Alcohol, Other Drugs, and Health: Current Evidence

JULY–AUGUST 2014

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INTERVENTIONS & ASSESSMENTS

Early Evidence Suggests Limited Effectiveness of Brief Intervention for Unhealthy Alcohol Use in the US Veterans Administration Health Care System

In 2007, the US Department of Veterans Affairs (VA) health system implemented brief intervention (BI) for unhealthy alcohol use, including a national performance measure and a reminder in the electronic health record. Among veterans who screened positive for unhealthy alcohol use (AUDIT-C score of ≥5) in the first 6 months of implementation and had follow-up screening 9–15 months later, this study examined whether those with documented BI were more likely to have resolution of unhealthy alcohol use than those without.

- Of the 22,214 patients screened at baseline, 6210 (28%) had a follow-up AUDIT-C.
- Of this cohort, 1751 (28%) had a BI documented.
- Patients who received a BI were older; more likely to be exempt from a VA copayment (a marker of lower income or more service-connected disability); and had higher prevalence of tobacco use, mental health disorders, and high physical comorbidity.
- Those with documented BI were also more likely to have an alcohol use disorder (43% versus 35%) and a severe or very severe AUDIT-C score (≥8; 44% versus 34%).
- Overall, 2922 (47%) patients resolved unhealthy alcohol use. No differences were detected in either unadjusted or adjusted prevalence of resolution among the groups.
- Alcohol use severity did not appear to impact the effect of documented BI on resolution.

Comments: Less than one-third of patients who screened positive had a follow-up AUDIT-C, suggesting that clinicians gave limited priority to managing unhealthy alcohol use over time. BI did not appear to be routine and the selection of more severe patients undoubtedly limited its effect. Medical record documentation cannot distinguish whether clinicians' counseling met even a minimal standard. The implementation included no training of clinicians or quality control, so poor counseling should not be expected to yield benefits. Finally, this early evaluation had only a 62% probability of detecting a true effect. We are left awaiting publication of a larger, adequately powered evaluation. In the meantime, this study presents a significant challenge; substantial implementation efforts will be required for alcohol BI to realize its promise in real-world settings.

Peter D. Friedmann, MD, MPH

Reference: Williams EC, Rubinsky AD, Chavez LJ, et al. An early evaluation of implementation of brief intervention for unhealthy alcohol use in the US Veterans Health Administration. *Addiction*. 2014;109(9):1472–1481.

Could Cannabis be a Treatment for Alcohol Use Disorder?

Unlike tobacco and heroin, there is currently no agonist therapy for alcohol. Chick and Nutt recently defined 7 criteria for alcohol "substitution therapy,"* and, in a literature review, Subbaraman assessed whether cannabis could satisfy those criteria:

- Reduction of alcohol-related harms: Some evidence suggests that cannabis could reduce alcohol use and related harms.
- Free of harms, or less harmful than alcohol: Available evidence points to

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Could Cannabis be a Treatment for Alcohol Use Disorder? (continued from page 1)

cannabis as being safer than alcohol; however, cannabis is not free of harms.

- "Misuse" should be less than that of alcohol: Epidemiological studies show a lower rate of dependence for cannabis compared with alcohol; however, there is an increased likelihood of cannabis dependence among people with alcohol use disorders.
- Adequate as a "substitution" for alcohol and not used along with it: Studies showing both "substitution" and use of cannabis as a complement were identified.
- Safer in overdose than alcohol: The safety ratio for cannabis is over 10 times greater than that of alcohol.
- Not potentiate the effects of alcohol: Some studies conclude that cannabis potentiates the effects of alcohol while others do not.
- Significant health economic benefits: There is some evidence at the aggregate level that cannabis may have health economic benefits, but no studies have compared individual health economics outcomes.

In sum, cannabis appears to be less harmful than alcohol and is safer in overdose. Evidence was mixed for the other criteria.

* The term "substitution" is used in the articles, but cannabis could not pharmacologically act as a simple substitute for alcohol.

Comments: Almost all of the evidence to support these findings comes from retrospective studies, and the risk of selection bias is high. Furthermore, most did not focus on people with alcohol use disorders. Further investigation into subsequent harms, problems, and economic consequences of cannabis use is necessary, but the current status of cannabis makes any systematic study unlikely. Nonetheless, there is insufficient evidence to support any recommendation for cannabis as a treatment for or even as a harm reduction strategy for people with an alcohol use disorder, especially in light of its known adverse health effects (*see also*: Is Marijuana Use Safe? NIDA's Director Addresses Questions of Adverse Health Effects, page 5).

Nicolas Bertholet, MD, MSc

References: Chick J, Nutt DJ. Substitution therapy for alcoholism: time for a reappraisal? *J Psychopharmacol*. 2012;26(2):205-12.
Subbaraman MS. Can cannabis be considered a substitute medication for alcohol? *Alcohol Alcohol*. 2014;49(3):292–298.

Acamprosate and Naltrexone: Similar Efficacy for Reducing Return to Drinking

Most people with alcohol use disorders do not receive treatment, and very few receive medication treatment. Investigators systematically searched the literature to identify double-blind randomized trials of medications for adult outpatients with alcohol dependence (nonrandomized studies of health outcomes and adverse effects were included); 123 studies with 22,803 participants were included in the report and 95 in meta-analyses.

- Acamprosate and naltrexone both reduced return to any drinking (numbers needed to treat, 12 and 20, respectively), and there were no differences in head to head comparisons. Naltrexone reduced heavy drinking.
- Acamprosate studies with the lowest risk of bias found no efficacy for the medication.
- Topiramate and nalmefene both reduced several drinking outcomes.
- There was insufficient evidence for improvements in health outcomes for any medication.
- Naltrexone was associated with dizziness, nausea, and vomiting (number needed to harm [NNH], 16, 9, and 24, respectively).
- Acamprosate was associated with anxiety, diarrhea, and vomiting (NNH, 7, 11, and 42, respectively).
- Topiramate was associated with cognitive dysfunction, paresthesias, and taste abnormalities (NNH, 12, 4, and 7, respectively).

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Acamprosate and Naltrexone: Similar Efficacy for Reducing Return to Drinking (continued from page 2)

- Nalmefene was associated with dizziness, headache, insomnia, nausea, and vomiting (NNH, 7, 26, 10, 7, and 17, respectively).

Comments: There are a few caveats to consider when interpreting this report. Firstly, disulfiram was not found to have efficacy, but placebo-controlled trials are not optimal for testing the efficacy of a medication that requires that patients know they are taking it. Studies of supervised oral disulfiram have demonstrated efficacy. Secondly, most studies provided psychosocial counseling, which may be necessary for better treatment outcomes, though not easily delivered in primary care settings. Lastly, the medications have side effects and have not been shown to affect outcomes beyond consumption. Nonetheless, medications for alcohol use disorders have modest efficacy for reducing drinking in people with moderate to severe alcohol use disorders.

Richard Saitz, MD, MPH

Reference: Jonas DE, Amick HR, Feltner C, et al. Pharmacotherapy for adults with alcohol use disorders in outpatient settings. a systematic review and meta-analysis. *JAMA*. 2014;311:1889–1900.

Telephone Booster Increases Efficacy of Brief Alcohol Intervention for Injured Patients

To determine the most effective way to deliver brief intervention to trauma patients with unhealthy alcohol use, this 3-site clinical trial randomized 596 injured patients to brief advice (n = 200), brief motivational intervention (BMI; n = 203), or BMI plus a telephone booster (BMI+B; n = 193). The telephone booster lasted an average of 28 minutes and was delivered 30 days after the BMI, providing personalized feedback based on the initial interview. Follow-up rates were 80% at 3 months, 79% at 6 months, and 75% at 12 months.

- Compared with brief advice and BMI, the BMI+B group reduced…
  - weekly consumption by 1.2 standard drinks at 3 months and 1.4 at 6 months;
  - the number of drinks per drinking day by 1.5 drinks at 3 months and 1.3 at 6 months;
  - the percentage of heavy drinking days (defined as 4 drinks on an occasion for men or 3 for women) at 6 months by 6%;
  - the maximum number of drinks in a day by 1.4 drinks at 3 months and 1.7 at 12 months.
- The intervention had no effect on alcohol-related problems.

Comments: BMI with a telephone booster 30 days later was more efficacious than BMI or brief advice alone in reducing unhealthy drinking among trauma patients. The effects differentiating BMI from brief advice were slight and suggest that a booster intervention might work even after a minimal intervention at the time of the injury. In settings where post-trauma telephone calls are not routine, clinicians seeing patients in follow-up after an injury are ideally positioned to deliver such a booster.

Peter D. Friedmann, MD, MPH

Reference: Field C, Walters S, Marti CN, et al. A multisite randomized controlled trial of brief intervention to reduce drinking in the trauma care setting: how brief is brief? *Ann Surg*. 2014;259(5);873–879.

Efficacy of a Single-Session Brief Intervention for Unhealthy Alcohol and Drug Use Among South African Young Adults

Most studies investigating the efficacy of brief motivational interventions for unhealthy alcohol and drug use among young adults have been conducted in college students. Researchers screened patients aged 18–24 years from a low-income primary care clinic in South Africa with single-item instruments for alcohol and drug use. Patients with positive screens were randomized to a single-session, nurse practitioner-delivered brief motivational intervention (n = 190; 56% female, 48% black, 52% mixed-race. At-risk use* in 54% for alcohol, 22% for cannabis, and 11% for other drugs), or to usual care (n = 173; 47% female, 50% black, 50% mixed-race. At-risk use in 49% for alcohol, 19% for cannabis, and 15% for other drugs).

- At 3 months, the intervention and usual care groups did not differ in prevalence of at-risk use of alcohol (33% versus 32%) and drugs (18% versus 19%), or heavy drinking** (51% versus 55%).
- At 3 months, the intervention group had a greater decrease in the mean ASSIST alcohol score (13 to 8) compared with the usual care group (11.5 to 9.1), but both groups decreased to scores (≤10) that do not require intervention.

* Defined as ASSIST alcohol score of ≥11 or an ASSIST drug score of ≥4.
** Defined as ≥3 drinks in an occasion for women and ≥6 drinks in an occasion for men.

Comments: Despite its commendable aims, this study ultimately did not show an intervention effect at 3 months. The importance of the slightly greater decrease in ASSIST alcohol score among intervention participants is uncertain

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Efficacy of a Single-Session Brief Intervention for Unhealthy Alcohol and Drug Use Among South African Young Adults (continued from page 3)

since both groups decreased to scores considered to be lower-risk. A larger study with a minimal assessment group, booster intervention sessions, biological outcomes, and longer follow-up may settle the issue.

Kevin L. Kraemer, MD, MSc

Reference: Mertens, JR, Ward CL, Bresick GF, et al. Effectiveness of nurse-practitioner-delivered brief motivational intervention for young adult alcohol and drug use in primary care in South Africa: a randomized clinical trial. *Alcohol Alcohol*. 2014;49(4):430–438.

Biomarkers Insensitive for Detecting Heavy Alcohol Use

Carbohydrate-deficient transferrin (CDT), gamma-glutamyltransferase (GGT), and breath alcohol are candidate biomarkers to detect heavy drinking. Researchers assessed the operating characteristics of CDT, GGT, and breath alcohol measured to detect heavy drinking* at 6-month follow-up among 402 patients with alcohol dependence and heavy drinking. The self-reported timeline follow-back validated calendar measure for alcohol use was the reference standard.

- CDT yielded the best performance with area under the receiver-operating curve (AUC) that suggested fair to good accuracy: % CDT had higher sensitivity with better likelihood positive and negative than GGT or breath alcohol, but missed 34–59% of the cases, depending on which cutoff was chosen and which outcome was used.
  - The optimal % CDT cut-point for any heavy drinking was 1.5% (sensitivity 51%, specificity 90%).
  - For recurrent heavy drinking** it was 1.3% (sensitivity 76%, specificity 70%).
  - For persistent heavy drinking*** it was 1.4% (sensitivity 81%, specificity 70%).
- For GGT, the estimated AUC suggested poor test accuracy.
  - The optimal GGT cut-point for any heavy drinking was 24 IU/l (sensitivity 72%, specificity 49%).
  - For recurrent heavy drinking, it was 27 IU/l (sensitivity 76%, specificity 54%).
  - For persistent heavy drinking, it was 40 IU/l (sensitivity 55%, specificity 70%).
- For breath alcohol where >0 indicated a positive test, sensitivity ranged 20–31% and specificity ranged 91–94%.

* Defined as ≥4 drinks in an occasion or >7 in a week for women, ≥5 drinks in an occasion or >14 in a week for men.
** Defined as ≥5 drinks in a day on at least 5 of the past 30 days.
*** Defined as ≥5 drinks in a day on at least 7 consecutive days over the past 30 days.

Comments: These biomarkers do not have sufficient diagnostic accuracy (sensitivity in particular) to be used without self-report measures in patients with alcohol dependence. While self-reported, the reference standard for this study was highly detailed and included confidentiality protections not usually available in clinical practice. A thorough history is likely to provide more useful information about alcohol use than laboratory tests in both research and clinical settings.

Alexander Y. Walley, MD, MSc

Reference: Bertholet N, Winter MR, Cheng DM, et al. How accurate are blood (or breath) tests for identifying self-reported heavy drinking among people with alcohol dependence? *Alcohol Alcohol*. 2014;49:423–429.

Blood Phosphatidylethanol Offers Limited Utility as an Alcohol Biomarker in Patients with Chronic Liver Disease

Blood phosphatidylethanol (PEth) is a product of ethanol metabolism that may be a useful biomarker of alcohol consumption. For this study, researchers recruited 222 participants with chronic liver disease (median age 52 years; 56% male; 54% with cirrhosis) and measured their PEth levels by mass spectroscopy and their alcohol consumption by a validated calendar method of self-report. Sensitivity and specificity of PEth cutoffs were calculated for detecting any alcohol consumption and an average consumption of ≥4 drinks in a day.

- In the last 30 days, 42% of the participants reported no alcohol consumption; 42% reported consuming an average of <4 drinks in a day; and 16% reported consuming an average of ≥4 drinks in a day.
- For an outcome of any drinking, a PEth cutoff of 8 ng/ml had sensitivity of 79% and specificity of 90%, whereas a cutoff of 20 ng/ml had sensitivity of 73% and specificity of 96%.
- For an outcome of consuming ≥4 drinks in a day, a PEth cutoff of 20 ng/ml had sensitivity of 97% and specificity of 66%, whereas a cutoff of 80 ng/ml had sensitivity of 91% and specificity of 77%.

Comments: PEth performed reasonably well in detecting any alcohol consumption and average consumption of ≥4 drinks

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Blood Phosphatidylethanol Offers Limited Utility as an Alcohol Biomarker in Patients with Chronic Liver Disease (continued from page 4)

in a day among people with chronic liver disease. However, the lower cutoffs will misclassify some people with alcohol consumption as abstinent, and the upper cutoffs will misclassify some people who consume an average of <4 drinks in a day as having heavier consumption. PEth's clinical role beyond potential relapse detection in patients with chronic liver disease remains uncertain.

Kevin L. Kraemer, MD, MSc

Reference: Stewart SH, Koch DG, Willner IR, et al. Validation of blood phosphatidylethanol as an alcohol consumption biomarker in patients with chronic liver disease. *Alcohol Clin Exp Res*. 2014;38(6):1706–1711.

Even After Training, Many Primary Care Physicians are Reluctant to Prescribe Buprenorphine

Buprenorphine has been shown to be an effective treatment for opioid use disorder, even when prescribed by primary care physicians without additional psychosocial services. In 2009, the Rural Opioid Management Project was established to train physicians to prescribe buprenorphine in rural areas of Washington State with high opioid death rates and few waivered physicians. Of 120 physicians who completed the training, 92 were interviewed at least 7 months following their training and 78 were included in this study.

- Of the 78 physicians, 50 (64%) had obtained the requisite DEA waiver to prescribe buprenorphine, but only 22 (28%) had since prescribed the medication.
- Family physicians were more likely than other specialties to prescribe buprenorphine (33% versus 7%). Having another physician with a waiver in the practice was associated with prescribing buprenorphine.
- Perceived barriers to prescribing buprenorphine included: lack of mental health and psychosocial support, time constraints, lack of confidence, resistance from practice partners, and lack of institutional support.

Comments: This study shows that simply providing the required waiver training is not sufficient to overcome barriers to increasing access to buprenorphine treatment. Physicians need institutional support and encouragement. Moreover, the widespread expectation that all patients who are prescribed buprenorphine must also receive psychosocial support beyond standard physician counseling presents another barrier to treatment. Including experience with prescribing buprenorphine in residency training programs may also help.

Darius A. Rastegar, MD

Reference: Hutchinson E, Catlin M, Andrilla CH, et al. Barriers to primary care physicians prescribing buprenorphine. *Ann Fam Med*. 2014;12:128–133.

HEALTH OUTCOMES

Is Marijuana Use Safe? NIDA's Director Addresses Questions of Adverse Health Effects

In the US, marijuana is the most common "illicit" substance (its legal status varies by state) with roughly 12% of individuals over the age of 12 reporting current use. Changes in state laws have created a complicated landscape whereby some have decriminalized possession, some have passed medical marijuana laws, and others (Colorado and Washington) have legalized marijuana for recreational purposes. One of the consequences of these changes is that, more than ever, Americans are questioning whether any risk is involved with marijuana use. In this important review, Dr. Nora Volkow (director of the National Institute on Drug Abuse) and colleagues outline the adverse health effects of marijuana use and the strength of the evidence supporting its health impact.

- The effects of short-term use include: impaired short-term memory and motor coordination, altered judgment, and, in high doses, paranoia and psychosis.†
- Long-term marijuana use is associated with the development of addiction in 9% of people with marijuana use overall, 17% of those who begin use in adolescence, and 25–50% of those who report daily use.*† Whether it leads to use of other drugs remains controversial.†
- Other long-term effects include: altered brain development,*† poor educational outcomes,* cognitive impairment,* diminished life satisfaction and achievement,*† impaired driving ability,† symptoms of chronic bronchitis,† and increased risk of psychotic disorders in people who are predisposed.†

† Medium to high level of confidence in the evidence.
* Effect is strongly associated with initial marijuana use in adolescence.

Comments: The availability and social acceptability of marijuana, as well as its pharmacologic properties, have resulted in

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Is Marijuana Use Safe? NIDA's Director Addresses Questions of Adverse Health Effects (continued from page 5)

an increasing prevalence of use. This exposure is not without risk to an individual's health, especially with long term use and use beginning in adolescence.

Jeanette M. Tetrault MD

Reference: Volkow ND, Baler RD, Compton WM, Weiss SR. Adverse health effects of marijuana use. *N Engl J Med*. 2014;370(23):2219–2227.

Low Amounts of Alcohol Consumption are Associated with a Reduced Risk of Stroke, While Heavy Drinking May Increase It

Low amounts of alcohol consumption are associated with a reduction in the risk of ischemic stroke, while alcohol use may increase the risk of hemorrhagic stroke. In this meta-analysis—based on 27 prospective studies reporting data on 1,425,513 individuals—the authors used a spline analysis to estimate the average intake reported by subjects; they classified <15 g of alcohol in a day as "light" consumption, 15–30 g in a day as "moderate," and larger amounts as "heavy." Data on the patterns of consumption or the types of alcoholic beverages consumed were not available. A spline is a relation defined by a piecewise polynomial function (meaning there can be multiple equations, and they are more complex than simple linear formulas).

- For total stroke, there was a 15% reduction in risk associated with light alcohol consumption (relative risk [RR], 0.85), no effect with moderate, and a 20% increased risk with heavy consumption (RR, 1.20).
- For ischemic stroke and stroke mortality, there were decreases in risk with light alcohol consumption (RR, 0.81 and 0.67, respectively), but no significant effects associated with either moderate or heavy consumption.
- For hemorrhagic stroke, the relative risk for participants reporting heavy alcohol consumption was higher than that of abstainers, but none of the differences were statistically significant.

Comments: This meta-analysis found a J-shaped association between alcohol consumption and stroke mortality with a decrease in the risk of total stroke among participants who reported consumption of 0–20 g of alcohol in a day, and possibly an increase in the risk among those with heavy consumption.

R. Curtis Ellison, MD

Reference: Zhang C, Qin YY, Chen Q, et al. Alcohol intake and risk of stroke: a dose-response meta-analysis of prospective studies. *Int J Cardiol*. 2014;174(3):669–677.

HIV AND HCV

Birth Cohort Screening Will Only Identify a Minority of Individuals with Hepatitis C in Correctional Settings

Hepatitis C (HCV) is primarily transmitted through injection drug use and disproportionately affects people in contact with the criminal justice system. In addition to testing high-risk individuals, the CDC has recommended one-time testing of everyone born between 1945 and 1965; this was based on data from National Health and Nutrition Examination Survey (NHANES), which found that 82% of people with HCV in the US were in this birth cohort. However, NHANES did not include incarcerated persons. Researchers used data from the Pennsylvania Department of Corrections, which has offered all entrants opt-out testing for HCV since 2003, to examine the prevalence of anti-HCV antibodies among inmates.

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American Journal of Drug & Alcohol Abuse
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Journal of Substance Abuse Treatment
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Journal of Viral Hepatitis
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New England Journal of Medicine
Preventive Medicine
Psychiatric Services
Substance Abuse
Substance Use & Misuse

Many others periodically reviewed (see www.aodhealth.org).

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Birth Cohort Screening Will Only Identify a Minority of Individuals with Hepatitis C in Correctional Settings (continued from page 6)

- Overall, anti-HCV prevalence was 18% and the highest prevalence was among those born between 1950 and 1954 (45%). Prevalence was higher among women (31%) than men (17%).
- Testing limited to the 1945–1965 birth cohort would identify 44% of male and 29% of female inmates with HCV.

Comments: This study shows that HCV is highly prevalent in correctional settings and suggests that all entrants should be offered testing. With the availability of more effective treatments, a "test and treat" approach in correctional settings would probably have a significant impact on the prevalence and burden of this disease, but the current cost of HCV medications presents a major barrier.

Darius A. Rastegar, MD

Reference: Larney S, Mahowald MK, Schaff N, et al. Epidemiology of Hepatitis C Virus in Pennsylvania state prisons, 2004–2012: limitations of 1945–1965 birth cohort screenings in correctional settings. *Am J Pub Health*. 2014;104(6):e69–74.

Among People with Opioid Use Disorder, Buprenorphine and Methadone Treatment Lead to Decreases in Injection-Related HIV Risk

Methadone and buprenorphine treatment can reduce the risk of HIV infection among people with injection drug use but few studies have directly compared the efficacy of the two medications on injection and sexual risk. Researchers performed a secondary analysis of data from a 24-week randomized trial that assessed differences in hepatotoxicity between buprenorphine and methadone among 731 adults with opioid dependence. For this study, the HIV Risk Behavior Survey was used to assess participants' injection and sexual risk behaviors to determine differences between those treated with methadone and those receiving buprenorphine. Randomization was 2:1 in favor of buprenorphine due to higher rates of dropout in that group.

- Injecting risk decreased with treatment in most ways measured, and did not differ between groups. The mean number of times a participant injected any substance in the last 30 days decreased from 74 at baseline to 6 at 24 weeks among participants receiving methadone, and from 70 to 6 among those treated with buprenorphine. High-risk injecting practices (e.g., sharing needles) also decreased.
- Overall, sexual risk decreased slightly or stayed the same over time for both the methadone and buprenorphine groups. However, males receiving buprenorphine had a modest increase (41% to 47% at 24 weeks) in their sexual risk composite, whereas males receiving methadone had a small decrease in their sexual risk composite (46% to 44% at 24 weeks).

Comments: This study suggests that both buprenorphine and methadone decrease HIV transmission risk primarily through decreased injection-related activities. Strategies to address sexual risk among patients treated with both medications are needed. Clinicians should screen for HIV transmission risk behaviors in their opioid-dependent patients and promote the use of methadone or buprenorphine among those at risk.

Jessica S. Merlin, MD, MBA

Reference: Woody G, Bruce D, Korthuis PT, et al. HIV risk reduction with buprenorphine-naloxone or methadone: findings from a randomized trial. *J Acquir Immune Defic Syndr*. 2014;66(3):288–293.

Continuing Medical Education (CME) Accreditation Statements

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This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of Boston University School of Medicine and Boston Medical Center. Boston University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians (Course Code I.ACT1408. Boston University School of Medicine designates this enduring material for a maximum of 1.5 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity..

Target Audience

The target audience is generalist clinicians, many of whom have received limited training on detecting and treating substance abuse.

Educational Needs Addressed

Primary-care clinicians often miss the diagnosis of alcohol or drug problems and cannot stay abreast of the current substance-abuse literature in the context of a busy practice. Because of the effects of alcohol and drugs on adherence to care plans and physician-patient relationships, patients with alcohol or drug problems may receive suboptimal treatment for other conditions. Further, physicians sometimes perceive alcohol or drug dependence as less treatable than other medical conditions, and thus delegate responsibilities for screening and intervention to others. At the root of the screening and treatment gap is the inadequate provision of substance-abuse education in medical schools and mental-health fields. The newsletter addresses this not only by research dissemination but by providing free downloadable teaching tools for use by educators.

Educational Objectives

At the conclusion of this program, participants will be able to state the latest research findings on alcohol, illicit drugs, and health; incorporate the latest research findings on alcohol, illicit drugs, and health into their clinical practices, when appropriate; and recognize the importance of addressing alcohol and drug problems in primary care settings. In sum, the purpose of the newsletter is to raise the status of alcohol and drug problems in both academic and clinical culture to promote evidence-based screening and treatment and ultimately improve patient care.

Disclosure Statement

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