



New Reports on Workforce Development Available

Two new reports are available through SAMHSA concerning the development and training of the substance use and mental health treatment workforce. Both reports can be downloaded from the SAMHSA Web site at:

http://www.samhsa.gov/matrix2/matrix_workforce.aspx

1.) Hoge, M. A., Morris, J. A., Daniels, A. S., Stuart, G. W., Huey, L. Y., and Adams, N. (2007). *Action plan for behavioral health workforce development: A framework for discussion*. Cincinnati, OH: The Annapolis Coalition on the Behavioral Health Workforce.

The Annapolis Coalition's *Action Plan* includes overarching recommendations concerning changes to the behavioral health system for training, licensing, and credentialing. The report also addresses the importance of involving consumers and their families as part of the workforce, taking a life-span perspective on the issue of workforce development, increasing the diversity of the workforce, and involving communities to a greater degree.

In addition, the report addresses workforce issues for improving services to individuals with co-occurring disorders. The *Action Plan* includes as an objective, the launching of "a national initiative" that will ensure that all providers of behavioral health services have "basic competencies in the assessment and treatment of substance use disorders and co-occurring mental and addictive disorders" (p. 79). As part of this proposed initiative, the authors recommend competencies related to the assessment and treatment of substance abuse disorders and COD be included in all behavioral health competency models, in curricula for both preservice and continuing education, in accreditation standards for

treatment and training programs, and in certification and licensure requirements. The *Action Plan* stresses that there is an *urgent* need for competency-based, portable curricula that can be used to teach entry-level providers about COD.

2.) Whitter, M. (2006). *Strengthening professional identity: Challenges of the addictions treatment workforce: A framework for discussion*. Cambridge, MA: Abt Associates.

The Abt Associates' report focuses on strengthening the professional identity among substance use treatment providers. It also recognizes that COD is a significant issue affecting substance use treatment clients, and it recommends specialized training and certification for treating COD. A number of other trends affecting the addictions treatment workforce are reviewed, including:

- an insufficient workforce;
- a changing client base;
- a shift in funding sources for treatment;
- an increased need to use evidence-based best practices;
- the increased use of medications to treat substance use disorders;
- the movement towards a recovery management model of care;
- increased provision of services in other settings;
- the use of performance and patient outcome measures; and
- the need to address stigma and discrimination.

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

Agrawal, A., Lynskey, M. T., Madden, P. A. F., Bucholz, K. K., & Heath, A. C. (2007). A latent class analysis of illicit drug abuse/dependence: Results from the National Epidemiological Survey on Alcohol and Related Conditions. *Addiction, 102*(1), 94–104.

The authors used data from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC) (N=43,093) to examine the association between different types of illicit substance use and various DSM-IV diagnoses. They found the strongest association between prescription drug abuse/dependence and anxiety disorders. Polysubstance use disorders were most strongly associated with major depressive disorder and nicotine dependence.

Bada, H. S., Das, A., Bauer, C. R., Shankaran, S., Lester, B., LaGasse, L., Hammond, J., Wright, L. L., & Higgins, R. (2007). Impact of prenatal cocaine exposure on child behavior problems through school age. *Pediatrics, 119* (2), e348–e359.

The authors used data from the Maternal Lifestyle Study to determine the effects of prenatal cocaine exposure on a large group of children who were assessed at ages 3, 5, and 7. They found an association between high levels of prenatal cocaine exposure and both internalizing and externalizing behavioral problems as well as with higher total numbers of behavioral problems. The effects they found were independent of pre- and postnatal alcohol and tobacco exposure.

Cohen, P., Chen, H., Crawford, T. N., Brook, J. S., & Gordon, K. (2007). Personality disorders in early adolescence and the development of later substance use disorders in the general population. *Drug and Alcohol Dependence, 88* (Supplement 1), S71–S84.

The authors sampled a group of youth (mean age 13) and assessed personality disorder and conduct disorder. The presence of either of those disorders in young people was associated with both symptoms of and diagnoses for substance use disorders and these effects were independent of correlated family risk, gender, and other Axis I disorders.

Fergusson, D. M., Horwood, L. J., & Ridder, E. M. (2007). Conduct and attentional problems in childhood and adolescence and later substance use, abuse and dependence: Results of a 25-year longitudinal study. *Drug and Alcohol Dependence, 88* (Supplement 1), S14–S26.

The authors looked at data from a 25-year longitudinal study of 1265 New Zealand children. They found conduct problems in middle childhood and adolescence were associated with increased rates of substance use disorders, but conduct disorder in early childhood did not have as strong a relation.

Fryer, S. L., McGee, C. L., Matt, G. E., Riley, E. P., & Mattson, S. N. (2007). Evaluation of psychopathological conditions in children with heavy prenatal alcohol exposure. *Pediatrics, 119* (3), E733–E741.

The authors compared a group of 39 children who had been heavily, prenatally exposed to alcohol to 30 others who had not had prenatal alcohol exposure. The prenatally exposed children had higher rates of attention-deficit/hyperactivity disorder (AD/HD), depressive disorders, oppositional defiant disorder, conduct disorder, and various phobias, with rates of AD/HD showing the largest differences.

Garlow, S. J., Purselle, D. C., & Heninger, M. (2007). Cocaine and alcohol use preceding suicide in African American and White adolescents. *Journal of Psychiatric Research, 41* (6), 530–536.

The authors investigated differences between white and African-American teenagers who committed suicide in Fulton County, GA, between 1989 and 2003. They found 79 cases of suicide victims under the age of 19, 62 percent of whom were African American, 33 percent of whom were white, and 5 percent of whom were of other races. Autopsy reports were evaluated by the authors who found that 41.7 percent of white teenage suicide victims had used cocaine or alcohol prior to committing suicide compared to only 17.8 percent of African-American teenage suicide victims. Regarding cocaine use specifically, 28 percent of white teenage suicide victims had used the drug compared to only 8.9 percent of the African-American teenagers.

Goldstein, A. L., Walton, M. A., Cunningham, R. M., Trowbridge, M. J., & Maio, R. F. (2007). Violence and substance use as risk factors for depressive symptoms among adolescents in an urban emergency department. *Journal of Adolescent Health, 40* (3), 276–279.

The authors looked at violence, substance use, and demographic variables as risk factors for symptoms of depression in a group of 115 adolescents who presented for treatment at an urban emergency room. Being female, having higher levels of substance use, and having greater exposure to violence in one's community were all significant risk factors.

Hayatbakhsh, M. R., Najman, J. M., Jamrozik, K., Mamun, A. A., Alati, R., & Bor, W. (2007). Cannabis and anxiety and depression in young adults: A large prospective study. *Journal of the American Academy of Child & Adolescent Psychiatry, 46* (3), 408–417.

The authors investigated the relationship of age of first cannabis use and frequency of use to anxiety and depression in a large (N=3,239) group of Australian young adults. They found, after controlling for confounding factors, that young people who began using cannabis before the age of 15 and those who were using it frequently at the age of 21 were more likely to report anxiety and depression symptoms in early adulthood.

Meade, C. S. & Weiss, R. D. (2007). Substance abuse as a risk factor for HIV sexual risk behavior among persons with severe mental illness: Review of evidence and exploration of mechanisms. *Clinical Psychology: Science and Practice, 14* (1), 23–33.

The authors review data on people who have serious mental illness (SMI) with co-occurring substance use disorders and HIV and propose that substance abuse may lead to high-risk sexual behaviors, which in part account for elevated levels of HIV among people with COD.

Morissette, S. B., Tull, M. T., Gulliver, S. B., Kamholz, B. W., & Zimering, R. T. (2007). Anxiety, anxiety disorders, tobacco use, and nicotine: A critical review of interrelationships. *Psychological Bulletin, 133* (2), 245–272.

The authors review the literature on the connection between anxiety (including anxiety disorders) and tobacco use. They note that the use of tobacco increases individual's risk for later developing certain types of anxiety disorders, and people who use tobacco who have anxiety disorders have more severe withdrawal symptoms when trying to quit tobacco use.

Pardini, D., White, H. R., & Stouthamer-Loeber, M. (2007). Early adolescent psychopathology as a predictor of alcohol use disorders by young adulthood. *Drug and Alcohol Dependence, 88* (Supplement 1), S38–S49.

The authors looked at a sample of 506 adolescent males to determine the relationship between conduct disorder symptoms and the development of alcohol use disorders in later life. They found that early symptoms of conduct disorder correlated with alcohol dependence in young adulthood. They also found that boys who had high levels of anxiety/withdrawal had fewer symptoms of alcohol use disorders and were less likely to develop alcohol dependence as young adults. Symptoms of depression in adolescence were only associated with later alcohol dependence in boys who also had a conduct disorder. They found no evidence that AD/HD symptoms were related to alcohol use disorder symptoms after controlling for other co-occurring disorders.

Roberts, R. E., Roberts, C. R., & Xing, Y. (2007). Comorbidity of substance use disorders and other psychiatric disorders among adolescents: Evidence from an epidemiologic survey. *Drug and Alcohol Dependence, 88* (Supplement 1), S4–S13.

The authors looked at a sample of 4,175 youths (ages 11 to 17) to determine rates of COD. They found female youths with substance use disorders tended to have higher rates of COD than males, and that older youth had more COD than younger. They also found that marijuana use was somewhat less associated with COD than use of alcohol or other substances.

Simmons, L. A. & Havens, J. R. (2007). Comorbid substance and mental disorders among rural Americans: Results from the national comorbidity survey. *Journal of Affective Disorders, 99* (1), 265–271.

Using data from the National Comorbidity Survey, the authors determined (after adjusting for age, race, gender, education, and income) that rural respondents (N=532) were more likely than urban respondents (N=4,653) to meet DSM-

IIIR criteria for an alcohol use disorder in the prior month if they also had a major depressive disorder in the prior month or antisocial personality disorder at some point during their lifetime. Rural respondents were also more likely to have a past month drug use disorders if they had major depressive disorder or generalized anxiety disorder in the past month or antisocial personality disorder at some point during their lifetime. The authors suggest that because it is more difficult to find appropriate mental health treatment in rural areas, people in those areas with mental disorders may be self-medicating with substances, thus accounting for higher levels of COD.

Infrastructure

Workforce Development

Piotrowski, N. A. (2007). Comorbidity and psychological science: Does one size fit all? *Clinical Psychology: Science and Practice*, 14 (1), 6–19.

The author argues that “comorbidity” is a wide-ranging issue that may be understood differently by different types of providers, and that it is problematic to claim that there is one correct approach to comorbidity. The author also discusses some of the things that need to be considered in researching, treating, and teaching about comorbidity.

Services & Service Systems

Prevention

Tsuang, M. T., Stone, W. S., & Lyons, M. J. (Eds.). (2007). *Recognition and prevention of major mental and substance use disorders*. Arlington, VA: American Psychiatric Publishing.

The authors from the American Psychopathological Association present a wide ranging look at recognition, prevention, and intervention for mental and substance use disorders. They look at everything from genetic causes to social policy issues, and touch on topics as diverse as the role of substance abuse in increasing vulnerability to schizophrenia, stress and its relationship to depression, early prevention opportunities for antisocial personality disorder, prevention of Alzheimer's disease, and pharmacological interventions to prevent posttraumatic stress disorder, among other topics.

Services Integration

Blakely, T. J. & Dziadosz, G. M. (2007). Creating an agency integrated treatment program for co-occurring disorders. *American Journal of Psychiatric Rehabilitation*, 10 (1), 1–18.

The authors discuss the process of creating a community-based agency to provide integrated substance abuse and mental health treatment. They pay particular attention to the barriers encountered and strategies that can be used to surmount those barriers.

Health Management Associates. (2007). *Integrating publicly funded physical and behavioral health services: A description of selected initiatives. Final report*. Princeton, NJ: Robert Wood Johnson Foundation. Available online at <http://www.oregon.gov/DHS/ph/hsp/docs/rwjfreport.pdf>.

This report details the process of developing publicly funded healthcare that integrates behavioral and physical health services. It discusses the variety of goals that might be involved in such a process and presents information on approaches used by both service providers and systems to develop this level of integration. Through analyzing existing integration efforts, the authors conclude that integration initiatives were most sustainable when they could connect costs and benefits to a single payor. They also note that integrated care can lead to improved services as well as lower costs.

Treatment Planning & Services

August, J. L. & Flynn, A. (2007). Applying stage-wise treatment to a mixed-stage co-occurring disorders group. *American Journal of Psychiatric Rehabilitation, 10* (1), 53–63.

The authors describe work with a group of clients with COD who were at mixed stages of readiness for change, in which clinicians tried to apply motivational interviewing and cognitive-behavioral therapy techniques designed to address clients at specific levels of readiness. They discuss both benefits and potential problems with this approach but conclude that using stage-appropriate interventions for group members at different stages worked better than alternatives to address group members' treatment needs.

Carey, K. B., Leontieva, L., Dimmock, J., Maisto, S. A., & Batki, S. L. (2007). Adapting motivational interventions for comorbid schizophrenia and alcohol use disorders. *Clinical Psychology: Science and Practice, 14* (1), 39–57.

The authors describe their use of a motivational enhancement approach with a group of individuals who had schizophrenia and alcohol use disorders. They present specific exercises that are a part of the intervention they created and describe how those exercises can work to enhance motivation and improve engagement.

Cheng, A. L., Lin, H., Kaspro, W., & Rosenheck, R. A. (2007). Impact of supported housing on clinical outcomes: Analysis of a randomized trial using multiple imputation technique. *Journal of Nervous and Mental Disease, 195* (1), 83–88.

The authors reanalyzed data from a previous study evaluating the effectiveness of a Veterans Affairs (VA) supported housing program for homeless veterans with psychiatric and/or substance use disorders in order to account for missing data. Whereas the prior study found that supported housing produced better housing outcomes (but not substance abuse outcomes) than case management alone or standard VA care, the reanalysis showed that there were also significant benefits in substance abuse outcomes for subjects in the supported housing program.

Cleirigh, C. & Safren, S. (2007). Breaking the mold or business as usual? Meeting the challenges of HIV prevention in people with serious mental illness and substance use disorders. *Clinical Psychology: Science and Practice, 14* (1), 34–38.

The authors review information on HIV-risk behaviors of people with COD and discuss the ways in which substance abuse and mental illness may combine to increase HIV-risk for this population. They also consider the application of cognitive-behavioral interventions to provide HIV prevention services for people with COD.

Coldwell, C. M. & Bender, W. S. (2007). The effectiveness of assertive community treatment for homeless populations with severe mental illness: A meta-analysis [CME activity]. *American Journal of Psychiatry, 164* (3), 393–399.

The authors performed a meta-analysis of the literature on assertive community treatment (ACT) for homeless people with serious mental illness (in some cases with co-occurring substance use disorders). They identified 10 articles that met their inclusion criteria and from those extrapolated that ACT produced significantly greater reductions in homelessness and significantly greater improvements in psychological functioning than standard case management. They did not find significant differences in hospitalization rates between those who received ACT and those who received standard case management.

Graham, K. & Massak, A. (2007). Alcohol consumption and the use of antidepressants. *Canadian Medical Association Journal, 176* (5), 633–637

The authors looked at the effects of antidepressants on the alcohol use of individuals with depression. They conducted a large (N=14,063) telephone survey of Canadian adults to gather their data. They found that while overall people who were depressed drank more than those who were not, men who were depressed and used antidepressants drank less (414 mean drinks per year) than both men who were not depressed (mean drinks 436 per year) and men who were depressed and not taking antidepressants (mean drinks 579 per year). However, for women who were depressed the use of antidepressants did not significantly decrease alcohol consumption (mean drinks of 264 per year) in comparison to women who were

depressed and did not use antidepressants (mean drinks of 235 per year) and women who were not depressed (mean drinks of 179 per year).

Kertesz, S. G., Mullins, A. N., Schumacher, J. E., Wallace, D., Kirk, K., & Milby, J. B. (2007). Long-term housing and work outcomes among treated cocaine-dependent homeless persons. *Journal of Behavioral Health Services & Research*, 34 (1), 17–33.

The authors compared three interventions for homeless people who were cocaine dependent. All subjects received intensive behavioral day treatment with one group entering abstinent-contingent housing, one entering housing not contingent on abstinence, and one receiving no housing through the program. Subjects in both of the groups that received housing were significantly more likely to be housed and employed at 12 months after the intervention than those who did not receive housing.

Kolbe, M. & Carlson, G. A. (2007). Influence of attention-deficit/hyperactivity disorder symptoms on methadone treatment outcome. *American Journal on Addictions*, 16 (1), 46–48.

The authors investigated 687 subjects admitted to a methadone maintenance program to determine if the presence of AD/HD symptoms affected their treatment outcomes. At an assessment 9 months after entering treatment, individuals with significant AD/HD symptoms were able to reduce substance use but were less likely to have achieved abstinence than individuals without significant AD/HD symptoms.

Lefforge, N. L., Donohue, B., & Strada, M. J. (2007). Improving session attendance in mental health and substance abuse settings: A review of controlled studies. *Behavior Therapy*, 38 (1), 1–22.

The authors reviewed controlled studies evaluating methods for increasing session attendance among clients in either substance abuse or mental health treatment. They performed reliability estimates on the studies they reviewed and found generally high rates of reliability. The authors suggest that scheduling next appointments promptly, using phone calls and letters to remind clients of appointments, asking clients to make a commitment, and working in other ways to resolve obstacles to attendance are all particularly promising methods for improving attendance.

Martino, S. (2007). Contemplating the use of motivational interviewing with patients who have schizophrenia and substance use disorders. *Clinical Psychology: Science and Practice*, 14 (1), 58–63.

Martino suggests the decision to use motivational interviewing techniques with clients who have co-occurring schizophrenia and substance use disorders may be premature based on his understanding of the issues involved. He explains some potential problems with using motivational interviewing with this population.

Mills, K. L., Teesson, M., Ross, J., & Darke, S. (2007). The impact of post-traumatic stress disorder on treatment outcomes for heroin dependence. *Addiction*, 102 (3), 447–454.

The authors evaluated the effects of post-traumatic stress disorder (PTSD) on treatment for heroin dependence. They used a sample of 615 individuals with heroin dependence who were primarily self-referred to treatment. They found that although subjects with PTSD did improve on measures of substance use, PTSD was associated with both physical and mental disability and poorer occupational functioning during the 2-year followup period.

Ostacher, M. J. (2007). Comorbid alcohol and substance abuse dependence in depression: Impact on the outcome of antidepressant treatment. *Psychiatric Clinics of North America*, 30 (1), 69–76.

The author considers issues involved in the treatment of co-occurring major depressive disorder and substance use disorders with particular attention to the part antidepressants may play in treatment.

Petersen, L., Jeppesen, P., Thorup, A., Ohlenschlaeger, J., Krarup, G., Ostergard, T., Jorgensen, P., & Nordentoft, M. (2007). Substance abuse and first-episode schizophrenia-spectrum disorders. The Danish OPUS trial. *Early Intervention in Psychiatry*, 1 (1), 88–96.

The authors studied a group of 547 Danish patients who had first-episode schizophrenia-spectrum disorders and who abused substances. Subjects were randomly assigned to an assertive community treatment (ACT) program (with family involvement and social skills training components) or to standard treatment at a community mental health clinic. Subjects

were evaluated 2 years after treatment entry, and 17.3 percent of the clients in ACT met criteria for a substance abuse diagnosis compared to 20.7 percent of clients in standard treatment. Clients who received the ACT treatment also showed significantly lower levels of negative and disorganized schizophrenia symptoms than those in the control treatment.

Rosenheck, R. A. & Mares, A. S. (2007). Implementation of supported employment for homeless veterans with psychiatric or addiction disorders: Two-year outcomes. *Psychiatric Services*, 58 (3), 325–333.

The authors evaluated a low-intensity job training approach for veterans who were homeless and had psychiatric and/or substance use disorders. Participants at nine different VA sites were compared to veterans who had attended treatment at those same sites before this intervention was implemented. Fidelity measures showed that the intervention was successfully implemented at most (but not all) the sites. After controlling for baseline differences, the authors found that veterans who received the intervention had a greater number of mean days employed and mean days housed per month over the 2-year followup period.

Spring, B., Doran, N., Pagoto, S., McChargue, D., Cook, J. W., Bailey, K., Crayton, J., & Hedeker, D. (2007). Fluoxetine, smoking, and history of major depression: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 75 (1), 85–94.

The authors evaluated the effects of high-dose (60 mg/daily) fluoxetine on smoking cessation attempts of people with a history of major depression, comparing the treatment group to a control group who received a placebo. Those who received fluoxetine had somewhat better initial cessation rates but were 3.3 times more likely to be smoking at 6 months after the quit date.

Stein, M. D., Weinstock, M. C., Anderson, B. J., & Anthony, J. L. (2007). Relationship of depression to smoking outcomes in a methadone-maintained population. *Journal of Addictive Diseases*, 26 (1), 35–40.

The authors sought to determine whether higher levels of depression made it more difficult for a group of individuals in methadone maintenance (N=383) to quit smoking when provided with nicotine replacement and a brief behavioral intervention. They found that while participants who had high levels of depressive symptoms were significantly less likely to set a date for quitting, depression did not appear to affect motivation to quit, time before returning to smoking, or other behavioral indicators of smoking during followup.

Tull, M. T., Schulzinger, D., Schmidt, N. B., Zvolensky, M. J., & Lejuez, C. W. (2007). Development and initial examination of a brief intervention for heightened anxiety sensitivity among heroin users. *Behavior Modification*, 31(2), 220–242.

The authors describe a 6-session behavioral intervention to address anxiety sensitivity in heroin users. Preliminary data suggest this may be an effective way to reduce anxiety in this population.

Zilberman, M. L., Tavares, H., Hodgins, D. C., & el-Guebaly, N. A. (2007). The impact of gender, depression, and personality on craving. *Journal of Addictive Diseases*, 26 (1), 79–84.

The authors found that depression was the best predictor of substance craving for women but not for men. How recently substances were used and impulsivity were significantly associated with craving for both men and women.