

# The Annual Catastrophe of Alcohol in California

## Executive Summary

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### What is this study about?

Marin Institute has conducted a landmark research study. This report estimates the total annual cost of alcohol problems in the state of California, including deaths, incidents, and economic costs, to individuals and to society. Our peer-reviewed study (to be published in November) examines in detail the relationship between alcohol consumption and illness, injury, crime, and traffic collisions.

Such a comprehensive study has never been done before in California. While several studies have estimated the annual cost of alcohol problems nationally and others have analyzed underage drinking costs, no overall annual cost estimate at the state level currently exists for California.

We calculated the costs of several types of problems not previously studied at the state level in California or elsewhere, most notably the work loss from deaths, and the cost of fetal alcohol syndrome and risky sexual behavior. We also included intangible costs for the first time. We need such baseline information to accurately describe the scope of the problem.

### What are the most important results?

- The total number of lives lost each year to alcohol use is 9,439. This means one person dies *every hour* due to alcohol use in California.
- The total number of incidents related to alcohol is over 920,000. That means there are *100 incidents* (for example, injuries, crimes, high-risk sex) *every hour* due to alcohol use in California.

- The total economic cost of alcohol to California is \$38.4 billion annually. This translates to roughly \$1000 per California resident each year.
- Government agencies bear \$8.3 billion or 22 percent of the total cost.
- Quality of life (pain and suffering) costs add another \$48.8 billion annually.

### **How did we conduct this study?**

We estimated the annual costs to the health care and criminal justice systems, the lost work from deaths, illness, and injury, and the reduced quality of life.

To estimate the health impact of harmful drinking, our study examined only the health effects of medium and high alcohol consumption (more than three drinks per day for men and over 1.5 drinks per day for women). This level of consumption is responsible for the majority of health problems caused by alcohol, and has virtually no health benefit. (See more on this below.)

For each category of alcohol-related problems, we estimated fatal and nonfatal cases attributable to alcohol use. We multiplied “alcohol-attributable” cases by the estimated costs per case to obtain total costs for each problem.

This method allows us to estimate the unique contribution of alcohol to a wide range of problems. For each category of harm, we calculated the total number of fatal cases in 2004 (the latest year available) and non-fatal cases in California (in 2005) and then isolated the proportion of these cases actually attributable to, or caused by, alcohol use. For example, if 30 percent of liver cirrhosis cases are attributable to alcohol consumption, we used that proportion to determine the number of cases.

The total cost of each alcohol-attributable problem (illness, injury, traffic, and crime) was calculated by: total number of cases, multiplied by the percentage of harm attributable to alcohol, multiplied by the cost per case.

### **What kinds of costs are included?**

Economic costs estimate the direct and indirect costs of alcohol related problems. “Direct costs” are the value of tangible goods and services delivered to address the consequences of the alcohol problem. In our study, this includes medical and mental health costs, property losses, and public program costs.

Medical costs for treatment of injury and the victims of traffic collisions and crime include hospital fees, payments to physicians, rehabilitation, prescriptions, allied health services, medical devices, insurance-claims-processing costs, and costs associated with emergency medical transport. For the medical cost of illness, the only available data were for hospital fees and pharmaceuticals.

Mental health costs are estimated for the victims of crime and include payments for services by psychiatrists, psychologists, social workers, pastoral counselors, as well as associated insurance claim processing costs.

Property losses arise in traffic crashes and crimes. These costs include reparation and replacement of lost or damaged property, and the cost of processing insurance claims.

Public program costs involve the costs of police services (initial response and follow up), criminal adjudication and sanctioning, fire and victim services, child protective services and foster care, and special education for maltreated children.

### **What are the costs from illness and injury?**

While much of the public's attention is focused on traffic fatalities, in fact illness causes 57 percent of deaths from alcohol use, compared to 12 percent for driving under the influence. In addition, non-traffic injuries (most commonly suicide and falls) accounts for twice as many deaths, or 25 percent of the total 9,239 deaths.

Alcohol use causes a disturbing array of health problems, from liver disease to cancer to sexually-transmitted diseases, all of which cost California \$18.2 billion annually. In addition, non-traffic injuries cost California \$4 billion annually.

### **What are the crime costs?**

Our study includes violent crimes - murder, rape, robbery, assault (including aggravated, non aggravated, and domestic violence), and child abuse as well as property crimes - larceny, burglary, and motor vehicle theft.

A staggering 90 percent of alcohol-related crime costs are from violent crime – including homicide, assault, rape, robbery, and child abuse. Most alarming are the violent crime statistics. The number of assaults alone caused by alcohol use tops 369,000, with rapes at 26,000, and child abuse cases (both physical and sexual), more than 10,000. All told, the more than 649,000 alcohol-fueled crimes cost California \$7.8 billion, of which 74 percent is paid for by government dollars.

### **What about traffic collisions?**

We estimated the number of alcohol-involved traffic collisions with data from the California Highway Patrol. Using formulas developed by the U.S. National Highway Traffic Safety Administration, we adjusted the figures to account for underreporting of alcohol involvement. About 26 percent of all traffic collisions are caused by alcohol, which are responsible for an estimated 1,144 deaths and cost California \$8.4 billion.

## **What are the costs to the workplace?**

“Indirect costs” measure the lost work caused by alcohol problems, and are measured in terms of the monetary value of lost wages and fringe benefits, as well as the value of lost housework, having serious reverberations throughout California’s economy.

Such losses make up the single largest cost, totaling \$25.3 billion. This figure represents the reduced earnings of those who are currently, or ever have ever been, alcohol dependent (\$12.8 billion), with the rest coming from a combination of lost productivity from deaths and non-fatal illnesses and injuries suffered by both the drinker and the victim.

## **What are the intangible costs?**

In addition to the direct and indirect costs, we determined that it was critical to capture the intangible costs. These include pain, suffering, and quality of life. Intangible costs are important because the damage to an individual’s quality of life is often the largest cost imposed by alcohol use.

For example, in an alcohol-caused assault, the pain and suffering to the victim may far outweigh the medical and judicial costs. By including these costs, our study presents a fuller picture of alcohol related harm by attempting to quantify the value people put on their quality of life. We estimated the quality of life losses experienced by alcohol users, survivors, victims, (for example, of crime or drunk driving) and their families due to injury, traffic collisions, crime, and death.

We estimated such costs to be as high as \$48.8 billion. Fatalities from illness, injury, traffic collisions, and crime account for 51 percent of quality of life costs. The remaining 49 percent is borne by survivors of alcohol related crime, injury, traffic collisions, and health problems. Permanent disability caused by injury and traffic collisions accounts for \$13.4 billion in costs, while the victims of rape and assault and their families bear \$8.6 billion in quality of life costs.

## **What are the government costs?**

California’s state, county, and city governments bear a significant proportion of the total cost of alcohol problems. In total, government agencies bear \$8.3 billion or 22 percent of the total cost of alcohol harm in the state, including:

- State and county medical programs shoulder \$1.8 billion for the healthcare treatment of alcohol-caused illness, injury, crime and traffic collisions;

- Alcohol caused crime costs the criminal justice system an astounding \$5.35 billion in costs, while alcohol caused traffic incidents costs government agencies \$50 million;
- Public finances also lose an additional \$1.1 billion in state income taxes from reduced productivity caused by alcohol consumption.

### **How do these costs compare with tobacco and other drugs?**

In California, tobacco costs (mainly from healthcare) are roughly \$19 billion annually while alcohol costs are twice as high. A previous national study of various drug-related harm concluded that the societal costs of marijuana, heroin, and cocaine costs combined are lower than those from alcohol.

### **What does problem drinking look like in California?**

In 2007, approximately 4.7 percent of the population (aged 18 years and above) was estimated as suffering from “alcohol abuse,” with an additional 3.8 percent being “alcohol dependent,” for a total of 2.3 million California residents. It’s important to realize that the largest proportion of problem drinking comes from binge drinking, defined as five or more drinks for men and four or more drinks for women within the last 30 days. As the table below indicates, an alarming 24 percent of men and 10 percent of women binge drink. Because binge drinking causes much of alcohol harm and costs, solely focusing on alcohol abuse or dependence misses a large part of the problem.

*Problem Drinking in California, 2007*

	Males	Females	Total
Alcohol Abuse	920,000 (6.9%)	350,000 (2.6%)	1,270,000 (4.7%)
Alcohol Dependence	720,000 (5.4%)	310,000 (2.3%)	1,030,000 (3.8%)
Heavy Drinking	870,000 (6.5%)	780,000 (5.7%)	1,650,000 (6.1%)
Binge Drinking	3,210,000 (24%)	1,360,000 (10%)	4,570,000 (16.9%)

### **Doesn’t drinking have health benefits?**

Low levels of drinking (defined as three or fewer drinks per day for men, 1.5 drinks per day for women) are associated with some health benefits. These include reduced risk of ischemic heart disease, ischemic strokes, and gallstones. However, such health benefits pertain only to older segments of the population. In fact, the level of alcohol consumption with the lowest risk of death is zero for women younger than 45 and for men under age 35.

Unfortunately, the health benefits can not be isolated, as low levels of alcohol consumption also increase the risk of a wide variety of severe health problems. Alcohol is a carcinogen and even a low level of drinking over time significantly increases the risk of cancers of the mouth, esophagus, larynx, liver, female breast, and male prostate.

In addition, drinking low levels of alcohol increases the risk of hemorrhagic stroke, chronic hepatitis, psoriasis and irregularities in heart rhythms and palpitations. Finally, low levels of alcohol consumption during pregnancy can increase the risk of spontaneous abortion, low birth weight, prematurity, and intra-uterine growth retardation.

### **What about the economic benefit the alcohol industry brings to the state?**

In 2007, the alcohol industry generated \$22.8 billion in sales revenue in California: \$10.3 billion from beer, \$7.4 billion from spirits and \$5.1 billion from wine. The three largest breweries alone (Anheuser-Busch, Miller Brewing, and Molson Coors) made \$8.1 billion in the state. However, as all of these companies have global headquarters elsewhere, most of their profits leave California.

Moreover, despite these enormous sales figures, in 2005, industry paid \$318 million in state excise taxes and \$50 million in alcohol licensing fees and fines -- only 1.7 percent of industry's income. Moreover, this amount covers only five percent of alcohol's price tag to state, county, and city governments.

Even including the \$1.5 billion in sales tax from alcoholic beverages (which is paid by consumers rather than industry), the total government costs covered by payments are still only 22 percent.

### **What can be done about the problem?**

At a minimum, Marin Institute is calling for hearings by the state legislature into how to address this massive problem and consider these steps:

- 1) Require an annual study on the societal harm and costs caused by alcohol consumption in California;
- 2) Adequately fund counties and cities to mitigate and prevent harm;
- 3) Curb alcohol industry lobbying and influence, which blocks public policy efforts to reduce harm; in 2006, Big Alcohol spent \$3 million in lobbying state officials and an additional \$3.5 million in campaign donations;
- 4) Raise fees by implementing an alcohol producer surcharge to cover government programs;
- 5) Raise alcohol excise taxes to reduce excessive consumption and the related harm and costs.

## **Why are higher fees and taxes the best solution?**

Much of alcohol industry lobbying is spent on thwarting efforts to raise alcohol fees and taxes, policies that are critical to reducing the harm caused by alcohol.

Thanks to industry pressure, the last time alcohol taxes were raised in California was 1992 and by only a penny per drink. Since then, the real value of alcohol taxes in the state has decreased 45 percent due to rising inflation.

Alcohol taxes have been shown to be a highly effective tool in reducing a wide range of harms caused by alcohol, including alcohol dependence, violent crime, traffic fatalities, other injuries, and especially underage drinking.

Increasing the alcohol tax would also raise significant funds which could be used to help solve the budget shortfall and fund programs at both the state and local level such as prevention programs, emergency rooms, trauma care, Medi-Cal, mental health, alcohol treatment, monitoring ads, counter-advertising, policing of liquor stores, crime prevention, and traffic safety.

The potential impact of small increases in alcohol taxes on drinkers is negligible (except for youth, who are especially price sensitive). One-third of the population does not drink at all. Of those who do drink, 50 percent drink 95 percent of the alcohol volume. Thus most people would hardly feel the impact; however, everyone would benefit from the resulting reduction in harm.

An across-the-board increase in alcohol excise taxes by 25 cents per drink would generate an additional \$3 billion per year. Even if we focused on a beer-only tax (there are good reasons for doing so as beer sales are 80 percent of all alcohol consumed and causes the most binge drinking), we could still generate an additional \$2 billion.

We estimate that a 25 cent per drink tax increase would reduce consumption by nine percent, and we would expect a corresponding decrease in deaths, injuries, crimes, and of course, costs. The revenue generated would also help fill the hole in the state's budget, and go a long way to reducing the devastating toll of alcohol harm in California.

## **When and where will the published study be available?**

The complete, peer-reviewed study will be published in the November 2008 issue of *Alcoholism: Clinical and Experimental Research*. The authors of the study are Simon Rosen, Ted Miller, and Michele Simon. An "online early" version of the article will be available shortly. (Visit [www.marininstitute.org](http://www.marininstitute.org) for details.) This executive summary was prepared by Simon Rosen and Michele Simon.