

This is the second in a series of primers to be issued by Ensuring Solutions to Alcohol Problems at the George Washington University Medical Center and supported by a grant from The Pew Charitable Trusts. Future subjects will include the costs of problem drinking and alcoholism, treating alcoholism and employee assistance programs.

Understanding The Problem Drinking Continuum

Introduction

It's easy to forget when celebrating with a toast that alcohol causes more societal problems than either tobacco or illegal drugs. More than 100,000 American families lose a loved one every year because of alcohol. Countless more suffer as a result of the havoc that alcohol wreaks on our communities. And the price tag is just as staggering: \$185 billion which, when spread across the entire population, means that alcohol costs every American – even those who never touch a drop – \$683 every year in lost productivity, health care expenses and car crashes.

As health care costs escalate, budgets tighten and the number of alcohol-related car crashes creeps up, it's useful to understand how the full continuum of problem drinking affects health, family and society. At one end is the hungover student or employee who occasionally doesn't show up for school or work; at the other, a person with alcoholism whose life has been completely destroyed. Intervening early in this continuum can thwart a slide into more serious difficulties for drinkers, their families, their employers and their communities.

By replacing myths about drinking with facts and approaching problem drinking as a public health issue, the nation can greatly reduce alcohol's enormous economic and social toll. Earlier identification of problem drinking through confidential alcohol screening, followed by brief interventions, can help keep families together and parents working. It also can help people who already have alcoholism get treatment for their disease.

Problem drinking should be of particular concern to private companies. It drives up the cost of providing health insurance to their workers and their families by increasing the need for outpatient, emergency room and inpatient hospital care. It increases absenteeism, disability and turnover. If it develops into alcoholism, it requires specialized treatment. Many employers don't understand that they can substantially reduce their health care costs and improve productivity by getting help for their workers as early as possible in the problem drinking continuum.

The Continuum

Nearly two-thirds of Americans drink alcoholic beverages at some point during their lives. Just look at the numbers: a 2001 government survey reported that nearly 110 million people had at least one drink in the previous month. Alcohol problems come in many shapes and sizes, and there is no cookie-cutter solution to these problems. But scientists have found that they can readily categorize where along the continuum of problem drinking any person who drinks can fall: light to moderate drinkers who consume too much alcohol on occasion and get into trouble, problem drinkers and people with alcoholism.

Almost 14 million Americans have problems with drinking – 8 million people with alcoholism and almost 6 million who are problem drinkers. Most are between 18 and 49 years old and employed full-time. Their heavy drinking puts them at very high risk for many serious and expensive health problems.

Diagnostic criteria to help physicians distinguish between problem drinking and alcoholism have been developed by the American Psychiatric Association. In addition, the American Society for Addiction Medicine has established criteria to match the level of treatment intensity to an individual's particular needs. Appropriate matching has a significant impact on treatment cost and effectiveness.

DEFINITION OF ALCOHOLISM

Alcoholism, also known as alcohol dependence, is a disease with four primary symptoms:

Craving: *A strong need or compulsion to drink.*

Loss of control: *The inability to limit one's drinking on any given occasion.*

Physical dependence: *Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety occur when alcohol use is stopped after a period of heavy drinking.*

Tolerance: *The need to drink greater amounts of alcohol over time in order to get high.*

Source: National Institute on Alcohol Abuse and Alcoholism (2000a)

But nearly 100 million *light and moderate drinkers* also put themselves at risk for alcohol-related problems if they drink too much in the wrong place or at the wrong time. Because there are so many more light and moderate drinkers than heavy drinkers, they too can cause problems in the workplace, though not necessarily because they are consuming alcohol on the job. In many cases, hangovers that result from occasionally drinking too much at night or on the weekend, may explain why an employee is absent, late, or unable to do their job properly. In industries and occupations where physical safety is an issue, hangovers can endanger the drinkers' lives as well as those of their co-workers and the public.

Widespread media coverage about the health benefits of moderate drinking for some middle-aged men and women is creating misleading perceptions about drinking and its health consequences, particularly among younger workers for whom the risks associated with alcohol consumption outweigh the health benefits.

Myths About Moderate Drinking

Good news about the health benefits of moderate drinking all too often overshadows alcohol's risks for many people, according to many of the nation's most respected doctors.

"If alcohol were a newly discovered drug ...we can be sure that no physician would develop it to prevent cardiovascular disease," wrote Dr. Ira J. Goldberg in the *New England Journal of Medicine* early in 2003. "Nor would many physicians use a therapy that might reduce the rate of [heart attacks] by 25 to 50 percent, but that would result in thousands of additional deaths per year due to cancer, motor vehicle accidents and liver disease."

DEFINITION OF PROBLEM DRINKING

Problem drinking, also known as alcohol abuse, is a pattern of drinking in which one or more of the following situations occur within a 12-month period:

Failure to fulfill major work, school or home responsibilities;

Drinking in situations that are physically dangerous, such as while driving a car or operating machinery;

Having recurring alcohol-related legal problems, such as being arrested for driving under the influence of alcohol or for physically hurting someone while drunk; and

Continued drinking despite having ongoing relationship problems that are caused or worsened by the drinking.

Source: National Institute on Alcohol Abuse and Alcoholism (2000a)

SNAPSHOT OF HEAVY DRINKERS IN THE WORKPLACE

Some 8.1 percent of the labor force between ages 18 to 49 – more than 7 million people – drinks heavily. Heavy drinkers are more likely to be:

- *White men ages 18 to 25 with less than a high school education*
- *Earning annual incomes less than \$20,000*
- *Employed in medium-sized establishments*
- *Working in construction; as handlers, helpers and laborers; as machine operators or inspectors; in precision production and repair; in transportation and material moving; and in food preparation, including wait staff and bartenders*

Source: Substance Abuse and Mental Health Services Administration (2002a, 1997).

In recognition of these risks, the federal government has developed specific guidelines for moderate drinking. These guidelines define moderate drinking as not more than two drinks per day for men and not more than one drink per day for women. They also recognize that for some groups of people, and in some situations, any drinking can cause an alcohol-related problem:

- People who shouldn't drink at all include women who are pregnant or likely to become pregnant; people who are taking medication, even nonprescription drugs, that may interact negatively with alcohol, and people who can't control their drinking.
- People who are operating a motor vehicle or heavy machinery shouldn't drink because alcohol impairs their judgment, thinking, coordination, and reaction time, possibly causing injury or death to themselves or others.

Amount, Frequency and Context

Blanket prescriptions for moderate drinking also confuse the public about how alcohol problems develop. Many people can have too much to drink without suffering much more than a mild headache. It takes a combination of:

- how much an individual drinks (*amount*),
- how often an individual drinks (*frequency*), and
- when and where an individual drinks, and what he or she does after drinking (*context*) for an alcohol problem to occur.

Impaired driving offers the best example of how amount, frequency and context interact to cause an alcohol problem. Anyone who has even a single drink

DRINKING DEFINITIONS

What is a standard drink? *A standard drink contains half an ounce of alcohol, which can be found in a 12-ounce can of beer, a 5-ounce glass of wine or 1.5 ounces of 80 proof distilled spirits.*

What is moderate drinking? *The U.S. government defines moderate drinking as not more than two drinks per day for men and not more than one drink per day for women. Moderate drinking for older people is one drink per day (or less), because of age-related changes in metabolism.*

What is heavy drinking? *People who drink five or more drinks on at least five occasions during a month are considered heavy drinkers in federal government surveys, but it is important to remember that alcohol problems can and do occur at much lower levels of consumption.*

What is binge drinking? *People who drink five or more drinks on at least one occasion during a month are considered binge drinkers. When heavy drinkers consume five or more drinks on a single occasion, they are "bingeing," but not everyone who binges is a chronic heavy drinker. People who binge, however, put themselves at serious risk for an alcohol problem.*

Who should not drink?

- Children and adolescents;
- Individuals of any age who cannot restrict their drinking to moderate levels;
- Women who are or may become pregnant;
- Individuals who plan to drive, operate machinery or take part in other activities that require attention, skill or coordination;
- Individuals taking prescription or over-the-counter medications that can interact with alcohol.

Sources: National Institute on Alcohol Abuse and Alcoholism (2000); Substance Abuse and Mental Health Services Administration (2001); U.S. Department of Health and Human Services; U.S. Department of Agriculture.

and gets behind the wheel increases his or her chance of having an alcohol-related car crash. That risk rises dramatically with each additional drink. Drivers who frequently drink too much greatly increase their odds of causing car crashes. Drinking drivers who travel unfamiliar routes or who drive in heavy traffic increase their risk even more.

If a person is drinking in the wrong place or at the wrong time, it doesn't take much alcohol to cause a problem. That's why context and frequency are more critical than amount for victims of assault, domestic violence, rape and sexually transmitted disease or unplanned pregnancy, all of which can be alcohol-related. But amount and frequency of alcohol consumption play a bigger role than context in causing health problems such as liver disease, cancers of the mouth, throat, stomach and breast, and addiction.

The amount, frequency and context of an individual's drinking also make it possible to determine precisely where an individual may fall on the problem drinking continuum.

Screening and Brief Intervention

Nearly everyone who drinks can benefit from a discussion with their health care providers about their risk for alcohol-related problems. According to the National Institute on Alcohol Abuse and Alcoholism, as many as one in every five men and one in ten women who schedule routine or urgent appointments with their primary care physicians drinks in ways that increase their risk for injury or serious illness.

Confidential **alcohol screening** is a reliable, inexpensive and quick way to identify patients whose drinking patterns fall within the continuum of problem drinking. Using standardized materials, health care professionals can ask patients questions about the amount, frequency and context of their alcohol consumption or give them a short questionnaire to complete while waiting to see the doctor. Screening instruments also are available on-line. In-person screenings take less than five minutes to administer and interpret.

If screening indicates that a patient is well along in the problem drinking continuum, a more extensive diagnostic assessment may be necessary. If alcoholism is diagnosed, patients can be referred to an alcoholism specialist for treatment and encouraged to attend Alcoholics Anonymous and other support groups.

Research also clearly shows that for people who are identified early in the continuum, a series of brief counseling sessions, called brief interventions, can yield substantial payoffs. The majority of patients welcome these brief interventions, and when counseled to cut back on their drinking by a physician or other health care provider, they are very likely to do so. Medical personnel have successfully conducted brief interventions in outpatient doctors' offices, community clinics and hospital emergency rooms.

These brief, alcohol-focused interventions can be delivered over the course of five or fewer routine office visits. First, a health care professional uses the results of a positive alcohol screening test to express medical concern about a patient's drinking and advises him or her to drink less. The health care provider also helps the patient develop a plan of action to achieve this goal and sometimes provides a workbook for this purpose. Other components include follow-up visits to discuss the patient's progress and one or two telephone calls for reinforcement.

Clinical trials have shown that screenings and brief interventions in primary care settings consistently help many drinkers of either gender and all ages reduce the amount and frequency of their alcohol consumption or to change the context of their drinking. While follow-up studies have generally only assessed changes in drinking after a brief intervention for a period of six months or a year, these studies have documented significant reductions among middle-aged men (14 percent), middle-aged women (31 percent) and among adults 65 and older (40 percent).

Straightforward Steps at Many Levels

Employers, health care professionals, policy makers and individuals all can take steps to identify and reduce problem drinking and to ensure that alcoholism is treated as a chronic disease.

Because the vast majority of Americans who drink have jobs, employers are uniquely positioned to change the way alcohol problems are addressed. At the same time, they can reap productivity gains and savings from a reduction in alcohol-related healthcare costs. Workers who reduce their drinking to safer levels are more likely to be productive, and less likely to be late, to use sick leave and cause problems on the job.

Options for employers:

- Adopt and enforce workplace alcohol policies.
- Educate employees about alcohol, problem drinking and alcoholism.
- Include alcohol screening in employee wellness programs and health risk appraisals and offer financial incentives (such as reducing employee contributions for health insurance) to those who participate in these programs.
- Negotiate with managed care organizations to provide alcohol screening and brief intervention services.
- Offer employee assistance programs to help people with problem drinking.

More information about what employers can do is available in **Seven Tools to Lowering the Business Costs of Alcohol Problems**, available from Ensuring Solutions to Alcohol Problems or by visiting www.ensuringsolutions.org. The National Business Coalition on Health is another resource for employers. For information, visit www.nbch.org/rfi-web.htm.

Options for health care professionals:

- Use standardized alcohol screening tools such as the AUDIT questionnaire to help identify problem drinking. Available at www.who.int/substance_abuse/PDFfiles/auditbro.pdf.
- Learn how to conduct brief interventions for problem drinkers. Available at www.who.int/substance_abuse/PDFfiles/bimanbro.pdf.
- Learn how to diagnose problem drinking and alcoholism.
- Maintain a list of up-to-date referral sources for problem drinkers and patients with alcoholism, including publicly and privately funded treatment centers and local member physicians of the American Society of Addiction Medicine at www.asam.org and the American Academy of Addiction Psychiatrists at www.aaap.org.

Options for policy makers:

- Examine laws regarding alcoholism treatment. For example, nearly 50 percent of managed care providers have higher copays, coinsurance and deductibles for alcoholism treatment than for other medical care. Medicare requires a 20 percent copayment for outpatient medical treatment, but a 50 percent copayment for alcohol treatment. The State-Children's Health Insurance Program (S-CHIP) requires comprehensive coverage for treatment of physical illnesses, but it makes coverage of alcohol treatment completely optional to states. In many states, Medicaid covers little or no alcohol treatment. The unequal coverage of alcoholism and alcohol-related problems results in more health problems, family distress and total health care costs than would be saved by restricting access to alcohol treatment. Policy makers can initiate dialogue about whether these disparities are justified.
- Examine the experiences of the seven states and the Federal Employees Health Benefits Program that require employment-based health insurance to cover alcohol treatment at levels equal to that for other illnesses.
- Review state laws that permit health insurers to refuse to reimburse patients for emergency room and trauma center treatment if alcohol is involved.

Options for individuals and families:

- If you have a concern about your own drinking or that of a family member or friend, consider taking a confidential, on-line alcohol screening at www.alcoholscreening.org or call 800/NCA-CALL for a personal assessment of risk for developing alcoholism.
- If you are recovering from alcoholism, consider joining local advocacy efforts to improve the way your community and the nation address alcohol problems. Visit www.facesandvoicesofrecovery.org/ for more information.

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This primer was developed in consultation with David C. Lewis, M.D., a professor of Medicine and Community Health and the Donald G. Millar Distinguished Professor of Alcohol and Addiction Studies at Brown University. In 1982, Dr. Lewis founded the Brown University Center for Alcohol and Addiction Studies.

Dr. Lewis is also project director of the Physician Leadership on National Drug Policy and a member of the board of directors of the American Society of Addiction Medicine and the National Council on Alcoholism and Drug Dependence. He is the author of over 400 publications and the founding editor of DATA, the Brown University Digest of Addiction Theory and Application.

In 1997 the American Medical Association honored Dr. Lewis with its Education and Research Foundation Award for his contributions and leadership in championing the inclusion of alcohol and other drug problems in the mainstream of medical practice and medical education.

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Suggested Reading

Chappel, J.N. and Lewis, D.C. 1997. *Medical Education: The Acquisition of Knowledge, Attitudes and Skills in Substance Abuse: A Comprehensive Textbook (3rd edition)*, ed. JH Lowinson, J.H., Ruiz, P., Millman, RB and Langrod, J.G. Baltimore, MD: Williams & Wilkins.

Goplerud, E. and Cimon, M. 2002. *Workplace Solutions: Treating Alcohol Problems Through Employment-Based Health Insurance*. Washington, DC: Ensuring Solutions to Alcohol Problems, George Washington University Medical Center.

Hungerford, D.W. and Pollock, D.A., editors. 2001. *Alcohol Problems among Emergency Department Patients: Proceedings of a Research Conference on Identification and Intervention*. Arlington, VA.

Institute of Medicine. 1990. *Broadening the Base of Treatment for Alcohol Problems: Report of a Study by a Committee of the Institute of Medicine, Division of Mental Health and Behavioral Medicine*. Washington, DC: National Academy Press.

Lewis, D. 1992. Medical and Behavioral Management of Alcohol Problems in General Medical Practice. *In Medical Diagnosis and Treatment of Alcoholism*, ed. Mendelson, J.H. and Mello N.K. New York: McGraw-Hill.

Moore, M.H. and Gerstein, D.R., editors. 1981. *Alcohol and Public Policy: Beyond the Shadow of Prohibition*. Panel on Alternative Policies Affecting the Prevention of Alcohol Abuse and Alcoholism, Committee on Substance Abuse and Habitual Behavior. Assembly of Behavioral and Social Sciences, National Research Council. Washington, DC: National Academy Press.

National Institute on Alcoholism and Alcohol Abuse. 2000. *Tenth Special Report to the U.S. Congress on Alcohol and Health*. Washington, DC: Department of Health and Human Services. Public Health Service. National Institutes of Health.

Vaillant, G.E. 1995. *The Natural History of Alcoholism Revisited*. Cambridge: Harvard University Press.

Washington Business Group on Health 2002 Working Solutions to Substance Abuse. Available from World Wide Web: <http://www.wbgh.org/programs/mentalhealth/esapt/about/aboutus.html>

Sources

- Babor, T. and Higgins-Biddle, J. 2001. Brief Intervention for Hazardous and Harmful Drinking: A Manual for Use in Primary Care. World Health Organization.
- Broskowski, A. & Smith, S. 2001. *Estimating the Cost of Preventive Services in Mental Health and Substance Abuse Under Managed Care*. Substance Abuse and Mental Health Services Administration.
- Goldberg, I.J. 2003. To Drink or Not to Drink. *New England Journal of Medicine*. 348;2. p. 164.
- Lewis, D. 1992. Medical and Behavioral Management of Alcohol Problems in General Medical Practice. In *Medical Diagnosis and Treatment of Alcoholism*, ed. Mendelson, J.H. and Mello N.K. New York: McGraw-Hill.
- Mangione, T.W., Howland, J. and Lee, M. 1998. *New Perspectives for Worksite Alcohol Strategies: Results from a Corporate Drinking Study*. Robert Wood Johnson Foundation and National Institute on Alcohol Abuse and Alcoholism.
- McGinnis, J. and Foege, W. 1993. Actual Causes of Death in the United States. *Journal of the American Medical Association*. 270:18:2208.
- Moore, M.H. and Gerstein, D.R., editors. 1981. *Alcohol and Public Policy: Beyond the Shadow of Prohibition*. Panel on Alternative Policies Affecting the Prevention of Alcohol Abuse and Alcoholism, Committee on Substance Abuse and Habitual Behavior. Assembly of Behavioral and Social Sciences, National Research Council. Washington, DC: National Academy Press.
- National Institute on Alcohol Abuse and Alcoholism. 1994. *Alcohol Health and Research World*. 3: 243, 245.
- National Institute on Alcohol Abuse and Alcoholism. 2000. Alcohol and Aging. *Alcohol Alert No. 40*. Available from World Wide Web: <http://www.niaaa.nih.gov/publications/aa40.htm>.
- National Institute on Alcoholism and Alcohol Abuse. 1999. Alcohol and the Workplace. *Alcohol Alert No. 44*. Available from World Wide Web: <http://www.niaaa.nih.gov/publications/aa44-text.htm>
- National Institute on Alcoholism and Alcohol Abuse. 2000a. *Alcoholism: Getting the Facts*. Available from World Wide Web: <http://www.niaaa.nih.gov/publications/booklet.htm>
- National Institute on Alcoholism and Alcohol Abuse. 2000b. *Tenth Special Report to the U.S. Congress on Alcohol and Health*. Washington, DC: Department of Health and Human Services. Public Health Service. National Institutes of Health.

Substance Abuse and Mental Health Services Administration. 2002a. *Substance Use, Dependence or Abuse Among Full-Time Workers. The National Household Survey on Drug Abuse, 2001*. Washington, DC: Department of Health and Human Services. Available from World Wide Web: <http://www.samhsa.gov/oas/2k2/workers/workers.cfm>

Substance Abuse and Mental Health Services Administration. 2001. *National Household Survey on Drug Abuse, 2000*. Washington, DC: Department of Health and Human Services. Available from World Wide Web: www.samhsa.gov/oas/NHSDA/2k1NHSDA/vol1/Chapter3.htm

Substance Abuse and Mental Health Services Administration. 2002. The Drug and Alcohol Services Information System (DASIS) Report: *Admissions to Treatment for Abuse of Alcohol Alone*. Available from World Wide Web: www.samhsa.gov/oas/2k2/alcTX/alcTX.cfm

Substance Abuse and Mental Health Services Administration. 1997. *National Household Survey on Drug Abuse, 1996*. Washington, DC: Department of Health and Human Services. Available from World Wide Web: www.samhsa.gov/oas/occupation.htm

U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2000. *Nutrition and Your Health: Dietary Guidelines for Americans*. 36-37.

Vaillant, G.E. 1995. *The Natural History of Alcoholism Revisited*. Cambridge: Harvard University Press.

Wald, M.L.: "Deaths Mounting Again in War on Drunk Driving," *New York Times*, 10 October 2002.

Washington Business Group on Health. 1999. *Proceedings from the Employer Leadership Forum on Substance Abuse: An Exploratory Conference*. Washington, D.C.

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Ensuring Solutions to Alcohol Problems (Ensuring Solutions) at the George Washington University Medical Center in Washington, DC, seeks to increase access to treatment for individuals with alcohol problems. Working with policy makers, employers and concerned citizens, Ensuring Solutions provides research-based information and tools to help curb the avoidable health care and other costs associated with alcohol use and improve access to treatment for Americans who need it. The project is supported by a grant from The Pew Charitable Trusts.