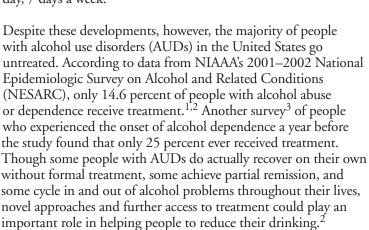
Alcohol Alert

Number 81

Exploring Treatment Options for Alcohol Use Disorders

Treatment techniques and tools to address alcohol use disorders (AUDs)* have multiplied over the last 30 years, moving beyond models based on Alcoholics Anonymous and its offshoot, the Minnesota Model. Care providers now can prescribe medications to aid people as they work to reduce their drinking. If a traditional mutual-help group model of care does not appeal to a patient, he or she has other behavioral therapy options. And Webbased approaches provide access to therapy 24 hours a day, 7 days a week.



This picture of a largely untreated population of patients has prompted researchers to explore better ways of engaging people who might not have considered treatment as an option for addressing their problems with alcohol. Improving diagnosis is one area under exploration, including screening for alcohol abuse and alcoholism and providing brief interventions in a variety of settings, such as primary care clinics and emergency departments. Scientists are examining the effectiveness of



Novel
approaches
and further
access to
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^{*}Individuals whose excessive consumption of alcohol leads to 3 or more symptoms of alcohol dependence or abuse have an alcohol use disorder. The range of symptoms include repeatedly drinking more than intended, the inability to stop drinking despite a desire to do so, a preoccupation with alcohol to the detriment of other aspects of a person's life, experiencing negative impacts of alcohol on social or professional obligations, withdrawal symptoms, and craving.

medications for treating patients and preventing relapse to drinking. Research also suggests that a large proportion of people with co-occurring psychological or medical conditions remain underserved by existing treatment systems; greater coordination of care might improve responses to AUD treatment for this group.

This *Alcohol Alert* summarizes the state of alcoholism treatment research, explores its use in a variety of settings, and reviews new efforts for engaging people in treatment. Efforts to improve continuing care for those in treatment and to coordinate care for those with co-occurring disorders also are included. The *Alert* then examines how health services and financing vehicles, such as private and public insurance, influence people's ability to access and pay for that treatment.

Broadening the Reach of Treatment

Although medications and behavioral therapies traditionally have been developed and studied within specialty alcoholism treatment settings, that is beginning to change. Studies show that effective treatment can be administered in a variety of settings and should be considered a routine component of healthcare. As physicians gain experience and comfort with alcohol treatment options, they will be more likely to identify and help people with AUDs and to help them better manage their drinking throughout their lives.

Medications

Primary care providers are accustomed to prescribing medications for a number of illnesses, but generally are unfamiliar with medicines to treat alcohol problems. Medicines approved by the Food and Drug Administration (FDA) to treat alcohol dependence include disulfiram (Antabuse®), oral naltrexone, extended-release naltrexone (Vivitrol®), and acamprosate (Campral®). Medications marketed for other illnesses also have shown efficacy in treating AUDs, such as topiramate, which is approved to treat epilepsy and migraines (for a review of approved medicines and compounds in development, see reference).⁴

New compounds under study also are showing promise. For example, some compounds targeting certain brain systems are being used for alcohol withdrawal and for relapse prevention. ^{5,6} Also, researchers are studying medicines approved for smoking cessation for their impact on heavy drinking. ^{7,8}

Positive results are found when medications are combined with behavioral treatment. Now scientists are assessing the appropriate level of counseling to use in conjunction with medication and the best methods to enhance patients' medication adherence. Such approaches include establishing a plan for adhering to the medication, solving

any problems that appear, and teaching strategies for self-change. Maintaining contact with patients and emphasizing adherence appear to be key to successful treatment with medications, and these aspects are especially well suited to primary care settings where doctors maintain ongoing relationships with their patients.⁹

Behavioral Therapies

Medications are one tool to stop or reduce drinking, but successful long-term recovery centers on changing a person's behaviors and expectations about alcohol. Many treatment approaches, including mutual-help groups like Alcoholics Anonymous (AA), focus on behavioral principles such as reinforcement and behavior modeling (for instance, these groups provide sponsors who guide participants through the program) to help patients make those changes. Since the mid-1980s, therapies have become available that combine behavioral principles of reinforcement and punishment with various therapeutic techniques designed to encourage healthy behavior change. Many of these therapies can be adapted for use outside specialty alcoholism treatment settings, such as primary care, emergency departments, community centers, and schools.

Behavioral therapies are especially effective in encouraging self-change—or the ability of some people to quit drinking on their own. These approaches use goal setting, self-monitoring of drinking, analysis of drinking situations, and learning alternate coping skills. Couples and family therapies analyze drinking behaviors and aim to improve relationship factors, such as improving communication, avoiding conflicts, and learning to solve problems that might lead to drinking.

Care providers can offer these treatments not only in different settings but in varying doses. For example, brief interventions enable doctors to help patients in identifying high-risk situations when they might use alcohol and discuss skills for coping with those situations without drinking. Such therapies can be delivered in a physician's office in an hour or less. One study determined that brief physician advice delivered across two doctor visits and two follow-up phone calls resulted in reduced alcohol use and binge drinking for up to 4 years after the intervention.¹¹

With such a variety of approaches available today, scientists are examining whether certain patient characteristics predict better responses to different approaches. Although no such patterns have yet emerged from research, core components of effective therapies have been identified that may prove useful in helping a care provider decide which treatment is best for a particular person. These components include enhancing social support, working with the patient to develop goals and to provide ideas for obtaining those goals, modeling and rewarding good behavior, and reviewing ways to cope with the triggers that lead to drinking. Matching a patient to therapies that address an area where he or she shows the greatest need may prove most effective.

Screening

A potentially powerful way to improve problem drinkers' access to treatment is to make routine screening part of primary care. Asking the single question of how often the patient exceeded the daily maximum drinking limits in the prior year (i.e., 4 drinks for men, 3 drinks for women) can screen effectively for unhealthy alcohol use. ¹² A simple question can then become the opportune moment for a brief intervention.

Mutual-help Groups (MHGs)

Despite developments in medications and behavioral therapies, MHGs remain the most commonly sought source of help for AUDs in the United States. ¹³ MHGs are groups of two or more people who share a problem and come together to provide problem-specific help and support to one another. ¹⁴ Although AA has the largest following, groups catering to populations with different demographics and preferences (e.g., women and younger people) also can be found.

One reason for the popularity of MHGs may be their inherent flexibility and responsiveness. ¹⁵ People can attend MHGs as frequently and for as long as they want without insurance and without divulging personal information. Often, people can attend MHGs at convenient times, like evenings and weekends, when they are at higher risk of a relapse to drinking. MHGs also are more cost effective than formal treatment. For example, patients can attend AA at no cost, which translates into about 45 percent lower overall treatment costs than costs for patients in outpatient care while achieving similar outcomes. ¹⁶

Although high-quality clinical trials assessing MHGs are difficult because of their voluntary and anonymous nature, studies that follow drinkers during and after treatment have shown that MHGs compare well with more formal treatment. AA participants in a 16-year study did as well in achieving abstinence at the 8-year mark as those in formal treatment (approaching 50 percent), and a group that participated in both AA and formal treatment performed better than formal treatment alone at years 1 and 3.¹⁷ Other studies show that people involved in MHGs had more friend support resources than those in outpatient programs.¹⁸ Indeed, some scientists believe the improvement in participants' social network and the support they receive for abstinence may explain the success of MHGs. Also, people can have access to this support for as long as they need it.

Thus, MHGs remain a staple treatment tool and provide a good alternative for physicians to consider when counseling patients. One method doctors use to encourage patients to try MHGs, called twelve-step facilitation (TSF) therapy, dispels myths and encourages patients to attend meetings. Studies of TSF^{19,20} show that if physicians actively refer their patients to MHGs by making arrangements for them to attend meetings or setting up introductions to group members, patients do

become more involved. Patients who receive TSF also have shown higher rates of continuous abstinence than those receiving some other behavioral therapies.²⁰

Emerging Technologies

From social networking sites and news outlets to online learning, the Internet is changing the way people communicate and obtain information. Internet and computer-based technologies are infiltrating many levels of AUD care, from screening to recovery. Early evidence suggests that they improve access to services and promote treatment effectiveness.²¹

The Internet gives patients the option of receiving treatment 24 hours a day, 7 days a week. It enables a patient in a rural setting to access much of the same care as those in urban settings, provided he or she has Internet access. Using Webbased therapy, patients can compare their drinking patterns with those of people like them or take a test that indicates the severity of their drinking concerns. These tools are costeffective ways of engaging people in treatment. For those who want to reduce their drinking, Internet tools can provide drinking diaries, goal-setting exercises, and relapse-prevention techniques. These may prove useful for patients most interested in self-help. While the tools have most often been studied under circumstances of face-to-face contact with a care provider, some studies of online versions of the tools suggest that people who use them do reduce their drinking. ^{22,23}

In addition to improving the accessibility of screening and other tools, emerging technologies also are being used to help clinicians maintain better contact with their patients through the use of mobile phone-based counseling and online counseling. ^{24,25} Here, monitoring tools such as interactive voice response programs can collect information from patients and help caregivers keep track of patients' progress and signal the potential need for intervention. ²⁶

One new program for helping patients with long-term management of their own AUDs takes advantage of the capabilities of smartphones. Known as the Alcohol–Comprehensive Health Enhancement Support System (A-CHESS), the program uses smartphones to provide patients with information, adherence strategies, decision-making tools, reminders, and social support services in easy-to-use formats. The phone application is customizable to focus on particular patients' needs and enhances their autonomy by providing a tool that provides resources patients can select when needed.²⁷

Reaching Out to Potential Patients

Because such a high proportion of people with unhealthy alcohol use—from risk drinking and abuse to dependence—go untreated, it may be advantageous to expand treatment to include other settings, such as primary care offices, emergency

departments, and even community centers. Involving health care providers such as psychiatrists, psychologists, and social workers also may help. Even still, these measures may not be enough. Studies suggest that the majority of those with alcohol problems recognize the problem as much as a decade before they seek treatment, which implies there may be an opportunity for reaching patients earlier.²⁸ Understanding the factors that influence people's decisions to seek care and learning how to engage them will direct this effort.

Characteristics of Treatment Seeking

Only 15 to 25 percent of people with drinking problems seek help from doctors, treatment programs, or MHGs. 1,2,29 Many do not use treatment services until they are forced to do so by a court, a family member, or an employer. 30 People in alcohol treatment, then, often have the most serious problems, such as comorbid health, mental health, and psychosocial problems. However, studies also show that 66–75 percent of risky drinkers do make positive changes, including reaching abstinence or stable moderation, on their own. 31,32 People who resolve drinking problems on their own more commonly become moderate drinkers than those who receive treatment.

Research suggests that a person's denial that he or she has a drinking problem is not a primary reason people do not seek treatment.³³ One possible reason people do not seek treatment earlier is that both alcohol problems and treatment remain stigmatized in society. Other barriers to treatment include a belief that the problem is not serious enough to warrant treatment.^{34,35} People also report that a lack of insurance, worries about privacy, and problems making or keeping appointments keep them from treatment.

The consequences of heavy drinking—particularly social consequences—do drive people to seek help.²⁹ Positive change and treatment-seeking are more likely among people whose social networks encourage them to get help and discourage heavy drinking, while help-seeking is likely among those whose networks accept heavy drinking.^{36–38}

Strategies for Promoting Treatment Seeking

To remove barriers to treatment, programs are starting to view people with AUDs and their social networks as consumers of services who can choose among many available alternatives. Programs are making services more user friendly and attractive by providing convenient appointments, parking, and childcare. They also can offer treatment goals that do not necessarily require abstinence in the near term but allow for more gradual approaches to change.

Some programs have gone a step further, offering "treatment on demand." Rather than working to change a person's motivations directly, these programs simply promote rapid treatment entry as soon as an individual's motivation shifts in favor of change. ³⁹ Another approach, the Community Reinforcement and Family Training (CRAFT) model, ⁴⁰ works to change the patient's environment to make a non-substance-using lifestyle more rewarding than one focused on drinking. In the CRAFT model, concerned significant others (CSOs) are the focus of the therapy instead of the substance abusers. CSOs receive training to change their interactions with the substance-using person, reducing their enabling behaviors and improving their communication strategies. ⁴¹

Keeping Patients in Recovery

Unfortunately, even after entering treatment, many patients drop out—either during the initial phases or later during follow-up care. Some of the same concerns that prevent people from entering treatment make them especially reluctant to continue with care.

Generally, patients in AUD treatment begin with intensive outpatient treatment of two to three sessions per week lasting between 30 and 60 days, followed by a continuing care phase when patients are encouraged to attend self-help meetings. Yet, alcohol problems typically are chronic, involving cycles of abstinence, relapse, and treatment. This has led researchers 42,43 to design approaches that provide a continuum of care, blurring the traditional distinction between intensive initial phases and followup with MHGs or individual therapy. That research shows that interventions with a longer duration (i.e., at least 12 months) or in which patients are actively engaged through telephone calls, home visits, or by involving a patient's support network—such as family, friends, and employers—have the most success. 42

Researchers also are investigating ways to make remaining active in treatment more appealing, including the use of incentives—such as providing monetary rewards or support with housing, employment, or alcohol-free social activities—to keep patients from dropping out of treatment. Also, programs can take into account patients' preferences for the type and intensity of their treatment and, importantly, be able to detect and adapt to each patient's changing likelihood of relapse. As noted above, smartphones and the Internet can play a role in identifying fluctuations in a patient's needs.

Treating Patients with Co-occurring Disorders

Although engaging and keeping people with AUDs in treatment are essential areas for improvement in service delivery, another dimension that can add significantly to the success of treatment is improving care for those with co-

occurring psychological or medical disorders (CODs). More than half (51.4 percent) of those with a lifetime alcohol or other drug disorder also have a co-occurring mental health disorder.⁴⁴ In addition, research suggests that people with alcohol or other drug problems have a higher prevalence of general health problems, and in particular diseases such as HIV, hepatitis B and C, viruses, asthma, hypertension, and others. 45,46 All this complicates treatment and frequently contributes to poorer outcomes.⁴⁷ Better integration of care is key.

Researchers have proposed several ways to approach COD treatment. For example, is it better for separate providers to treat one disorder at a time? Or is it more advantageous for a single clinician to treat both disorders simultaneously? Unfortunately, to date, few studies have yet been able to make recommendations about the effectiveness of one strategy versus another.

What is clear is that primary care settings offer a promising environment for incorporating both AUD and mental health services, as this is where the services would be less stigmatized and potentially reach more patients.⁴⁷ Considering the reviews and recommendations from groups such as the Institute of Medicine, which reported on the state of integrated care, ⁴⁸ trends in care will continue to shift for those with CODs.

Considering Financing

Methods of reimbursement, such as fee-for-service versus fixed-budget, create incentives that influence the accessibility, quantity, and quality of care—sometimes negatively. Patients cite lack of insurance coverage as a reason they do not enter AUD treatment. Additionally, insurance reimbursement often does not pay for extended follow-up care.

The setting for treatment services and the amount of services a patient can receive largely depend on what insurance companies and public payers such as States are willing to finance. 49 One thing, however, that influences payers is new legislation; several recent policy changes are likely to affect AUD treatment services.

Conclusion

People with AUDs differ in their degree of severity, in their co-occurring conditions, and in the social systems that support either their recovery or their continued abusive drinking. In recognizing this, the field is seeking ways to better tailor care and to make that care responsive to a patient's changing needs. Emerging technologies likely will make these goals easier and perhaps more cost effective. Simultaneously, changes in policies and insurance coverage can help create new, more flexible systems that reflect the latest research findings. Also, it will be important to embrace the existing treatment framework such as medications, behavioral therapies, and mutual help groups—that have been shown to have a significant impact on many people's efforts to change their drinking.

References

¹Cohen, E.; Feinn, R.; Arias, A.; and Kranzler, H.R. Alcohol treatment utilization: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions. Drug and Alcohol Dependence 86:214–221, 2007. PMID: 16919401 ²Huebner, R.B., and Kantor, L.W. Advances

in Alcoholism Treatment. Alcohol Research & Health 33(4):295-299, 2011. 3Dawson, D.A.; Grant, B.F.; Stinson, F.S.; et al. Recovery from DSM-IV alcohol dependence: United States, 2001–2002. Addiction 100(3):281–292, 2005. PMID: 1573323 ⁴Krishnan-Sarin, S.; O'Malley, 2001–2002. Addiction 100(3):281–292, 2005. PMID: 1573323 "Krishnan-Sarın, S.; O'Malley, S; and Krystal, J.H. Treatment implications: Using neuroscience to guide the development of new pharmacotherapies for alcoholism. Alcohol Research & Health 31(4):400–407, 2008. 5Addolorato, G.; Leggio, L.; Ferrulli, A.; et al. Effectiveness and safety of baclofen for maintenance of alcohol abstinence in alcohol-dependent patients with liver cirrhosis: Randomised, double-blind controlled study. Lancet 370(9603):1915–1922, 2007. PMID: 18068515 6Anton, R.F.; Myrick, H.; Baros, A.M.; et al. Efficacy of a combination of flumazenil and gabapentin in the treatment of alcohol dependence: Relationship to alcohol withdrawal symptoms. Journal of Clinical Psychopharmacology 29(4):334–342, 2009. PMID: 19593171

O'Malley, S.S.; Krishnan Sarin, S.; McKee, S.A.; et al. Dose-dependent reduction of hazardous alcohol use in a placebo-controlled trial of nattrexone for smoking cessation. International Journal of Neuropsychopharmacology 12(5):589–597, 2009. PMID: 18796184 ⁸Chatterjee, S., and Bartlett, S.E. Neuronal nicotinic acetylcholine receptors as ⁸Chatterjee, S., and Bartlett, S.E. Neuronal nicotinic acetylcholine receptors as pharmacotherapeutic targets for the treatment of alcohol use disorders. CNS & Neurological Use Disorders Drug Targets 9(1):60–76, 2010. PMID: 20201817 ⁹O'Malley, S.S., and O'Connor, P.G. Medications for unhealthy alcohol use: Across the spectrum. Alcohol Research & Health 33(4):300–312, 2011. ¹⁰Witkiewitz, K, and Marlatt, A. Behavioral therapy across the spectrum. Alcohol Research & Health 33(4):313–319, 2011. ¹¹Fleming, M.F.; Mundt, M.P.; French, M.T.; et al. Benefit-cost analysis of brief physician advice with problem drinkers in primary care settings. Medicial Care 38(1):7–18, 2000. PMID: 10630716 ¹²Willenbring, M.L.; Massey, S.H.; and Gardner, M.B. Helping patients who drink too much: An evidence-based guide for primary care clinicians. American Family Physician 80(1):44–50, 2009. PMID: 19621845 ¹³Substance Abuse and Mental Health Services Administration. Results From the 2007. National Survey on Druig Use and Health: National Findings. (NSDIJL) Series H–34. guide for primary care clinicians. American Family Physician 80(1):44–50, 2009. PMID: 19621845 ¹³Substance Abuse and Mental Health Services Administration. Results From the 2007 National Survey on Drug Use and Health: National Findings. (NSDUH Series H–34, DHHS Publication No. SMA 08–4343). Rockville, MD: Office of Applied Studies, 2008. ¹⁴Humphreys, K. Circles of Recovery: Self-Help Organizations for Addictions. Cambridge, UK: Cambridge University Press, 2004. ¹⁵Kelly, J.F., and Yeterian, J.D. The role of mutual-help groups in extending the framework of treatment. Alcohol Research & Health 33(4):350–355, 2011. ¹⁶Humphreys, K., and Moos, R.H. Reduced substance-abuse-related health care costs among voluntary participants in Alcoholics Anonymous. Psychiatric Services 47(7):709–713, 1996. PMID: 8807683 ¹⁷Moos, R.H., and Moos, B.S. Participation in treatment and Alcoholics Anonymous: A 16-year follow-up of initially untreated individuals. Journal of Clinical Psychology 62(6):735–750, 2005. PMID: 16538654 ¹⁸Ouimette, P.C.; Moos, R.H.; and Finney, J.W. Influence of outpatient treatment and 12-step group involvement in one-year substance abuse treatment outcomes. Journal of Studies on Alcohol 59(5):513–522, 1998. PMID: 9718103 ¹⁹Sisson, R.W., and Mallams, J.H. The use of systematic encouragement and community access procedures to increase attendance at Alcoholic Anonymous and Al-Anon meetings. American Journal of Drug and Alcohol Abuse 8(3):371–376, 1981. PMID: 7340507 ²⁰Cronigan, J.S.; Connors, G.J.; and Miller, W.R. Participation and involvement in Alcoholics Anonymous. In: Babor, T.F., and Del Boca, F.K., Eds. Treatment Matching in Alcoholism. New York: Cambridge University Press, 2003, pp. 184–204. ²¹Cunningham, J.A.; Kypros, K; and McCambridge, J. The use of emerging technologies in alcohol treatment. Alcohol Research & Health 33(4):320–326, 2011. ²²Riper, H.; Kramer, J.; Smit, F.; et al. Web-based self-help for problem drinkers: A pragmatic randomized trial. Addiction 103(2):218–227, 2008. PM E-health solution for people with alcohol problems. Alcohol Research & Health 33(4):327–337, 2011. ²⁸Tucker, J.A., and Simpson, C.A. The recovery spectrum: From self-change to seeking treatment. Alcohol Research & Health 33(4):371–379, 2011. ²⁹Tucker, J.A. Natural resolution of alcohol-related problems. Recent Developments in Alcoholism 16:77–90, 2003. PMID: of alcohol-related problems. Recent Developments in Alcoholism 16:77–90, 2003. PMID: 12638632 30Parhar, K.K.; Wormith, J.S.; Derkzen, D.M.; and Beauregard, A.M. Offender coercion in treatment: A meta-analysis of effectiveness. Criminal Justice and Behavior 35:1109–1135, 2008. 31Klingemann, H; Sobell, L.; Barker, J.; et al. Promoting Self-Change from Problem Substance Use: Practical Implications for Policy, Prevention and Treatment. Dordrecht, Netherlands: Kluwer Academic Publishers, 2001. 32Sobell, L.C.; Cunningham, Dordrecht, Netherlands: Kluwer Academic Publishers, 2001. ³²Sobell, L.C.; Cunningham, J.A.; and Sobell, M.B. Recovery from alcohol problems with and without treatment: Prevalence in two population surveys. American Journal of Public Health 86:966–972, 1996. PMID: 86669520 ³³Simpson, C.A., and Tucker, J.A. Temporal sequencing of alcohol-related problems, problem recognition, and help-seeking episodes. Addictive Behaviors 27:659–674, 2002. PMID: 12201375 ³⁴Narrow, W.E.; Regier, D.A.; Rae, D.S.; et al. Use of services by persons with mental and addictive disorders. Findings from the National Institute of Mental Health Epidemiologic Catchment Area Program. Archives of General Psychiatry 50:95–107, 1993. PMID: 8381266 ³⁵Wild, T.C.; Roberts, A.B.; and Cooper, E.L. Compulsory substance abuse treatment: An overview of recent findings and issues. European Addiction Research 8:84–93, 2002. PMID: 11979011 ³⁶Codd, R.T., and Cohen, B.N. Predicting college student intentions to seek help for alcohol abuse. Journal of Social and Clinical Psychology 22:168– intentions to seek help for alcohol abuse. Journal of Social and Clinical Psychology 22:168–191, 2003. ³⁷George, A.A., and Tucker, J.A. Help-seeking for alcohol-related problems: Social contexts surrounding entry into alcoholism treatment or Alcoholics Anonymous. Journal of Studies on Alcohol 57:449–457, 1996. PMID: 8776687 ³⁸Longabaugh, R.; Wirtz, P.W.; Zweben, A.; and Stout, R. Network support for drinking. In: Longabaugh, R., and Wirtz, P.W.; Eds. Project MATCH Hypotheses: Results and Causal Chain Analyses (Project MATCH Monograph Series, Vol. 8). Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism, 2001, 260–275. ³⁹Carr, C.J.; Xu, J.; Redko, C.; et al. Individual and system influences on waiting time for substance abuse treatment. Journal of Substance Use Treatment 34:192–201, 2008. PMID: 17512159 ⁴⁰Smith, J.E., and Myers, R.J. Motivating Substance Abusers to Enter Treatment. New York: Guilford Press, 2004. ⁴¹Waldron, H.B.; Kern-Jones, S.; Turner, C.W.; et Treatment. New York: Guilford Press, 2004. ⁴¹Waldron, H.B.; Kern-Jones, S.; Turner, C.W.; et al. Engaging resistant adolescents in drug abuse treatment. Journal of Substance Abuse Treatment 32:133–142, 2007. PMID: 17306722 ⁴²McKay, J.R. Continuing care research: What we have learned and where we are going. Journal of Substance Abuse Treatment 36:131–145, 2009. PMID: 19161894 ⁴³McKay, J.R. and Hiller-Sturmhofel, S.H. Treating alcoholism as a chronic disease: Approaches to long-term continuing care. Alcohol Research & Health 33(4): 356–370, 2011. ⁴⁴Kessler, R.C. The epidemiology of dual diagnosis. Biological Psychiatry 56:730–737, 2004. PMID: 15556117 ⁴⁵Cargiulo, T. Understanding the health impact of alcohol dependence. American Journal of Health-System Pharmacists 64(5 Suppl 3):S5–S11, 2007. PMID: 17322182 ⁴⁶Mertens, J.R.; Lu, Y.W.; Parthasarathy, S.; et al. Medical and psychiatric conditions of alcohol and drug treatment patients in an HMO: Comparison with matched controls. Archives of Internal Medicine 163:2511–2517, 2003. PMID: 14609789 ⁴⁷Sterling, S.; Chi, F.; and Hinman, A. Integrating care for people with co-occurring alcohol and other drug, medical, and mental health conditions. Alcohol Research & Health 33(4):388–359, 2011. ⁴⁸Institute of Medicine Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders. Improving the Quality of Health Care for Mental and Substance Use Conditions: Quality Chasm Series. Washington, DC: National Academies Press, 2006. ⁴⁹Stewart, M.T., and Horgan, C.M. Health services and financing of treatment. Alcohol Research & Health 33(4):389–394, 2011.

Research & Health 33(4):389-394, 2011.

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Resources

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- Alcohol Research & Health, 33(4) "Expanding the Framework of Treatment" focuses on the numerous and varied approaches in the treatment of alcohol use disorders. The articles discuss the ways in which treatment is being made more accessible, more effective, and more cost effective. The articles also review such approaches as behavioral therapy, medications development, and advances in technology, as well as integrated care for patients with co-occurring disorders.
- For more information on the latest advances in alcohol research, visit NIAAA's Web site, www.niaaa.nih.gov

