

OREGON PUBLIC HEALTH DIVISION • OREGON HEALTH AUTHORITY

## PREVENTING EXCESSIVE ALCOHOL USE: WHAT PUBLIC HEALTH CAN DO

*"Wine is the most healthful and most hygienic of beverages."*

— Louis Pasteur

While a glass of wine in the evening with dinner may have health benefits, alcohol misuse and abuse can be deadly. Excessive alcohol consumption is the third leading cause of preventable death in the U.S., resulting in an estimated 80,000 deaths annually and 2.3 million years of potential life lost. The economic costs of alcohol misuse/ abuse are staggering: an estimated \$220 billion in 2006. The adverse health effects of alcohol over-consumption include: motor vehicle crashes; dis-inhibition leading to violence, spread of sexually transmitted infections, unplanned pregnancy; fetal alcohol syndrome; and alcohol dependence. Long-term alcohol use is also associated with increased risk of heart disease; chronic pancreatitis; cirrhosis; and cancers of the esophagus, liver, colon, and breast.

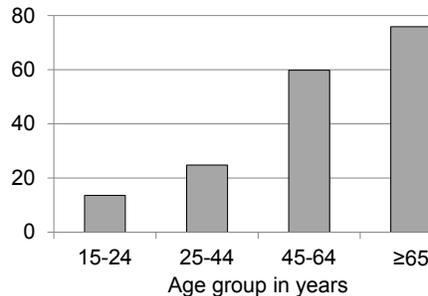
So what is public health to do? Thankfully, the Centers for Disease Control-sponsored Community Guide to Preventive Services provides a systematic review of the scientific literature on the effectiveness of alcohol interventions.<sup>1</sup> This *CD Summary* presents data on the scope of excessive alcohol use in Oregon, and reviews the Community Guide recommendations.

### OREGON NUMBERS

In 2011, 1,375 Oregonians (35.6 per 100,000 population) died from alcohol-related causes. This represents a 14% increase in the overall rate of alcohol-related deaths since 2001. Alcohol-related death rates increase with age (figure 1).

Most of the health and economic costs related to alcohol over-consumption are due to binge drinking ( $\geq 4$  drinks per occasion in women and  $\geq 5$  in men). Binge drinking accounts for 2/3 of the premature deaths, and 3/4 of the economic costs. During 2011, 14.8% of adults reported binge drink-

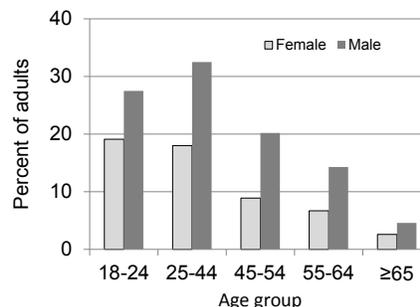
Figure 1. Alcohol-related deaths by age group, Oregon, 2011



Source: Oregon death certificate data.

ing on at least one occasion during the past 30 days, a number that has not changed appreciably over the past decade. Males report binge drinking more frequently than women. Male binge drinking peaks in the 25–34 year age group; female binge drinking peaks in the 18–24 year age group (figure 2). However, the number of episodes of binge drinking per month increases with age. In other words, more young adults binge drink at least once each month, but the older adults who binge drink, do so more often.

Figure 2. Adult binge drinking, by sex and age, Oregon, 2011



Source: Oregon Behavioral Risk Factor Surveillance System

### COMMUNITY GUIDE RECOMMENDATIONS

The Community Preventive Services Task Force has developed the Community Guide to provides evidence-based recommendations on preventive services, programs, and policies for communities. These recommenda-

tions are based on rigorous systematic reviews of the literature conducted by scientists and subject matter experts from the CDC in collaboration with a wide range of government, academic, policy, and clinical partners. The following are the evidence-based interventions to prevent excessive alcohol consumption that are recommended in the Community Guide.<sup>1</sup>

**Enhance enforcement of laws prohibiting alcohol sales to minors.** Increasing the frequency of compliance checks of retailers selling alcohol to minors has a positive effect on reducing these sales. Retailer compliance checks, or “sting operations,” are conducted by local law enforcement or alcohol beverage control agencies, and violators receive legal or administrative sanctions. Enhanced enforcement programs are often conducted as part of multicomponent, community-based efforts to reduce underage drinking. The studies reviewed by the Community Guide found a median decrease of sales to minors of 42%.<sup>2</sup>

**Commercial host (dram shop) liability** allows the owner or server of a retail alcohol establishment where a customer consumed alcohol to be held legally responsible for the harms inflicted by that customer. Examples include intoxicated or underage patrons who cause death, injury or other damages as a result of an alcohol-related car crash. Studies reviewed found a median decrease of 6.4% for alcohol-related motor vehicle fatalities reductions with the presence of dram shop liability.<sup>3</sup>

**Electronic screening and brief intervention (e-SBI)** to reduce excessive alcohol use involves using electronic devices (e.g., computers, telephones, or mobile devices) to: 1) assess patients’ drinking patterns, 2) provide those who screen positive for excessive drinking with feedback about risks and the importance of changing their drinking patterns, and 3) refer to treatment if appropriate. Delivery of personalized feedback can range from



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being fully automated (e.g., computer-based) to interactive (e.g., provided by a person over the telephone).

The e-SBI studies reviewed found decreases in the frequency of binge drinking, peak consumption, frequency of consumption, and number of drinks consumed each month.<sup>4</sup>

Maintain limits on days and hours of sale. Limiting the days when alcohol can be sold (usually by limiting sales on Sundays) is intended to prevent excessive alcohol consumption by reducing access to alcohol. A 1995 repeal in New Mexico of a ban on Sunday sales was associated with a 30% increase in motor vehicle fatalities on Sundays compared with other days of the week. A study of the effects of increased days of sale in multiple states indicated increases in the per capita consumption of spirits and beer.<sup>5</sup>

Studies reviewed also found that increasing hours of sales was associated with an increase in alcohol consumption, and an increase in alcohol-related motor-vehicle crashes, and violent crimes.<sup>6</sup>

Regulation of alcohol outlet density is often implemented through licensing or zoning processes. A higher concentration of retail alcohol outlets within a small area is associated with increased alcohol consumption and related harms (e.g. violent crime).<sup>7</sup>

Avoid privatization of alcohol sales. Repealing government control over the retail sales of alcoholic beverages generally applies only to *off-premises* alcohol retail sites, such as liquor stores, where alcoholic beverages are sold for consumption elsewhere.

Seventeen studies assessed the effects of privatization on per capita

alcohol sales (a well-established proxy for excessive alcohol consumption). Overall, per capita alcohol sales increased by a median of 44.4% in jurisdictions that underwent privatization.<sup>8</sup>

Increase alcohol price. As with many products, alcohol exhibits “price elasticity of demand”. Simply put, the more it costs, the less people will buy. For alcohol products, it is estimated that increase the price by 10% would decrease consumption by 7%. The price increase can be accomplished by increasing the tax on alcohol products. Studies showed that higher alcohol prices or taxes were consistently related to: fewer motor vehicle crashes and fatalities; less alcohol-impaired driving; less mortality from liver cirrhosis; and less all-cause mortality. Effects also were demonstrated for measures of violence, sexually transmitted diseases, and alcohol dependence.<sup>9</sup>

### LOWERING THE LEGAL BLOOD ALCOHOL LIMIT

In 2000, the Community Guide reviewed state laws on the legal limit for blood alcohol concentration (BAC) while driving. Reviewers found that lowering the limit from 0.10% to 0.08% reduced alcohol-related fatalities by a median of 7%.<sup>10</sup> In October 2000, federal legislation was enacted that required states to pass 0.08% BAC laws by October 2003 or risk losing federal highway construction funds. Since then, all 50 states have passed these laws, resulting in an estimated 400-600 fewer alcohol-related motor vehicle crash deaths annually in the U.S.

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