

Management and Screening of Alcohol Misuse in Primary Care by family doctors

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• *Abstract*

Various trials of the effectiveness of brief alcohol intervention have actually been carried out in different settings amongst individuals with a wide variety of alcohol disorders. Nonetheless, the effectiveness of the intervention is likely to be affected by the context. We examined the evidence of efficacy of quick alcohol interventions targeted at decreasing long-lasting alcohol usage and associated damage in people attending primary care centers however not looking for assistance for alcohol-related problems. Alcohol misuse (alcoholism) is consumption of alcohol to such a degree as to trigger wear and tear in social behaviour or physical disease and the development of reliance, from which withdrawal is difficult or causes unfavorable impacts. Numerous verified and evidence-based screening, evaluation, intervention, and treatment options are readily available, consisting of the Alcohol Use Disorders Identification Test, Alcohol Use Disorders Identification Test-Consumption, and the single-question screen. Similar to evaluating for other adverse health behaviors, screening and brief intervention for alcohol misuse is a preventive service that nurse practitioners can supply to their patients.

• *Introduction*

The primary care company (PCP) is frequently the first and most essential gamer in the initial evaluation of patients at risk for alcohol misuse. This could be because of a currently developed PCP/patient relationship, making the PCP a relied on source of info and/or preliminary intervention for the patient misusing alcohol or at risk for abuse^(1,2). Nurse practitioners (NPs) play a crucial function in the screening and management of alcohol usage disorders in primary care, and in immediate, emergency situation, and acute care settings. In spite of the prevalence and health impact of alcohol abuse, and recommendations for use of routine screening by many entities

(eg, National Institute on Alcoholic Abuse and Alcohol Addiction [NIAAA], American Academy of Household Physicians [AAFP], American Society of Dependency Medicine, United States Preventive Services Task Force [USPSTF], etc, lots of suppliers report lack of preparation and self-confidence in the recognition, treatment, and referral of patients with alcohol use disorders⁽³⁾.

SCOPE OF PROBLEM AND DEFINITION OF TERMS

Inning accordance with the 2015 National Study on Drug Use and Health, > 70% of Americans surveyed reported drinking in the past year; 56% reported that they drank in the past month⁽⁴⁾. It is approximated that > 9.8 million guys (8%) and 5.6 million ladies (4%) in the United States have had an alcohol usage disorder, making alcohol-related occasions the fourth leading reason for avoidable death in the United States⁽⁵⁾. In 2014, 31% of all driving deaths (88,000 deaths) were caused by alcohol-impaired driving^(6,7).

To clarify terms, moderate drinking, as defined by the Dietary Standards for Americans, 2015-2020, is up to 1 beverage per day for women and as much as 2 drinks each day for guys, with a beverage defined as 0.6 fluid ounce of pure alcohol⁽⁸⁾. For example, 1 alcoholic drink- equivalent can consist of, 12 fluid ounces of routine beer (5% alcohol), 5 fluid ounces of wine (12% alcohol), or 1.5 fluid ounces of 80 evidence distilled spirits (40% alcohol).8 Risky alcohol usage includes all levels of drinking above these advised limits. Of unique interest to brand-new clinicians, terms such as dangerous drinking, moderate drinking, harmful drinking, binge drinking, alcohol abuse, alcoholic abuse, and alcoholism frequently trigger confusion in the evaluation of patients who utilize alcohol. Previously, the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) described 2 unique disorders-alcohol abuse and alcoholism-with specific criteria for each. The fifth edition, DSM-5, incorporates these 2 disorders into a single one, called alcohol use disorder (AUD), with mild, moderate, and serious subclassifications⁽⁹⁾.

Although the term alcohol abuse can consist of moderate to severe levels of alcohol usage, AUD is a pattern of alcohol usage that can involve trouble in controlling drinking, a fixation with alcohol, continuing to utilize alcohol even when it triggers problems, having to drink more to get the very same effect, or having withdrawal symptoms when rapidly stopping or decreasing drinking⁽¹⁰⁾. Although abstinence has been revealed to produce the very best health results, reducing the amount

of drinking can likewise significantly enhance lifestyle and other lead to other improvements in health status⁽¹¹⁾.

Risky/hazardous drinking is considered to be any drinking behavior that increases risk to a person's health or well being or that of others, and this usually occurs with drinking above the recommended limitations as set forth by the Dietary Standards⁽¹¹⁾. Binge drinking is the most typical pattern of risky drinking habits and is scientifically defined as an AUD that leads to a blood alcohol level of! 0.08 g/dL⁽¹²⁾. This level of blood alcohol is generally reached by the intake of > 4 drinks/day for women, or > 5 drinks/day for guys at the same time or within a number of hours of each other; consuming this much alcohol on at least 1 day in the past month also qualifies the patient for a diagnosis of AUD⁽¹³⁾. Binge drinking is associated with increased morbidity and mortality^(14,15).

EPIDEMIOLOGY AND PATHOPHYSIOLOGY

A review of the epidemiology and pathophysiology is likewise handy in acquiring a clear viewpoint of this intricate disorder. A wide variety of health disorders are related to AUDs, including depression, stress and anxiety, cognitive problems, cancer, pancreatitis, liver disease, hypertension, stroke, gastritis and stomach ulcers, osteopenia/osteoporosis, cirrhosis, and birth defects⁽¹¹⁾. These disorders are likewise a significant consider morbidity and mortality connected with accidents, murder, suicide, child abuse/neglect, and significant injury⁽¹⁶⁾. AUDs can also complicate the evaluation and treatment of these and other medical and psychiatric conditions⁽¹⁶⁾.

Although it is common knowledge that alcohol intake can cause dependence and dose tolerance, numerous significant research studies have also shown that light to moderate alcohol consumption can have some health advantages, although this is not constantly real for everybody⁽¹⁷⁾. In regard to heart problem threat, regular light drinkers have the tendency to have more advantage over irregular light drinkers, and binge drinking, no matter how infrequent, has actually been shown to produce more adverse qualities over non binge drinking, even when weekly usages are similar⁽¹⁸⁾. For this and other reasons, the US Centers for Disease Control and Avoidance (CDC) does not motivate nondrinkers to start consuming for health reasons⁽¹⁷⁾.

SCREENING FOR ALCOHOL MISUSE

Numerous good screening, treatment, evaluation, and intervention choices are offered and advised by the US Department of Health and Human Services, National Institute of Health, and NIAAA. These entities' newest 2005 edition of *The Clinician's Overview of Helping Patients Who Consume Excessive* offers a number of tips for preliminary screening and assessment of patients in the medical care center. Two approaches of preliminary screening are suggested: (1) a single concern about heavy drinking days; and/or (2) a written self-report instrument, the Alcohol Use Disorders Recognition Test (AUDIT). The USPSTF likewise recommends the AUDIT, the shortened AUDIT- Usage (AUDIT-C), and single-question screening, such as "The number of times in the past year have you had 5 (4 for ladies and all adults over age 65 years) or more beverages a day?"⁽¹⁹⁾.

For over Thirty Years, research study has revealed that alcohol screening and brief intervention has actually worked at lowering dangerous drinking, leading the USPSTF to recommend that screening, short intervention, and referral to treatment (SBIRT) be implemented in primary care^(19,20). It follows (and newer research study is active in this direction) that SBIRT may work in other locations where point-of-contact care is administered, such as emergency situation departments along with immediate and specialized care locations⁽²¹⁾. The screening process may be finished by administering basic questions by paper-and-pencil or digital survey, or by interview, and is planned to direct subsequent diagnostic and treatment choices^(20,21).

Experienced clinicians may know numerous validated and evidence-based screening, assessment, intervention, and treatment alternatives offered and suggested by the NIAAA, a department of the National Institute of Health, and the USPSTF, an independent, volunteer panel of national experts in avoidance and evidence-based medication. The USPSTF recommends the AUDIT, AUDIT-C, and single-question screening, such as "How many times in the past year have you had five (4 for women and all adults > 65 years) or more beverages a day?"⁽²²⁾.

The AUDIT 10-question screening tool, developed by the World Health Company, is a basic technique of screening for excessive drinking and takes roughly 3-5 minutes to administer⁽³⁾. It provides information to help patients with risky drinking patterns to reduce or stop alcohol usage in an effort to prevent negative health consequences, is easily included as part of an annual and/or focused physical evaluation, and may help in identifying extreme drinking as the cause of the presenting disease (describe "Valuable Links" in the Supplementary Box available online at ⁽²³⁾.

The AUDIT-C is an abbreviated 3-question version of the AUDIT, needing approximately 1-2 minutes to administer, and has been shown to have similar dependability and validity scores (see Useful Hyperlinks)^(3,24). The single-question screen, which takes < 1 minute to administer, works as a really short preliminary screen that might assist determine the requirement for more evaluation⁽³⁾.

Patients who have a positive single-question screen, or an AUDIT rating of > 8 must receive additional assessment beyond a preliminary screening in medical care⁽²²⁾. Short (up to 15 minutes) multi-contact behavioral interventions are most effective for improving drinking behaviors and health outcomes⁽²⁰⁾. Because particular brief counseling interventions have been shown to be typically ineffective, a referral for specialized treatment is the advised next step for.

patients who satisfy the diagnostic criteria for alcoholism^(3,25).

Routine screenings are advised for all individuals, age! 18 in primary care practices and other point-of-care locations, including outpatient and ambulatory care settings, emergency and injury departments, and medical facility inpatient departments^(11,17,26). There is not enough proof to date to properly identify the very best screening periods⁽³⁾. As constantly, it is very important for NPs to make use of good clinical judgment and to perform a thorough assessment, consisting of assessment for coexisting medical conditions, family history of alcohol abuse, and viewed sincerity in reacting to the AUDIT questions⁽²⁷⁾.

Some possible barriers to appropriate screening include patient dishonesty in actions on the questionnaire, rejection of true alcohol intake levels, a perceived lack of supplier time and familiarity with screening tools, and that care suppliers regularly screen an extremely low percentage of patients (15.4%)⁽³⁾. With this in mind, NPs need to consider executing regular alcohol screening in a manner that will permit a constant and prompt circulation to the workday, while still providing this important patient service.

DIAGNOSIS

The DSM-5 integrates both alcoholic abuse and alcohol dependence into a single disorder, AUD, with moderate, moderate, and serious sub categories. The presence of 2 or 3 requirements suggests

moderate severity, 4 or 5 requirements indicates moderate seriousness, and! 6 requirements suggests a serious grade. The DSM-5 likewise states that a patient meeting any 2 of the 11 requirements during the exact same 12-month duration gets a diagnosis of AUD ⁽⁹⁾. Table 1 is practical in determining whether an AUD exists and at what intensity level.

NPs need to keep in mind that a diagnosis of AUD can include patients with alcoholism (3% -5% of the population) and patients with hazardous/risky drinking (15% -40% of the population) ⁽²²⁾. The USPSTF explains alcohol abuse as behaviors that consist of dangerous or hazardous alcohol usage, which is specified as consuming more than the advised daily, weekly, or per-occasion amounts of alcohol ⁽²²⁾. The NIAAA specifies "risky use" as usage of > 4 drinks each day or 14 drinks a week for men or 3 drinks daily or 7 drinks per week for ladies ⁽²⁵⁾. Utilizing the SBIRT acronym as a guide, once the screening for AUD has actually been finished and a diagnosis of AUD has actually been made, the NP may proceed to either short intervention (BI) or referral to treatment, or both, based on the seriousness of the AUD ⁽²⁰⁾.

Table 1. DSM-5 Criteria for Diagnosing Alcohol Use Disorder ²⁸	
1. Had times when you ended up drinking more, or longer, than you intended?	Yes/No
2. More than once wanted to cut down or stop drinking, or tried to, but couldn't?	Yes/No
3. Spent a lot of time drinking? Or being sick or getting over other aftereffects?	Yes/No
4. Wanted a drink so badly you couldn't think of anything else?	Yes/No
5. Found that drinking—or being sick from drinking—often interfered with taking care of your home or family? Or caused job troubles? Or school problems?	Yes/No
6. Continued to drink even though it was causing trouble with your family or friends?	Yes/No
7. Given up or cut back on activities that were important or interesting to you, or gave you pleasure, in order to drink?	Yes/No

BRIEF INTERVENTION

The goals of a SBIRT are to bring awareness to the patient of his/her alcohol abuse and the associated repercussions, and to encourage the patient to produce a strategy to change their habits to remain within safe limitations ⁽²⁶⁾. There are 2 main functions: (1) to recognize and refer people

with alcoholism at early stages to prevent development of reliance; and (2) to determine and assist risky/hazardous drinkers who may or may not develop alcohol dependence ⁽²⁶⁾. Table 2 lays out the actions to quick intervention.

The time involved in carrying out the SBIRT can be quite quick, as little as 5-6 minutes (less effective), as much as 15 minutes (more efficient), or the NP might prepare a number of follow-up visits (most efficient) ^(20,23,26). If a short intervention is made use of, a referral to treatment is suggested for those patients presumed of an AUD that necessitates further diagnosis and/or treatment outside the scope of short services ⁽²³⁾.

SPECIALTY TREATMENT

Alcoholics Anonymous (AA) has actually been among the main support/treatment sources for alcoholism for nearly 8 years. However, due to the fundamental anonymous nature of AA, there is limited measurable evidence to show the institution's claims of a 50% -75% success rate ⁽²⁷⁾. In 2006, the Cochrane Cooperation released a research study concluding that there were merely inadequate speculative research studies to show the effectiveness of AA or any other 12-step technique in decreasing alcohol use and/or achieving abstaining as compared with other techniques ⁽²⁹⁾. Nevertheless, the claims might not be entirely refuted, and there continues to anecdotal evidence of some level of success.

Specialized treatment recommendation is advised for all patients with an AUD, access to suitable treatment is variable, and decisions about where to refer the patient is reliant on the patient's personal attributes as well as offered local resources. Specialized care may consist of care by an alcohol recovery specialist for inpatient/outpatient treatment at a customized alcohol healing center. Since the NP often has already developed a trusting relationship with the patient, he/she is tactically positioned to provide services that the patient may not have access to (just 14.6% of patients with an AUD ever get treatment) ⁽²⁵⁾.

Specifically, the NP can offer some or all the care to the appropriate patient, consisting of screening, therapy, management of withdrawal symptoms, and recommendation to specialty care, supplied he or she (or somebody else in the practice) has the suitable experience, training, and assistance in handling alcohol abuse.

By supplying this screening as a part of the general NP practice, a statistically higher portion of patients will receive the short screening and education, therefore potentially preventing future associated health complications. These screening and/or treatment choices might likewise be considered a billable service, because dangerous drinking is considered not just a drug abuse issue but also a medical concern, due to its function in comorbidities⁽¹¹⁾.

Management of withdrawal symptoms is not addiction treatment, however rather a bridge to treatment. This is a location where the NP can offer services crucial in transitioning the patient to a treatment and/or support program. It is also a significant step in preventing relapse of alcohol usage, and making use of a combined technique of interventions, treatment, behavioral counseling, support system, and/or pharmacotherapy use the very best course to prevent regression⁽³⁰⁾.

Pharmacologic treatments need to not be restricted to just patients who have an objective of abstinence, as even small reductions in alcohol usage can have significant health benefits, and should be motivated, even as a long-term objective⁽²⁰⁾. Outpatient management of mild-to-moderate withdrawal symptoms might be appropriate for certain patients who have a readily available support person willing to monitor their development closely. Patients must be personally motivated, reliable, and committed to continuing with the treatment strategy, even after the withdrawal duration⁽²⁾. A patient who is at threat of severe withdrawal, consisting of delirium tremens or previous withdrawal seizure, irregular labs, and a drug screen favorable for other substances, or who has psychiatric or medical comorbidities, should be handled in the inpatient setting^(27,31).

Every patient with more severe usage patterns (! 6 symptoms), or hazardous/risky drinking patterns, such as binge drinking, ought to be questioned about withdrawal symptoms⁽²⁾. Patients who have consumed big quantities of alcohol for 2 weeks or longer might experience withdrawal symptoms if alcohol usage is abruptly stopped, and symptoms normally start within 6 to 24 hours after the last beverage⁽³¹⁾. The Clinical Institute Withdrawal Evaluation for Alcohol-modified variation, is a verified tool helpful in medical care that determines 10 categories of symptoms, scoring at 1 point each: sweating; stress and anxiety; auditory or visual disturbances; agitation; queasiness and vomiting; tremor; tactile disturbances; headache; and disorientation⁽³¹⁾.

The type of medication and the frequency of tracking must be assisted by patients' symptom intensity, attributes, and environment and support system. In general, patients need to be assessed daily till their symptoms enhance and the dose of medication required is decreased⁽³¹⁾. There are numerous medications frequently utilized to treat withdrawal symptoms, with benzodiazepines being the most frequently made use of^(29,30). Intensity of symptoms should be reassessed at each follow-up check out utilizing the exact same tool used upon initial evaluation. Typically, no withdrawal symptoms are noted after 7 days of sobriety⁽³⁰⁾.

As soon as the patient is weaned off medication, recommendation to a long-term outpatient treatment program may be thought about. Likewise, patients who do not follow-up as directed, or who resume drinking, must be described a professional^(22,30).

It is very important that NPs develop reputable contacts and acquaint themselves with regional resources, such as counselors, psychologists, hospitals, and treatment centers (both in- and outpatient), that would benefit patients who need extra assistance⁽¹¹⁾. NPs should also think about that patient-centered care and shared choice making might increase buy-in and long-lasting success of AUD treatment prepares⁽¹¹⁾.

Table 2. Steps to Brief Intervention ^(20,23,26)

Algorithm Step	Action	Example
1: Broach the subject	NP is respectful and obtains permission to discuss the patient's use of alcohol	"Would it be okay to take a few minutes to talk about your drinking?" ²⁶
2: Provide feedback	NP reviews the patient's current drinking patterns, compares them to the NIAAA drinking guidelines, expresses concerns, and makes connections between alcohol and health problems	"From what we know, drinking too much can cause problems such as." and "I am concerned about your drinking." ²⁶

3: Enhance motivation	NP assesses the patient's readiness to make a change by engaging the patient in a nonjudgmental way, listening effectively, and asking open-ended questions	"On a scale from 1 to 10, with 1 being not ready and 10 being very ready, how ready are you to make a change to any aspect of your drinking?" ²⁶
4: Negotiate and advise	NP discusses options and develops a plan with clear steps for the patient to decrease alcohol consumption	"Where do you want to go from here?" and "This drinking agreement can help you reinforce your new goals. It is really an agreement between you and yourself." ²⁶

• Conclusion

Just like screening for other unfavorable health behaviors and conditions, SBIRT for alcohol abuse is a preventive service that NPs can supply their patients⁽¹¹⁾. Risky drinking can have many unfavorable health effects, including high blood pressure, stroke, cancer, liver disease, injury, cognitive impairment, social problems, and violence. NPs are strategically placed to intervene in this potential trajectory of bad health outcomes. Using validated screening questions, a brief conversation with patients who are drinking too much and, if shown, a referral to specialized treatment, the impacts of dangerous drinking might be minimized or eliminated. Decades of research study have actually shown that SBIRT can be an efficient tool toward this goal and it is recommended that it be implemented for all adults in medical care settings and/or other point-of-care places⁽¹¹⁾.

• References

1. Murray B, McCrone S. An integrative review of promoting trust in the patient-primary care provider relationship. J Adv Nurs. 2015;71(1):3-23. <https://doi.org/10.1111/jan.12502>.
2. Spithoff S, Kahan M. Moving the management of alcohol use disorders from specialized care to primary care. Can Fam Phys. 2015;61(6):491-493.

3. Moyer V. Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: clinical summary of US Preventive Services Task Force recommendations. *Ann Intern Med.* 2013;159(3):210-218. <https://doi.org/10.7326/0003-4819-159-3-201308060-00652>.
4. 2015 National Survey on Drug Use and Health. Table 2.41B—Alcohol use in lifetime, past year, and past month among persons aged 12 or older, by demographic characteristics: percentages, 2014 and 2015. <https://www.samhsa.gov/data/sites/default/files/NSDUH-DeTabs-2015/NSDUH-DeDeltas2015/NSDUH-DeTabs-2015.htm#tab2-41b/>. Accessed July 18, 2017.
5. Substance Abuse and Mental Health Services Administration. 2015 National Survey on Drug Use and Health. Table 5.6B—Substance use disorder in past year among persons aged 18 or older, by demographic characteristics: percentages, 2014 and 2015. <https://www.samhsa.gov/data/sites/default/files/NSDUH-DeTabs-2015/NSDUH-DeTabs-2015/NSDUH-DeTabs-2015.htm#tab5-6b>. 2016. Accessed July 18, 2017.
6. National Center for Statistics and Analysis. 2014 crash data key findings. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812219.2015/>. Accessed July 18, 2017.
7. US National Institutes of Health. National Institute on Alcohol Abuse and Alcoholism. Alcohol Facts & Statistics. Updated February 2017. <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/alcohol-facts-and-statistics/>. Accessed July 18, 2017.
8. US Department of Health and Human Services, Department of Agriculture. Dietary guidelines for Americans 2015-2020. <https://health.gov/dietaryguidelines/2015/guidelines/appendix-9/>. Accessed July 18, 2017.
9. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, Va: American Psychiatric Association; 2013.
10. Mayo Clinic. Alcohol use disorder. 2015. <http://www.mayoclinic.org/diseases-conditions/alcohol-use-disorder/basics/definition/con-20020866/>. Accessed July 18, 2017.
11. US Centers for Disease Control and Prevention. Planning and implementing screening and brief intervention for risky alcohol use: a step-by-step guide for primary care practices. 2014. <http://www.cdc.gov/ncbddd/fasd/documents/alcoholsbiimplementationguide.pdf/>. Accessed July 18, 2017.
12. National Institute on Alcohol Abuse and Alcoholism. Drinking levels defined. 2017. <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking/>. Accessed July 18, 2017.
13. Substance Abuse and Mental Health Services Administration. Binge drinking terminology and patterns of use. 2016. <https://www.samhsa.gov/capt/tools-learning-resources/binge-drinking-terminology-patterns/>. Accessed July 18, 2017.
14. Shukla SD, Pruett SB, Szabo G, Arteel GE. Binge ethanol and liver: new molecular developments. *Alcohol Clin Exp Res.* 2013;37:550-557.
15. Bala S, Marcos M, Gattu A, Catalano D, Szabo G. Acute binge drinking increases serum endotoxin and bacterial DNA levels in healthy individuals. 2014. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0096864>. Accessed July 18, 2017.
16. Schuckit MA. Alcohol-use disorders. *Lancet.* 2009;373(9662):492-501.
17. Coogler C, Owens M. Screening and brief intervention for alcohol misuse in older adults: training outcomes among physicians and other healthcare practitioners in community-based settings. *Commun Ment Health J.* 2015;51(2):190-197. <https://doi.org/10.1007/s10597-014-9804-x>.
18. Wannamethee SG. Significance of frequency patterns in 'moderate' drinkers for low-risk drinking guidelines. *Addiction.* 2013;108(9):1545-1547. <https://doi.org/10.1111/add.12089>.

19. US Centers for Disease Control and Prevention. CDC's alcohol screening and brief intervention efforts. 2017. <https://www.cdc.gov/ncbddd/fasd/alcohol-screening.html/>. Accessed July 18, 2017.
20. US Preventive Services Task Force. Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: current recommendations. 2016. <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/alcohol-misuse-screening-and-behavioral-counseling-interventions-in-primary-care/>. Accessed July 18, 2017.
21. Landy M, Davey C, Quintero D, Pecora A, McShane K. A systematic review on the effectiveness of brief interventions for alcohol misuse among adults in emergency departments. *J Subst Abuse Treatment*. 2016;61:1-12.
22. Swift R, Aston E. Pharmacotherapy for alcohol use disorder: current and emerging therapies. *Harv Rev Psychiatry*. 2015;23(2):122-133. <https://doi.org/10.1097/HRP.0000000000000794>.
23. Babor TF, Higgins-Biddle JC, Saunders JB, Monteiro MG. The Alcohol Use Disorders Identification Test: guidelines for use in primary care. 2nd ed. World Health Organization, Department of Mental Health and Substance Dependence. 2001. http://apps.who.int/iris/bitstream/10665/67205/1/WHO_MSD_MSB_01.6a.pdf. Accessed July 18, 2017.
24. Bradley KA, DeBenedetti AF, Volk RJ, Williams EC, Frank D, Kivlahan DR. AUDIT-C as a brief screen for alcohol misuse in primary care. *Alcohol Clin Exp Res*. 2007;31(7):1208-1217. <https://doi.org/10.1111/j.1530-0277.2007.00403.x>.
25. National Institute on Alcohol Abuse and Alcoholism. Alcohol use disorder. 2017. <http://niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/alcohol-use-disorders/>. Accessed July 18, 2017.
26. Singh M, Gmyrek A, Hernandez A, Damon D, Hayashi S. Sustaining screening, brief intervention and referral to treatment (SBIRT) services in health-care settings. *Addiction*. 2017;112(Suppl):92-100. <https://doi.org.ezproxy.utttyler.edu:2048/10.1111/add.13654>.
27. Barrio P, Gual A. Patient-centered care interventions for the management of alcohol use disorders: a systematic review of randomized controlled trials. *Patient Prefer Adherence*. 2016;10:1823-1845.
28. Ferri M, Amoato L, Davoli M. Alcoholics Anonymous and other 12-step programmes for alcohol dependence. *Cochrane Database Syst Rev*. 2006;(3).
29. Dodes L, Dodes Z. *The Sober Truth: Debunking the Bad Science Behind 12-Step Programs and the Rehab Industry*. Boston: Beacon Press; 2015.
30. Lee J, Kresina TF, Campopiano M, Lubran R, Clark W. Use of pharmacotherapies in the treatment of alcohol use disorders and opioid dependence in primary care. *Biomed Res Int*. 2015. <https://doi.org/10.1155/2015/137020>.
31. Muncie H, Yasinian Y, Oge L. Outpatient management of alcohol withdrawal syndrome. *Am Fam Physician*. 2013;88(9):589-595.

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