



### **Psychiatric Services Highlights Co-Occurring Disorders (COD)**

This month's *Psychiatric Services* highlights COD with three articles and a column on the topic. Two of these articles use Medicaid data from multiple States to analyze services available for people with COD.

**Clark, R. E., Samnaliev, M., & McGovern, M. P. (2007). Treatment for co-occurring mental and substance use disorders in five state Medicaid programs. *Psychiatric Services*, 58 (7), 942–948.**

Clark and colleagues investigated claim records from 126,513 individuals (age 21 to 64) receiving Medicaid benefits in 5 different States. They found that 14,256 had COD. Approximately three-fourths of the individuals with COD were under the age of 45, three-fifths were female, and anywhere from one-fifth (in Indiana) to three-fifths (in New Jersey) were members of racial or ethnic minorities. The authors' main finding was that in all 5 States individuals with severe mental illness (SMI) and substance use disorders were more likely to receive care in inpatient, hospital, and/or emergency room (ER) settings than those with SMI alone. In four of the five States, COD (no matter what severity of mental illness) were associated with less use of community-based treatments for mental disorders. In all five States, individuals with SMI and COD were more likely to receive hospital or ER services for substance abuse than were individuals with substance use disorders alone. In general, the authors recognize an underuse of community-based services and an overuse of hospital-based care by individuals with COD (in comparison to individuals with one type of disorder alone), and conclude that more incentives are needed to increase use of less costly treatment settings.

**McGovern, M. P., Clark, R. E., & Samnaliev, M. (2007). Co-occurring psychiatric and substance use disorders: A multistate feasibility study of the quadrant model. *Psychiatric Services*, 58 (7), 949–954.**

McGovern and colleagues looked at the application of the four quadrant model to 22,912 Medicaid recipients with COD from 6 States. They found that the majority (53.3 percent) of those recipients would be placed in Quadrant IV of the model (i.e., having a severe substance use disorder and a severe mental disorder).

Quadrant IV was also associated with the highest level of service use. They found equivalent distribution for individuals placed in Quadrants II (19.4 percent) and III (19.8 percent). Distribution across quadrants did not differ significantly by State, suggesting that the model was valid and could be applied regardless of locale.

**Another article in this issue looks at treatment services within the Canadian healthcare system for people with COD: Urbanoski, K. A., Rush, B. R., Wild, T. C., Bassani, D. G., & Castel, S. (2007). Use of mental health care services by Canadians with co-occurring substance dependence and mental disorders. *Psychiatric Services*, 58 (7), 962–969.**

Urbanoski and colleagues looked at individuals with co-occurring substance dependence (but not abuse) and mental disorders in a large (N=36,984) general population sample. They found that individuals with COD disorders were more likely to seek care but were also four to seven times more likely to report an unmet treatment need compared to individuals with substance dependence or a mental disorder alone. Respondents with COD also reported lower levels of satisfaction with their care and less belief in the helpfulness of the care they received, compared to respondents with substance dependence or a mental disorder alone.

Finally, this month's column on State Mental Health Policy explores the experiences of the first seven States to have participated in SAMHSA's Co-Occurring State Incentive Grant (COSIG) initiative:

**Dausey, D. J., Pincus, H. A., Herrell, J. M., & Rickards, L. (2007). State mental health policy: States' early experience in improving systems-level care for persons with co-occurring disorders. *Psychiatric Services*, 58 (7), 903–905.**

The column reviews how well goals were met; what planning, consensus, and bureaucratic challenges States faced; and the evaluation activities that have occurred regarding States' participation in this initiative.

This Review contains revisions of abstracts and is not generally the product of an original analysis of the actual articles cited. Readers interested in finding out more about COCE should visit the Web site: <http://coce.samhsa.gov/>

## COD Research

### Epidemiology

**Bakken, K., Landheim, A. S., & Vaglum, P. (2007). Axis I and II disorders as long-term predictors of mental distress: A six-year prospective follow-up of substance-dependent patients. *BMC Psychiatry*, 7 (29).**

The authors looked at 287 consecutive substance abuse treatment admissions to both outpatient and inpatient programs in Norway to determine the course of mental distress over a 6-year followup period. They found that levels of mental distress continued to be high among all study participants even after 6 years, but that they were significantly lower for those who were abstaining at followup (particularly if they were also female). Independent predictors of continued high levels of mental distress (at followup) included the number and type of both Axis I and Axis II disorders and the severity of substance abuse/dependence at intake.

**Barnett, J. H., Werners, U., Secher, S. M., Hill, K. E., Brazil, R., Masson, K., Pernet, D. E., Kirkbride, J. B., Murray, G. K., Bullmore, Ed. T., & Jones, P. B. (2007). Substance use in a population-based clinic sample of people with first-episode psychosis. *British Journal of Psychiatry*, 190 (6), 515–520.**

The authors analyzed substance use (both current and lifetime) for 123 British individuals referred to an early intervention program and compared data to a general population survey. They found that people experiencing their first episode of psychosis were twice as likely to report substance use as those who did not have a psychotic episode. Of those who reported a first episode of psychosis, 51 percent also reported cannabis abuse and 43 percent reported alcohol abuse. They also found that age of first use for marijuana, cocaine, amphetamines, and ecstasy were significantly associated with age at the time of the first psychotic symptom.

**Bernal, M., Haro, J. M., Bernert, S., Brugha, T., de Graaf, R., Bruffaerts, R., Lépine, J. P., de Girolamo, G., Vilagut, G., Gasquet, I., Torres, J. V., Kovess, V., Heider, D., Neeleman, J., Kessler, R., Alonso, J., & ESEMED/MHEDEA Investigators. (2007). Risk factors for suicidality in Europe: Results from the ESEMED study. *Journal of Affective Disorders*, 101 (1–3), 27–34.**

The authors used data from the European Study on the Epidemiology of Mental Disorders (ESEMED), a survey of 21,425 individuals in six European countries, to determine lifetime rates of suicidal ideation (7.8 percent) and suicide attempts (1.3 percent). They found that psychiatric diagnoses (especially major depressive disorder, dysthymia, generalized anxiety disorder, post-traumatic stress disorder, and alcohol dependence) were strongly related to suicidal ideation and suicide attempts.

**Bonn-Miller, M. O., Bernstein, A., Sachs-Ericsson, N., Schmidt, N. B., & Zvolensky, M. J. (2007). Associations between psychedelic use, abuse, and dependence and lifetime panic attack history in a representative sample. *Journal of Anxiety Disorders*, 21 (5), 730–741.**

The authors investigated connections between the use of psychedelic drugs, psychedelic drug abuse/dependence, and panic attacks using data from a Colorado general population survey (N=4745). They found a significant relationship between psychedelic abuse/dependence and panic attacks, but no significant relationship between use and panic attacks.

**Cho, H., Hallfors, D. D., & Iritani, B. J. (2007). Early initiation of substance use and subsequent risk factors related to suicide among urban high school students. *Addictive Behaviors*, 32 (8), 1628–1639.**

The authors investigated associations between age of onset for substance use and suicide risk factors using a sample of 1,252 adolescents entered in a suicide prevention study. They found that among males earlier onset of “hard” drug use was associated with increased rates of five risk factors associated with suicide (i.e., symptoms of depression, suicide ideation, suicide ideation with concurrent substance drug use, endorsement of suicide as an option for oneself, and suicide attempts). Among females, however, onset of regular cigarette use, drinking to drunkenness, and “hard” drug use were all associated with some (but not all) of the risk factors.

**Freedenthal, S., Vaughn, M. G., Jenson, J. M., & Howard, M. O. (2007). Inhalant use and suicidality among incarcerated youth. *Drug and Alcohol Dependence, 90* (1), 81–88.**

The authors looked at the relationship between inhalant use and both suicidal ideation and suicide attempts in a population of incarcerated youth (N=723). They found severity of inhalant use was positively associated with both suicidal ideation and attempts. The effect was found for both girls and boys but was stronger for girls.

**Gadalla, T. & Piran, N. (2007). Eating disorders and substance abuse in Canadian men and women: A national study. *Eating Disorders, 15* (3), 189–203.**

The authors used data from the Canadian Community Health Survey (CCHS) to evaluate the relationship between substance use and eating disorders. Alcohol use disorders and amphetamine use were associated with an elevated risk for eating disorders among both men and women. Illicit substance use, drug dependence, and a number of specific types of substance use were associated with increased risk for women only.

**Levander, E., Frye, M. A., McElroy, S., Suppes, T., Grunze, H., Nolen, W. A., Kupka, R., Keck, P. E., Jr., Leverich, G. S., Altshuler, L. L., Hwang, S., Mintz, J., & Post, R. M. (2007). Alcoholism and anxiety in bipolar illness: Differential lifetime anxiety comorbidity in bipolar I women with and without alcoholism. *Journal of Affective Disorders, 101* (1–3), 211–217.**

The authors investigated rates of anxiety disorders and their relationships to alcohol use disorders among people with bipolar disorder (N=350). One hundred sixty three (46.5 percent) of subjects met criteria for an anxiety disorder diagnosis. Obsessive compulsive disorder and specific phobias were found to be less common in those subjects who had an alcohol use disorder. Women (but not men) with alcohol use disorder had significantly higher rates of PTSD compared to those without such disorders.

**Neuman, R. J., Lobos, E., Reich, W., Henderson, C. A., Sun, L.-W., & Todd, R. D. (2007). Prenatal smoking exposure and dopaminergic genotypes interact to cause a severe ADHD subtype. *Biological Psychiatry, 61* (12), 1320–1328.**

The authors investigated in utero exposure to nicotine as well as genetic factors to determine their effects on the development of attention-deficit/hyperactivity disorder (AD/HD) in a sample of twins, age 7 to 19. Genetic factors (i.e., the presence of DAT1 440 allele) in combination with nicotine exposure increased the odds of DSM-IV diagnosis of AD/HD by 2.9 times. The authors conclude that smoking during pregnancy can have a significant effect on increasing AD/HD among children who also have a genetic susceptibility to the disorder.

**Norman, S. B., Tate, S. R., Anderson, K. G., & Brown, S. A. (2007). Do trauma history and PTSD symptoms influence addiction relapse context? *Drug and Alcohol Dependence, 90* (1), 89–96.**

This study investigated the effects of PTSD and trauma history on the substance abuse treatment outcomes of male veterans (N=134). While there were no significant differences in terms of abstinence outcomes, men with trauma histories (but no PTSD) and those with PTSD were more likely to report depression, anxiety, and psychiatric symptoms prior to a relapse than were those without trauma histories. There was also an association between PTSD symptoms and risk of relapse in a number of different contexts.

**Ouimette, P., Coolhart, D., Funderburk, J. S., Wade, M., & Brown, P. J. (2007). Precipitants of first substance use in recently abstinent substance use disorder patients with PTSD. *Addictive Behaviors, 32* (8), 1719–1727.**

The authors assessed self-identified reasons for lapses to substance use among a group of 65 people both with and without co-occurring PTSD 6 months after they had left substance abuse treatment. They found that individuals with PTSD (compared to individuals without PTSD) were more likely to report using as a result of negative feelings and less likely to report use that resulted from urges prompted by substance-related cues. Individuals with PTSD also reported greater subjective urges immediately prior to using and an increased risk of using to the point of intoxication.

**Tarter, R. E., Kirisci, L., Feske, U., & Vanyukov, M. (2007). Modeling the pathways linking childhood hyperactivity and substance use disorder in young adulthood. *Psychology of Addictive Behaviors, 21* (2), 266–271.**

The authors present a model for understanding the relationship between hyperactivity in childhood and the development of substance use disorders, using data from a group of 112 boys, assessed first at ages 12 to 14 and again at age 22. They found that hyperactivity directly predicts later substance use disorders. Also, hyperactivity appeared to predict the development of neuroticism that, which in turn, appeared to predict lower self-esteem resulting in social withdrawal and substance use disorders.

**Tate, S. R., Norman, S. B., McQuaid, J. R., & Brown, S. A. (2007). Health problems of substance-dependent veterans with and those without trauma history. *Journal of Substance Abuse Treatment, 33* (1), 25–32.**

The authors investigated whether exposure to traumatic events and PTSD were associated with increased rates of physical health problems among a group of veterans who were in treatment for substance dependence disorders (N=134). Subjects who had a substance use disorder but no trauma history had the lowest rates of chronic health stressors and those who had PTSD reported the highest rates of chronic health stressors. However, subjects did not differ significantly in terms of acute health problems as a result of their trauma histories or PTSD diagnoses.

### Services & Service Systems

#### Prevention

**Woodall, W. G., Delaney, H. D., Kunitz, S. J., Westerberg, V. S., & Zhao, H. (2007). A randomized trial of a DWI intervention program for first offenders: Intervention outcomes and interactions with antisocial personality disorder among a primarily American-Indian sample. *Alcoholism: Clinical and Experimental Research, 31* (6), 974–987.**

The authors describe a randomized, clinical trial of a treatment program for first-time driving while intoxicated (DWI) offenders that used motivational interviewing in conjunction with a 28-day period of incarceration. In this sample of 305 offenders who were primarily of American-Indian ethnicity, 52 were diagnosed as having anti-social personality disorder (ASPD). Individuals who were randomized to receive incarceration plus treatment reported significantly greater reductions in alcohol use compared to those who were incarcerated without treatment. Those participants who had ASPD reported heavier and more frequent alcohol consumption but also had significantly greater declines in drinking after treatment and experienced a greater effect from treatment relative to controls in comparison to individuals without ASPD.

#### Screening & Assessment

**DeMarce, J. M., Burden, J. L., Lash, S. J., Stephens, R. S., & Grambow, S. C. (2007). Convergent validity of the Timeline Followback for persons with comorbid psychiatric disorders engaged in residential substance use treatment. *Addictive Behaviors, 32* (8), 1582–1592.**

The authors investigated the validity of the Timeline Followback instrument for individuals with COD who were in residential treatment for substance use disorders. Approximately half the sample of 150 individuals had COD. For the entire sample, Timeline Followback data were significantly correlated with ASI data and with collateral report of substance use. There were no significant differences for individuals with COD from those who did not have COD.

**Rounsaville, B. J. (2007). DSM-V research agenda: Substance abuse/psychosis comorbidity. *Schizophrenia Bulletin, 33* (4), 947–952.**

This paper calls for further research into the distinctions between mental health problems that exist independently and syndromes (such as dementia) that result from substance use in patients with COD. The author comments on the difficult nature of discerning the origins of such disorders and new indications that marijuana use may impact the onset of schizophrenia. Specifically, the author calls for a review of already existing longitudinal research in an effort to determine how long syndromes brought on by specific substances last following cessation of substance use.

### *Treatment Planning & Services*

**Brown, R. A., Niaura, R., Lloyd-Richardson, E. E., Strong, D. R., Kahler, C. W., Abrantes, A. M., Abrams, D., & Miller, I. W. (2007). Bupropion and cognitive-behavioral treatment for depression in smoking cessation. *Nicotine & Tobacco Research, 9* (7), 721-730.**

The authors studied the impact of bupropion and cognitive-behavioral mood management treatment on 524 smokers, 47.5 percent of whom were women. They also examined the effect of the combination of these treatment methods on smokers who are vulnerable to depression. The double-blind, randomized test placed participants into four different treatment groups that were treated over the course of 12 weeks with follow-ups conducted 2, 6, and 12 months following treatment. Abstinence was confirmed using biochemical methods. Although bupropion garnered better outcomes for smoking cessation than did placebos, the addition of cognitive-behavioral mood management treatment did not improve results, and neither treatment method, alone or in combination, provided noticeably different outcomes in patients with a history of depressive symptoms.

**Jaffe, A., Shoptaw, S., Stein, J., Reback, C. J., & Rotheram-Fuller, E. (2007). Depression ratings, reported sexual risk behaviors, and methamphetamine use: Latent growth curve models of positive change among gay and bisexual men in an outpatient treatment program. *Experimental and Clinical Psychopharmacology, 15* (3), 301-307.**

The authors explored connections between changes in symptoms of depression, methamphetamine use, and risky sexual behavior during the treatment of 145 methamphetamine-dependent men who were bisexual or gay. Men were randomly assigned to standard cognitive-behavioral therapy (CBT), contingency management, a combination of the two previous interventions, or a form of CBT modified specifically for gay men. A reduction in depressive symptoms and risky sexual behavior generally accompanied a reduction in methamphetamine use, which may mean men who respond well to substance abuse treatment will also see a reduction of co-occurring depression. The study also found that participants involved in CBT modified specifically for gay men recorded the most noticeable decrease in use of the methamphetamines.

**Kaspro, W. J. & Rosenheck, R. A. (2007). Outcomes of critical time intervention case management of homeless veterans after psychiatric hospitalization. *Psychiatric Services, 58* (7), 929-935.**

The authors evaluated a modification of the Department of Veterans Affairs' model for transitioning clients who are mentally ill and homeless from inpatient care to community living. They conclude that most sites effectively implemented the Critical Time Intervention (CTI) case management model. In comparing client outcomes before and after implementation, they found improved outcomes including fewer days in institutional settings (14 percent fewer) and lower Addiction Severity Index alcohol use scores (19 percent lower). The authors also conclude that this model can be effectively implemented to improve mental health and substance abuse outcomes even in settings that have little experience with such models.

**McKendrick, K., Banks, S., Sullivan, C., & Sacks, S. (2007). Modified therapeutic community treatment for offenders with mica disorders: Antisocial personality disorder and treatment outcomes. *Journal of Offender Rehabilitation, 44* (2-3), 133-159.**

This study examined the effectiveness of Modified Therapeutic Communities (MTC) on clients in a criminal justice setting who had co-occurring Antisocial Personality Disorder (APD). The authors looked at treatment outcomes 12-months after release, comparing two sets of patients: one group assigned to an MTC and the other assigned to a mental health treatment program. Clients assigned to MTC exhibited significantly better outcomes regardless of whether they were diagnosed with APD. Moreover, APD did not account for negative treatment outcomes in the MTC population. The authors concluded that prisons should develop and implement MTC programs for a variety of disorders, including APD.

## COD Research and Resources Monthly Review

**Office of Applied Studies. (2007). *Facilities offering special treatment programs or groups: 2005* (The DASIS Report, June 14, 2007). Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved June 29, 2007, from <http://oas.samhsa.gov/2k7/ServicesTX/servicesTX.pdf>**

This 3-page report analyzes data from SAMHSA's Drug and Alcohol Services Information System (DASIS) and provides information on the types of special programs (including programs for COD) offered by the various types of care facilities that report to SAMHSA's National Survey of Substance Abuse Treatment Services.

**Price, J., Ambrosetti, L., Sidani, J., & Price, J. (2007). Psychiatrists' smoking cessation activities with Ohio community mental health center patients. *Community Mental Health Journal, 43* (3), 251–266.**

This study examines the opinions on and practices of activities leading to smoking cessation employed by 80 psychiatrists working for community mental health centers in Ohio. While most psychiatrists inquire into their patients' smoking habits and encourage them to quit, very few provide interventions such as nicotine replacement therapy that can facilitate smoking cessation. The authors claim that these findings further reinforce the often noted fact that not enough is being done in the mental field to facilitate the cessation of smoking among patients.

**Gulcur, L., Tsemberis, S., Stefancic, A., & Greenwood, R. (2007). Community integration of adults with psychiatric disabilities and histories of homelessness. *Community Mental Health Journal, 43* (3), 211–228.**

The authors of this study randomly assigned two groups of adults with psychiatric disabilities to apartments using the Housing First method or to normal integration services in an evaluation of the Wong and Solomon community integration model. The authors noted that a variety of factors influenced the effectiveness of integration including choice and independent scatter-site housing, psychiatric hospitalization, and participation in substance use treatment. Their findings suggest that independence/self-actualization should be accounted for in any definition of community integration. Several areas for further study are noted, such as non-neighborhood based integration and the opinions of consumers on the definition of integration.

**Webster, J. M., Rosen, P. J., McDonald, H. S., Staton-Tindall, M., Garrity, T. F., & Leukefeld, C. G. (2007). Mental health as a mediator of gender differences in employment barriers among drug abusers. *The American Journal of Drug and Alcohol Abuse, 33* (2), 259–265.**

In order to better understand the reasons for lower employment rates of women with substance use disorders compared to men with substance use disorders, the authors investigated mental disorders and employment records of a group of drug court participants. The authors concluded that men have fewer mental health problems and face fewer barriers to work than do women and that there was support for the hypothesis that mental health served as a mediating factor in regards to employment for men and women who have substance use disorders.

### *Services Integration*

**Manderscheid, R. W., Masi, D., Rossignol, C. R., & Masi, D. A. (2007). The integration of physical health and behavioral health services: Three university case examples. *Archives of Psychiatric Nursing, 21* (3), 141–149.**

The authors describe three case examples of ways in which universities have integrated substance abuse and mental health services with primary care services. All three examples illustrate that such integration is viable both on a clinical and economic level.

### *Systems Integration*

**Janzen, R., Nelson, G., Hausfather, N., & Ochocka, J. (2007). Capturing system level activities and impacts of mental health consumer-run organizations. *American Journal of Community Psychology, 39* (3), 287–299.**

The authors performed a longitudinal study of four different mental health consumer-run organizations in Ontario, Canada. They looked at system level activities and using qualitative and quantitative methodologies, describe the development and implementation of the projects as well as lessons learned through that implementation.