

**REGULAR ARTICLES****Do dimensions of TC treatment predict retention and outcomes?**

*Wallace Mandell, Maria O. Edelen, Suzanne L. Wenzel, James Dahl, and Patricia Ebener*

First week Dimensions of Change Instrument (DCI) assessments from a cohort of 519 adults entering six TCs were used to predict treatment retention and outcomes. More positive first week response to TC social processes, *Community Responsibility, Resident Sharing Support and Enthusiasm; Group Process*; and *Clarity and Safety*, and to one TC personal development process, *Positive Self-Attitude and Commitment to Abstinence*, predicted retention for the first month. Improvement at 30 days in *Clarity and Safety* and *Resident Sharing, Support and Enthusiasm* scores predicted retention in treatment for 3, 6 and 9 months. In multivariate analyses available for a subset of the entry cohort, longer tenure in treatment was a robust predictor of post-treatment outcomes. First week DCI scores on the community process scales predicted post-treatment AOD abstinence and functioning.

**Services received and treatment outcomes in day-hospital and residential programs**

*Sarah E. Zemore and Lee Ann Kaskutas*

This longitudinal health services study (N=733) 1) examines the impact of services received on 6-month outcomes and 2) compares day hospital to residential programs on services received. Services were measured at 2, 4, and 8 weeks post-baseline using a version of the Treatment Services Review (TSR). Higher odds of total sobriety at 6 months were associated with greater participation in a) *extracurricular (but not curricular) 12-step meetings*, b) *sober recreational events*, and c) *educational sessions*. Program effects also emerged. Unexpectedly, *extracurricular 12-step meeting attendance* and odds of having a sponsor were lower among residential (vs. day hospital) participants through 4 weeks—despite higher participation in *curricular 12-step meetings* among residential participants at 2 weeks. Still, residential participants reported higher involvement in *sober recreation* and *informal peer socialization* across most analyses. Findings suggest that residential and day hospital programs might maximize outcomes by facilitating optional 12-step involvement and sober recreation, respectively.

**Treatment of opioid-dependent pregnant women: Clinical and research issues**

*Hendree E. Jones, Peter R. Martin, Sarah H. Heil, Karol Kaltenbach, Peter Selby, Mara G. Coyle, Susan M. Stine, Kevin E. O'Grady, Amelia Arria, and Gabriele Fischer*

This paper addresses common questions that clinicians face when treating pregnant women with opioid dependence. Guidance is provided to aid clinical decision-making, based on both research evidence and the collective clinical experience of the authors which include investigators in the Maternal Opioid Treatment: Human Experimental Research (MOTHER) project. MOTHER is a double-blind, double-dummy, flexible-dosing, parallel-group clinical trial examining the comparative safety and efficacy of methadone and buprenorphine for the opioid dependence treatment among pregnant women and their neonates. The paper begins with a discussion of appropriate assessment during pregnancy, and then addresses clinical management stages, including maintenance medication selection, induction and stabilization, opioid agonist medication management before, during and after delivery, pain management, breast-feeding, and transfer to aftercare. Lastly, other important clinical issues including managing co-occurring psychiatric disorders and medication interactions are discussed.

### **Improving acceptance of naltrexone in community addiction treatment centers: A pilot study**

*Suzanne E. Thomas, Peter M. Miller, Patrick K. Randall, and Sarah W. Book*

Alcoholism pharmacotherapies are underutilized in community addiction treatment settings, in part because individuals who practice in these settings—non-medical addiction counselors and administrators—lack knowledge about and confidence in the value of adjunctive alcohol pharmacotherapies. We developed and tested an intervention to improve knowledge and attitudes about naltrexone. A team of researchers, physicians, addiction treatment counselors and administrators collaborated to develop a naltrexone educational intervention designed for nonmedical addiction professionals. The intervention was compared to a control condition in a pilot study with six addiction treatment agencies (3 agencies per group). Participants (counselors and administrators, N=84) were assessed prior to and six months following the intervention. Results revealed that the intervention significantly improved naltrexone knowledge, and participants who received the intervention reported greater satisfaction with the education they received, as well as greater utilization of the information. The effect of the intervention on attitudes about naltrexone was encouraging, but failed to reach statistical significance. The present study is the first reported attempt to develop and test an intervention specifically to improve acceptance of adjunctive medications for alcoholism among non-medical addiction professionals.

### **Internalizing and externalizing behaviors and their association with the treatment of adolescents with substance use disorder**

*Ken C. Winters, Randy D. Stinchfield, William W. Latimer, and Andrea Stone*

Whereas the treatment outcome research literature for adolescent alcohol and other drug abuse has shown recent advances (Williams, Chang & Addiction Centre Adolescent Research Group, 2000), significant knowledge gaps remain. Kazdin (2001) recently observed that one of the key questions for the field is to identify if client characteristics meaningfully mediate or moderate treatment outcome. There is support from the adolescent clinical literature that internalizing and externalizing personality subtypes are related to the onset and course of youth substance use disorders (Clark and Bukstein, 1998). The study extends this literature by examining the association of drug use behaviors outcome and sub-typed adolescents (internalizers and externalizers;  $n = 141$ ) who sought treatment at a 12-step program. The analysis also includes a community-based control group ( $n = 94$ ). Specifically, we examined the association of subtype and treatment retention and short (1-year) and long (year-4 and year-5.5) term drug involvement outcomes. Externalizers consistently showed poorer outcomes, including poorer treatment retention and greater drug use and drug disorder symptoms at each follow-up point. The treatment implications of the study are discussed.

### **Methamphetamine dependence and human immunodeficiency virus risk behavior**

*Richard A. Rawson, Rachel Gonzales, Valerie Pearce, Alfonso Ang, Patricia Marinelli-Casey, Julie Brummer, and Methamphetamine Treatment Project Corporate Authors*

We examined human immunodeficiency virus (HIV)-related risk behaviors among methamphetamine (MA)-dependent users. Secondary data analysis was performed on data from a large clinical trial: The Methamphetamine Treatment Project ( $N = 784$ ). All MA-dependent participants were enrolled in an outpatient treatment program, receiving either a standardized psychosocial protocol (Matrix model) or treatment-as-usual. HIV-related risk behavior, including injection and unsafe sexual practices, was assessed using the AIDS Risk Assessment at baseline, treatment discharge, and 6, 12, and 36 months following treatment participation. Results indicated that HIV risk behaviors substantially decreased over time. Treatment factors (retention and completion) and frequency of MA use were both positively associated with increased reduction of HIV risk behaviors. The findings suggested that treatment of MA dependence is promising for reducing behaviors that have been shown to transmit HIV.

### **Outcomes using two tailored behavioral treatments for substance abuse in urban gay and bisexual men**

*Steven Shoptaw, Cathy J. Reback, Sherry Larkins, Pin-Chieh Wang, Erin Rotheram-Fuller, Jeff Dang, and Xiaowei Yang*

This project evaluated two behavioral therapies for substance abuse and concomitant sexual risk behaviors applied to primarily stimulant-abusing gay and bisexual men in Los Angeles. One hundred twenty-eight participants were randomly assigned to 16 weeks of a gay-specific cognitive-behavioral therapy (GCBT,  $n = 64$ ) or to a gay-specific social support therapy (GSST;  $n = 64$ ), with follow-up evaluations at 17, 26, and 52 weeks after randomization. No overall statistically significant differences were observed between conditions along retention, substance use, or HIV-related sexual risk behaviors. All participants showed a minimum of twofold reductions in substance use and concomitant sexual risk behaviors from baseline to 52-week evaluations. Among methamphetamine-using participants, the GCBT condition showed significant effects over GSST for reducing and sustaining reductions of methamphetamine. Findings replicate prior work and indicate that GCBT produces reliable, significant, and sustained reductions in stimulant use and sexual risk behaviors, particularly in methamphetamine-abusing gay and bisexual men.

### **Substance abuse treatment in human immunodeficiency virus: The role of patient-provider discussions**

*Philip Todd Korthuis, Joshua S. Josephs, John A. Fleishman, James Hellinger, Seth Himelhoch, Geetanjali Chander, Elizabeth B. Morse, and Kelly A. Gebo, for the HIV Research Network*

Substance abuse treatment is associated with decreases in human immunodeficiency virus (HIV) risk behavior and can improve HIV outcomes. The purpose of this study was to examine factors associated with substance abuse treatment utilization, including patient-provider discussions of substance use issues. We surveyed 951 HIV-infected adults receiving care at 14 HIV Research Network primary care sites regarding drug and alcohol use, substance abuse treatment, and provider discussions of substance use issues. Although 71% reported substance use, only 24% reported receiving substance abuse treatment and less than half reported discussing substance use issues with their HIV providers. In adjusted logistic regression models, receipt of substance abuse treatment was associated with patient-provider discussions. Patient-provider discussions of substance use issues were associated with current drug use, hazardous or binge drinking, and Black race or ethnicity, though substance use was comparable between Blacks and Whites. These data suggest potential opportunities for improving engagement in substance abuse treatment services.

### **Adverse events in an integrated trauma-focused intervention for women in community substance abuse treatment**

*Therese Killeen, Denise Hien, Aimee Campbell, Chanda Brown, Cheri Hansen, Huiping Jiang, Allison Kristman-Valente, Christine Neuenfeldt, Nicci Rocz-de la Luz, Royce Sampson, Lourdes Suarez-Morales, Elizabeth Wells, Greg Brigham, and Edward Nunes*

A substantial number of women who enter substance abuse treatment have a history of trauma and meet criteria for posttraumatic stress disorder (PTSD). Fear regarding the extent to which PTSD treatment can evoke negative consequences remains a research question. This study explored adverse events related to the implementation of an integrated treatment for women with trauma and substance use disorder (Seeking Safety) compared with a nontrauma-focused intervention (Women's Health Education). Three hundred fifty-three women enrolled in community substance abuse treatment were randomized to 1 of the 2 study groups and monitored weekly for adverse events. There were no differences between the two intervention groups in the number of women reporting study-related adverse events (28 [9.6%] for the Seeking Safety group and 21 [7.2%] for the Women's Health Education group). Implementing PTSD treatment in substance abuse treatment programs appears to be safe, with minimal impact

on intervention-related adverse psychiatric and substance abuse symptoms. More research is needed on the efficacy of such interventions to improve outcomes of PTSD and substance use.

### **Implementing methadone medical maintenance in community-based clinics: Disseminating evidence-based treatment**

*Van L. King, Christopher Burke, Kenneth B. Stoller, Karin J. Neufeld, Jessica Peirce, Ken Kolodner, Michael Kidorf, and Robert K. Brooner*

Methadone medical maintenance (MMM) is an effective intervention that minimizes the demands of opioid agonist treatment without compromising good treatment response. Despite the benefits of MMM to both patients and treatment programs, little information is available to help community-based programs implement MMM and select patients who might benefit from this intervention. This study evaluates the impact of a seven-session seminar presentation combined with optional on-site consultation on subsequent changes in clinical programming and on the opinions of community-based treatment staff ( $n = 96$ ) in five methadone maintenance treatment clinics regarding both the adoption of an MMM protocol and the use of an adaptive stepped care model to deliver it. The presentations were developed based on results from a randomized clinical trial (King, V. L., Kidorf, M. S., Stoller, K. B., Schwartz, R., Kolodner, K., Brooner, R. K. (2006) A 12-month controlled trial of methadone medical maintenance integrated into an adaptive treatment model (*Journal of Substance Abuse Treatment* 31, 385–393.) together with other studies of MMM to help program staff (a) understand the risks and benefits of MMM, (b) develop criteria to choose who may benefit from MMM, and (c) implement an adaptive stepped care delivery system that includes MMM as the least restrictive level of care. A survey of clinic staff opinion about MMM and stepped care was administered at baseline and at five other points over the course of the 1-year project. Overall, the presentations were rated highly favorable for content and presentation (3.3 on a 4-point scale). At the 12-month follow-up, staff were more likely to believe that MMM facilitates patient participation in community-based rehabilitation oriented activities ( $p = .026$ ) and that MMM patients receive adequate counseling services ( $p = .025$ ) and were more likely to support treatment that matches patients who are stable with minimal intensities of care ( $p = .041$ ). One clinic modified its routine care to an adaptive stepped care model in response to the presentations, and 3 of the 5 clinics used MMM levels of treatment intensity at the end of the project. The results suggest that seminar presentations combined with on-site consultation may be a beneficial mechanism for helping staff at community-based programs learn about and adopt effective interventions developed and tested using rigorous research designs.

### **Sleep problems reported by patients entering opioid agonist treatment**

*Christopher K. Burke, Jessica M. Peirce, Michael S. Kidorf, David Neubauer, Naresh M. Punjabi, Kenneth B. Stoller, Steve Hursh, and Robert K. Brooner*

Treatment-seeking opioid-dependent individuals frequently report sleep-related problems. This study provides a detailed assessment of sleep duration and quality in this population, including their effect on daily functioning and relationship to psychiatric severity and drug use. Samples of newly admitted patients to opioid agonist maintenance treatment ( $n = 113$ ) completed a series of questionnaires to assess sleep functioning, psychiatric severity, and drug use due to sleep problems over the past 30 days. The results showed that study participants reported considerable sleep-related difficulties that had little effect on their appraisals of daily functioning. Nevertheless, sleep problems were associated with psychiatric distress, and those reporting substance use specifically to increase or decrease sleepiness endorsed more sleep problems and lower levels of daily functioning. Overall, these results replicate and extend previous work showing poor sleep functioning in this population and show that sleep problems are associated with variables that often have an adverse impact on substance abuse treatment outcome.

## **Web-based norms for the Drinker Inventory of Consequences from the Drinker's Checkup**

*Reid K. Hester and Daniel D. Squires*

To date, the only published norms for the Drinker Inventory of Consequences (DrInC) have come from a sample of heavy drinkers in Project MATCH (Matching Alcoholism Treatments to Client Heterogeneity) who were enrolling in a treatment program. We have generated an additional set of norms for the DrInC based on a large sample ( $N = 1,564$ ) of heavy drinkers who have completed the DrInC as part of a Web-based brief motivational intervention, the Drinker's Checkup (DCU; [www.drinkerscheckup.com](http://www.drinkerscheckup.com)). Although these drinkers were not seeking formal treatment, they were concerned enough about their drinking to pay \$25 to use the DCU. Comparing the means and decile scores for lifetime and recent total scores and subscale scores between the DCU and MATCH samples revealed that DrInC scores for the DCU sample were significantly lower than the MATCH sample. These findings have implications for giving normative feedback using the DrInC with non-treatment-seeking populations. The use and limitations of these findings are discussed.

### **BRIEF ARTICLES**

#### **Symptoms and sleep patterns during inpatient treatment of methamphetamine withdrawal: A comparison of mirtazapine and modafinil with treatment as usual**

*Catherine McGregor, Mani Srisurapanont, Amanda Mitchell, Wendy Wickes, and Jason M. White*

The safety and tolerability of modafinil (400 mg/day,  $n = 14$ ) and mirtazapine (60 mg/day,  $n = 13$ ) in inpatient methamphetamine withdrawal treatment were compared to a historical comparison group receiving treatment as usual (pericyazine, 2.5–10 mg/day,  $n = 22$ ). Modafinil and mirtazapine were well tolerated, producing minimal positive subjective effects and no discontinuation effects in this open-label study. Side effects were mild and transient. Aches and pains were most commonly reported by participants receiving mirtazapine, whereas headache was reported by modafinil-treated participants. Modafinil-treated participants had a milder withdrawal syndrome as measured by the Amphetamine Cessation Symptom Assessment and less sleep disturbance in comparison to mirtazapine. Pericyazine was associated with a more severe withdrawal syndrome in comparison to mirtazapine and modafinil. Both modafinil and mirtazapine were safe and well tolerated in methamphetamine withdrawal treatment. However, these early findings of efficacy in symptom amelioration should be replicated in an adequately powered, randomized, placebo-controlled double-blind design.

#### **Does initial treatment focus influence outcomes for depressed substance abusers?**

*Michelle L. Drapkin, Susan R. Tate, John R. McQuaid, and Sandra A. Brown*

Interventions for alcohol- and substance-dependent adults with comorbid depressive disorders are needed, but few have been empirically tested. In a randomized clinical trial of two psychotherapy interventions for these disorders, we examined whether initial focus of treatment was related to retention, substance use, and depression outcomes. Both interventions, integrated cognitive-behavioral therapy (ICBT;  $n = 105$ ) and twelve-step facilitation ( $n = 92$ ), were delivered in group formats with entry points every 4 weeks at the beginning of three content-distinct modules. Entry module (i.e., initial treatment focus) was not related to percentage days abstinent, proportion of the sample abstinent, or depression symptoms for either intervention. This was true at both 12 and 24 weeks postbaseline. Furthermore, attendance was similar for both treatments, regardless of initial treatment focus, with a single exception in the ICBT condition. Our findings support the use of modular formats with multiple or rotating entry points for psychotherapy group interventions.

### **LETTER TO THE EDITOR**

#### **Hepatitis A and B infection among methamphetamine-dependent users**

*Rachel Gonzales, Patricia Marinelli-Casey, Maureen Hillhouse, Jeremy Hunter, Richard A. Rawson, Larissa Mooney, and Alfonso Ang*