



Planning for Community-Based Prevention of Alcohol and Other Drug- Related Problems in Sonoma County

Step 1: Assessment

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Sonoma County Department of Health Services
Prevention and Planning Division



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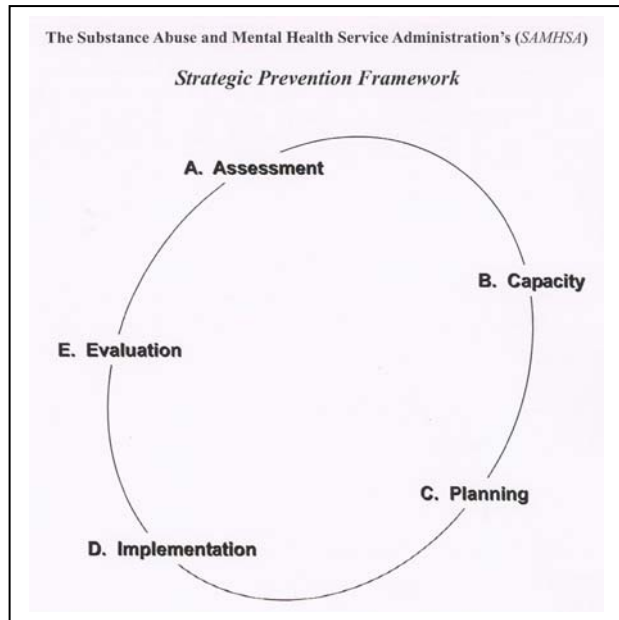
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Introduction

Substance Abuse Prevention and Treatment (SAPT) Federal Block Grant funds are awarded to counties by the California Department of Alcohol and Drug Programs (CADP) to plan, implement, and evaluate activities to prevent and treat substance abuse. Twenty percent (20%) of the State's SAPT Block Grant funds must be spent on primary prevention. The Department of Health Services (DHS) administers SAPT funds for alcohol and other drug (AOD) primary prevention services in Sonoma County.

In July 2005, the CADP adopted a new policy direction regarding SAPT-funded primary prevention services. This direction requires that counties use the Strategic Prevention Framework (SPF), a planning and program design tool developed by the federal Substance Abuse and Mental Health Services Administration (SAMHSA). The SPF consists of five steps and aims to enable counties to build the infrastructure necessary for effective and sustainable prevention through a community-based approach. The five SPF steps are:

1. **Assessment:** Profile population needs, resources, and readiness to address problems and gaps in service delivery.
2. **Capacity:** Mobilize and/or build capacity to address identified needs.
3. **Planning:** Develop a comprehensive strategic plan.
4. **Implementation:** Implement evidence-based programs and infrastructure support.
5. **Evaluation:** Monitor, evaluate, sustain and improve or replace those programs and approaches that fail.



The Sonoma County Department of Health Services (DHS) Prevention and Planning Division has undertaken a yearlong planning process to create a comprehensive prevention plan for alcohol and other drug (AOD) prevention in Sonoma County. This document represents the first step – assessment – of the Strategic Planning Framework. It provides findings about Sonoma County's AOD-related problems. The process has enlisted community support in reviewing indicator data and identifying factors that contribute to AOD problems.

The assessment process involved the following methods:

- County and state archival or secondary data was gathered showing trends over time (e.g. hospital and emergency room, California Health Interview Survey, California Healthy Kids Survey, arrests, treatment, driving under the influence (DUI), alcohol-related traffic crashes, off-sale and on-sale alcohol outlets and disciplinary actions against problem outlets, state and national surveys).

- Primary data was collected (e.g. Place of Last Drink Survey, focus groups with students and parents, surveys of professionals affected by AOD problems, key informant interviews).
- Findings were presented to community forums and councils for feedback (e.g. Juvenile Justice Coordinating Council and Sonoma Valley Inter-Agency Council).

Based on a review of existing data on AOD-related problem indicators in Sonoma County and input from community stakeholders, DHS identified the following key problem areas:

- Underage Alcohol Use and Related Problems
- High-Risk Adult Alcohol Use and Related Problems
- Methamphetamine Use and Related Problems

These problem areas are discussed in greater detail in the following chapters, including overviews of the problems, key findings on the extent of these problems in Sonoma County, and contributing community factors.

Chapter 1.

Underage Alcohol Use and Related Problems

Problem Overview

Underage drinking is a serious problem that costs the nation an estimated \$62.6 billion each year in deaths, injuries, property damage, and related economic and productivity losses. More young people drink alcohol than use other illegal drugs, and alcohol is a factor in the three leading causes of death among youth (unintentional injuries, suicides, and homicides), killing more youth than all other illegal drugs combined.^{1,2,3}

Community Impacts

Underage drinking creates a wide range of problems for communities, including vandalism, litter, property damage, violence, and other injuries due to car crashes, assaults and other trauma. These problems create a significant drain on public resources through increased police calls for service, emergency medical services, health care costs, criminal justice costs, substance abuse treatment, and use of other community services.⁴

Individual Impacts

Alcohol use has serious health and safety consequences for youth. Nationally, illegal consumption of alcohol by minors contributed to 3,212 deaths and 2.4 million other harmful events in 2001.⁵ Nearly half of all teen automobile crashes and more than half of all suicides are linked to underage drinking.⁶ Recent brain research has shown that damage from alcohol use in teen years can be long-term and irreversible. Young drinkers also suffer short-term consequences, such as poor school performance, social problems, depression, suicidal thoughts, and violence.⁷ In the longer term, youth who begin to use alcohol before the age 15 are four times more likely to report a dependence or abuse problem in later life than those who begin to use alcohol at 21 years of age or older.⁸

Problem Indicators

Key problems related to underage drinking:

- Alcohol is the leading drug used by Sonoma County youth
- High-risk behaviors occur in association with youth alcohol use

Alcohol is the leading drug used by Sonoma County youth

- 48% of Sonoma County 11th grade students report drinking alcohol in the past 30 days. This is significantly higher than the percentage reporting use of marijuana (28%) and tobacco (16%) in the past 30 days. Much higher past 30-day use of alcohol – compared with marijuana and tobacco – is also evident among 7th and 9th graders (Table 1).
- Higher percentages of Sonoma County 7th, 9th, and 11th grade students report using alcohol in the past 30 days than do their counterparts statewide (Table 1).
- Sonoma County youth attending alternative schools report much higher percentages of past 30-day use of alcohol than do alternative school students statewide (Table 1).

- A high percentage of high school teens report a pattern of regular alcohol use: 14% of ninth-graders and 25% of eleventh-graders report drinking alcohol three or more days per month.⁹
- 74% of Sonoma State University (SSU) students report drinking alcohol in the past 30 days.¹⁰

Table 1. Percent Sonoma County Youth Reporting Substance Use in Past 30 Days, 2004								
Grade	Sonoma County			California			Alternative schools	
	7 th	9 th	11 th	7 th	9 th	11 th	County	State
Alcohol	11	31	48	10	25	37	59	51
Marijuana	4	16	28	4	12	20	53	39
Tobacco	3	9	16	5	10	15	49	39

Source: California Healthy Kids Survey, Sonoma County, 2004

- Alcohol is the second most reported drug problem, following marijuana, among Sonoma County youth under 18 admitted to AOD treatment programs (Table 2).

Table 2. Percent Treatment Admissions by Primary Drug of Choice, <18, Sonoma County, 2000-2004					
	2000	2001	2002	2003	2004
Marijuana	54	53	60	59	54
Alcohol	30	28	24	26	34
Methamphetamine	23	13	13	12	10

Source: California Department of Alcohol and Drug Programs, CADDS

High-risk behaviors occur in association with youth alcohol use

Intoxication

- Over half (54%) of Sonoma County 11th graders and 29% of 9th graders report "getting very drunk or sick" from alcohol (Table 3).

Binge drinking

- 30% of 11th graders report binge drinking¹¹ in the past 30 days (Table 3) and 16% report binge drinking three or more days in the past month, suggesting a pattern of risky drinking.
- The percent of students reporting alcohol-related high-risk behaviors in 9th and 11th grade are considerably higher than their counterparts statewide (Table 3).

Table 3. Percent of Students (7th, 9th, and 11th grade) Who Report Alcohol-Related High-Risk Behaviors, Sonoma County and California, 2004						
	Sonoma County			California		
	7	9	11	7	9	11
Drinking alcohol in the past 30 days	11	31	48	10	25	37
Binge drinking in the past 30 days	4	17	30	4	11	23
Binge drinking three or more times in the past 30 days	2	8	16	1	5	12
Ever been very drunk or sick from drinking	7	29	54	7	20	37
Ever been drinking and driving (or being in a car driven by someone who has been drinking)	43	25	36	35	19	27

Source: 2004 California Healthy Kids Survey, Sonoma County and California

Arrests

- In 2004, a total of 2,613 Sonoma County youth under 18 were arrested on various felony and misdemeanor charges. Over one-fourth of all youth felony and misdemeanor arrests (26%, or 685) were for alcohol and other drugs. Arrests for alcohol (n=345) and other drugs (n=340) were evenly divided.¹²
- In 2004, 995 alcohol-related arrests involved Sonoma County youth under the age of 21. Liquor law violations accounted for 44.2%, followed by driving under the influence (30.3%), and public drunk arrests (25.5%) (Table 4).

Table 4. Underage Alcohol-Related Arrests, Sonoma County, 2004				
	<18	18-20	Total	Percent
Driving under the influence	29	272	301	30.3
Drunk in public	113	141	254	25.5
Liquor law violations	203	237	440	44.2
Total	345	650	995	100.0

Source: California Department of Justice, Criminal Justice Statistics Center

Driving under the influence

- In 2004, a total of 2,914 arrests were made in Sonoma County for driving under the influence. Ten percent (or 301) were individuals under the age of 21 (272 were 18-20, 29 were under 18).¹³
- Over a third (36%) of 11th graders report driving a car after drinking alcohol or riding in a car driven by a friend who had been drinking. Forty-three percent of 7th graders report being in a car driven by someone who has been drinking (Table 3).
- Of students surveyed from West County Union High School District, 75% think that drinking and driving among youth is a serious problem.¹⁴

Contributing Factors to Underage Alcohol Use

National research has identified the following community factors that contribute to underage drinking:

- Easy availability of alcohol from both commercial and social sources¹⁵
- Permissive attitudes, behaviors, and community norms¹⁶
- Inconsistent merchant compliance with underage drinking laws¹⁷

Easy availability of alcohol from both commercial and social sources

- 83% of Sonoma County 11th graders, 71% of 9th graders, and 32% of 7th graders report that it is “very easy” or “fairly easy” to obtain alcohol.¹⁸

- While the majority of Sonoma County students report friends or other teenagers as a source for alcohol, a substantial percentage of students (48%) report that they “get adults to buy it for them.”¹⁹

- Cotati-Rohnert Park 11th graders report that youth who drink alcohol can also “buy it themselves at a store”. These students report that most of the students in their grade who buy alcohol usually buy it at a convenience store or mini-market (45%), liquor store (23%), or drug store/other retail store (4.5%).²⁰

- Asked where most students in their grade usually purchase alcohol, 34% of students surveyed from West Sonoma County reported purchase from a convenience store or mini-market, 26% from a liquor store, and 21% from a supermarket.²¹

- House parties are one of the most frequently reported ways that South County school students gained access to alcohol. Alcohol is either provided directly by parents, older siblings, or older friends, or is available by virtue of parental absence. Drinking games are reported to be a common feature of private parties, encouraging over-consumption of alcohol.²²

- West Sonoma County youth reported that it is not difficult to steal alcohol from local stores.²³

“Stores are selling to minors.”

“Some parents will buy alcohol for kids to come over and party.”

“Parents leave it out in the open on the counter or in the fridge – I see this everywhere.”

“Parents allow you to drink at home if they take your keys and make you stay the night.”

California Healthy Kids Survey Focus Group held at Casa Grande High School, April 13, 2006.

Permissive attitudes, behaviors, and community norms

- Students get conflicting messages from parents and the community who say, “Don’t drink” but then sell it or supply it to students.²⁴

- Twenty-six percent of 11th graders responding to the 2005 California Healthy Kids Survey (CHKS) in Petaluma reported that when they drink alcohol at parties, a parent or another adult is present “sometimes” or “all or most of the time.”²⁵

- Twelve percent of West Sonoma County Union High School District students that were surveyed reported being allowed to drink alcohol at home under parental supervision, while 46% of parents reported knowing parents or adults who permit underage youth to consume alcohol in their homes.²⁶

Inconsistent merchant compliance with underage drinking laws

- Sonoma County youth are able to purchase alcohol from stores, bars, or restaurants despite the fact that selling alcohol to minors is against the law. From 2001 through April 2006, 25% (161) of Sonoma County's 651 off-sale alcohol outlets²⁷ and 13% (97) of 767 on-sale establishments²⁸ licensed to sell alcohol had disciplinary actions filed against them by the state regulatory agency for license violations. Eighty-three percent of off-sale violations and 79% of on-sale violations were related to minors; most were due to selling alcohol to a minor, and some involved employment of a minor or allowing a minor on the premises (of a bar) (Table 5).
- Twenty-eight percent of parents surveyed from West Sonoma County Union High School District indicate that lack of enforcement is a factor in preventing alcohol use among youth under 21.²⁹

	<i>Off-sale</i>	<i>On-sale</i>
Total licensed outlets	651	767
Disciplinary actions Jan 2001-April 2006	161	97
% of outlets with disciplinary actions of total	25%	13%
Disciplinary actions involving youth	134	77
% of outlets with disciplinary actions involving youth	83%	79%

Source: California Alcoholic Beverage Control Department

- Five percent of West Sonoma County Union High School District students reported having successfully used a fake ID to obtain alcohol and 10% reported being successful at purchasing alcohol without an ID.³⁰



Possible Areas for Further Study

National research has identified other community factors that contribute to underage drinking. Although local data are not currently available, the following are issues that Sonoma County might want to examine in the future.

Alcohol advertising and promotions. Recent studies conclude that exposure to alcohol advertising contributes to an increase in underage drinking;³¹ 7th graders who viewed more television programs containing alcohol commercials were more likely to drink in the 8th grade;³² and exposure to and positive attitudes towards alcohol advertisements affect youth decisions about alcohol use.³³

Portrayal of alcohol use in entertainment media. A 2000 report examining research on the frequency and nature of media portrayals of the use of alcohol, tobacco, and illicit drugs concluded that alcohol is the substance most likely to be portrayed in television programs. Further, alcohol consumption occurs in almost all movies and 17% of current songs make reference to alcohol.³⁴

Low-priced, youth-focused products. Numerous studies have shown that raising alcohol prices (i.e. by raising taxes on alcohol) help to lower alcohol-related problems, such as alcohol consumption by underage youth.³⁵ "Alcopops" are the newer, sweeter alcoholic malt beverages that include the popular brands Mike's Hard Lemonade, Smirnoff Ice and Doc Otis' Hard Lemonade. Youth who were surveyed reported that alcopops are very easy to get, taste much better than beer or liquor, and make it more likely that underage youth will try other alcohol beverages.³⁶

Chapter 2.

Adult High-Risk Alcohol Use and Related Problems

Problem Overview

More than 75,000 deaths annually are attributable to excessive alcohol consumption, the third leading cause of preventable death in the United States.³⁷

Community Impacts

At a community level, high-risk alcohol use contributes to criminal activity, motor vehicle crashes, and other injuries. In addition to the pain and suffering inflicted on community citizens, these problems create an enormous financial burden on communities. National research has found “unhealthy alcohol use” in 7% to 20% of outpatients, 30% to 40% of emergency department patients, and 50% of trauma patients. In California, the costs of alcohol abuse in 2001 totaled \$17.8 billion for health services, substance abuse treatment and prevention, lost productivity from premature deaths, and justice system costs.³⁸ Traffic crashes due to driving under the influence (DUI) are one of the most visible problems caused by high-risk alcohol use. Societal costs of DUI have been estimated to be \$1 per drink, with 60% of those costs paid for by people other than the drinking driver.³⁹

Individual Impacts

Heavy drinking is known to cause illness, disability, and premature death.⁴⁰ It is associated with a number of chronic health conditions including cirrhosis, chronic liver disease, heart disease, stroke, certain cancers, depression, and various social problems.⁴¹ In a recent study, nearly one fourth of all persons admitted to general hospitals were determined to have alcohol-related problems or to be undiagnosed heavy drinkers being treated for the consequences of their drinking.⁴² In 2004, one third of Sonoma County hospitalizations where alcohol was a principal diagnosis were due to acute alcoholic hepatitis, alcoholic cirrhosis of the liver, or alcoholic liver damage.⁴³

The National Institute on Alcohol Abuse and Alcoholism defines binge drinking as consuming enough alcohol to result in a blood alcohol content (BAC) of .08, which, for most adults, would be five or more drinks for men and four or more for women over a short period.⁴⁴ Binge drinking is associated with a number of adverse health effects, including unintentional injuries, including motor vehicle crashes, falls, drownings, and burns.⁴⁵ Binge drinking is also associated with violent acts such as homicide, suicide, child abuse, and domestic violence.⁴⁶ In addition, binge drinking is associated with sudden infant death syndrome (SIDS), alcohol poisoning, hypertension, sexually transmitted diseases, and diabetic problems.⁴⁷ Although binge-drinking rates are highest among those aged 18-25 years, 70% of binge drinking episodes occur among those aged 26 years and older.⁴⁸

Problem Indicators

Key problems related to high-risk adult drinking:

- Sonoma County adults exhibit high rates of high-risk drinking
- Adults are engaging in high-risk behaviors associated with drinking alcohol
- The impact of high-risk alcohol use on public health and safety is significant

Sonoma County adults exhibit high rates of high-risk drinking

Heavy drinking

- Heavy drinking (defined in Table 1) is reported by a significant number of Sonoma County adults. On average, of those consuming alcohol in the past 30 days, 30% of Sonoma County males report having more than two drinks per day, while 44% of females report drinking more than one drink per day.⁴⁹

Table 1. Adult Problem Drinking Definitions		
	Male	Female
Heavy drinker	More than 14 standard drinks per week, or 4 drinks in a day	More than 7 standard drinks per week or 3 drinks in a day
Binge drinker	5+ drinks in a short period of time	4+ drinks in a short period of time

Source: National Institute on Alcohol Abuse and Alcoholism (NIAAA). NIAAA Council approves definition of binge drinking. *NIAAA Newsletter* (3), Winter 2004.

- Sonoma County Drinking Driver Program (DDP) clients that participated in a May 2006 Place of Last Drink Survey reported having an average of 5.69 drinks before being arrested for driving under the influence (DUI) (Table 2).

Table 2. Number of Drinks Consumed Before DUI Arrest, Sonoma County, 2006		
	Number	Percent
1-5 drinks	307	50.4
6-10 drinks	212	34.8
11-15 drinks	59	9.7
16-20 drinks	19	3.1
20+ drinks	12	2.0
Total*	609	100.0
Average # drinks consumed: 5.69		
*137 are unknown and not counted as a part of the total.		
Source: Sonoma County Place of Last Drink Survey, Drinking Driver Programs, May 2006		

- 39% of the DDP survey respondents reported that they drank for 1-3 hours and 27% drank for 3-5 hours before being arrested for DUI.

Binge drinking

- In 2003, 18% of Sonoma County adults 18 and older (representing an estimated 64,000 residents) reported binge drinking within the past 30 days, compared with 15% of Californians (Table 3).⁵⁰
- The problem of binge drinking is even more prevalent among young adults ages 18 to 35. In this age group, 36% (representing 35,000 Sonoma County residents) report binge drinking within the past month compared to 23% statewide (Table 3). This age group represents over half of all adults engaged in binge drinking in the county⁵¹.
- Respondents who were 18 to 35 years of age accounted for 34% of all DDP survey respondents (253 out of 746).

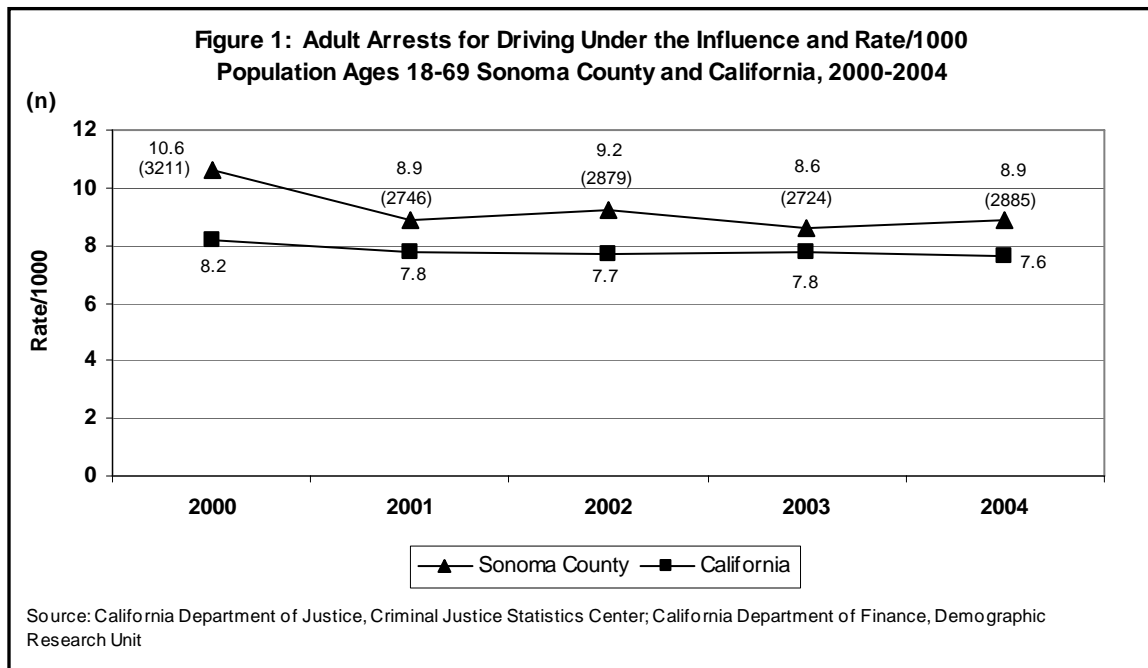
Table 3. Percent Adult Binge Drinking in Past Month, Sonoma County and California, 2003		
	Sonoma County	California
All adults	18%	15%
18-35	36%	23%

Source: 2003 California Health Interview Survey

Adults are engaging in high-risk behaviors associated with drinking alcohol

Driving under the influence

- In 2004, a total of 2,885 adults 18 and over were arrested in Sonoma County for driving under the influence. The rate of adult arrests for driving under the influence (DUI) has been consistently higher in Sonoma County than statewide for the years 2000-2004 (Figure 1).⁵²



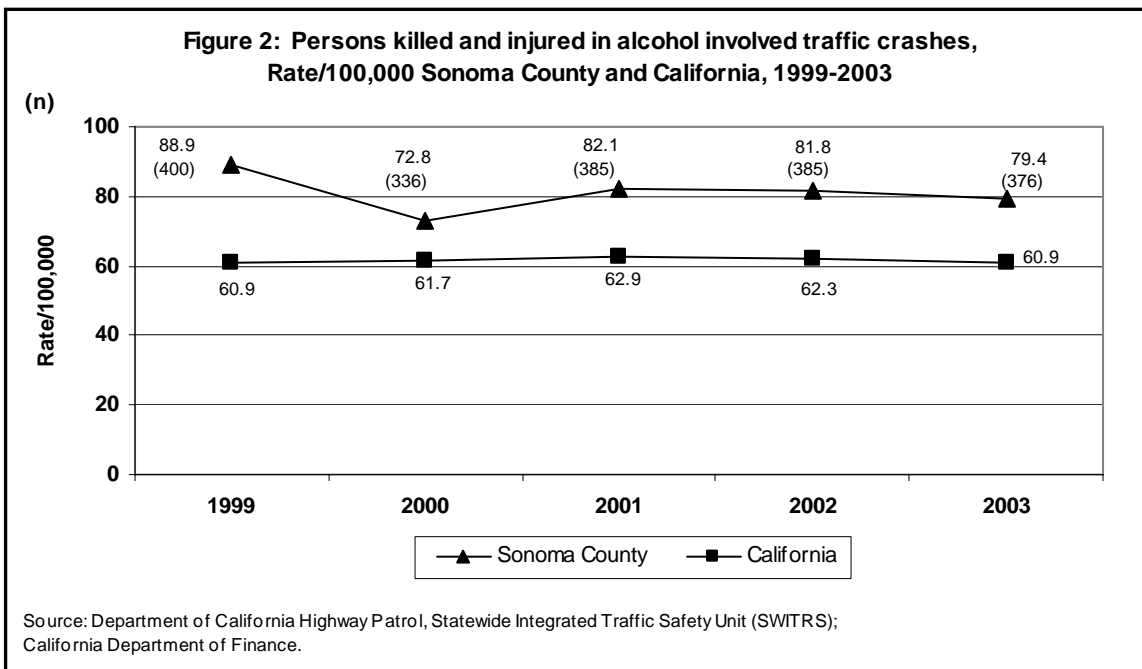
- Sonoma County Drinking Driver Program (DDP) clients that participated in a May 2006 Place of Last Drink Survey reported driving an average of 7.95 miles before being arrested for driving under the influence.⁵³
- Over half (52.5%) of the DDP survey respondents participating in the May 2006 Place of Last Drink Survey reported drinking their last drink one hour or less before getting in their car and driving (Table 4).⁵⁴

Table 4. Length of Time DDP Clients Had Been Drinking Before DUI Arrest, Sonoma County, 2006		
	Number	Percent
Less than 1 hour	113	15.7
1-3 hours	279	38.8
3-5 hours	194	27.0
5-7 hours	66	9.2
7+ hours	67	9.3
Total*	719	100.0
*27 were unknown and not counted as a part of the total		
Source: Sonoma County Last Drink Survey, Drinking Driver Program, May 2006		

- Two-thirds (66%) of DDP Place of Last Drink Survey respondents reported feeling safe to drive at the time of their arrest.⁵⁵

Alcohol-involved traffic crashes

- On average, about one person is killed or injured every day in alcohol-involved traffic crashes in Sonoma County (Figure 2).
- From 1999 to 2003, a total of 107 people were killed and 1,755 people were injured in alcohol-involved traffic crashes on Sonoma County highways and roads.⁵⁶
- The rate of alcohol-involved fatal and injury traffic crashes is consistently higher in Sonoma County than the statewide average (Figure 2).



The impact of high-risk alcohol use on public health and safety is significant

AOD treatment

- From 2000 to 2004, alcohol was the most widely reported primary drug problem among adult treatment admissions in Sonoma County programs, followed by methamphetamine, heroin, marijuana, and cocaine. In 2004, alcohol was the primary drug of choice for 44% (n=2,987) of all adult admissions (n=6,765) to publicly-funded treatment programs in Sonoma County.⁵⁷

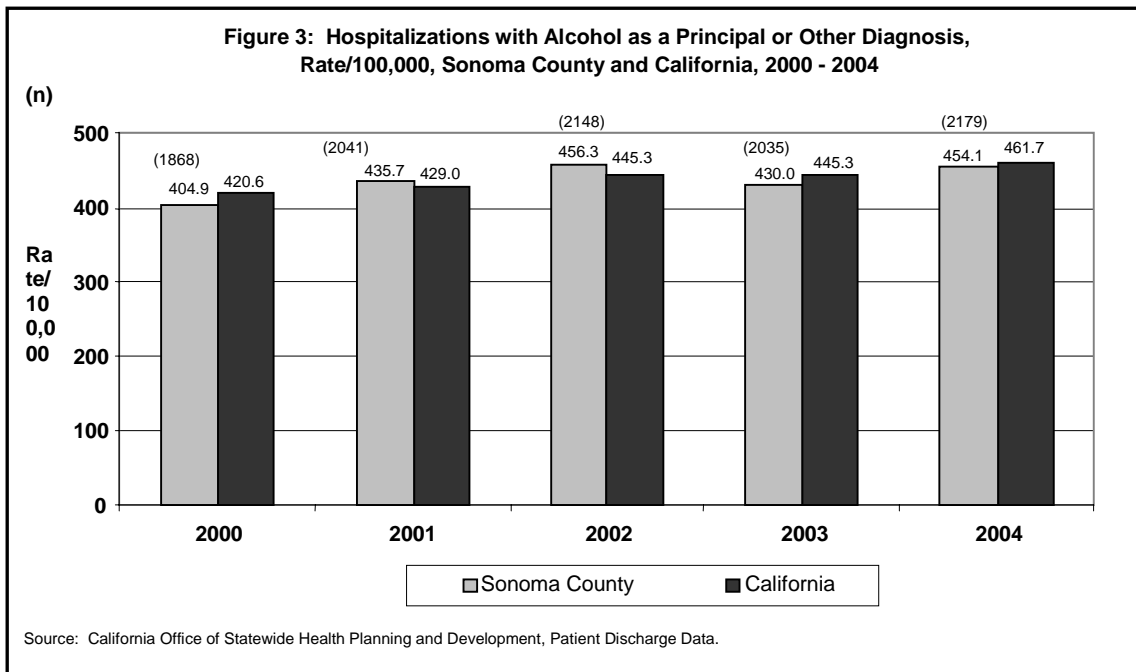
Hospitalization

- Hospitalizations with an alcohol-related principal or other diagnosis increased by 17% from 1,868 in 2000 to 2,179 in 2004 (Table 5). These diagnoses include alcohol withdrawal, acute alcoholic intoxication, alcoholic-induced psychotic delusions, alcohol abuse and dependence, alcoholic hepatitis, polyneuropathy, gastritis, cardiomyopathy, and cirrhosis of the liver.⁵⁸

	2000	2001	2002	2003	2004
Principal diagnosis	329	362	364	331	293
Other diagnosis	1,539	1,679	1,784	1,704	1,886
Total principal or other alcohol diagnosis	1,868	2,041	2,148	2,035	2,179

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

- In 2004, 5% of all hospitalizations in Sonoma County involved an alcohol-related principal or other diagnosis.⁵⁹
- Sonoma County's per capita hospitalization rate for alcohol and other drug related diagnosis increased from 2000 to 2004, although the county rate was generally lower than the statewide rate (Figure 3).



- In 2004, Sonoma County hospitals charged nearly \$7 million for a total of 293 patients discharged with alcohol as a principal diagnosis. From 2000 to 2004, the average charge⁶⁰ per hospital stay with alcohol as a principal diagnosis has nearly tripled from \$10,836 to \$28,935 (Table 6).

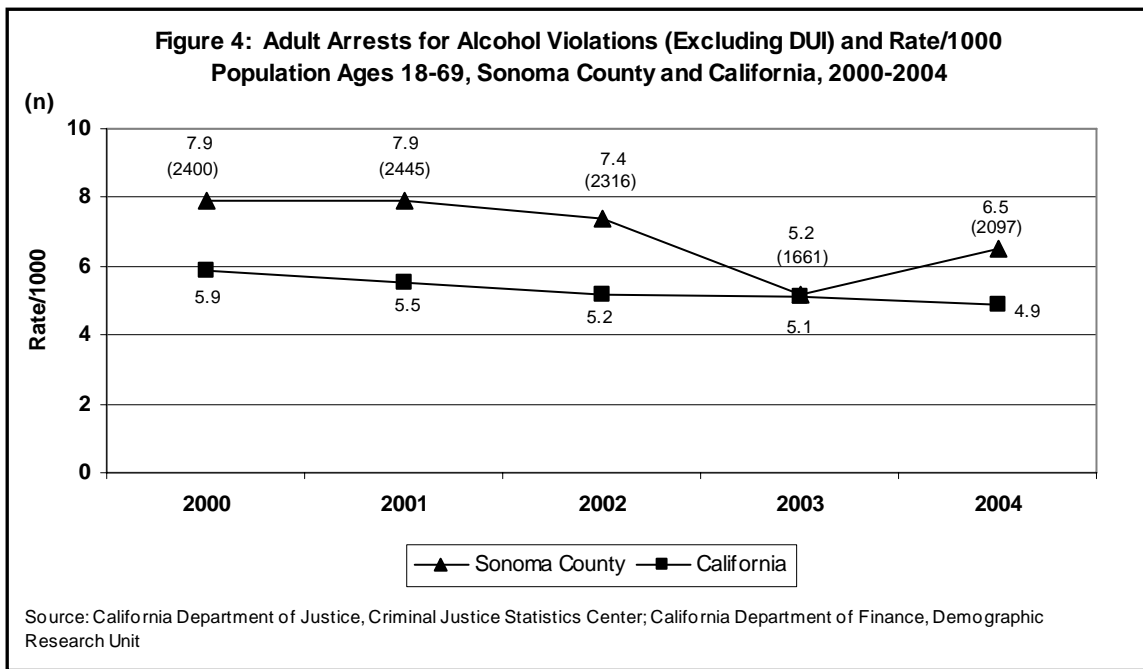
Table 6. Total Discharges and Charges for Alcohol as Principal Diagnoses, Sonoma County Hospitals, 2000-2004					
	2000	2001	2002	2003	2004
Total discharges	329	362	364	331	293
Non-Kaiser discharges*	287	307	276	288	241
Charges	\$3,110,038	\$4,549,726	\$5,384,742	\$7,405,075	\$6,973,434
Average charge per stay	\$10,836	\$14,820	\$19,510	\$25,712	\$28,935
* As an HMO, Kaiser provides care at set, prepaid rates and does not provide financial data.					
Source: Office of Statewide Health Planning and Development, Patient Discharge Data 2000-2004					

Emergency room visits

- In the first six months of 2005, 1,598 emergency room visits in Sonoma County hospitals involved alcohol as a principal (669) or other (929) diagnosis.⁶¹

Law enforcement/criminal justice

- From 2000 to 2004, the rate of arrests for public intoxication and other liquor law violations (excluding DUI arrests) in Sonoma County stayed well above statewide rates with the exception of 2003. Countywide, arrests for public intoxication in 2004 made up 13% of all misdemeanor arrests by local police departments (Figure 4).



- In 2005, about 25% of Sonoma County jail bookings were for DUI (2,289) or public drunkenness (1,297).⁶²

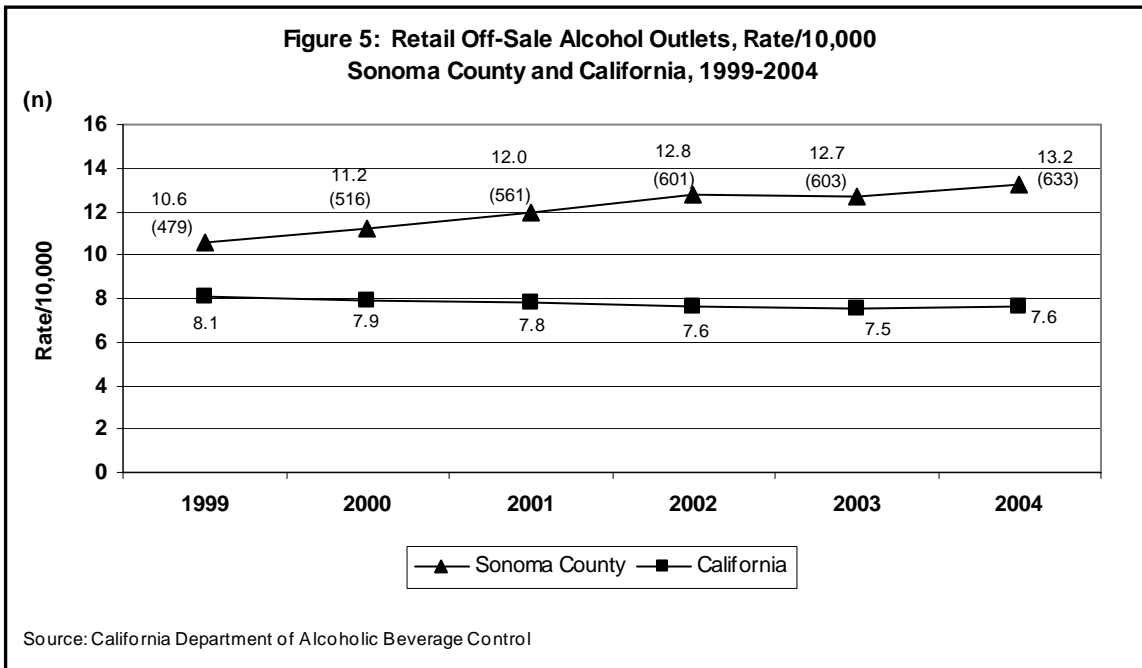
Contributing Factors to Adult High-Risk Alcohol Use

National research has identified the following community factors that contribute to high-risk drinking among adults, including:

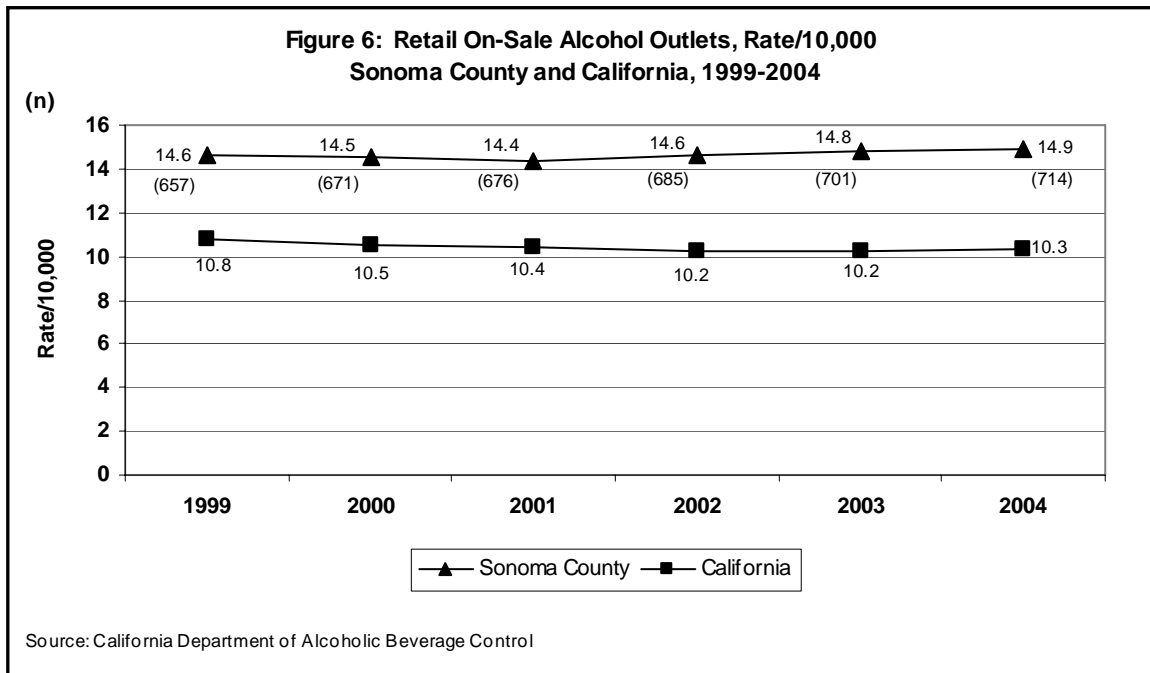
- Alcohol availability from both commercial and social sources⁶³
- Density and over-concentration of retail alcohol outlets⁶⁴
- Beverage serving and promotional practices in commercial settings⁶⁵
- Alcohol industry sponsorship of community events⁶⁶

Alcohol availability from both commercial and social sources

- In April 2006, 651 off-sale outlets (markets, grocery stores, mini marts, liquor stores), 767 on-sale outlets (bars and restaurants), and 190 wine tasting rooms were licensed to sell alcohol in Sonoma County.⁶⁷
- The per capita rate of retail off-sale outlets in Sonoma County increased from 10.6 per 10,000 population in 1999 to 13.2 per 10,000 in 2004. Sonoma County rates have remained well above state rates, which have declined during the same period (Figure 5).



- In contrast to off-sale rates, per capita rates of on-sale alcohol establishments in Sonoma County – while well over statewide rates – have remained relatively flat from 1999 to 2004 (Figure 6). This is also true for the state as a whole.



Density and over-concentration of retail alcohol outlets

- Poorly managed retail alcohol establishments can generate neighborhood problems resulting in DUIs, crime, violence, police calls for service, and other problems.
- The per capita rate of licensed alcohol establishments varies among incorporated cities in Sonoma County. Healdsburg and Sonoma have the highest rate, with 161 outlets each for every 10,000 residents. Sebastopol has the third highest rate with 110 outlets per 10,000 residents – all considerably higher than the countywide average of 33.5 per 10,000 (Table 7).

	2006 est. population	Off-sale	On-sale	Wine tasting	Total	Rate/ 10,000
Cloverdale	8,454	21	17	2	40	47.3
Cotati	7,381	13	30	-	43	58.2
Healdsburg	11,704	83	52	54	189	161.5
Petaluma	56,727	60	125	-	185	32.6
Rohnert Park	43,027	26	48	1	75	17.4
Santa Rosa	157,145	191	246	33	470	29.9
Sebastopol	7,753	39	38	9	86	110.9
Sonoma	9,893	61	68	31	160	161.7
Windsor	26,011	25	28	23	76	29.2
Unincorporated	151,834	132	115	37	284	18.7
Total	479,929	651	767	190	1,608	33.5

Sources: California Alcoholic Beverage Control Department; California Department of Finance, City/County Population Estimates, 2006.

Beverage serving and promotional practices in commercial settings

- Over half (55.9%) of clients mandated to a Sonoma County Drinking Driver Program (DDP) who participated in a May 2006 Place of Last Drink Survey reported having their last drink in a place licensed to sell alcohol (bar, restaurant, private club, or festival) just before they were arrested for driving under the influence (Table 8).

	<i>Number</i>	<i>Percent</i>
Bar/tavern	230	31.5
Someone else's home	178	24.4
Your home	116	15.9
Vehicle	51	7.0
Restaurant	49	6.7
Park or beach	27	3.7
Private club	20	2.7
Fair or festival	8	1.1
Wine tasting room	3	.4
Other	47	6.4
Total*	729	100.0
*17 were unknown or missing and were not included.		
Source: Sonoma County Last Drink Survey, Drinking Driver Program, May 2006.		

Alcohol industry sponsorship of community events

- Through sponsorship agreements, the alcohol industry uses community events, many of which attract children and families, to market its brands and products.⁶⁸
- Participants in the Strategic Planning Framework community presentations observed that ambivalence around appropriate use of alcohol by adults is complicated by alcohol event sponsorship. Others commented that alcohol industry sponsorship of family or youth events sends a mixed message about when it is appropriate to consume alcohol and that this message profoundly affects community norms.⁶⁹



Possible Areas for Further Study

Several other issues have been identified in the literature as important contributing factors to adult high-risk use of alcohol. Although local data pertaining to the following issues are currently not available, they are included as possible areas of investigation at a later time.

Beverage serving practices in social settings. Forty percent of Sonoma County Drinking Driver Program clients surveyed reported having their last drink before being arrested for DUI in their own home or someone else's home.⁷⁰ This data suggests that adults are consuming alcohol in social settings at levels that put themselves and others at risk for serious alcohol-related problems.

Low price of alcohol. Studies evaluating various economic policies have demonstrated a consistent inverse relationship between alcohol price and alcohol consumption.⁷¹ A

similar inverse relationship exists between alcohol price and alcohol-related problems such as traffic fatalities, mortality, robberies, and sexual assaults.^{72,73}

Community norms that support high levels of alcohol consumption. Communities that demonstrate tolerance for heavy drinking or over-consumption in public and social settings tend to have higher per capita rates of drinking. Higher per capita drinking is associated with higher rates of alcohol-related problems at the community level.⁷⁴

Lack of policies regulating how, when, and where alcohol is sold and consumed at public events. Lack of clear standards and policies regarding alcohol sales and/or service at public events contributes to higher rates of consumption resulting in greater alcohol-related problems.⁷⁵

Chapter 3.

Methamphetamine Use and Related Problems

Problem Overview

According to the World Health Organization, methamphetamine ranks among the most widely used illegal drugs in the world, second only to marijuana.⁷⁶ In 2004, 1.4 million Americans aged 12 or older (representing 0.6% of the U.S. population) had used methamphetamine in the past year, and 600,000 had used it in the past month.⁷⁷

Community Impacts

Methamphetamine has detrimental affects on the community, environment, economy, and public services. Communities bear significant economic costs for health care services, substance abuse treatment services, social services, child protective services, mental health care services, law enforcement and fire services, and the criminal justice system (jail, probation, and courts).

Individual Impacts

Methamphetamine can cause a variety of problems for individuals. Addiction occurs quickly, leading to increased frequency and quantity of use, and causing harm throughout the body. According to the National Institute on Drug Abuse, when methamphetamine use is stopped several symptoms occur, including depression, anxiety, fatigue, paranoia, aggression, and an intense craving for the drug.⁷⁸ Use of methamphetamine causes health problems including cardiovascular problems, increased blood pressure and irreversible, stroke-producing damage to small blood vessels in the brain. Prolonged or overuse of methamphetamine can cause short-term memory loss, extreme mood swings, immune system damage, depression, brain damage, heart and respiratory problems, irregular heartbeat, and extreme anorexia. Effects on the central nervous system resulting from taking even small amounts of methamphetamine can include increased wakefulness, increased physical activity, decreased appetite, increased respiration, irritability, and tremors. Chronic methamphetamine abuse can result in episodes of violent behavior, aggressiveness, anxiety, paranoia, confusion, and insomnia.⁷⁹

Problem Indicators

Key problems related to methamphetamine use:

- Methamphetamine is used by a wide spectrum of people in Sonoma County
- Methamphetamine use starts young
- Methamphetamine use increases the probability of high-risk sexual activity and sexually transmitted disease, including HIV
- The impact of methamphetamine use on public health and safety is significant

Methamphetamine use in Sonoma County exceeds national rates

- The 2004 National Survey on Drug Use and Health (NSDUH) reported that 1.4 million Americans aged 12 or older (representing 0.6% of the population) had used methamphetamine in the past year, and 600,000 (representing 0.2% of the population) had used it in the past month.⁸⁰ The rate of methamphetamine use in California is twice as high: 1.2% of Californians in the NSDUH survey reported using methamphetamine in the past 12 months, and 0.6% reported methamphetamine use in the past month. Extrapolating from the California rates, over 4,900 Sonoma County residents aged 12 or older are likely to have used methamphetamine in the past year, and nearly 2,500 are likely to have used the drug in the past month.⁸¹

Table 1. Estimated Prevalence of Methamphetamine Use Based on California Rates of Use, Sonoma County, 2004				
	<i>Lifetime</i>	<i>Past year</i>	<i>Past month</i>	<i>Addicted*</i>
% 12+ who use methamphetamine	7.3 %	1.2 %	0.6%	1,460
Estimated # in Sonoma County **	29,966	4,926	2,463	
*In 2004, 59.3% of past month methamphetamine users met the definition for drug dependence (NSDUH).				
** Based on estimated 2004 county population for ages 12+ of 410,494.				
Sources: 2004 National Survey on Drug Use and Health (NSDUH), Detailed Tables. See http://oas.samhsa.gov/nsduh/2k4nsduh/2k4tabs/Sect1peTabs1to66.htm#tab1.1a ; California Department of Finance, Population Projections, Demographic Research Unit				

- Prevalence data is available for some groups, including those in publicly funded alcohol and other drug (AOD) treatment programs and those testing for HIV at public testing sites.

Alcohol and other drug (AOD) treatment program clients

- The Sonoma County rate of treatment admissions where methamphetamine was reported as the primary drug problem in 2003 (548 per 100,000 population aged 12 or older)⁸² was 2½ times higher than the California rate (212 per 100,000) and over nine times higher than the national rate (56 per 100,000).⁸³
- In 2004, nearly one-third (n=2,132) of 6,741 adults (18+) admitted to a publicly supported Sonoma County AOD treatment program reported methamphetamine as their primary substance abuse problem. An additional 810 clients reported methamphetamine to be their secondary drug problem, and 237 reported the drug as their third drug of choice bringing the total percentage of methamphetamine-involved individuals to 47% of all those in treatment in 2004.⁸⁴

HIV testing population

- From January 2004 through June 2006, Sonoma County public HIV testing clinic data show that 24.6% of heterosexual women, 27.9% of heterosexual men, and 19% of men who have sex with men (MSM) tested for HIV report having used methamphetamine in the past two years.⁸⁵

Methamphetamine use starts young

- On average, from 2000 to 2004, 70% of methamphetamine abusing adult clients in publicly supported AOD treatment programs report having first used the drug before they were 21; over half (53%) before they were 18.⁸⁶
- About 10% of youth under 18 in Sonoma County AOD treatment programs report methamphetamine as their primary drug problem.⁸⁷
- Four percent of Sonoma County 9th graders (or 123 out of 3,079 surveyed) and 6% of 11th graders (150 out of 2,499) report having used methamphetamine one or more times. This compares to state rates of 3% for 9th graders and 8% for 11th graders. In addition, 37% of students in “non-traditional” high schools (i.e. court and continuation schools) reported having used methamphetamine one or more times and 12% reported having used methamphetamine in the past 30 days (Table 2).⁸⁸
- Past 30-day use – which is considered a proxy for current use – is about twice as high among Sonoma County students (2% each for 9th and 11th graders) as it is nationally, but lower than statewide rates (3% of 9th graders and 5% of 11th graders) (Table 2).⁸⁹

Table 2. Methamphetamine Use Among Traditional and Non-Traditional High School Students, Sonoma County, 2004			
	Traditional High School		Non-traditional High School
	Sonoma County	California	
Lifetime use			
9 th graders	4%	3%	
11 th graders	6%	8%	37%
Past 30 days			
9 th graders	2%	3%	
11 th graders	2%	5%	12%

Source: 2004 California Healthy Kids Survey, Sonoma County

Methamphetamine use increases the probability of high-risk sexual activity
 And sexually transmitted disease, including HIV

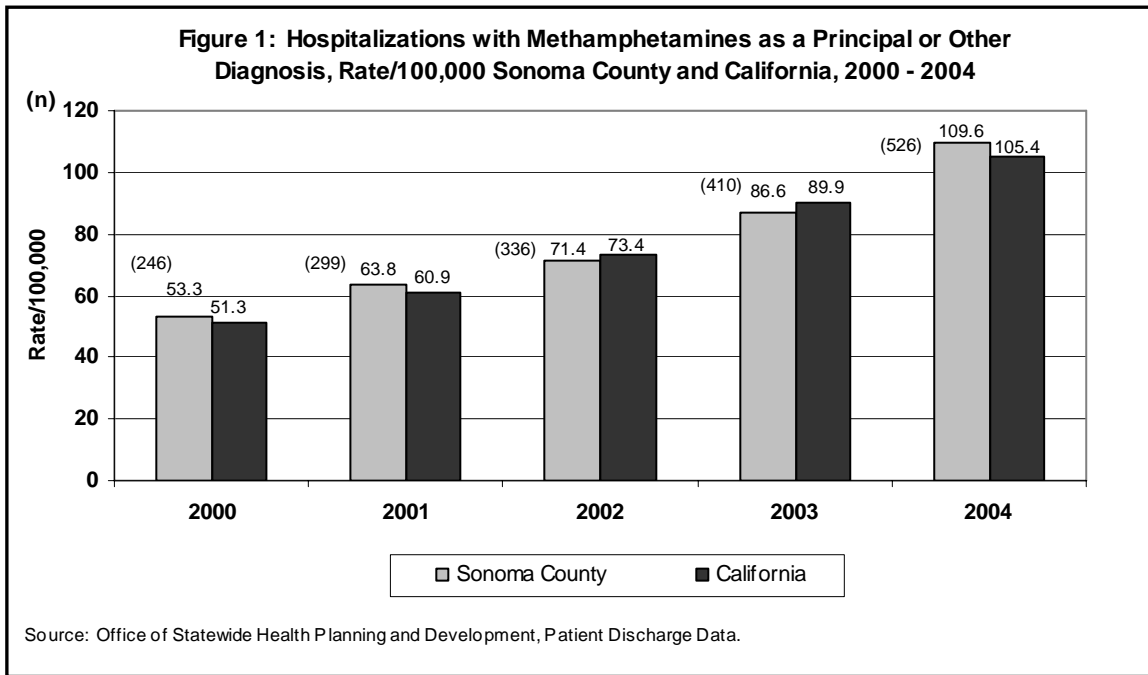
- Risky sexual behaviors (multiple sexual partners, decreased use of condoms) and injection needle-sharing put some methamphetamine users at high risk for HIV, hepatitis C, and other sexually transmitted diseases (STDs).
- Studies show that methamphetamine use doubles or triples the probability of engaging in high-risk sexual activities and acquiring sexually transmitted diseases, including HIV.^{90,91}
- A new study now provides evidence that methamphetamine also increases the spread of the HIV virus in infected users by allowing more of the virus to invade the immune system.⁹²
- The link between methamphetamine use and high-risk sexual behavior is demonstrated in data collected by Sonoma County public HIV testing clinics. Male

methamphetamine users were much more likely *never* to use barrier protection with male or female partners than non-methamphetamine users.⁹³

The impact of methamphetamine use on public health and safety is significant

Health impacts

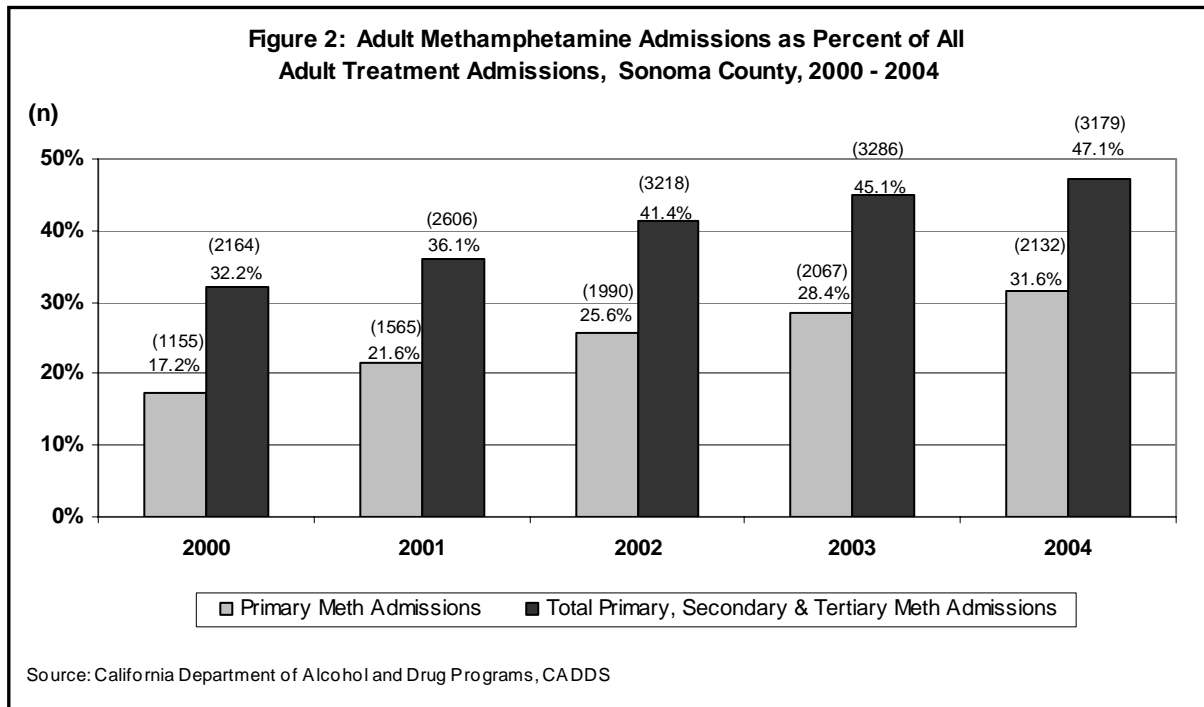
- From 2000 to 2004, methamphetamine-related hospitalizations reported as a principal or other diagnosis increased steadily at both county and statewide levels (Figure 1).



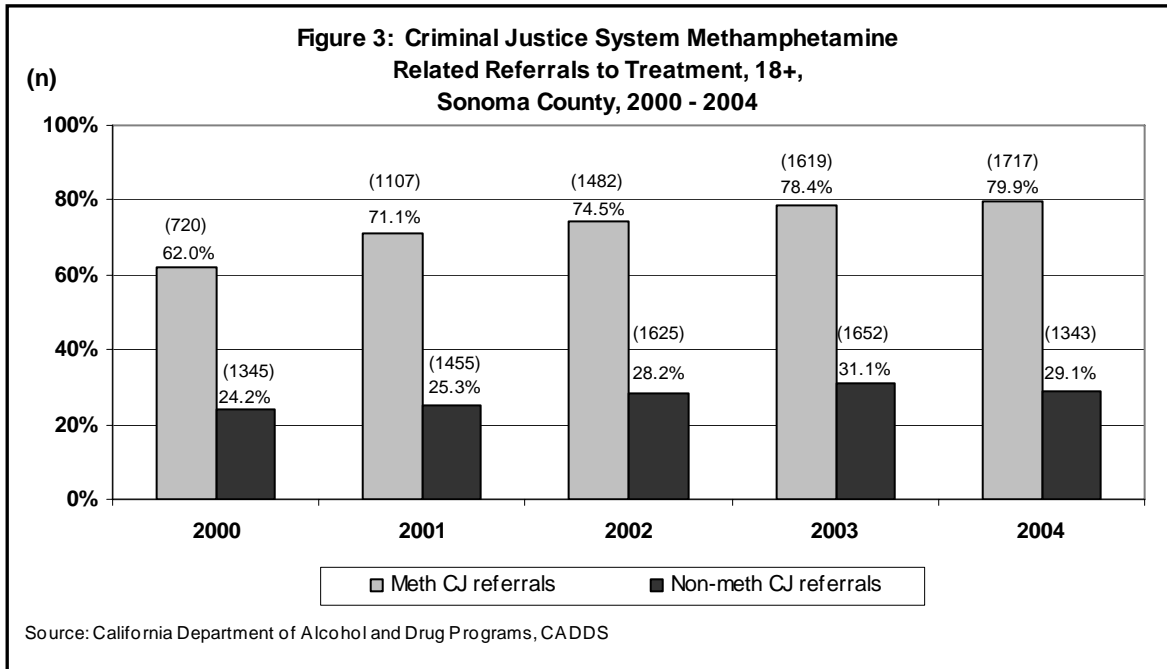
- In 2004, methamphetamine accounted for 16.9% of the 3,026 hospitalizations in Sonoma County hospitals with alcohol or other drugs as a principal or other diagnosis.⁹⁴
- During the first six months of 2005, methamphetamine was reported as a principal diagnosis in 52 Sonoma County hospital emergency room visits and as an “other” diagnosis in 265 visits.⁹⁵ According to national data collected by the Drug Abuse Warning Network, the most common reasons for methamphetamine-related ER visits are overdose (28%), unexpected reaction (23%), wanting to detoxify (22%), and chronic effects (22%).⁹⁶
- An estimated 60% of clients using Sonoma County mental health outpatient programs have substance abuse problems, with a large portion reporting methamphetamine as their primary drug of choice.⁹⁷
- Approximately 10% of admissions to the Sutter Psychiatric Inpatient Unit are the direct result of a methamphetamine-induced psychosis - over 100 admissions

annually. An additional estimated 25% of admissions identify methamphetamine use or abuse as a factor contributing to their need for acute inpatient care.⁹⁸

- Approximately half of the clients in the County’s Forensic Assertive Community Treatment Team program report regular use of methamphetamine.⁹⁹
- Methamphetamine is the second most common primary drug of abuse – following alcohol – among those admitted for AOD treatment in Sonoma County. Adult treatment admissions for methamphetamine have increased by 85%, from 1,155 in 2000 to 2,132 in 2004, accounting for one-third of treatment clients over 18. About half of adult treatment admissions report methamphetamine as a primary, secondary, or tertiary drug problem (Figure 2).¹⁰⁰



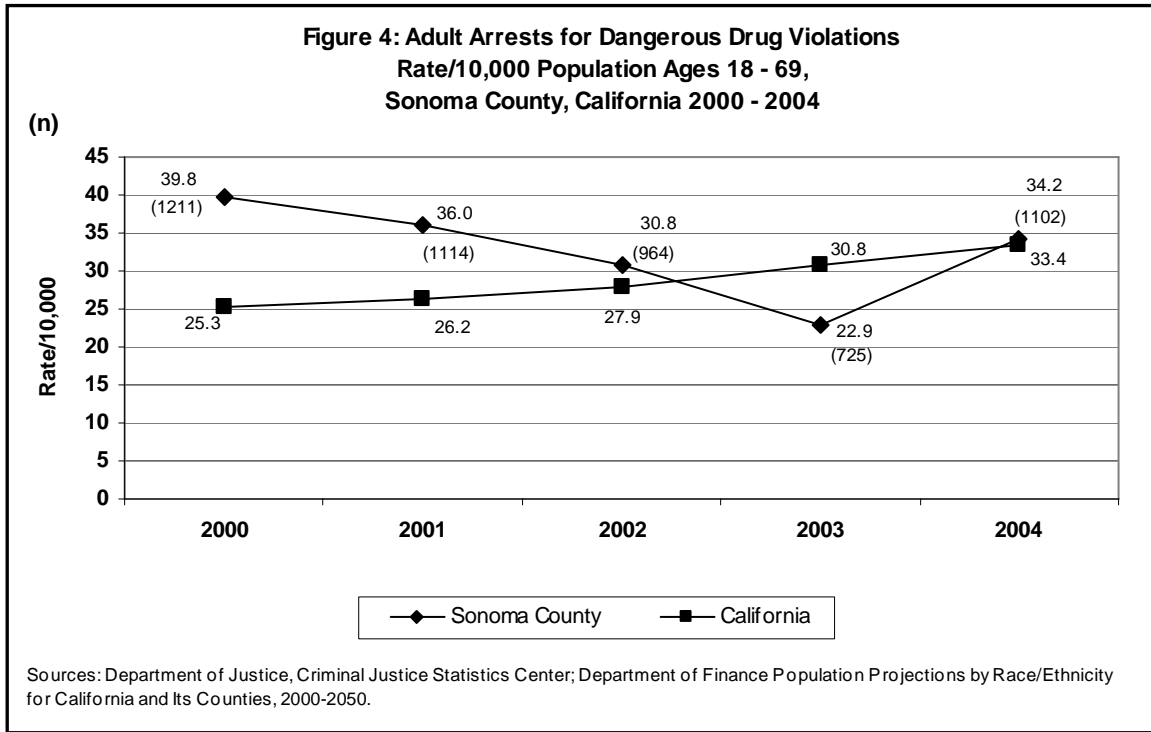
- Criminal justice referrals to AOD treatment for methamphetamine abuse rose in Sonoma County from 62% in 2000 to 79.9% in 2004, compared to non-methamphetamine AOD referrals, which remained relatively flat during the same years (24.2% in 2000 to 29.1% in 2004) (Figure 3).¹⁰¹



- Sonoma County youth in treatment reporting methamphetamine as their primary drug problem declined from 11.8% in 2000 to 9.7% in 2004.¹⁰²
- In 2004, 60.9% of juvenile methamphetamine users in treatment were referred by the juvenile justice system, compared to 37.1% of youth in treatment for other drug.¹⁰³
- Sonoma County child welfare officials estimate that about one-half of parents involved in the child welfare system have some significant involvement with methamphetamine.¹⁰⁴

Public safety impacts

- Methamphetamine use is a significant contributor to crime and violence. From 2000-2004, dangerous drug arrests (which include methamphetamine) have remained fairly level in Sonoma County. These arrests account for approximately 44% of adult (18+) and up to half of juvenile (<18) non-alcohol drug arrests.¹⁰⁵
- The per capita rate of adult dangerous drug arrests in Sonoma County has declined from 2000 to 2004, in contrast to a steady increase in statewide rates. Nevertheless, the Sonoma County rate has generally remained higher than the state rate – with the exception of a dip in 2003 (Figure 4).



- In 2005, adult bookings into Sonoma County jail totaled 19,300. Nearly half (48%) of these were for alcohol and other drug crimes – which does not include other crime categories that are likely influenced by AOD use or abuse. While specific data on methamphetamine-related crimes and arrests per se are not available, a history of methamphetamine use prior to arrest is reported by a significant number of inmates. In April 2006, the jail medical provider conducted a random review of the medical charts of 402 inmates, and found that 60% (240 cases) had self-disclosed using methamphetamine.¹⁰⁶
- From 2002 to 2004, felony dangerous drug (including methamphetamine) arrests among youth accounted for 32% to 39% (about 24 annually) of all felony drug bookings at Juvenile Hall.¹⁰⁷
- Sonoma law enforcement officials report a direct correlation between methamphetamine use and property crimes such as mail fraud, burglary, shoplifting, and theft, including identity theft.¹⁰⁸
- The Probation Department supervises 733 minors whose jurisdictional status ranges from informal probation to wards of the Court. In a recent 13-month period, 5.6% (168 out of 3,000) drug tests of juvenile probationers were positive for methamphetamine. At Sierra Youth Center, the Department’s residential treatment program, four out of eleven girls currently acknowledge an addiction to methamphetamine.¹⁰⁹

Environmental safety impacts

- Chemical waste and debris from methamphetamine production can pose a serious environmental threat. The chemicals used in making methamphetamine include lye,

red phosphorus, hydriodic acid, and iodine. Some of the chemicals have independent toxicity; in combination, many have serious toxic and explosive effects.¹¹⁰

- For every pound methamphetamine produced, five to six pounds of toxic waste byproducts are generated¹¹¹ which are often dumped into the ground near a laboratory, contaminating the local water.
- In 2001, clean-up costs for over 2,000 methamphetamine labs and dumpsites in California totaled nearly \$5.5 million or an average of \$2,450 per lab.¹¹² (Local data is not available.)

Contributing Factors to Methamphetamine Use

While the research on methamphetamine use and prevention best practices is still emerging, it is probable that the factors that have been identified as contributing to alcohol problems also contribute to methamphetamine-related problems in Sonoma County. Such factors may include:

- Easy availability of methamphetamine
- Low price relative to other illicit stimulant drugs
- Community norms that support methamphetamine use
- Settings or environments that facilitate or encourage methamphetamine use

Easy availability of methamphetamine

- According to local law enforcement sources, the production and distribution of methamphetamine in Sonoma County increased with the arrival of Mexican organized crime families in the early- to mid-1990s.
- Most of the methamphetamine available in Sonoma County today is produced in Mexican “super labs,” brought across the border to Los Angeles, and transported through San Jose or Fresno to Santa Rosa. Santa Rosa is a distribution hub for Northern California, particularly Lake and Mendocino counties. Distribution occurs through a network of primarily Latino established families and cartels.¹¹³
- In the first half of 2006, undercover agents with the Sonoma County Narcotics Task Force purchased large quantities of crystal methamphetamine, currently selling for \$8,000-\$9,000 a pound.¹¹⁴

Low price relative to other illicit stimulant drugs

- Compared with some other illicit drugs, methamphetamine is relatively inexpensive. The value of methamphetamine varies according to its purity, the region in which it is sold, the source of the drug (whether it was made locally or imported), and its availability. In Sonoma County, a bag (or gram)¹¹⁵ of methamphetamine costs about \$40-\$50, in contrast to \$60-\$120 for an equivalent amount of cocaine.¹¹⁶

Community norms that support methamphetamine use

- The stimulant properties of methamphetamine have made it popular among diverse groups such as truck drivers and students. In the initial stages of use it gives the user energy to keep working, especially at manual jobs or work that requires long periods of wakefulness, such as truck driving or shift-work. Young women who want to lose weight use it as an appetite suppressant. Students use it to stay awake to study.
- Focus group and key informant interviews conducted among men who have sex with men (MSM) in Sonoma County found that the social environment has become more conducive to methamphetamine use and that it is increasingly part of the mainstream MSM party culture in the county.¹¹⁷

"[Methamphetamine use] matches our American culture, work hard, work long hours, be bright, come home and fix a 4-course meal, and stay skinny."

Participant comments at Prevention & Planning SPF community presentation.

Settings or environments that facilitate or encourage methamphetamine use

- Access to methamphetamine is perceived to be easier because the drug is normalized in some communities. Key informants interviewed in the MSM community report that methamphetamine is often used at parties. Most key informant former users report obtaining their drugs from friends or sex partners.¹¹⁸

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³ American Medical Association, Office of Alcohol/Drug Abuse (2001).

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¹³ California Department of Justice, Criminal Justice Statistics Center.

¹⁴ West Sonoma County Union High School District, Youth Access to Alcohol Survey. June 2006.

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¹⁶ S.A. Hoover, "Environmental Prevention" Technical Research Publication produced by the Community Prevention Institute, 2005. p.4

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- ¹⁹ Sonoma County Office of Education, Sonoma County Results from the 2004 California Healthy Kids Survey.
- ²⁰ Sonoma County Office of Education, Sonoma County Results from the 2004 California Healthy Kids Survey, Cotati-Rohnert Park Unified Technical Report, Module G, Fall 2005.
- ²¹ West Sonoma County Union High School District, Youth Access to Alcohol Survey, June 2006.
- ²² Review and Analysis of Data Collected for the Sonoma County State Incentive Grant: Cotati, Rohnert Park, Petaluma, and Sonoma State University.
- ²³ REUDL Focus Group – El Molino High School. May 2006.
- ²⁴ California Healthy Kids Survey Focus Group held at Casa Grande High School, April 13, 2006.
- ²⁵ Johnson, Dan. Argus Courier "Survey on Teen Drinking Alarming" May 17, 2006.
- ²⁶ West Sonoma County Union High School District, Youth Access to Alcohol Survey and Parent Questionnaire Summary. June 2006.
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- ²⁸ On sale alcohol outlets include bars and restaurants.
- ²⁹ West Sonoma County Union High School District, Youth Access to Alcohol Survey. Parent Questionnaire Summary. June 2006.
- ³⁰ West Sonoma County Union High School District, Youth Access to Alcohol Survey, June 2006.
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- ⁵⁰ 2003 California Health Interview Survey, http://www.chis.ucla.edu/data_main.html.
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