

Special article

Co-occurring disorders in substance abuse treatment: Issues and prospects

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Abstract

This article explores the epidemiology of co-occurring disorders (CODs) with an emphasis on the implications of study findings for the functioning and potential of substance abuse treatment. Severity of disorder is discussed as an issue that may have particular significance for the selection of specialized as opposed to traditional substance abuse treatment forms. Exploration is made, as well, of the resources currently available to substance abuse treatment, especially the human resources available, and the implications of resource availability for undertaking initiatives specific to COD. Findings from standard and enhanced treatment for comorbid individuals are examined in an effort to clarify areas of need for specialized and typical treatment personnel. Issues are raised for consideration by the clinical research and treatment provider communities in terms of assessment and diagnosis, manpower and training, and response to the challenge of relapse in this population. © 2008 Elsevier Inc. All rights reserved.

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1. Introduction

More than 25 years ago, Woody and Blaine (1979) drew attention to an emerging literature describing a relationship between mental health problems (depression) and substance use disorders among substance abuse treatment clients. Despite those early findings, the effort to develop an effective response to mental health problems is a more recent, increasingly emphasized concern of substance abuse treatment.

Virtually since the introduction of community-based treatment, clinicians have been challenged by health and psychosocial problems in addition to those of substance use disorders. Infectious disease, unemployment, unstable housing, and family problems have been cited as characterizing substance abuse treatment clients (McLellan, Hagan, Meyers, Randall, & Durell, 1997; McLellan, Luborsky, O'Brien, Woody, & Druley, 1982; Moos,

Finney, & Cronkite, 1990) and as increasingly prevalent phenomena (Gerstein & Harwood, 1990; Pickens & Fletcher, 1991). Not surprisingly, study findings suggest the importance of clinicians providing, or accessing for clients, the comprehensive services they require (Hser, Polinsky, Maglione, & Anglin, 1999; McLellan, Arndt, Metzger, Woody, & O'Brien, 1993; McLellan et al., 1998), and providers find themselves increasingly called upon to respond to a wider array of needs with a diminishing supply of resources (D'Aunno & Vaughn, 1995; Etheridge, Craddock, Dunteman, & Hubbard, 1995; Gerstein et al., 1997; Pringle, Emptage, & Hubbard, 2006). Now, these same providers are asked to treat more than the substance use problems and accompanying social problems that have been recognized. They are being pressured to identify and treat the multiple and co-occurring mental disorders seen as characterizing a substantial proportion of the clients entering their clinics. Whether these expectations are met directly through on-site services or through the establishment of linkages to the mental health services system depends, in large part, on organizational factors beyond the control of the individual counselor and sometimes beyond the control

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of the substance abuse treatment program. Whether resources permit the training and supervision of current staff, whether resources permit the hiring of specialized staff, whether that staff is available in a community, and whether mental health services are readily accessible in a community will all help to determine the response the substance abuse treatment program can make to the mental health needs of its clients.

Regardless of resources, it seems clear that substance abuse treatment programs will now, as always, be obliged to respond to the full range of client needs, and it is useful, therefore, to explore issues that can be seen as key to making an informed and appropriate response to their clients who show evidence of co-occurring disorder (COD; cf. Flynn, Craddock, Luckey, Hubbard, & Duntzman, 1996; Regier et al., 1990; Woody, McLellan, O'Brien, & Luborsky, 1991).

Three issues appear important to explore.

1. There is a need to clarify the rates of COD and, more significantly, the rates of mental disorder among substance abuse treatment clients. While prevalence for the general population can be seen as having obvious significance for national planning, prevalence in substance abuse treatment programs is the immediate concern of the substance abuse treatment field and constitutes the demand we are required to address.
2. There is a need to clarify the adequacy of the current response to COD within substance abuse treatment programs. The extent to which current programming fails should determine the extent to which new or specialized programming is warranted. Indeed, the specific areas of failure can suggest the nature of the new programming required.
3. There is a need to propose clinical initiatives in response to areas of need with regard to CODs that are tied realistically to the resources and circumstances of substance abuse treatment programs. Resources are, of course, finite, and it can be equally irresponsible to ignore identified problems as to suggest solutions that exceed the capacity or potential of typical treatment programs. At the same time, it is recognized that some portion of research should be devoted to clarifying the effectiveness of interventions that demand greater resources than are currently available to make cogent argument for change in the allotment of those resources. Such interventions, however, while exceeding current levels of resource allocation, cannot exceed the capacity of anticipated future allocation. Thus, as will be explored below, proposed novel interventions can only rely on staffing that may realistically be seen as being, or becoming, available to typical substance abuse treatment programs.

2. Rates of CODs

2.1. Prevalence in the general population

Two large epidemiological studies have exerted a particular influence on thinking with regard to rates of COD. Regier et al. (1990) examined data from the National Epidemiological Catchment Area (ECA) Study, whereas Kessler et al. (1997, 1994) report findings from the National Comorbidity Survey (NCS). Rates of substance dependence from the two surveys were highly comparable. Lifetime prevalence for alcohol use disorder was 16.5% and 14.1% for the ECA and NCS, respectively, and lifetime prevalence for drug use disorder was 6.1% and 7.5% for ECA and NCS, respectively. Among individuals with drug use disorder (other than alcohol), rates of co-occurring mood disorders, anxiety disorders, psychotic thought disorders (i.e., schizophrenia), and antisocial personality disorder (APD) were found to be 26%, 28%, 7%, and 18%, respectively. Overall, Reiger et al. reported that more than half of those identified with a drug use disorder had one or more other mental disorders but did not make a distinction between independent and substance-induced disorders. More recently, Grant et al. (2004) utilized National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) data that differentiate between independent and substance-induced disorders to examine the prevalence of co-occurring mood and anxiety disorders. This more refined method of assessing only non-substance-induced disorders showed that about 20% of the general population with a substance use disorder also had one or more mood disorders, and 18% had an anxiety disorder. Another investigation using NESARC data, conducted by some of the same research team members, focused only on primary or independent diagnoses of personality, mood, and anxiety disorders among three groups—alcohol only, drug only, and both alcohol and drug use disorders (Stinson et al., 2005). Findings from this study indicated that, in the drug-only group, the rates were approximately 44%, 28%, and 24% for personality, mood, and anxiety disorders, respectively. The drug and alcohol group reported rates of 51%, 35%, and 27% for personality, mood, and anxiety disorders, respectively; the alcohol-only group revealed rates of 25%, 16%, and 16% for personality, mood, and anxiety disorders, respectively. High prevalence rates of CODs have also been found in countries other than the United States (see, e.g., Kantojärvi et al., 2006; Pozzi, Frustaci, Janiri, & Di Giannantonio, 2006; Rodríguez-Llera et al., 2006), indicating that the problem is not unique to our system and its current methods of problem identification. Variability in methodologies and assessment procedures (e.g., those that do or do not rule out substance-induced disorders) characterizes much of the practice in the field of addiction studies. This assessment issue, along with others that cloud more precise knowledge of CODs, will be discussed below.

2.2. Prevalence in treatment populations

Reports from treatment programs of lifetime evidence of COD have varied widely but have generally involved high estimates of COD (Cacciola, Alterman, McKay, & Rutherford, 2001). As summarized by Sacks and Ries (see Center for Substance Abuse Treatment, 2005), investigators describing substance abuse treatment client populations during the 1980s and the 1990s have reported 50% to 70% of their clients showing lifetime histories of CODs, whereas investigators describing mental health treatment populations during the same period have reported 20% to 50% of their clients showing lifetime histories of substance use disorders. Recent studies of treatment programs and clients have supported these earlier estimates. McGovern, Xie, Segal, Siembab, and Drake (2006) surveyed addiction treatment agency directors, clinical supervisors, and clinicians in a single-state system about CODs among their clientele. They found overall estimates of 41% for mood disorders, 26% for anxiety disorders, 25% for posttraumatic stress disorder (PTSD), 17% for severe mental illness, 18% for APD, and 17% for borderline personality disorder. Watkins et al. (2004) screened admissions to three outpatient substance abuse treatment clinics and found that about 50% had co-occurring mental health disorders. Havassy, Alvidrez, and Owen (2004) reported a comparably high prevalence of substance use disorders among admissions to mental health programs. These findings have suggested that clinical practices restricted to services appropriate to a single disorder can be inappropriate to the needs of a large number of clients entering both substance abuse treatment and mental health programs and that modifications to services appropriate to the needs of individuals with CODs may be needed (Minkoff & Cline, 2004).

One issue is probably worth considering here as it bears on the adequacy of traditional treatment forms and the development of new initiatives to respond to COD. The term “co-occurring disorder” is, perhaps of necessity, a blanket descriptor that covers all types of substance use and mental health disorders as well as all levels of severity of those disorders. Indeed, concern has been raised regarding the lack of distinction regarding both the nature and seriousness of mental health disorders. Watkins, Hunter, Burnam, Pincus, and Nicholson (2005) point out that, as desirable as it would be to have efficacy data for treatment of COD, the number of permutations of mental disorder and substance use disorder makes it impossible to believe that efficacy data can ever be gathered for all the potential combinations and suggest a research strategy based on either or both the prevalence or clinical significance of combinations. Also supporting a more focused research effort, available findings do indeed suggest that differences in treatment outcomes are associated with diagnostic differences (Compton, Cottler, Jacobs, Ben-Abdallah, & Spitznagel, 2003).

The particular significance of severity for treatment response and program outcome is recognized in New York State’s suggested use of four quadrants, based on separate consideration of the severity of substance use disorder and of mental health disorder to determine treatment assignment, as well as in the use of terms like “serious mental illness” (Center for Substance Abuse Treatment, 2005) and “severe and persistent mental illness” (Kandel, Huang, & Davies, 2001; Kessler et al., 1996) to guide appropriate treatment response. It should be noted that these latter two terms, while connoting severity, are typically used in association with diagnoses of psychotic disorder. Moreover, there is evidence that severity of substance use and of mental health disorder may not exist independently. In a large study of treatment effectiveness, Flynn et al. (1996) found that approximately 30–35% of 7,400 substance abuse treatment clients reporting dependency on alcohol, heroin, or cocaine were reported as showing evidence of APD, whereas about 45% of clients reporting dependency on two drugs were reported as showing evidence of APD, and 60% of clients reporting dependency on all three drugs were reported as showing APD. Similarly, in a national community survey, it was found that about 8% of respondents with one or more mental health symptoms showed evidence of a co-occurring substance use disorder, but the rate of substance use disorder nearly doubled (15%) for respondents with serious mental disorder (Harris & Edlund, 2005). In short, the term co-occurring disorder includes a multiplicity of diagnostic categories, a broad range of severities of disorder, and a potential for confounding between severity in one area and diagnosis in another. All of these bring into question the usefulness of that umbrella term for treatment planning.

Pursuant to these issues is the ability and/or willingness of the mental health and substance abuse treatment systems to serve clients with CODs. The mental health system is viewed as treating clients “with severe and chronic mental illnesses” but is seen as “not equipped to address the treatment of concurrent substance abuse disorders” (U.S. Department of Health and Human Services, 2002, p. v). In contrast, these same authors report that “the substance abuse treatment system addresses all types of substance abuse disorders at all levels of severity; when necessary, many providers in this system are able to respond to mild to moderate forms of mood, anxiety, and personality disorders” (U.S. Department of Health and Human Services, 2002, p. v). Consistent with the latter conclusion, McGovern et al. (2006) found that clients with non-severe mental illness were more common in substance abuse treatment than those with high severity. Cacciola et al. (2001) suggest that the small number of individuals with severe mental illness found in substance abuse treatment programs may be evidence of the reluctance of these programs to treat the severely mentally ill. While it is unclear to what extent these findings indicate self-selection as opposed to program selection, they do suggest the presence of a selection process that leads to differing severities of the two disorders in each system.

3. Treatment response

3.1. National population data

Not surprisingly, data from the National Survey of Drug Use and Health indicate that substantial proportions of individuals in the general population evidencing COD do not receive services in either mental health or substance abuse treatment systems. In their analysis of these survey data, [Harris and Edlund \(2005\)](#) found that 35% of individuals showing evidence of substance use disorder and of mental health symptoms other than “serious mental illness” (distinction was based on frequency with which symptoms were experienced) reported receiving any treatment during the preceding year. However, the number of those reporting any treatment rose to 54% when the co-occurring condition could be classified as serious mental illness. Individuals with COD who received either substance abuse or mental health treatment—but not both—were nearly three times as likely to receive mental health services only as to receive substance abuse treatment services only if they were without serious mental illness (20.7% received mental health services only and 7.6% received substance abuse services only) and nearly nine times as likely to receive mental health services only if they evidenced serious mental illness (34.4% received mental health services only and 4.1% received substance abuse services only). Overall, 6.6% of individuals with CODs not involving serious mental disorders reported receiving both substance abuse and mental health services compared to 15.5% of individuals with COD involving serious mental illness. The authors suggest that respondents were more likely to receive mental health treatment than substance abuse treatment (a) because of the greater propensity and generosity of both public and private insurance in paying for mental health treatment as opposed to substance abuse treatments and (b) due to the difficulty in differentiating between the two types of care when survey respondents were asked about which treatment was received. It seems likely that the availability of insurance, particularly of Medicaid, also helps to explain the greater likelihood of individuals with serious mental disorder reporting receipt of mental health services as compared to those with less severe disorders.

The findings of [Harris and Edlund \(2005\)](#) are in accord with those reported earlier by [Watkins, Burnam, Kung, and Paddock \(2001\)](#) in that 72% of survey respondents from a national household sample evidencing COD had not received substance abuse or mental health services in the preceding year. From among individuals who received services from a single system, those who received mental health services were more than three times as many as those who received substance abuse services, while only 8% received both types of services (together or jointly) during the year preceding interview.

3.2. Treatment population data

The availability of services, generally, and of combined services, particularly, for COD clients has been a concern. In 2004, according to National Survey of Substance Abuse Treatment Services data, 35% of substance abuse treatment facilities in the United States provided services for CODs. Of these, most services were provided in government-operated facilities ([Substance Abuse and Mental Health Services Administration, 2005](#)). In an analysis of data drawn from a sample of clients in three outpatient substance abuse treatment programs, it was found that half of those evidencing COD never received treatment for mental disorder ([Watkins et al., 2004](#)). [McFarland and Gabriel \(2004\)](#) analyzed earlier data from the National Survey of Substance Abuse Treatment Services and found variations in the availability of services for CODs in accord with geography, agency size, Medicaid and managed care arrangements, and funding status. Larger programs, access to Medicaid and managed care, and not-for-profit status were all associated with greater likelihood of COD services. It is of additional note that, while joint services for clients showing COD are the exception rather than the rule, substance abuse programs were found to provide mental health services for COD clients at rates ranging from 32% to 79% depending on diagnosis, whereas mental health programs were found to provide substance abuse services to only 31% of COD clients evidencing serious mental disorder ([Harris & Edlund, 2005](#)). Given that CODs are prevalent in both substance abuse and mental health programs and that single services remain the typical response despite the increasing emphasis on integrated or simultaneous treatment ([American Association of Community Psychiatrists, 2000](#); [Center for Substance Abuse Treatment, 2005](#)), service delivery systems might be characterized as failing this significant portion of the treatment population ([Gonzales & Insel, 2004](#)). However, given that the term co-occurring disorder lacks specificity with regard to both diagnostic category and severity of disorder, the question that emerges is whether all parts of the COD treatment population are being deprived of effective treatment or whether there are particular categories of COD that are at greater risk or, alternatively, are at limited risk for positive outcomes in association with normative treatment. Before examining treatment effectiveness, it is useful to describe briefly the nature and use of integrated services. While the exploration here will be largely cursory to set the stage for discussion of treatment outcome research findings, the reader will find a fuller description of this treatment form in [Drake et al. \(this issue\)](#).

3.3. Integrated treatment

The seemingly obvious, and desirable, alternative to the delivery of single-disorder services for those showing

multiple disorders would be the coordination of substance abuse and mental health services within a single site or between treatment sites. As described by Mueser, Noordsy, Drake, and Fox (2003), integrated treatment is “the seamless integration of psychiatric and substance abuse interventions in order to form a cohesive, unitary system of care.” Most would agree that seamless integration is best made available by providing mental health and substance abuse services simultaneously in the same agency and by the same clinicians. Nonetheless, as described by Watkins et al. (2005), there is confusion about the proper definition of integrated treatment. Thus, integrated treatment is alternately described as services colocated in one site, as requiring staff cross-trained in both disciplines, and as a system of care involving services provided through linkages and referrals across systems. This close coordination of efforts has been widely seen as an effective strategy for responding to COD. In recent reviews of the literature regarding integrated treatment, the conclusion that there is considerable research support for the effectiveness of integrated treatment for CODs was reached (Drake, Mueser, Brunette, & McHugo, 2004; Mueser, Noordsy, et al., 2003), although Donald, Dower, and Kavanagh (2005) conclude that the findings from randomized clinical trial investigations regarding the efficacy of integrated treatment remain inconclusive. This lack of certainty, coupled with confusing definitions of integrated treatment, produces dubiety and may continue to inhibit a policy that drives financing. Moreover, Mueser, Noordsy, et al. (2003), in their reporting of the effectiveness of integrated treatment, emphasize that effectiveness is only achieved in association with long-term treatments (i.e., time-unlimited services). Others have also emphasized a longitudinal perspective when treating CODs, specifically highlighting the importance of continuity of care involving an extended, multiyear period (Drake, Wallach, & McGovern, 2005; Osher, 1996). Drake et al. (cf. Mueser, Torrey, & Lynde, 2003) developed an effective integrated dual-disorder treatment provided in community mental health settings for clients with severe mental illness and substance use disorders. Severity of disorder is understandably related to need for services, and strategies for matching treatments to client symptom severity are now beginning to appear. Chen, Barnett, Sempel, and Timko (2006) demonstrated that high-severity clients matched to higher service intensity had better psychiatric and substance use outcomes than those treated in low-intensity programs. Pharmacotherapies for CODs, which are beyond the scope of this article, are also indicated in many cases and should not be considered as stand-alone treatments; rather, they should be used in conjunction with psychosocial interventions (Nunes & Levin, 2004).

The extent to which clients entering both substance abuse and mental health treatment programs are seen as showing evidence of COD, in combination with the expressed support for integrated treatment, even if that

support is less than entirely uniform, would appear to suggest that integrated treatment might be widely implemented by treatment programs. As detailed above, findings from studies conducted to determine the use of integrated treatment suggest that only a minority of clients evidencing COD received both substance abuse and mental health services simultaneously (7–8%; Harris & Edlund, 2005; Watkins et al., 2001), although rates are somewhat higher for comorbid clients evidencing serious mental disorder (15%; Harris & Edlund, 2005). Although factors ranging from stigma to an inability to define any single intervention as having clear effectiveness have been cited as reasons for the lack of a coordinated substance abuse and mental health treatment effort (Drake & Wallach, 2000; Ridgely, Goldman, & Willenbring, 1990), findings of an inadequate response to clients’ multiple presenting problems have been widely reported (Etheridge et al., 1995; Etheridge, Hubbard, Anderson, Craddock, & Flynn, 1997; Gerstein et al., 1997; Pringle et al., 2006). D’Aunno and Vaughn (1995) and Etheridge et al. (1997) have, indeed, described a diminution of services such that the comparatively broad array of services available in earlier years have been reduced in association with a diminution in available resources. Without minimizing the significance of other contextual issues, the reduced availability of resources renders these other considerations of less immediate influence. Limited resources can be seen as having a particular effect on the use of the specialized personnel required to implement integrated treatment programs and similarly specialized and/or targeted treatment services.

3.4. Staffing patterns

It has been argued that both mental health and substance abuse treatment programs should be prepared to treat individuals evidencing COD (Havassy et al., 2004; Power & DeMartino, 2004). While there can be a danger in attributing too much significance to formal education/training as opposed to experiential on-the-job skills acquisition, it seems obviously appropriate to view individuals showing COD as reflecting heightened complexity of problems and as having the potential to make demands on counseling skills and practices that exceed those associated with single-problem disorders. In such context, the addiction field can be seen as experiencing significant difficulty. A recent survey of the substance abuse treatment field (Addiction Technology Transfer Center, 2001) indicated that 22% of clinical staff had some college, 9% possessed an associate degree, 29% had a bachelor’s degree, and 32% had postgraduate degrees. More clinical staff had high school degrees only (8%) than had doctorates (5%). Thus, while on-site psychiatric staff can be seen as significant to diagnostic assessment and treatment, particularly regarding the administration of pharmacotherapies, and have indeed been found to be

associated with greater retention and diminished substance use (Charney, Paraherakis, & Gill, 2001; Saxon & Calsyn, 1995), their limited availability to public treatment programs renders their utility moot for large numbers of programs (Grella, Gil-Rivas, & Cooper, 2004). Further complicating this picture, McLellan, Carise, and Kleber (2003) not only find similar evidence of a dearth of postgraduate staff but also report levels of staff turnover that jeopardize the stability of treatment programming. Some cause for optimism may be found in the findings from the study of Mulvey, Hubbard, and Hayashi (2003). In a survey of treatment programs serving substance abuse clients and embracing both drug treatment and mental health programs, as well as public and private programs, a sample of counselors was drawn by having program directors volunteer, in an alphabetical manner, the names of the staff members in their programs. Of the resulting sample, 74% were found to have at least a bachelor's degree and 42% had a master's degree. None held doctorates.

Nonetheless, findings from studies in two areas suggest that there is little likelihood of an ultimate resolution of the staffing situation. In a survey involving several states in the American Northwest, Gallon, Gabriel, and Knudsen (2003) found that an overwhelming majority (71%) of treatment administrators reported difficulty in filling existing vacancies and that two thirds (68%) further reported that large numbers of candidates were found incapable of meeting minimal job standards. More than half of program officials (53%) reported having to offer salaries that were unattractive to those candidates who could be seen as qualified, an assertion supported by findings that salaries for substance abuse treatment counselors rank poorly in comparison to several although not all other counselor categories (Libretto, Weil, Nemes, Linder, & Johansson, 2004). Perhaps equally disconcerting, Keller and Dermatis (1999) note the slow growth in college-level training programs for substance abuse, further limiting the prospect of any rapid turnaround in this area.

In brief, there is the suggestion that the level of staff, often seen as the most critical resource needed for the implementation of intensive and complex interventions for clients manifesting COD, is in short supply in substance abuse treatment programs. Moreover, there appears little reason for optimism that this situation will change any time soon. The question that emerges, then, is what can be accomplished with co-occurring clients in those instances in which there is, of necessity, a reliance on the counseling staffs available in typical treatment programs. There is, as well, the related question as to whether specialized treatment forms are essential to the treatment of all individuals showing evidence of COD regardless of the severity of mental disorder or whether severity of substance disorder becomes a factor in the apportioning of scarce resources and a basis for triaging clients to different treatment options.

3.5. *The effectiveness of single-disorder treatment with comorbid clients*

There is ample reason to believe that normative substance abuse treatment can support the achievement of a wide range of behavior change objectives. Traditional treatment has long been found capable of modifying the psychological functioning of substance abuse clients (Brook & Whitehead, 1980; De Leon, 1984, 1989). Indeed, De Leon and Jainchill (1982) reported positive change in ratings of depression, self-esteem, and so forth associated with traditional therapeutic community programming, although the extent to which individuals evidenced mental disorder, severe or otherwise, was not known. Other studies, involving traditional programs, have examined treatment outcomes for individuals identified as evidencing COD and those showing evidence of drug use only. While mental health disorder has been frequently cited as a clearly negative prognostic indicator, study findings suggest that, nonetheless, in a number of instances, equally positive treatment outcomes are obtained for both adults with and without diagnosable disorders (Cacciola, Rutherford, Alterman, McKay, & Snider, 1996; Kosten, Kosten, & Rounsaville, 1989; Nace & Davis, 1993; Ross, Dermatis, Levounis, & Galanter, 2003) and for adolescents (Grella, Joshi, & Hser, 2003). Similarly, Hser, Grella, Evans, and Huang (2006), in a study involving more than 1,000 clients admitted to 39 programs representing all major modalities, reported no differences in outcomes for individuals evidencing COD who were exposed to mental health services and for those exposed to normative substance abuse treatment, including outcomes for measures of psychiatric severity. In terms of specific treatment strategies, cognitive behavioral therapy, employed in substance abuse treatment programs, was found to reduce substance use and depression (Brown, Evans, Miller, Burgess, & Mueller, 1997) as well as substance use and PTSD (Hien, Cohen, Miele, Litt, & Capstick, 2004).

These findings do nothing to limit the importance of providing effective treatment services, including mental health services, for the significant number of clients whose severity of disorder indicates the need for those services. What is being suggested is that, in a time of diminished resources, it is important to allot scarce resources—perhaps especially specialized staff—as effectively as possible.

The relevance of severity of Axis I disorders for treatment assignment was importantly clarified in a classic study by Woody et al. (1984). In that study, low, mid, and high psychiatric severity clients were grouped in analyses to explore the interaction of treatment type (counseling alone or counseling with psychotherapy) with severity. The investigators found that individuals showing low severity achieved generally equivalent positive outcomes under both treatment conditions, whereas those with mid to high severity achieved far greater improvement when standard treatment was supplemented with mental health services.

Although, as a group, those with mid to high severity fared better with the addition of psychotherapy, counseling alone did produce significant improvements. In a related study, Chen et al. (2006) report that “moderate-severity [dual diagnosis] patients” had positive and comparable treatment outcomes and health care costs whether treated in high or low service-intensity programs, whereas “high-severity [dual diagnosis] patients” exposed to high service-intensity programs had better substance abuse and psychiatric outcomes than those exposed to low service-intensity programs. Similarly, Curran, Kirchner, Worley, Rookey, and Booth (2002) report that severity of depressive symptomatology, rather than the simple presence or absence of diagnosable depression, helped to predict program retention.

The findings suggest, of course, the importance of assessment and of clarifying problem severity in determining the appropriate assignment of treatment services, but the findings suggest an additional important aspect of substance abuse treatment. While it is appropriate to invoke the familiar bromide that more research is needed, the findings from this study, in combination with those indicating change in psychological functioning and the achievement of positive outcomes as a consequence of standard treatment, appear to indicate that substance abuse treatment should not be viewed as so narrowly focused that achievement beyond the level of change in drug use and antisocial behaviors is either unlikely or necessarily limited. Thus, one can hypothesize either or both of two possibilities. First, counselors in normative treatment follow the lead of their clients in terms of expressed needs and concerns, including those of emotional problems and difficulties in coping, and work with clients to resolve those issues with some apparent effectiveness. Second, we can posit that, as the client achieves success in coping with problems in one area of life functioning, he or she feels increased self-esteem and the confidence to test behaviors in other areas of life functioning. As a consequence, individuals with less severe mental health problems and/or with particular types of mental health disorders may show improved psychological functioning in association with the achievement of reductions in drug use achieved in typical substance abuse treatment programs employing typical counseling staffs.

4. Issues and prospects

4.1. Assessment, diagnosis, and placement

The study of CODs is less than 30 years old. The field can be characterized as having gone through stages of (a) discovery (i.e., identifying the phenomenon of clients with multiple disorders and clarifying its frequency), (b) establishing the significance of the phenomenon (i.e., understanding the relevance of COD for treatment outcomes), and (c) developing and assessing treatment initiatives (i.e., testing the efficacy of strategies targeted to the needs and

functioning of clients with multiple disorders). It is suggested that there can now be a utility to employing assessment and diagnostic strategies to identify those entrants to substance abuse treatment who show evidence of co-occurring mental disorder that requires or may be more effectively treated by employing integrated treatment or other interventions similarly demanding of additional resources. As described above, both prior research and the reality of resource availability would seem to dictate the relevance of this next stage of treatment research. Thus, we would argue that assessing severity of disorder should be explored for its significance in determining appropriate treatment response.

Ideally, the assessment of mental disorders would occur only after permitting a period of abstinence that extends up to a month or more to avoid the risk of confusing the client's presenting condition with the effects of his or her drug use (Center for Substance Abuse Treatment, 2005; Hasin, Trautman, & Endicott, 1998; Quello, Brady, & Sonne, 2005). The press of clinical programming often does not typically allow for such a deliberate strategy even where assessment does take place. Thus, in substance abuse treatment, clinicians may feel constrained to adapt practices to less-than-ideal conditions and accept the noise associated with the influence of substance use on assessment practices and results. One potential outcome of this less-than-ideal process is an overidentification of mental disorders, which may be a significant contributing factor to both the high prevalence rates reported by programs for CODs and findings of the effectiveness of single-disorder treatments for individuals identified as showing evidence of multiple disorders. To counter the risk of error in early diagnosis, it has been suggested that clinicians make use of multiple assessments conducted over time (Center for Substance Abuse Treatment, 2005) and rely on brief screening instruments at intake to determine if a later diagnostic assessment is warranted (cf. Center for Substance Abuse Treatment, 2005; Quello et al., 2005).

Categorical classifications, such as those used in diagnostic systems, have been the standard for communicating clinical information about mental health. These have been used to effectively communicate the nature of disorders to both practitioners and researchers (Flynn, 2005). Psychiatric classifications are also recognized public health tools that are used to convey statistical information about disorders in various populations (American Psychiatric Association, 1994). Dimensional measures that capture varying degrees of problem severity have been shown to be better predictors of outcomes (Marlowe, Kirby, Festinger, Husband, & Platt, 1997) as well as retention (Broome, Flynn, & Simpson, 1999). Indeed, dimensional models have been proposed for some *Diagnostic and Statistical Manual of Mental Disorders (DSM)* diagnostic classifications, and authors of the future *DSM-V* may consider alternate approaches to diagnostic assessment (cf. Widiger & Simonsen, 2005a, 2005b), which would convey not only the presence of

psychopathology but also the intensity of the problem and its associated symptoms. If adopted by the American Psychiatric Association in their next *DSM* revision, dimensional indicators of severity will provide a richer and more dynamic picture of presenting problems. This more progressive method of diagnostic evaluation may help to improve assessment and diagnostic practices.

During the last several years, a new framework was developed to permit the appropriate placement of program entrants evidencing COD into levels of care based on severity of disorders. This framework is a heuristic continuum consisting of four quadrants specifying both locus of care and level of severity of co-occurring substance abuse and mental disorder (U.S. Department of Health and Human Services, 2002). The framework also indicates service-level coordination, which can vary from consultation to collaboration to integration. The American Society of Addiction Medicine Patient Placement Criteria provide decision rules for CODs and for specifying appropriate treatments based on severity of mental disorders (Mee-Lee, Shulman, Fishman, Gastfriend, & Griffith, 2001). These standards recommend placement into two types of care based on the program's ability to respond to individuals with CODs. Dual-diagnosis-capable programs are substance abuse treatment programs that can treat emotional, behavioral, or cognitive types of mental health problems; dual-diagnosis-enhanced programs are mental health programs that treat "more unstable or disabling" mental disorders and accompanying substance-related disorders (Mee-Lee et al., 2001, p. 9). A comparable distinction is also made for addiction-only programs.

4.2. Staffing and training for COD

It is important to recognize and acknowledge that substance abuse counselors have played and will continue to play a significant role in the treatment of COD. Individuals with substantial educational background, often seen as desirable for the treatment of mental disorder (if not substance use disorders), are the exception rather than the rule in typical public programs, and there appears little reason to anticipate dramatic change in that situation. While the provision of training opportunities can provide an important supplement to educational and experiential backgrounds, and the Center for Substance Abuse Treatment has taken significant action to make opportunities available specific to the issue of COD (see, e.g., Clark, Power, Le LeFauve, & Lopez, 2008), the difficulties in accessing training are detailed in the national survey undertaken by the *Addiction Technology Transfer Center* (2001). They report that substantial barriers impede the ready availability of training and will need to be overcome to deliver the promise of those well-intended efforts. Specifically, time, inadequate agency resources, the press of clinical activity, and bureaucratic entanglements have all been cited as hurdles to be overcome in accessing training. Certification and licensure initiatives have also helped to increase the qualifications of substance

abuse counselors, although frequently without complementary increases in counselor income. One initiative designed to enhance counselors' skills in working with substance abuse clients showing mental disorder at a level below that of serious mental illness has been reported as achieving positive findings in terms of changes in knowledge and attitudes, although findings are not yet available in terms of the impact of this training initiative on client outcomes (Hunter et al., 2005). While increased knowledge and skills development are clearly desirable objectives, it is important to recognize that single-disorder treatment as practiced by typical counseling staff has been found effective in achieving behavior change in terms of substance use and crime, as well as psychological functioning for many showing COD. It behooves us now to clarify the nature and severity of mental disorders requiring the specialized skills of typically scarce mental health specialists and, indeed, the nature and severity of disorders that can be effectively treated through additional training provided to counseling staff.

4.3. Responding to the ongoing threat of relapse

Evidence of mental disorder at program entry has long been reported as significant to relapse following drug treatment (Brown, O'Grady, Battjes, & Farrell, 2004; Compton et al., 2003; McLellan, Luborsky, Woody, O'Brien, & Druley, 1983; Rounsaville, Kosten, Weissman, & Kleber, 1986; Rounsaville, Tierney, Crits-Christoph, Weissman, & Kleber, 1982; Shanahan et al., 2005). Indeed, risk of relapse for all treated drug users has come to be seen as so pervasive that the disorder itself has come to be characterized as a chronic and relapsing medical illness akin to diabetes and hypertension (McLellan, Lewis, O'Brien, & Kleber, 2000). It can be reasoned that cause for a greater optimism about the effectiveness of treatment can be seen in the repeated findings of substantial minorities of individuals maintaining drug abstinence after a single treatment experience for follow-up periods of up to 12 years (Flynn, Joe, Broome, Simpson, & Brown, 2003a, 2003b; Simpson & Sells, 1990). Nonetheless, there is little question that most substance users face continuing threats to their efforts to maintain posttreatment abstinence. Responding to that ongoing threat of relapse would seem to be a next great challenge to the treatment of substance users generally and of those showing evidence of COD specifically. Thus, whether one believes that the potential for relapse is a long-term danger for many or an inevitability for all, the continuing reliance on an acute care system of treatment would appear misguided at best. The need to provide ongoing support and/or monitoring to clients exiting an initial period of skills building and/or cognitive restructuring appears essential to maintaining the behavioral change that is the clear consequence of treatment. As argued by Drake et al. (2005), there is now a considerable body of study describing the internal, interpersonal, and community-based threats to the continuing recovery of clients manifesting COD.

Studies of interventions designed to counter those threats and provide long-term posttreatment assistance have been limited. It seems likely that inactivity in this area reflects, in part, an unwillingness to move beyond the narrow borders of existing treatment programming. The time would seem propitious, if not urgent, that we do the latter. As we have maintained, it is important that we create and test strategies that do not exceed the resource capacity of typical treatment programs. In that regard, 12-step programs have been found effective and willing allies to substance abuse treatment (Humphreys et al., 2004; Timko & Moos, 2002; Timko & Sempel, 2004). Other mutual help organizations such as Fairweather Lodges (Fairweather, Sanders, Cressler, & Maynard, 1969) and Oxford Houses (Jason, Olson, Ferrari, & Lo Sasso, 2006; Molloy, 1992) have also been found effective in maintaining the gains of the primary treatment experience for mental health and substance abuse clients, respectively. As described by Mueser et al. (2002), within the area of mental health, there is growing interest in working with the client to empower the individual to be an effective agent in his or her own long-term recovery, making use of a range of interventions for symptom management and life skills training. Finally, it has been found that the structured use of telephone contacts by counseling staff during the months posttreatment has the potential to provide a cost-efficient strategy for encouraging and monitoring the positive posttreatment functioning of substance abuse treatment clients (McKay, Lynch, Shepard, Morgenstern, et al., 2005; McKay, Lynch, Shepard, & Pettinati, 2005; McKay et al., 2004). While it remains incumbent on the treatment research community to assess those strategies that have real potential for clinical implementation, and it is all too apparent that the treatment community is far too often understaffed and overburdened, both are too well aware of the continuing risk for relapse for individuals exiting treatment programs to allow the current system of acute care to be maintained without change. There is a need to understand strategies for taking the next step in effective treatment if we are to maintain and extend the real gains of primary treatment for clients with CODs and for all clients.

5. Summary and recommendations

The demand on substance abuse treatment programs to respond to the multiple presenting problems of incoming clients is neither new nor likely to diminish over time. Nor is this demand likely to vary greatly in association with the availability of resources. Indeed, there is every indication that treatment providers themselves feel that it is their responsibility to attend, to the extent it is feasible, to the range of client problems they confront. In this context, it is important to take note of findings from several studies that individuals manifesting low to moderate levels of mental disorder in association with substance abuse appear to respond positively in terms of both drug use and psychiatric

symptoms to the nonspecialized treatment provided in drug abuse programs. However, those same studies also point to the importance of specialized treatment specifically responsive to the needs and functioning of those showing moderate to severe levels of mental disorder. That is, in the interest of expending limited resources wisely, it is important for substance abuse treatment programs to have the capacity to identify for specialized treatment those COD clients whose disorder is of a severity and type that justify the use of those resources. The dearth of human resources appropriate to specialized care within substance abuse treatment is evident from several studies and is a cause for concern. In that context, it is noteworthy that the mental health and substance abuse treatment systems have been found to serve clients manifesting different levels of mental disorder severity and with differing profiles of COD. It seems unlikely to be happenstance. Rather, one can posit that the individual and/or the system effects a partial solution to demands that would otherwise overtax the capability of each system. Nonetheless, it remains our responsibility to develop and test treatment strategies appropriate to the needs of clients—and to the real capabilities of the treatment systems serving those clients. As the articles in this special issue demonstrate, that challenge has been embraced by many of our colleagues.

An additional treatment concern is associated with the changing conceptualization of drug abuse and its particular significance for the client showing evidence of COD. Drug-abusing individuals are widely characterized as continuously at risk for relapse. Several studies suggest that where drug abuse is complicated by mental disorder, the long-term prognosis is even bleaker. Nonetheless, treatment programming continues to be episodic at best rather than recovery based as the changed conceptualization of the drug user would suggest. In short, a next challenge would appear to be the development and testing of strategies of long-term monitoring and support consistent with a view of the exited client as being at continuing risk for relapse to substance use and/or psychiatric disorder. While recognizing the obvious complexity of moving from a treatment objective of cure through an emphasis on acute care to a treatment objective of recovery through an emphasis on long-term monitoring and support, such a transition is both consistent with the changed conception of the drug abuse client and would seem critical to the increased effectiveness of treatment efforts with clients evidencing COD.

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