents view underage drinking as normal for teenagers. Some parents provide alcohol to youth in their homes. The 2005 IYS showed that for every five Iowa 11<sup>th</sup>-graders, two drank alcohol in the past month. Iowa youth and adult current alcohol

use rates are similar to the national rate. However, binge drinking by young Iowans is significantly higher than the national binge drinking rate for youth (14% vs. 11%).

### Tobacco

Tobacco use in Iowa is similar to the national rate, and was level from 2003 to 2004. Approximately 800,000 Iowans over age 12 use tobacco. Cigarette use makes up most of tobacco use in Iowa. Rates of smoking during pregnancy have been steady at about 16%. A bright spot is that the rate of smoking among youth has been steadily decreasing.

### Illicit Drugs

Illicit drug use in Iowa appears to be holding steady, and its prevalence is lower than the national level. The illicit drug used by the most Iowans is marijuana, followed by methamphetamine. Current marijuana use by Iowa adults is significantly lower than the national rate (NSDUH, 2004). 18- to 25 –year-old Iowans are four times more likely to use marijuana than older Iowans, and twice as likely to use marijuana as 12-to 17-year-olds.

## ***Consequences of Substance Abuse in Iowa***

### Alcohol

The consequences of alcohol use in Iowa are severe and multi-faceted. They include: loss of life and injury; lost wages and loss of employment; increased insurance rates and hospitalization charges; costs associated with the legal system; incarceration; and property damage. Because of the higher level of alcohol consumption compared with tobacco or illicit drugs, the adverse consequences of alcohol use may outweigh those associated with tobacco or illicit drugs.

Approximately 20,000 drunkenness and liquor law arrests were recorded in 2005, the majority of these arrests involved 18- to 24-year-olds. More than 14,000 OWI arrests were recorded in 2005. Between 2000 and 2005, approximately one-quarter to one-third of Iowa adult traffic fatalities involved an alcohol-involved driver defined as having a Blood Alcohol Content greater than 0.01. The rate of alcohol-related traffic fatalities has remained relatively constant since 2000. Approximately 115 Iowa deaths per year are caused by alcoholic cirrhosis.

## Tobacco

Iowa lacks quality tobacco consequence data, so lung cancer death is the only tobacco consequence indicator. Lung cancer death rates are on the rise in Iowa. White men aged 55 to 64 years are most at risk to die of lung cancer. Lung cancer can be caused by exposure to environmental toxins, a particular concern for a rural state with a large farming industry.

## Illicit Drugs

The illicit drug dependence or abuse rate in Iowa has remained steady over the last few years, and is similar to the national rate. Drug arrests have remained stable in Iowa over the past couple of years. Marijuana accounted for almost two-thirds of all drug arrests in Iowa during 2005. Drugs are incriminated in the spread of HIV/AIDS infection, but only a handful of Iowans are affected each year. Fewer than 10 new adult/adolescent cases were potentially linked to illicit drug use in 2005.

## *National Outcome Measures*

Information from guidance documents from the Center for Substance Abuse Prevention concerning outcome measures were reviewed by the members of the Workgroup. Iowa's Substance Abuse Epidemiological Profile reflects the group's current understanding that these documents were developed specifically for states who received the Strategic Prevention Framework State Incentive Grants. Iowa is applying this guidance for the Block Grant funding.

## *Conclusions*

- Iowa has a binge drinking problem; adult and youth binge drinking rates are higher in Iowa than nationally.
- Current alcohol and tobacco use in Iowa is similar to the national rate.
- Illicit drug use in Iowa appears to be lower than the national rate.
- National datasets do not always adequately portray substance use in Iowa due to the sampling methodologies used.
- The Iowa Youth Survey is a particularly useful tool in assessing youth substance use in the state.

# Appendices



## **Appendix 1**

### Indicators Included in Profile

#### **Alcohol Consumption:**

- 30-Day Alcohol Use (both adult and youth)
- Age of First Use of Alcohol
- Binge Drinking (both adult and youth)
- Heavy Drinking (adult)
- 30-Day driving after drinking alcohol
- Women reporting the use of alcohol during pregnancy
- Perception of Risk

#### **Tobacco Consumption:**

- 30-Day Use of Cigarette Use
- Age of First Use of Cigarettes
- 30-Day Use of Other Tobacco Products
- Heavy Smoking (youth)
- Women reporting the use of cigarettes during pregnancy
- Perception of Risk

#### **Illicit Drug Consumption:**

- 30-Day Marijuana Use
- 30-Day Any Illicit Drug Use Other Than Marijuana
- Age of First Use of Marijuana
- Perception of Risk

#### **Alcohol Consequences:**

- Alcohol-Related Motor Vehicle Crashes
- Chronic Liver Disease/Alcoholic Cirrhosis Deaths
- Alcohol-Involved Drivers Among All Drivers in Fatal Crashes
- People 12 and Older Meeting DSM IV Criteria for Alcohol Dependence or Abuse
- Treatment Numbers for Alcohol Dependency or Alcohol-Related Disorders from Licensed Public Treatment Facilities
- Suicides
- Alcohol-Related Domestic Violence Arrests
- Liquor Law Violations
- Drunkenness
- DUI Rates

**Tobacco Consequences:**

- Lung Cancer Deaths

**Illicit Drug Consequences:**

- New AIDS Cases and Annual HIV/AIDS Rates Due to Drug Use
- Drug Possession Arrests
- Presence of Illegal Drugs in Confirmed or Founded Child Abuse Cases
- Manufacturing Methamphetamine in the Presence of a Minor

**Other Indicators:**

- ATOD-Related Suspensions
- ATOD-Related Expulsions
- School Attendance
- School Enrollment

## Appendix 2

### All Indicators Considered for Inclusion in the Profile

#### **Alcohol Consumption:**

- 30-Day Alcohol Use (both adult and youth)
- Age of First Use of Alcohol
- Binge Drinking (both adult and youth)
- Heavy Drinking (adult)
- 30-Day driving after drinking alcohol
- Women reporting the use of alcohol during pregnancy
- Perception of Risk
- Binge Drinking in Past 14 Days
- Total Alcohol Sales
- Percentage of Case Sales
- Percentage of Cash Sales
- Number of Liquor Licenses
- Per Capita Alcohol Consumption, Based on Population >14 years
- Age at Which Started Drinking Regularly
- Lifetime Alcohol Use
- Percentage of Students who had at Least One Drink of Alcohol on School Property on One or More of the Past 30 Days
- Adults Aged 18 and Older Reporting Driving After Having “Perhaps Too Much to Drink” in Past 30 Days
- Students Who During the Past 30 Days Rode in a Car or Other Vehicle Driven by Someone Who had been Drinking Alcohol
- Perception of Disapproval Attitude

#### **Tobacco Consumption:**

- 30-Day Use of Cigarette Use
- Age of First Use of Cigarettes
- 30-Day Use of Other Tobacco Products
- Heavy Smoking (youth)
- Women reporting the use of cigarettes during pregnancy
- Perception of Risk
- Past 30-Day Use of at Least 2 Cigarettes
- Ever Tried Cigarette Smoking
- Total Cigarette Sales
- Percent of Students Who Used Chewing Tobacco or Snuff on One or More of the Past 30 Days
- Percentage of Students Who Smoked Cigars, Cigarillos, or Little Cigars on One or More of the Past 30 Days
- Percentage of Students Reporting Any Use of Cigarettes in Their Lifetime

- Total Cigarette Consumption per Capita
- Age of First Use of Smokeless Tobacco
- Percent Reporting Having Smoked at Least 100 Cigarettes in Lifetime
- Of Smokers: the Average Number of Cigarettes Smoked per Day in Last 30 Days
- Of Smokers: the Average Number of Days Smoked in Last 30 Days
- Students Reporting any Use of Smokeless Tobacco in Their Lifetime
- Students Who Used Chewing Tobacco or Snuff on School Property in last 30 Days
- Students Who Smoked Cigarettes on School Property in last 30 Days
- Students Who Smoked a Whole Cigarette for the First Time Before Age 13
- Students Who Were Current Smokers and Have Tried to Quit Smoking During the Past 12 Months
- Perception of Disapproval Attitude

**Illicit Drug Consumption:**

- 30-Day Marijuana Use
- 30-Day Any Illicit Drug Use Other Than Marijuana
- Age of First Use of Marijuana
- Perception of Risk
- 30-Day Cocaine Use (both adults and youth)
- 30-Day Inhalant Use (youth)
- 30-Day LSD Use
- 30-Day Stimulant Use
- 30-Day Sedative Use
- 30-Day Heroin Use
- 30-Day Ecstasy Use
- 30-Day Steroid Use
- Lifetime Methamphetamine Use
- Lifetime Stimulant Use
- Lifetime Ecstasy Use
- Lifetime LSD Use
- Lifetime Sedative Use
- Lifetime Steroid Use
- Daily Drug Use in Iowa
- Lifetime Marijuana Use
- Lifetime Cocaine Use
- Lifetime Inhalant Use
- Lifetime Heroin Use
- Lifetime Injecting Drugs for Adults
- Students Who Tried Marijuana for the First Time Before Age 13
- Daily Marijuana Use During Past 30 Days
- Lifetime Injecting Drugs
- Students Who Used Marijuana on School Property One or More Times During the Past 30 Days

- Students Who Were Offered, Sold, or Given an Illegal Drug on School Property During the Past 12 Months
- Persons Aged 16+ Reporting Driving After Having Smoked Marijuana or Using Other Illicit Drugs in the Past Month
- Perception of Disapproval Attitude

**Combination Consumption:**

- Annual Percentage of Students Reporting Being Drunk or High at School
- Of students Who had Sexual Intercourse, the Percentage Who Drank Alcohol or Used Drugs Before Last Sexual Intercourse

**Alcohol Consequences:**

- Alcohol-Related Motor Vehicle Crashes
- Chronic Liver Disease/Alcoholic Cirrhosis Deaths
- ER Visits for Alcohol-Related Issues
- Alcohol-Involved Drivers Among All Drivers in Fatal Crashes
- Alcohol-Related Property Damage
- People 12 and Older Meeting DSM IV Criteria for Alcohol Dependence or Abuse
- Treatment Numbers for Alcohol Dependency or Alcohol-Related Disorders from Licensed Public Treatment Facilities
- Suicides
- Alcohol-Related Domestic Violence Arrests
- Liquor Law Violations
- Drunkenness
- DUI Rates
- Liquor Laws
- Number of Persons Discharged from Hospitals for Alcohol-Related Conditions
- Number of Persons Discharged from Hospitals for Alcohol-Related Injuries
- Number of Persons Admitted to Hospital ER for Alcohol-Related Conditions
- Number of Persons Admitted to Hospital ER for Alcohol-Related Injuries
- Number of Iowa K12 Alcohol-Related Suspensions
- Number of Iowa K12 Alcohol-Related Expulsions
- Number of EMS Medical Response (Intoxication)
- Drunkenness
- Percent of Fatal Motor Vehicle Crashes that are Alcohol-Related
- Alcohol-Related Vehicle Death Rate
- Percentage of Injury Crashes that are Alcohol-Related
- Percentage of Non-Fatal Injuries that are Alcohol-Related
- Number of Boating Injuries with Alcohol Involvement
- Number of Boating Fatalities with Alcohol Involvement
- Rate of Fetal Alcohol Syndrome per 100,000 Live Births
- Alcohol-Related Personnel Actions

- Number of Boating Accidents With Alcohol Involved

**Tobacco Consequences:**

- Lung Cancer Deaths
- Adults with Asthma
- Number of deaths from each specific cause that is at least fractionally attributable to tobacco
- Number of Persons Discharged from Hospitals for Conditions Related to Tobacco Use (per ICD-10 Codes) Per 100,000 Population

**Illicit Drug Consequences:**

- ER Visits for Drug-Related Issues
- New AIDS Cases and Annual HIV/AIDS Rates Due to Drug Use
- Drug Possession Arrests
- Presence of Illegal Drugs in Confirmed or Founded Child Abuse Cases
- Manufacturing Methamphetamine in the Presence of a Minor
- Federal Drug Seizures
- Drug Abuse Violations
- Drug Abuse Convictions
- Drug Manufacture Violations
- Drug Possession Violations
- DEA Drug Violation Arrests
- Controlled Substance Arrests/Charges (Cocaine)
- Controlled Substance Seizures/Purchases (Cocaine)
- Controlled Substance Seizures/Purchases (Crack Cocaine)
- Highway Patrol Cocaine Seizures
- Highway Patrol Cocaine Cases
- Federal Drug Seizures (Cocaine)
- Federal Drug Seizures (Methamphetamine)
- Controlled Substance Seizures/Purchases (Clandestine Labs)
- Highway Patrol Clandestine Lab Seizures
- Number of Methamphetamine Clandestine Lab Seizures – DEA
- Other Stimulant Seizures – DCI
- Controlled Substance Seizures/Purchases (Heroin)
- Highway Patrol Heroin Seizures
- Controlled Substance Seizures/Purchases (Morphine)
- Controlled Substance Seizures/Purchases (Opium)
- Controlled Substance Seizures/Purchases (LSD)
- Controlled Substance Seizures/Purchases (Hallucinogens)
- Highway Patrol Hallucinogens Seizures
- Controlled Substance Seizures/Purchases (Psilocybin)
- Highway Patrol MDMA Seizures

- Federal Drug Seizures (Ecstasy)
- Controlled Substance Seizures/Purchases (Club Drugs)
- Highway Patrol Pharmaceutical Seizures
- Controlled Substance Arrests/Charges (Marijuana)
- Controlled Substance Seizures/Purchases (Marijuana)
- Controlled Substance Seizures/Purchases (Hashish)
- Controlled Substance Seizures/Purchases (Sinsemilla Plants)
- Controlled Substance Seizures/Purchases (Marijuana Plants)
- Controlled Substance Seizures/Purchases (Ditchweed/Wild Plants)
- Highway Patrol Marijuana Seizures
- Highway Patrol Marijuana Cases
- Federal Drug Seizures (Marijuana)
- Highway Patrol Hashish Seizures
- Highway Patrol Hashish Cases
- Controlled Substance Arrests/Charges (Methamphetamine)
- Controlled Substance Seizures/Purchases (Methamphetamine)
- Highway Patrol Methamphetamine Seizures
- Highway Patrol Methamphetamine Cases
- Highway Patrol Heroin Cases
- Federal Drug Seizures (Heroin)
- Controlled Substance Arrests/Charges (Opiates)
- Controlled Substance Arrests/Charges (Hallucinogens)
- Highway Patrol Hallucinogens Cases
- Highway Patrol MDMA Cases
- Highway Patrol Pharmaceutical Cases
- Controlled Substance Arrests/Charges (Other)
- Controlled Substance Seizures/Purchases (Other Narcotics)
- Number of Iowa K12 Drug-Related Suspensions
- Number of Iowa K12 Drug-Related Expulsions
- Number of EMS Medical Response (Drug Overdose)
- Drug-Related Personnel Actions per 100,000 Employees
- HIV Deaths Due to Drug Use
- Women Reporting the Use of Illicit Drugs During Pregnancy
- Number of Arrests for Possession of Drug Paraphernalia

**Combination Consequences:**

- Number of Iowa K12 Alcohol and Drug-Related Suspensions
- Number of Child Assessments Rated as Moderate for Alcohol/Drug as Contributing Factor
- Percentage of Child Assessments Rated as Moderate for Alcohol/Drug as Contributing Factor
- Death from Misuse of Prescription Drugs

- Number of Child Assessments Rated as High for Alcohol/Drug as Contributing Factor
- Percentage of Child Assessments Rated as High for Alcohol/Drug as Contributing Factor
- Number of Assessments Rated as High/Moderate for Alcohol/Drug Contributed
- Percentage of Assessments Rated as High/Moderate for Alcohol/Drug Contributed

**Other:**

- ATOD-Related Suspensions
- ATOD-Related Expulsions
- School Attendance
- School Enrollment
- Students Who Took Steroid Pills/Shots Without a Doctor's Prescription One or More Times During Their Life
- Students Who Received Grades of Mostly D's and F's in Past Year
- Total Boating Accidents per Year
- Total Boating Fatal Accidents per Year
- Total Boating Fatalities per Year
- Number of Boating Injuries per Year
- Number of Boating Accidents per Year
- Number of EMS Trauma Response (MV Incidents)
- Number of EMS Trauma Response (Fall)
- Number of EMS Trauma Response (Assault)
- Number of EMS Trauma Response (Altercation)
- Number of EMS Trauma Response (Stabbing/Gunshot)
- Number of EMS Trauma Response (Poisoning)
- Number of EMS Trauma Response (Water Accidents)
- Number of EMS Trauma Response (Drowning)
- Number of EMS Trauma Response (Firearm/Self-Inflicted)
- Number of EMS Trauma Response (Suicide Attempts)
- Number of EMS Trauma Response (Stabbing)
- Number of EMS Trauma Response (Sexual Assault)
- Number of EMS Medical Response (Psychological/Emotional)
- Number of EMS Medical Response (Acute Alcohol Intoxication)
- Number of EMS Medical Response (Poisoning)
- Percentage of Students Who had Sexual Intercourse
- Percentage of Students Who had Sexual Intercourse for the First Time Before Age 13
- Percentage of Students Who had Sexual Intercourse With Four or More People During Their Life
- Percentage of Students Who had Sexual Intercourse With One or More People During the Past Three Months
- Of students Who had Sexual Intercourse During the Past Three Months, the Percentage Who Used a Condom During Last Sexual Intercourse



- Of students Who had Sexual Intercourse, the Percentage Who Used Birth Control Pills During Last Sexual Intercourse
- Rate per 1,000 Women Aged 15-19 Years with a Reported Case of Chlamydia
- Rate per 1,000 Women Aged 20-44 Years with a Reported Case of Chlamydia
- Adults Who have been Told They Currently Have Asthma
- Number of Property Crimes Reported
- Number of Burglaries Reported
- Number of Larcenies Reported
- Number of Vehicle Thefts Reported
- Amount of Arson Reported
- Number of Violent Crimes Reported
- Number of Murder, Manslaughter Reported
- Number of Rapes Reported
- Number of Robberies Reported
- Number of Aggravated Assaults Reported
- Total Number of Domestic Violence Incidents
- Number of Property Crime Arrests
- Number of Burglary Arrests
- Number of Larceny Arrests
- Number of Vehicle Theft Arrests
- Amount of Arson Arrests
- Vehicle and Traffic Deaths
- Death Rate for Unintentional Injuries Among Children Aged 14 Years and Younger due to Motor Vehicle Crashes
- Death Rate from Unintentional Injuries due to Motor Vehicle Crashes Among 15-24 Year Olds
- Nonfatal Injury Rate due to Motor Vehicle Crashes Among Children Aged 14 and Younger
- Number of Violent Crime Arrests
- Number of Murder/Manslaughter Arrests
- Number of Robbery Arrests
- Number of Aggravated Assault Arrests
- Rate of Single Vehicle Nighttime Crashes
- Malnutrition Deaths
- Deaths Caused by Motor Vehicle Accidents
- Rate of Nonfatal Injuries Caused by Motor Vehicle Crashes
- Rate of Boating Fatalities per Year
- Estimated Number of Cases and Rates of HIV/AIDS
- Death rate due to Unintentional Injuries Among Children Aged 14 and Younger
- Infant Mortality
- Child Deaths
- Percentage of Low Birth Rate Babies
- Percent of Live Singleton Births Weighing Less Than 2,500 g
- Percent of Live Births Weighing Less Than 1,500 g

- Percent of Live Singleton Births Weighing Less Than 1,500 g
- Number of Substantiated Allegations of Abuse
- Rate of Death of Malnutrition
- Viral Hepatitis Deaths
- Teen Deaths by Accident, Homicides, and Suicide
- Teen Deaths – All Causes
- Post-Neonatal Mortality Rate per 100,000 Live Births
- Percentage of Teens not in School or not Working
- Rate of Children per 100,000 Population Who Received Preventive Services
- Number of Children with Substantiated Allegations of Abuse
- Suicide Deaths Among Youth Aged 15-19
- Rate of Other Unintentional Injuries
- Unintentional Accident Deaths
- Infant Mortality Rate per 100,000 Live Births
- Child Death Rate per 100,000 Children Aged 1-14
- Cardiovascular Deaths per 100,000 Population
- Neonatal Mortality Rate per 100,000 Population
- Perinatal Mortality Rate per 1,000 Live Births plus Fetal Deaths
- Teen Births (15-19)
- Teen Births (15-17)
- Teen Births (18-19)
- Percentage of High School Dropouts
- Adoptions of Children with Public Child Welfare Agency Involvement
- Percentage of Children in Foster Care Maltreated by Foster Care Provider
- Offenses Against Family and Children
- Maltreatment Rates
- Homicides per 100,000 Population Using ICD-10 Codes X85-Y09, Y87.1
- Number of Children Reported as Abused and Neglected and Referred for Investigation per 100,000 Children in the Population
- Number of Children Labeled as CINA
- Number of Child Victims and Non-Victims Removed from Home
- Number of Victims of Child Abuse and Neglect
- Number of Child Abuse and Neglect Fatalities
- Percent of Live Births Weighing Less Than 2,500 g.
- Persons Incarcerated in Juvenile Detention Facilities Rate per 100,000

## Appendix 3

### Data Sources

#### Data Sources

BRFSS (Behavior Risk Factor Surveillance System) -  
<http://www.cdc.gov/brfss/index.htm>

Certified Annual Report – Iowa Department of Education, Certified Annual Report (School attendance data)

HIV/AIDS – State of Iowa HIV and AIDS Surveillance Report June 30, 2006. Iowa Department of Public Health, Bureau of Disease Prevention and Immunization.  
[http://www.idph.state.ia.us/adper/hiv\\_aids\\_programs.asp#surveillance](http://www.idph.state.ia.us/adper/hiv_aids_programs.asp#surveillance)

Iowa Court Information System, Justice Data Warehouse

Iowa Department of Public Safety, Incident Based Uniform Crime Reporting System  
<http://www.dps.state.ia.us/commis/ucr/index.shtml>

Iowa Vital Records

Iowa Youth Survey -  
<http://www.state.ia.us/government/dhr/cjip/iys/YouthSurvey/ythsurvey.html>

NSDUH (National Survey on Drug Use and Health) -  
<http://www.oas.samhsa.gov/nsduh.htm>

Project EASIER – Iowa Department of Education, Project EASIER Fall Enrollment File

Project EASIER – Iowa Department of Education, Project EASIER Spring Suspension and Expulsion File

SARS - Kantzavelos, A., Barber, K., & Arndt, S. (2006). Outcomes Monitoring System, Iowa Project: Year Eight Report (Iowa Department of Public Health, Contract No. 5885NA01). Iowa City, IA: Iowa Consortium for Substance Abuse Research and Evaluation. <http://iconsortium.subst-abuse.uiowa.edu/>

Suicides -  
[http://www.idph.state.ia.us/eh/common/pdf/health\\_statistics/2004/vital\\_stats\\_2004.pdf](http://www.idph.state.ia.us/eh/common/pdf/health_statistics/2004/vital_stats_2004.pdf)

TEDS (Treatment Episode Data Set) - <http://www.oas.samhsa.gov/dasis.htm#teds2>

YRBS (Youth Risk Behavior Surveillance System) -  
<http://www.cdc.gov/healthyyouth/yrbs/index.htm>

## Appendix 4

### Sources

#### Sources

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Centers for Disease Control and Prevention. Toxicology Testing and Results for Suicide Victims – 13 States, 2004. *MMWR* 2006; 55:1245-1248. (<http://www.cdc.gov/mmwr/PDF/wk/mm5546.pdf>)

Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2003-2005].