

TREATMENT PRACTITIONER'S RESEARCH BULLETIN

Alcohol and drug research treatment advances and best practice summary

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ADVANCING EFFECTIVE ALCOHOL AND DRUG POLICY,
PREVENTION, AND TREATMENT

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Can Brief Motivational Intervention Reduce Marijuana Use in At-Risk Teens?

To determine the effectiveness of brief motivational intervention (BMI) for teens with risky drug and alcohol use, researchers conducted a pilot study of BMI among 42 at-risk youth aged 12–18 in an urban primary care setting. Participants completed baseline surveys on peer influence, alcohol and marijuana use, intent to use, and adverse consequences and were randomly assigned to either usual care or BMI. Follow-up surveys were administered at 3 months.

- Compared with the usual care group, teens in the BMI group were significantly more likely to report:
 - Less marijuana use
 - Lower perceived prevalence of marijuana use in their environment
 - Having fewer friends who used marijuana
 - Using marijuana fewer times on the days they used
- Although small improvements in alcohol outcomes were seen in the BMI group compared with usual care, they were not significant.

Comments by James Harrison, MHS, CADC

The effectiveness of BMI for alcohol use among adults is well demonstrated, but limited data are available on its effectiveness for other drugs or in youth. Since people tend not to seek help until adulthood, these results suggest that BMI for risky marijuana use in youth might reduce the likelihood of marijuana-related substance use disorders in adulthood.

Reference

D'Amico EJ, Miles JN, Stern SA, et al. Brief motivational interviewing for teens at risk of substance use consequences: a randomized pilot study in a primary care clinic. *J Subst Abuse Treat.* 2008;35(1):53–61.

Buprenorphine with Drug Counseling Is Superior to Oral Naltrexone with Counseling or Counseling Alone for Heroin Dependence

Opiate dependence and injection drug use are major vectors for HIV transmission across the globe, but many nations prohibit effective opioid substitution treatment (OST). In this randomized, double-blind, placebo-controlled trial in Malaysia, subjects were assigned to placebo (n=39), oral naltrexone (n=43), or sublingual buprenorphine (n=44) after standardized 14-day residential detoxification and initiation of group drug counseling. At 24-week follow-up:

- Only two-fifths of patients remained in treatment, and only one-fourth of those who stayed in treatment avoided relapse. However,
 - Treatment retention was significantly higher for buprenorphine compared with naltrexone or placebo.
 - Time to first heroin use was significantly longer for buprenorphine compared with naltrexone or placebo.
 - Time to heroin relapse (defined as 3 consecutive opiate-positive or missing urine tests) was significantly longer for buprenorphine compared with naltrexone or placebo.
 - No differences were detected between oral naltrexone and placebo.

Comments by Tommie Ann Bower, MA

This is another good news/bad news study. The good news is, buprenorphine increased retention in treatment and increased the average number of days to resumption of heroin use. The bad news is, less than half of subjects remained in treatment and, of those that did, only a quarter avoided relapse. Despite these numbers, it's clear that buprenorphine plus counseling is worth trying in the battle against heroin addiction.

Reference

Schottenfeld RS, Chawarski MC, Mazlan M. Maintenance treatment with buprenorphine and naltrexone for heroin dependence in Malaysia: a randomised, double-blind, placebo-controlled trial. *Lancet*. 2008;371(9631):2192-2200.

This summary was adapted from text previously published in *Alcohol, Other Drugs, and Health: Current Evidence* (www.aodhealth.org).

Can Comprehensive Integrated Treatment Improve Outcomes?

The prevailing approach to addressing co-occurring mental-health and substance-use disorders has been to treat them separately. To determine whether an integrated approach improves outcomes, researchers implemented the Comprehensive Continuous Integrated System of Care (CCISC) treatment model in a residential program for homeless men and women with mental health and substance use disorders. The CCISC model combines several evidence-based treatments in one program. Comprehensive screening and assessment tools* were administered at the start of the program and at 6-month follow-up. Of the 96 patients who enrolled in the program, 76 completed follow-up assessments.

- Significant improvements were identified in mental health symptoms, frequency of past-month drug use, abstinence from alcohol or drug use, housing status, and employment from baseline to follow-up.
- Frequency of past-month alcohol use did not change significantly.

*The Government Performance and Results Act, the Residential Follow-back Calendar, the Brief Symptom Inventory, and the Comorbidity Program Audit and Self-Survey for Behavioral Health Services.

Comments by Michael Boyle, MA

The findings of this before-after observational study support the effectiveness of CCISC in treating co-occurring mental health and substance abuse disorders, but the study lacked a comparison group, and a randomized clinical trial is needed to provide stronger evidence. Such a study would be challenging to design and implement, but without one, it will be difficult to argue for challenging organizational inertia to change the current, usually segregated, approach to care.

Reference

Harrison, ML, Moore, KA, Young MS, et al. Implementing the Comprehensive, Continuous, Integrated System of Care Model for Individuals with Co-Occurring Disorders: Preliminary Findings from a Residential Facility Serving Homeless Individuals. *J Dual Diagn.* 2008;4(3):238–259.

Effect of the Adolescent Community Reinforcement Approach on Outcomes in Teen Substance Users

The relationship between substance-use treatment retention and outcomes is well established, but whether improvements are due to specific treatment techniques or other variables is unclear. To determine the extent to which the Adolescent Community Reinforcement Approach (A-CRA) mediates treatment retention and outcomes, researchers compared components of A-CRA (e.g., functional analysis of behavior, skills training, homework, and urine testing) with subsequent drug and alcohol use and related problems. Data from 399 adolescents participating in 1 of 4 randomized controlled trials of A-CRA were used in the analysis. Ninety-four percent of participants met DSM-IV criteria for drug abuse or dependence. After each treatment session, therapists completed the A-CRA Exposure Scale (AES), a fidelity measure of the 15 A-CRA procedures, to track A-CRA component use.

- A significant relationship was found between treatment fidelity (as measured by the AES) and reductions in substance use and related problems.
- Adolescents who were exposed to 12 or more A-CRA procedures were significantly more likely to be in recovery at 6-month follow-up (55% versus 35%).
- None of the baseline variables (e.g., substance use, related problems, days of residential or outpatient treatment) were found to be significant in predicting treatment retention.

Comments by Tom Delaney, MSW, MPH

These results suggest that A-CRA procedure exposure, distinct from other variables, mediates the relationship between retention and outcome. The importance of using fidelity measures such as the AES continues to grow as the substance abuse treatment field moves toward the use of evidence-based practices. This research highlights the critically important issue of determining what provokes behavioral change within the "black box" of treatment. Although many studies have examined outcomes from a before-and-after perspective, much more can be done to reliably measure the impact of particular treatment techniques.

Reference

Garner BR, Godley SH, Funk RR, et al. Exposure to Adolescent Community Reinforcement Approach treatment procedures as a mediator of the relationship between adolescent substance abuse treatment retention and outcome. *J Subst Abuse Treat*. 2008 [Epub ahead of print].

Adolescent Cannabis Use Has a Dose-Response Association with Adverse Social Outcomes in Adulthood

Whether adolescent cannabis use causes adverse social outcomes or whether it is merely a marker of other causes is not clear from existing research. Investigators in New Zealand studied a birth cohort of 1003 subjects born in 1977 to determine the association between cannabis use from ages 14 to 21 and education, income, employment, relationship quality, and life satisfaction at age 25. Potential confounding factors, including socioeconomic status, family functioning, exposure to child abuse, childhood and adolescent adjustment, early adolescent academic achievement, and comorbid mental health and substance use disorders, were prospectively measured and adjusted for in the final analyses.

Subjects were divided into 6 groups based on self-reported cannabis use ranging from no use to use on greater than 400 occasions.

- Subjects demonstrated statistically significant linear trends for decreased university degree attainment, decreased income, increased welfare dependence, increased unemployment, decreased relationship satisfaction, and decreased life satisfaction with increased cannabis use in adolescence.
- Even after adjusting for covariable factors, these same linear trends were found regardless of whether cannabis categories were based on total times used, average annual frequency, or age periods (14–21 years or 14–18 years).

Comments by Michael Levy, PhD

This study demonstrates that heavy cannabis use during adolescence is associated with numerous adverse consequences in young adulthood. Although the precise reasons for this are not clear, this relationship suggests that heavy cannabis use during adolescence should be prevented and addressed in treatment whenever possible.

Reference

Fergusson DM, Boden JM. Cannabis and later life outcomes. *Addiction*. 2008;103(6):969–976.

This summary was adapted from text previously published in *Alcohol, Other Drugs, and Health: Current Evidence* (www.aodhealth.org).

Does Motivational Enhancement Therapy Improve Treatment Utilization and Decrease Substance Use in Pregnant Women?

Past studies indicate that pregnant substance-using women have many unmet psychosocial needs and are difficult to retain in treatment. This study examined whether motivational enhancement therapy (MET) increased treatment retention and decreased substance use in pregnant substance users compared with treatment as usual (TAU). Two-hundred women enrolled in 4 different treatment programs were randomized to receive either 3 individual sessions of MET, a systematic intervention approach designed to produce internally motivated change, or 3 individual non-MET (TAU) sessions normally provided by the treatment program over a 1-month period (TAU treatments not specified). All sessions were audiotaped, and recordings supported the discriminability between TAU and MET sessions. Follow-up assessments were conducted at 1 and 3 months following treatment.

- No significant differences between the 2 groups were found on number of hours attended for scheduled treatment or number of days until drop-out.
- A significant decrease in alcohol and drug use was seen in both groups during the treatment period.
- Minority participants were significantly less likely to have received at least 1 treatment session and attended significantly fewer weeks of treatment than nonminority participants regardless of group assignment.
- Minority participants in the MET group reported a greater decrease in substance use compared with minority participants in the TAU group at follow-up but not during the treatment period.

Comments by Norma Finkelstein, PhD

Motivational enhancement therapy was no more effective than TAU in increasing treatment retention or decreasing substance use in this study. However, outcomes may have been affected by site differences, differences in training and counseling skills between MET and TAU clinicians, and differences in baseline characteristics, despite randomization, between MET and TAU groups. Evidence-based treatment tools specifically for pregnant women with substance use disorders still hold the promise of greater effectiveness than less specific interventions.

Reference

Winhusen T, Kropp F, Babcock D, et.al. Motivational enhancement therapy to improve treatment utilization and outcome in pregnant substance users. *J Subst Abuse Treat.* 2008;35(2):161-173.

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Donna Vaillancourt is the Managing Editor of *Alcohol, Other Drugs, and Health: Current Evidence*. She has nearly two decades of experience editing and publishing in the medical and social sciences and has launched publications for a broad range of audiences including oncologists, pain management specialists, recreation therapists, dementia researchers, and hospice clergy and caregivers. Donna has extensive experience in print production and website management, and most recently served as Editor-in-Chief of the independent peer-reviewed quarterly, *Journal of Forensic Anthropology and Archaeology*.

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