Alcohol, Other Drugs, and Health: Current Evidence

JULY–AUGUST 2009

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INTERVENTIONS & ASSESSMENTS

Are Brief Alcohol Interventions Likely to be Effective in Routine Primary Care Practice?

A number of meta-analyses have demonstrated the modest efficacy of brief interventions (BI) for nondependent unhealthy alcohol use in primary care settings. Whether this level of efficacy can be expected when BIs are delivered outside of research studies in not known. This systematic review identified 22 randomized trials including over 5800 patients. Investigators classified the trials on a spectrum from tightly controlled (efficacy design) to real world (effectiveness design) studies. The scale considered whether patients presented to health care with a range of conditions, whether practices delivered a full range of medical services, whether practitioners routinely worked in the service rather than being funded by the trial, and whether the intervention could be delivered within standard visit times.

- Participants who received BI drank 38 g of alcohol (i.e., approximately 3 standard drinks) per week less than those who did not.
- Longer duration of intervention was not significantly associated with a larger effect.
- The effect of BI on drinking was similar in studies regardless of whether they were tightly controlled or had more real world characteristics.

Comments: This review confirms the efficacy of BI for nondependent unhealthy alcohol use in primary care. Although the findings are encouraging regarding the potential to see similar effects in routine practice, these research studies tend to provide training and materials to clinicians that are already willing and interested. Because the effects of BI are small, any decrease from what has been seen in trials could wipe out the benefits. As such, we should look to studies in practice-based research networks, other community settings, and other implementation programs to inform policy and practice as the service is disseminated.

Richard Saitz MD, MPH

Reference: Kaner EF, Dickinson HO, Beyer F, et al. The effectiveness of brief alcohol intervention in primary care settings: a systematic review. *Drug Alcohol Rev.* 2009; 28(3):301–323.

Do Biomarkers Improve the Accuracy of Alcohol Screening in Acutely Injured Adults?

Administration of self-report questionnaires is recommended for the detection of unhealthy alcohol use in acutely injured patients; however, it may lead to false negatives if there is underreporting. To assess whether alcohol biomarkers added accuracy to questionnaire-based alcohol screening in injured patients, 1233 acutely injured adults presenting to a German teaching hospital completed the Alcohol Use Disorders Identification Test (AUDIT) to assess the presence of unhealthy alcohol use.* Sixteen percent of all subjects (20% of men and 10% of women) had unhealthy alcohol use. Area-under-the-curve (AUC) analysis was used to compare the accuracy of the AUDIT with gamma-glutamyl-

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*Defined in this study as high-risk drinking (alcohol consumption >420 g per week in men and >280 g per week in women) or as harmful or dependent drinking per ICD-10 criteria. Cutoffs for men and women, respectively, were for AUDIT >8 and >5, GGT >21 U/l and >14 U/l, CDT >2.9% and >2.7%, and MCV >92 fl and >93 fl.

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Biomarkers and Alcohol Screening (continued from page 1)

transferase (GGT), carbohydrate-deficient transferrin (CDT), mean corpuscular volume (MCV), and the AUDIT plus all 3 biomarkers for detecting unhealthy alcohol use. An AUC of 1.0 would indicate a perfect test and 0.5 would be a test no better than chance.

Comments: This study demonstrates the superiority of the AUDIT over alcohol biomarkers for detecting AUDs in injured patients (Table 1). Although adding all 3 biomarkers to the AUDIT did increase the screening sensitivity in both men and women, this came at a cost of decreased specificity and no significant change in AUC.

Kevin L. Kraemer, MD, MSc

Reference: Neumann T, Gentilello LM, Neuner B, et al. Screening trauma patients with the Alcohol Use Disorders Identification Test and biomarkers of alcohol use. *Alcohol Clin Exp Res.* 2009:33(6):970–976.

Table 1. Results of screening tests for unhealthy alcohol use
(Optimal sensitivities corresponding to a specificity >0.8)

	Men (n=787)			Women (n=446)		
Test	**Sensitivity**	**Specificity**	**AUC**	**Sensitivity**	**Specificity**	**AUC**
AUDIT	0.75	0.84	0.874	0.79	0.85	0.889
GGT	0.43	0.82	0.660	0.21	0.83	0.522
CDT	0.43	0.82	0.669	0.40	0.81	0.595
MCV	0.36	0.84	0.652	0.28	0.85	0.576
All biomarkers	0.56	0.78	—	0.26	0.86	—
AUDIT + all biomarkers	0.87	0.68	0.890	0.84	0.74	0.900

Does Clonidine Reduce the Duration of Opioid Therapy for Neonatal Abstinence Syndrome?

Clonidine decreases the severity of opioid withdrawal in adults and older children, but its efficacy and safety in infants born to women with opioid dependence is not known. In this study, researchers randomized 80 infants with neonatal abstinence syndrome to standardized delivery of oral tincture of opium plus oral clonidine (1 µg/kg every 4 hours) or oral tincture of opium plus placebo. Ninety percent of infants in the clonidine group and 88% in the placebo group had intrauterine exposure to methadone, while 65% of infants in the clonidine group and 73% in the placebo group had intrauterine exposure to heroin. Therapy was guided by modified Finnegan scores.

- Median duration of therapy was 11 days in the clonidine group and 15 days in the placebo group (p=0.02).
- The mean dose of tincture of opium was 19.4 ml (7.7 mg morphine equivalents) in the clonidine group and 47.9 ml (19.2 mg morphine equivalents) in the placebo group (p=0.36).
- Seven infants in the clonidine group required restart of opium within 12–48 hours of stopping initial treatment compared with none in the placebo group.
- Blood pressure and heart rate were significantly lower in the clonidine group compared with the placebo group but remained within normal ranges.
- Three infants in the clonidine group died within 2 months of delivery. Each death occurred after discharge and was judged not to be due to clonidine.

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Clonidine for Neonatal Abstinence Syndrome (continued from page 2)

Comments: These findings suggest clonidine may be a potentially useful adjunct to tincture of opium in infants with neonatal abstinence syndrome. The "rebound" phenomenon observed in the clonidine group suggests that infants should be monitored carefully for at least 48 hours after discontinuation of therapy, and that, perhaps, only 1 drug at a time should be discontinued. The researchers correctly point out that a larger study is needed to better assess short-term efficacy and long-term safety.

Kevin L. Kraemer, MD, MSc

Reference: Agthe AG, Kim GR, Mathias KB, et al. Clonidine as an adjunct therapy to opioids for neonatal abstinence syndrome: a randomized, controlled trial. *Pediatrics.* 2009; 123(5):e849–e856.

Initiating Acamprosate during Alcohol Detoxification Is Not Beneficial and May Be Harmful

Acamprosate is an FDA-approved treatment for alcohol dependence that is generally initiated after patients have achieved abstinence. There have been no clinical trials comparing the results when acamprosate is initiated during alcohol detoxification versus after detoxification. In this exploratory trial, researchers randomly assigned 40 alcohol-dependent patients to either acamprosate (1998 mg per day) or placebo during outpatient detoxification of 5–14 days followed by a 10-week rehabilitation phase during which all subjects received acamprosate and weekly counseling.

- Thirty-four patients (85%) completed the detoxification phase. There was no difference in detoxification completion rates between groups.
- Patients in the placebo group had better results on 5 of 7 secondary measures during detoxification (withdrawal symptoms, oxazepam prescribed, duration of detoxification, heavy drinking days, and drinks per drinking day), although these differences were not significant.
- During the rehabilitation phase, patients who had been treated with acamprosate during detoxification had a higher percentage of heavy drinking days (30% versus 11%) and more drinks per drinking day (8.1 versus 4.7) than patients in the placebo group.
- There was no significant difference between groups on secondary measures during the rehabilitation phase (Addiction Severity Index score, Penn Alcohol Craving Scale score, and Hamilton Rating Scale scores for depression and anxiety).

Comments: Although this study does not exclude the possibility of a small benefit from initiating acamprosate during detoxification, it strongly suggests this practice is potentially harmful and should not be implemented until there is compelling evidence of a benefit.

Darius Rastegar, MD

Reference: Kampman KM, Pettinati HM, Lynch KG, et al. Initiating acamprosate within-detoxification versus post-detoxification in the treatment of alcohol dependence. *Addict Behav.* 2009;34(6–7):581–586.

Implantable Naltrexone for Opioid Dependence

Naltrexone is a long-acting opioid antagonist approved in the US, in oral form, for the treatment of opioid dependence. However, its utility has been hampered by poor adherence. To determine whether naltrexone pellets implanted subcutaneously reduce opioid self-administration and reduce craving, researchers from Norway conducted an open-label randomized trial comparing naltrexone implants with usual care (i.e., referral to after-care services) among 56 adults with opioid dependence. All participants had completed an abstinence-oriented inpatient treatment program, and all had passed an oral naltrexone challenge. Outcomes between the 2 groups were assessed at 6 months.

- Patients randomized to receive implantable naltrexone reported 18 days with heroin use versus 37 days for patients in the control group. The implantable naltrexone group reported 37 days with any opioid use (including methadone or buprenorphine) versus 97 days in the control group. Hair analysis, conducted in 43 of the 56, patients was concordant with self-report in 86% percent of cases.
- Polydrug use, injection drug use, and craving were lower in the naltrexone group compared with controls; however, no significant differences in overdose, depression, criminal activity, outpatient treatment attendance, and use of alcohol or nonopioid drugs were detected between groups.
- One overdose death occurred in each treatment group. Implants were removed from 3 patients in the naltrexone group (1 due to site infection, 1 due to site pain, and 1 due to diarrhea). There were no attempts to remove the implant by subjects.

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Implantable Naltrexone and Treatment Adherence (continued from page 3)

Comments: This small open-label randomized study demonstrated a reduction in opioid use with implantable naltrexone compared to usual care at 6 months. Larger trials among more diverse patients, with longer follow-up and other naltrexone formulations are warranted to determine the appropriate candidates, the long-term benefits, and the incidence of adverse events with such treatment.

Alexander Y. Walley, MD, MSc

Reference: Kunøe N, Lobmaier P, Vederhus JK, et al. Naltrexone implants after inpatient treatment for opioid dependence: randomised controlled trial. *Br J Psychiatry.* 2009;194(6):541–546.

Treatment of Hepatitis C within a Methadone Maintenance Program Yields Results Comparable to Treatment via Other Models of Care

Hepatitis C virus (HCV) affects more than 4 million people in the US, 60% of whom have a history of injection drug use (IDU). Concerns over treatment adherence, psychiatric comorbidity, ongoing drug use, and optimal timing of HCV treatment initiation have resulted in unwillingness on the part of many physicians to treat HCV in patients with IDU. This retrospective study investigated outcomes in patients with co-occurring HCV infection and opioid dependence (N=73) treated for HCV within an ongoing methadone maintenance program. At treatment initiation, 49% of patients had continuing drug use, 67% had psychiatric comorbidity, and 32% had HIV coinfection. Sixty-eight percent of patients had genotype 1 or 4 virus, 16% had genotype 2 virus, and 15% had genotype 3 virus. Treatment for HCV was delivered by internists via standardized protocol with pegylated interferon alpha-2a or alpha-2b and ribavirin. Main outcome variables were undetectable viral load at the end of treatment and at 6 months following treatment completion.

- Eighty-six percent of patients completed at least 12 weeks of HCV treatment.
- Fifty-five percent of patients had an undetectable viral load at the end of treatment, and 45% had an undetectable viral load 6 months post-treatment (sustained viral response [SVR]).
- Forty percent of patients with genotype 1 or 4 virus, 75% of patients with genotype 2 virus, and 36% of patients with genotype 3 virus achieved SVR.
- Thirty percent of patients continued to use illicit substances during treatment, and 23% received a methadone dose increase.

Comments: Patients receiving methadone for opioid dependence can be successfully treated for HCV in a co-located methadone maintenance and primary medical care program. Although the study design did not allow for comparison with separate, off-site HCV care, it is possible that co-location with methadone maintenance increased HCV treatment adherence and facilitated delivery of interferon injections. Additionally, internists treating patients within the structure of an addiction treatment program may be more comfortable with patients' continued substance abuse and be better able to address co-occurring psychiatric disease and HIV infection.

Jeanette M. Tetrault, MD

Reference: Litwin AH, Harris KA Jr, Nahvi S, et al. Successful treatment of chronic hepatitis C with pegylated interferon in combination with ribavirin in a methadone maintenance treatment program. *J Subst Abuse Treat.* 2009;37(1):32–40.

Effect of a Case Management Intervention as Part of a Needle Exchange Program on Opioid Agonist Treatment Retention

Opioid agonist treatment retention is an important predictor of abstinence, reduction in risky behavior, and overall functioning among injection drug users (IDUs). However, many studies have focused on treatment entry rather than treatment retention. In this clinical trial, investigators sought to determine the impact of a case management intervention on treatment retention among 127 needle exchange program participants referred for opioid agonist treatment. Participants were assigned to receive either a strengths-based case management (SBCM) intervention with linkage to a drug treatment program or passive referral to a drug treatment program. As part of the SBCM model, participants in the intervention group were central in formulating their own treatment goals and received assistance in achieving those goals (e.g., transportation, child care, social services). The primary outcome was retention in drug treatment.

- Median treatment duration was 7.9 months. No difference in treatment retention was observed between the intervention and control groups.
- After adjusting for intervention status and randomization,
  - factors predictive of shorter treatment duration included unstable housing (hazard ratio [HR], 1.79), buying drugs for others (HR, 1.84), living

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Effect of Case Management on Opioid Agonist Treatment Retention (continued from page 4)

further from treatment site (HR, 2.15), and higher levels of psychiatric distress (HR, 2.22).
- factors predictive of longer treatment retention included prior treatment history (HR, 0.3), multiple treatment requests (HR, 0.6), and being unemployed (0.37).

Comments: This study suggests that, although needle exchange programs are an important referral source for linking IDUs to substance abuse treatment, retention in treatment is not affected by case management provided through such programs. However, individual, social, and environmental factors did have an impact on whether patients remained in treatment, and focusing case manage-ment efforts in these areas may impact retention.

Jeanette M. Tetrault, MD

Reference: Havens JR, Latkin CA, Pu M, et al. Predictors of opiate agonist treatment retention among injection drug users referred from a needle exchange program. *J Subst Abuse Treat.* 2009:36(3):306–312.

HEALTH OUTCOMES

Alcohol Consumption Increases the Risk of Acute Myocardial Infarction in the Next 12 Hours

Regular moderate alcohol consumption may be a protective factor for cardiovascular disease. However, the effect of alcohol consumption immediately prior to cardiovascular events has not been studied extensively. Researchers conducted a "case-crossover" study in 250 first-time nonfatal acute myocardial infarction (AMI) cases to assess the influence of alcohol consumption in the 12 hours preceding AMI. Each case served as its own control; i.e., the control information for each subject was based on his or her own past behavior. The 12 hours preceding AMI was considered the hazard period, while the corresponding time period a week before AMI was the control period.

- Drinking any alcohol in the hazard period increased the risk for AMI threefold (odds ratio [OR], 3.1); even moderate drinking (≤24 g of ethanol for women and ≤36 g for men) more than doubled it (OR, 2.3).
- Of the 187 subjects who drank any alcohol, 15 men and 2 women reported heavy episodic drinking (4+ drinks per occasion for women and 5+ drinks for men). The association between heavy episodic drinking and AMI was not significant (OR, 3.0).
- These results were not influenced by known risk factors for AMI (age, gender, smoking status, family history of AMI, hypertension, hyperlipidemia, diabetes, prior unstable angina pectoris, physical exertion shortly before the event, psychological stress, or cocaine use) in adjusted analyses.
- Compared with an age- and sex-matched general population sample, subjects with AMI had more frequent heavy episodic drinking (less than monthly, 21% versus 11%; monthly or more, 7% versus 3%) and were more likely to drink irregularly, i.e., less than weekly (29% versus 16%).

Comments: Drinking any alcohol increased the risk for AMI in the next 12 hours in this study. Researchers were not able to demonstrate a significant association between heavy episodic drinking and AMI due to the small number of exposed subjects; however, the sample had higher rates of heavy and irregular drinking compared with the general population, giving some support to the hypotheses that heavy drinking increases AMI risk, and that pattern of drinking is important when assessing the risk for cardiovascular events. The relationship between alcohol use and cardiovascular events is likely not as simple as is commonly thought.

Nicolas Bertholet, MD, MPH

Reference: Gerlich MG, Krämer A, Gmel G, et al. Patterns of alcohol consumption and acute myocardial infarction: a case-crossover analysis. *Eur Addict Res.* 2009;15(3):143–149.

Alcohol and Pancreatic Cancer

Research findings are inconsistent on the association between alcohol intake and pancreatic cancer. The authors of this study prospectively examined data from 470,681 participants in the National Institutes of Health (NIH)-AARP Diet and Health Study who were aged 50–71 years between 1995–1996. They identified 1149 cases of pancreatic cancer through December 2003. Multivariable Cox proportional hazards regression models were used to calculate relative risks (RRs) for pancreatic cancer in relation to alcohol use or cigarette smoking, with the referent group being light drinkers (<1 drink* per day).

- Compared with light drinkers, subjects reporting consumption of ≥3 drinks per day had an RR of developing pancreatic cancer of 1.45 (1.62 for those consuming ≥3

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*Standard drink = 13–14 g of alcohol in this study.

Alcohol and Pancreatic Cancer (continued from page 5)

drinks per day of liquor). The increased risk was seen especially in never smokers (RR, 1.35) and participants who had quit smoking 10 or more years earlier (RR, 1.41).

- The fully adjusted RR was 1.14 for those who reported no alcohol consumption (95% CI, 0.99, 1.32), 0.92 for those consuming 1–2 drinks per day,** and 1.03 for those consuming 2–3 drinks per day.** (Current nondrinkers who were former drinkers could not be identified.)
- Beverage-specific effects revealed no increase in risk for consumers of any amounts of beer or wine or for consumers of liquor up to 3 drinks per day.

**Not significant.

Comments: Heavy alcohol use is associated with an increased risk of chronic pancreatitis, which may put patients at risk for pancreatic cancer. In this study, an increased risk was seen among subjects who reported either no alcohol consumption (a group that probably contained former drinkers) or consuming 3 or more drinks per day of liquor. I agree with the conclusions of the authors that, although moderate alcohol use was not a risk factor for pancreatic cancer in this study, heavy alcohol use, particularly of liquor, may play a role in its etiology.

R. Curtis Ellison, MD

Reference: Jiao L, Silverman DT, Schairer C, et al. Alcohol use and risk of pancreatic cancer: the NIH-AARP Diet and Health Study. *Am J Epidemiol.* 2009;169(9):1043–1051.

Heavy Drinking and Smoking Are Associated with an Increased Risk of Chronic Pancreatitis

Alcohol is a known risk factor for pancreatitis, although less is known about the association between pancreatitis and smoking. This case-control study was undertaken to further characterize the effect of alcohol intake and cigarette smoking on recurrent acute pancreatitis (RAP) and chronic pancreatitis (CP). Patients with pancreatitis (n= 1000) were recruited from pancreatic care centers in the US; controls (n=695) were primarily the patients' spouses, family members, and friends. Participants were interviewed regarding their alcohol use and smoking. They were then divided into 4 drinking categories based on their heaviest lifetime period of drinking.* Smoking was categorized by lifetime pack-years. In multivariable analyses controlling for age, gender, and body mass index,

- no association was found between drinking categories and RAP.
- heaviest lifetime smoking (≥35 pack-years) was associated with an increased risk of RAP (odds ratio [OR], 1.9).
- drinking was associated with CP only at the very heavy drinker level (OR, 3.1). Only 38% of men and 11% of women with CP were in this category.
- there was a significant association between lifetime smoking and CP with an apparent dose-response relationship (OR for 12–35 pack-years, 2.15; OR for ≥35 pack-years, 4.59).
- the ORs for heavy smoking associated with CP increased with the level of drinking (a nonsignificant trend).

*Abstainer/light drinker (≤0.5 drinks per day); moderate drinker (women, >0.5 to 1 drink per day and men, >0.5 to 2 drinks per day); heavy drinker (women, >1 to <5 drinks per day; men, >2 to <5 drinks per day), or very heavy drinker (≥5 drinks per day for both sexes).

Comments: This study further confirms the association between tobacco use and pancreatitis, and between heavy alcohol use and CP (possibly at a threshold of ≥5 drinks per day), with some possible synergistic effects. The lack of association between drinking and RAP is surprising. As the authors point out, participants with pancreatitis were recruited from specialty centers, so those with alcohol-associated pancreatitis were probably underrepresented. This may have weakened their ability to show an association.

Darius Rastegar, MD

Reference: Yadav D, Hawes RH, Brand RE, et al. Alcohol consumption, cigarette smoking and the risk of recurrent acute and chronic pancreatitis. *Arch Intern Med.* 2009;189 (11):1035–1045.

More Evidence Heavy Episodic Drinking Heightens HIV/STI Risk

Heterosexual African American males are disproportionately affected by HIV, and their heightened risk is not well-explained. To determine whether heavy episodic alcohol use is associated with risky sexual behaviors and HIV/STI* diagnosis, researchers conducted a cross-sectional study of 617 black men age 18–65 whose sex partners were exclusively women and who reported having sex with 2 or more partners in the past year. Participants were recruited from primary and urgent care clinics in Boston. Thirty-four percent of participants reported heavy episodic drinking in the past 30 days, and 45% reported past 30-day illicit drug use. Associations between heavy episodic drinking, risky sex

*Human immunodeficiency virus/sexually transmitted infections.

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Drinking and HIV/STI Risk in African American Men (continued from page 6)

practices, and HIV/STI diagnoses were tested in multivariable logistic regression models controlling for age, illicit drug use, homelessness, employment, incarceration history, and current main partner.

- Participants with heavy episodic drinking were more likely to have unprotected vaginal or anal sex with women other than their main partner (adjusted odds ratio [AOR], 1.7 and 2.3, respectively) and to be involved in sex trade (AOR, 2.1).
- Participants with heavy episodic drinking were more likely to have had a recent (past 6-month) HIV or STI diagnosis (AOR, 1.9).
- Heavy episodic drinking was not associated with unprotected sex with main partners.

Comments: Heavy episodic drinking and its impact on unprotected sex with non-main partners is potentially a key behavior amenable to intervention by clinicians. Offering specific counseling to reduce drinking and increase use of protection with non-main partners in patients with heavy episodic alcohol use may reduce HIV/STI risk.

Hillary Kunins, MD, MPH, MS

Reference: Raj A, Reed E, Santana MC, et al. The associations of binge alcohol use with HIV/STI risk and diagnosis among heterosexual African American men. *Drug Alcohol Depend.* 2009;101(1–2):101–106.

Alcohol and HIV Disease Progression: Is Liquor Quicker (than Beer and Wine)?

Alcohol affects the course of HIV disease, but the mechanisms of this effect (i.e., individual susceptibility and the importance of the type of alcohol) are poorly understood. Miguez-Burbano and colleagues studied differences in antiretroviral (ART) effectiveness after 24 weeks of therapy as a function of alcohol type consumed, comparing only liquor (LI, n=55) with only beer or wine (BW, n=110). Outcome measures were CD4 cell count, thymus size (by MRI), naïve lymphocytes, and HIV viral load (HVL). Comparisons were controlled in multivariable analyses for potential confounders including gender, race/ethnicity, HIV status (per CDC criteria), drug use, and body mass index. Alcohol was consumed on a similar number of days by both groups but in higher quantity in the LI group, which also had a higher baseline HVL. The following differences were noted:

- CD4 increased in the BW group (+12 cells/mm3) compared with the LI group (-4 cells/mm3).
- thymus volume increased in the BW group compared with the LI group (p=0.05).
- an increase of at least 50 CD4 cells immediately after ART initiation (a good prognostic indicator) was more commonly achieved in the BW group (50%) than in the LI group (10%).

Comments: According to the authors, these findings challenge the view that the effect of alcohol on HIV disease progression in individuals receiving ART is solely due to impact on medication adherence. Liquor is exposed as more destructive than beer or wine to the clinical course and specifically the immune system. Although the issues raised are provocative, it is not quite time to close down the liquor party but not the beer bash. Methodological issues in the paper, including the small sample size, the large number of variables for the analyses performed, the nonequivalent quantity of alcohol received, and HVL differences between the two groups, leave one desiring further reports.

Jeffrey H. Samet, MD, MA, MPH

Reference: Míguez-Burbano MJ, Lewis JE, Fishman J, et al. The influence of different types of alcoholic beverages on disrupting highly active antiretroviral treatment (HAART) outcome. *Alcohol Alcohol.* 2009;44(4):366–371.

Alcohol, Other Lifestyle Factors, and Mortality

To determine whether the survival benefit associated with moderate alcohol use remains after accounting for nontraditional risk factors such as socioeconomic status (SES) and functional limitations, researchers analyzed data from 12,519 participants in the Health and Retirement Study, a nationally representative study of US adults aged 55 and older. Participants were asked about their alcohol use, activities of daily living, mobility, SES, psychosocial factors (depressive symptoms, social support, and importance of religion), age, sex, race and ethnicity, smoking, obesity, and comorbid conditions. The outcome measure was death during the 4-year follow-up period.

- Moderate drinkers (1 drink per day) had a markedly more favorable risk factor profile, with higher SES and fewer functional limitations. After adjusting for demographic factors, moderate drinking versus no drinking was associated with 50% lower mortality (odds ratio [OR], 0.50).
- When smoking, obesity, and comorbidities were also adjusted for, the protective effect was slightly attenuated (OR, 0.57). When all risk factors (including functional status and SES) were adjusted for, the protective

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Alcohol, Lifestyle, and Mortality (continued from page 7)

effect was markedly attenuated but remained statistically significant (OR, 0.72).

- After calculating a propensity score for alcohol intake to provide more precise estimates of confounding, moderate drinking versus no drinking resulted in an OR for mortality of 0.62.

Comments: Although nontraditional risk factors explain much of the survival advantage associated with moderate alcohol use, moderate drinkers maintain their survival advantage over abstainers or heavy drinkers even after adjustment for these factors. In this study, the estimated mortality risk for moderate drinkers was 28% lower than that of nondrinkers after traditional multivariable adjustment, and 38% lower after a sophisticated analytic approach was used for better control of confounding. These findings suggest some, but not all, of the beneficial effects of moderate alcohol intake on total mortality may be related to other lifestyle factors.

R. Curtis Ellison, MD

Reference: Lee SJ, Sudore RL, Williams BA, et al. Functional limitations, socioeconomic status, and all-cause mortality in moderate alcohol drinkers. *J Am Geriatr Soc.* 2009;57(6): 955–962.

Increases in Methamphetamine-Related Treatment Admissions for Pregnant Women

Methamphetamine is an increasingly common drug of abuse in the US. Whether this rise has had an impact on substance abuse treatment (SAT) utilization by pregnant women is not well known. Researchers conducted an observational study of SAT admissions among pregnant women using the Treatment Episode Data Set, a database of admissions to federally funded treatment programs. Investigators analyzed data spanning a 12-year period (1994–2006) to determine trends in admissions over time and demographic and treatment characteristics of patients admitted specifically for methamphetamine use.

- The proportion of SAT admissions due to methamphetamines among pregnant women increased from 8% in 1994 to 24% in 2006—more than 3 times the rate for men and twice the rate for nonpregnant women.
- By 2004, methamphetamine was the most common drug of abuse among SAT-seeking pregnant women, surpassing cocaine, alcohol, and marijuana.
- More than half of SAT-seeking pregnant women had no health insurance.
- An increasing proportion of pregnant women using methamphetamine and seeking treatment were Hispanic (13% in 1994, 24% in 2006). Few were African American (3%), which did not change over time.
- By 2006, more than one-quarter of methamphetamine-related admissions among pregnant women were in the South and Midwest US; the remainder were in the West, with few admissions in the Northeast.

Comments: Methamphetamine is an increasingly common drug of abuse among pregnant women seeking SAT. Substance abuse treatment providers, obstetricians, and family physicians need to collaborate to treat this important and increasingly ethnically diverse and geographically widespread group to ensure best outcomes for maternal and child health.

Hillary Kunins, MD, MPH, MS

Reference: Terplan M, Smith EJ, Kozloski MJ, et al. Methamphetamine use among pregnant women. *Obstet Gynecol.* 2009;113(6):1285–1291.

ANNOUNCEMENT

Welcome to Our New Associate Editors

Julia Arnsten has stepped down after serving as an Associate Editor for *Alcohol, Other Drugs, and Health: Current Evidence* for the past 2 years. We are sure you will agree that her contributions have been valuable in part because of her insightful comments.

Beginning with this issue, please welcome the following new members to the editorial board: Hillary Kunins, MD, MPH, MS, Associate Professor of Clinical Medicine and Psychiatry/Behavioral Sciences at Albert Einstein College of Medicine; Darius Rastegar, MD, Assistant Professor of Medicine at Johns Hopkins; and Jeanette Tetrault, MD, Assistant Professor in the Department of Internal Medicine at Yale.

All have worked as generalist physicians (internists) and educators in the field of unhealthy substance use and bring

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Welcome New Associate Editors (continued from page 8)

research interests in areas ranging from the association between HIV/HCV and risky substance use, substance use and reproductive health, pharmacologic management of dependence, epidemiology, and prescription drug abuse. We are delighted to have the benefit of their cumulative expertise on the editorial board and look forward to their fresh perspectives going forward.

Visit www.aodhealth.org to download these valuable training tools:

Helping Patients Who Drink Too Much

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- Learn skills for addressing unhealthy alcohol use (e.g. screening, assessment, brief intervention, and referral) in primary care settings. Includes a free PowerPoint slide presentation, trainer notes, case-based training videos, and related curricula on health disparities/cultural competence and pharmacotherapy.

Prescription Drug Abuse Curriculum

A free downloadable PowerPoint presentation to address prescription drug abuse

www.bu.edu/aodhealth/presc_drug.html

- Framed within the clinical scenario of chronic pain management, this valuable teaching resource includes detailed lecture notes to expand on the information contained in each slide. Designed to last 2 hours, the material can be easily adapted to fit the 1-hour lecture slot typical of most training programs.

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Substance Abuse
Substance Use & Misuse

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

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