Psychosocial Interventions for the Long-Term Management of Patients With Severe Mental Illness and Co-Occurring Substance Use Disorder

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People with severe mental illness and co-occurring substance use disorders, also referred to as dual disorders, experience worse outcomes over the long term than people without co-occurring substance abuse. Integrated treatment of both disorders has been shown to be more effective than separate treatments offered in parallel or in sequence. The principles and strategies of integrated dual disorder treatment (IDDT) include integration of treatments for the mental illness and the addiction, use of strategies to engage people in treatment, use of pharmacologic and psychosocial interventions that are matched to the patient's stage of change, and use of a long-term perspective. The stages of change, the stages of treatment, and the psychosocial strategies used at each stage of treatment are outlined.

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The lifetime prevalence of an alcohol or drug use disorder in patients with schizophrenia or bipolar disorder is approximately 50%, compared with only 16% in the general population.[1,2] Co-occurring substance use disorders complicate the course of illness and treatment of patients with these severe mental illnesses. In these patients, substance use is associated with treatment nonadherence, suicidality, victimization, violence, hospitalization, homelessness, incarceration, and increased risk for human immunodeficiency virus (HIV) and hepatitis B and C infections. Separate treatment of the mental illness and substance use disorder is not as effective as integrated dual disorder treatment (IDDT), an approach that integrates treatment for both the mental illness and the substance use disorder. The principles and psychosocial treatment strategies needed for an effective long-term IDDT program are reviewed and discussed here.

OVERVIEW OF THE PROBLEM OF DUAL DISORDERS

The Epidemiologic Catchment Area (ECA) Study[2] indicated that 47.0% of people with schizophrenia and 56.1% of people with bipolar disorder had a lifetime co-occurring substance use disorder. Patients with co-occurring or dual disorders experience worse outcomes, utilize more treatment, and incur greater costs than patients with single disorders. The presence of a co-occurring disorder increases the risk of relapse of the other disorder. For example, co-occurring depression increased risk of relapse of substance abuse in 250 patients with substance use disorders (SUD).[3] Similarly, cannabis use increased the risk of relapse of psychosis in a study[4] of 93 patients with schizophrenia (42% vs. 17% relapsed over 1 year). When mild and heavy cannabis users were compared, significantly ($p = .03$) more and earlier psychotic relapses occurred in the heavy cannabis abusing group. Risk of relapse is in part explained by poor adherence to medications in patients with dual disorders.[5,6]

In addition to suffering from greater symptom severity and more frequent relapses, people with dual disorders are more likely than people with a single disorder to be violent,[7] to be a victim of violence,[8] and to experience housing instability or homelessness,[9] hospitalization,[10] or incarceration.[11,12] People with dual disorders also have more medical problems, including HIV and hepatitis,[13] and tend to have higher rates of hospital and emergency room utilization.[10] The increase in all these problems results in higher costs to service systems[14] and burden to families.[15]

More than 25 studies, completed over the past 3 decades, have shown that treatment is more effective when both mental health and substance use treatments are integrated than when services are offered in a separate or parallel fashion.[16] Effective integrated programs unify treatment for mental illness and substance use disorder

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into a cohesive package and tailor treatment to the individual's psychosocial needs and motivation to change, resulting in better outcomes for this difficult-to-treat population. For example, the New Hampshire Dual Diagnosis treatment study[17] of 223 people with severe mental illness and co-occurring substance use disorder showed that, over 3 years, more participants receiving integrated treatment than those receiving parallel treatment achieved substance abuse remission (approximately 60% vs. 20%).

PRINCIPLES AND STRATEGIES FOR INTEGRATED DUAL DISORDER TREATMENT

Principles of IDDT

Principles, components, and strategies of IDDT are described in detail in a clinician handbook[18] and will be briefly discussed here. The most important principle of IDDT is that mental health and substance abuse treatments are *integrated* and delivered by a multidisciplinary team of clinicians who give the patient a coherent message about treatment.[16] Treatment is *comprehensive*, utilizing a range of psychosocial and pharmacologic interventions that are available in a *variety of modalities* (i.e., individual, group, and family counseling) and that are provided in a stage-wise, flexible manner, as will be reviewed below. Because patients with severe mental illnesses experience substantial symptoms and cognitive deficits, treatments are modified to meet their needs. Counseling, for example, is less confrontational and more supportive. This model emphasizes strategies designed to engage and retain patients in treatment. In addition, because schizophrenia, bipolar disorder, and substance use disorders are chronic illnesses that most people learn to manage over months to years, treatment is offered in a *long-term* format. Effective treatment is individualized to address each patient's unique needs, taking into account cultural and ethnic diversity.

Components of IDDT Psychosocial Interventions

IDDT is a model of comprehensive treatment whereby psychosocial interventions address the environmental and functional problems, such as homelessness, unemployment, and lack of social support, that are associated with co-occurring disorders.[19,20] Important components of IDDT are described below.

Stagewise intervention. Different strategies are useful as patients progress toward recovery. Early on, clinicians must often reach out to people in the community, providing practical assistance and support in order to develop a trusting relationship with patients and to engage them in treatment. Once patients are engaged, clinicians use motivational counseling to help patients set their own goals and develop motivation to manage their illnesses. Then clinicians use a variety of substance abuse counseling and rehabilitation strategies to help patients develop the skills and gain the supports needed.

Vocational and parenting support. Many patients with co-occurring severe mental illness and substance abuse want to work and benefit from vocational supports. Patients who are parents can also benefit from support for this important adult role.

Social support. Working with patients to develop a sober support system is key. Family, group, and self-help interventions are formats of treatment that can enhance social support. Social skills training can help patients resist peer pressure and develop the skills to establish and maintain friendships with others who are sober.

Rehabilitation or skills training. Training to enhance living, leisure, coping, and vocational skills may be necessary to help patients manage their illnesses and live independently in the community.

Case management. Integrated treatment of dual disorders can be delivered in a variety of case management models.[21] Intensive case management or assertive community treatment may be particularly useful to reduce homelessness and repeated hospitalization in patients who have difficulty with housing instability and institutionalization.

Residential support. Patients with dual diagnosis are particularly vulnerable to homelessness and often need help obtaining and maintaining safe and decent housing. IDDT may be offered in a residential treatment setting. A review[22] of 20 controlled studies of residential treatment for dual disorder patients concluded that when residential substance abuse and mental health services were integrated and modified to meet the needs of persons with severe mental illness, they were more effective than traditional residential treatment.

Flexibility. People with dual diagnosis do not all respond to the same interventions. Treatments need to be tailored to the individual's needs and preferences. For example, intensive family interventions might be appropriate for a young adult who is living at home with his parents. Additionally, gradual entry into treatment may enhance engagement, and gradual discharge from particular treatment strategies, such as residential placement, may be beneficial to maintain gains.

Interventions for nonresponders. A number of ancillary interventions may be helpful to people who do not improve with basic approaches, although research regarding their effectiveness is still preliminary. Money management,[23,24] intensive family therapy,[25] trauma treatment,[26,27] and conditional discharge[28] are strategies that might be tried early on for particular individuals or after failure of standard approaches for other individuals. For example, a trauma intervention would be appropriate for a person who has co-occurring posttraumatic stress disorder symptoms. Although residential treatment is expensive, it might be chosen early on for an individual who is homeless and has not responded to appropriate engagement-stage interventions.

Table 1. Strategies to Use at Each Stage of Treatment Appropriate to the Stages of Change[a]

Stage of Change	Stage of Treatment	Strategies
Precontemplation	Engagement Establish alliance and regular treatment contact with individual	Outreach Practical assistance Crisis intervention Assessment of mental illness and substance use disorder
Contemplation and preparation	Persuasion Motivate patient to participate in treatment for mental illness or substance abuse	Psychiatric stabilization Motivational interviewing Rehabilitation or skills training Education about substances of abuse and mental illness Structured activities Medications Ongoing assessment of mental illness and substance use disorder
Action	Active treatment Help patient learn skills to manage mental illness and to reduce use/abuse of substances	Teach self-monitoring Social skills training Self-help, 12-step programs Substitute activities Contingency management Cognitive-behavioral therapy Medication
Maintenance	Relapse prevention Help patient learn skills to avoid relapse and to expand recovery to other areas of his or her life	Relapse prevention plan Cognitive-behavioral and supportive interventions to enhance functioning in work, relationships, leisure, health, and quality of life Self-help programs

[a]Based on Osher and Kofoed[30] and McHugo et al.[31]

STAGES OF CHANGE

One of the fundamental principles of IDDT is that treatment is provided in a stagewise fashion tailored to each patient's level of motivation to change. Prochaska and DiClemente[29] described change as a process that proceeds through identifiable stages. During *precontemplation*, patients are not aware of the negative consequences of the health behavior, such as substance use or mental illness behaviors, and are not considering change. For example, a patient perceives that using substances is enjoyable and does not cause any problems. During *contemplation*, patients consider the advantages and disadvantages of the behavior and contemplate change. In the *preparation* stage, the patient begins to prepare for change. During the *action* stage, the patient starts to change the behavior, e.g., cuts back on the quantity and frequency of substance use, begins to take medications for a mental illness, or uses new strategies to reduce mental illness behaviors. In the final stage, *maintenance*, the patient avoids relapse into the old behaviors. People often proceed through the stages for recovery from the mental illness before they proceed through the stages of recovery for their substance use disorder, or vice versa, rather than changing both simultaneously. People may circle back through these stages several times over the course of their recovery process.

STAGES OF TREATMENT

Effective programs tailor treatment interventions to the person's stage of change. Stagewise treatment or recovery involves the following processes, which are summarized in Table 1.[30,31]

Engagement

The patient is not yet meeting regularly with a clinician or the treatment team. The clinician's goal is to engage the patient in treatment and to develop a trusting relationship.

Persuasion

Although the patient is meeting regularly with a clinician, he or she is still not motivated to manage his or her illnesses. The clinician's goal is to help the patient become motivated for recovery-oriented treatment and, specifically, to weigh the positive and negative aspects of the substance use or mental illness. The clinician's task is to eventually persuade patients that the benefits of sobriety or mental illness management outweigh the perceived benefits of continued substance use or mental illness behavior.

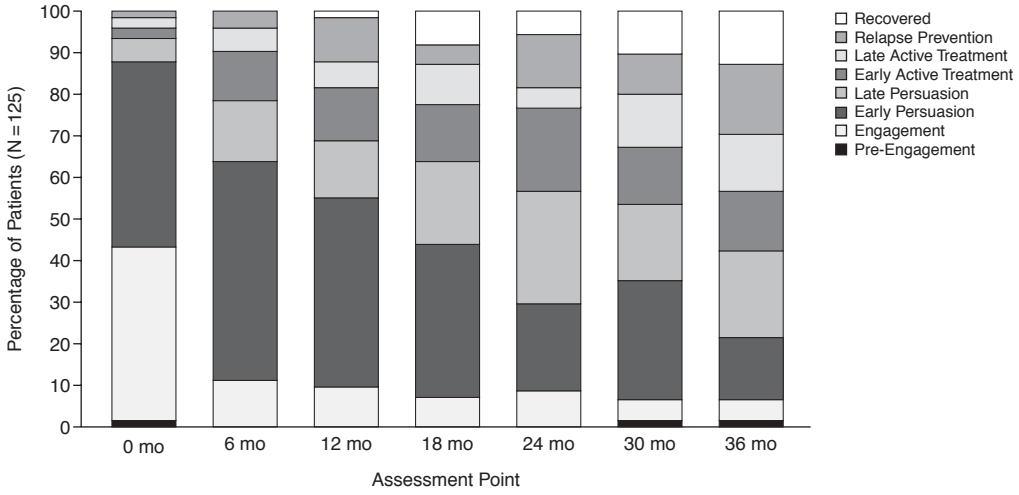
Active Treatment

In this stage, the patient begins to cut back on substance use or to manage his or her mental illness. The goal of the active treatment stage is to help patients acquire the skills and supports necessary to manage both their illnesses, including reducing and stopping their use and abuse of substances.

Relapse Prevention

Once stable remission is established, the goal of this stage of treatment is to help patients develop and utilize

Figure 1. Attaining Remission Occurs in Stages[a]



[a]Reprinted with permission from McHugo et al.[31]

skills to prevent relapse and to expand recovery to other areas of their lives.

Research shows that these stages of treatment can be reliably measured and that people in IDDT show progression through these stages. McHugo et al.,[31] for example, showed that IDDT treatment participants progressed through these stages over time. By 3 years, more than 50% of the group was in active treatment (actively stopping substance abuse), in relapse prevention (having stopped substance abuse), or in complete recovery (Figure 1).

PSYCHOSOCIAL INTERVENTIONS TAILORED TO STAGE OF TREATMENT

As patients begin and move through the recovery process, different treatment strategies are effective. More than one strategy may be chosen based on an individual patient's needs, and multiple strategies are utilized at the same time, or in sequence, as part of this comprehensive treatment. The vignette below exemplifies the use of multiple stagewise strategies in the treatment of Maria.

Maria, a 26-year-old woman, came to the clinic at the urging of her girlfriend. Outreach and practical assistance were utilized to help Maria become engaged in treatment, and a comprehensive assessment was done regarding her symptoms of psychosis and alcohol use. Motivational counseling was then used to help her establish her personal goals and examine her current behaviors. She was already motivated to improve her problems with sleep and fear or paranoia, so she started taking an antipsychotic medication for psychosis. Because she wanted to feel less lonely, her case manager encouraged her to attend a skills training group to help her learn healthier coping strategies and to get social support. She also participated in supported employment services, which helped her get a job during the persuasion stage. Later in that stage, Maria moved into a supported apartment, as she realized that it was impossible for her to cut down on her drinking in her current living setting. One year into treatment, Maria was more motivated to manage her illnesses, so she began to attend a group where cognitive-behavioral techniques were used to help her learn skills to stop substance use and to manage illness symptoms. She also began to attend Alcoholics Anonymous (AA) with the support of her case manager, and she started another medication, acamprosate, to assist in achieving sobriety from alcohol. After she had been abstinent for 6 months, her treatment team continued to utilize motivational counseling and cognitive-behavioral strategies to help her implement her relapse prevention plan, which involved continued participation in AA, continued housing and employment supports, and taking care of a new pet.

The strategies utilized in IDDT are outlined below according to the stage of treatment in which their use is most important, although some of the strategies, such as motivational interviewing, are important to utilize during all of the stages.

Engagement

Because many people with dual disorders have difficulty accessing and making use of treatment, effective programs emphasize engagement by providing the following services by staff who have the same language capacity as and cultural sensitivity to people who are being engaged in treatment.

Outreach. Treatment teams try to meet patients and get to know them in their own environments, including in their homes, on the streets, or in homeless shelters in the community.

Practical assistance. Practical assistance is provided to address patients' current needs, such as food, clothing, housing, medical care, or benefits.

Crisis intervention. Because people with dual disorders often have unstable lives, crisis intervention may be provided to resolve other situations and to engage the patient in treatment.

Assessment of mental illness and substance disorder. During this stage, clinicians begin the process of assessing both illnesses, which enables the team to develop an effective treatment plan. The assessment process continues throughout treatment.

These engagement strategies enable people to access services and develop trusting relationships with providers. Research shows that when these approaches are utilized in case management–based services or in combinations of services, participants are more likely to be engaged and retained in treatment and to experience better outcomes.[32–34]

Persuasion

Even when patients are engaged in treatment, they are often unmotivated to manage their own illnesses. Clinicians can use motivational interviewing as well as a number of other strategies during this stage of treatment to help people become ready to manage their illnesses. The treatment strategies described below can be offered in multiple modalities, including individual, group, and family. Because many people use substances in a social setting, providing treatment in groups is appropriate and effective. For patients who have family contact, involving the family in treatment is important.[35]

Education about mental illness, substances of abuse, and their interactions. In a nonjudgmental style, treatment providers offer information relevant to the individual patient about substances, mental illness, and their impact on each other.

Motivational interviewing. This counseling style, in individual, family, or group interventions, helps patients become ready for other treatments for their illnesses. Motivational interviewing instills motivation by creating a discrepancy between the person's current substance use or mental illness behavior and his or her own important personal goals. Although this style of counseling can be used in all the stages of treatment, it is especially important during the persuasion stage.

The core principles of motivational interviewing are to *express empathy, establish personal goals, develop (or perceive) discrepancy, roll with resistance,* and *support self-efficacy*.[36] When clinicians use a nonjudgmental, *empathetic* style of listening and talking, patients are more willing to engage in a working relationship with clinicians, and to *establish personal goals* for themselves. When they feel understood, they are better able to recognize, through a systematic exploration of the advantages and disadvantages of their current behaviors, that their substance use or mental illness gets in the way of reaching their personal goals. This *discrepancy* between current illness and life goals enhances motivation to change. However, resistance to or fear of change is recognized as a normal reaction in this process. Clinicians *roll with resistance,* i.e., rather than confronting patients, clinicians help patients who are fearful of change step back and refocus on their goals. Another commonly recognized barrier to change is the belief that change is not possible. Because many dual disorder patients have experienced substantial difficulties in their lives, they may expect to fail, or have low *self-efficacy*, and thus do not try to change. Clinicians can enhance or *support self-efficacy* by helping patients set small, achievable goals for themselves and by reminding them of their past successes.

Psychiatric stabilization. Because severe symptoms of psychosis, mania, or depression interfere with addressing substance use, clinicians may help patients stabilize their psychiatric illness before addressing their substance abuse. This strategy is especially useful for people who use substances as a way of coping with psychiatric symptoms.

Structured activities. Many people with dual disorders have replaced most or all other meaningful or enjoyable activities with using substances. Clinicians can help them get involved in other pleasurable activities as the first step toward being able to give up substances. Getting a job through supported employment services, for example, motivates many people to manage their illnesses.

Skills training. Patients may need help rebuilding social, work, and daily living skills. Skills training can be offered individually or in groups.

Contingency management. This strategy involves systematically providing incentives and/or disincentives for specific behaviors, such as treatment attendance or substance abstinence. Use of vouchers or small prizes contingent on attendance at a group or individual counseling session dramatically improves attendance[37] and is associated with better treatment outcomes.[38] Contingency management to reduce substance use is described below under Active Treatment, but it may be used in the persuasion stage for patients with low motivation to reduce substance use and initiate abstinence.

Of all the persuasion-stage interventions discussed here, motivational interviewing is the only strategy that has been tested as a stand-alone intervention for people with dual disorders in the persuasion stage. Motivational interviewing has been shown to enhance engagement and retention in treatment and to modestly improve treatment outcomes.[39–43] The other strategies listed above have been tested in combinations of interventions and in sequences of stagewise interventions.[16]

Active Treatment

Once patients are motivated to reduce their use and abuse of substances or change mental illness behavior, the following strategies, which can be provided in individual, self-help, other group, family, and residential modalities, are effective.

Self-monitoring. Clinicians teach patients to monitor their substance use and mental illness symptoms/behaviors as well as to recognize the triggers of substance use and the early warning signs of relapse of mental illness or substance use.

Cognitive-behavioral counseling. Clinicians can use cognitive-behavioral counseling individually or in group settings to help patients understand their motives for substance abuse and to develop strategies for coping with triggers and high-risk situations for substance use. This type of counseling can also be used to help patients learn how to manage symptoms of mental illness.

Substitute activities. Clinicians try to help patients get involved in substitute activities that are rewarding but do not involve substance use. A patient may decide, for example, that he will go to a gym in a safe neighborhood rather than play basketball with old cocaine-using friends.

Social skills training. Because many patients with dual disorders lack the skills necessary to refuse offers to buy or use substances as well as to make new sober friends, learning new social skills is an important component of dual disorder treatment.[44]

Self-help or 12-step programs. Research shows that use of self-help in conjunction with IDDT is associated with good outcomes. Although not all patients with dual disorders are willing to utilize self-help, those who do can learn new coping skills and benefit from the support. Referral to self-help meetings that are friendly to people with dual disorders, combined with coaching and support to help patients to attend such meetings, can facilitate the use of these groups. Double-Trouble in Recovery (DTR), Dual Recovery Anonymous, or other programs especially designed for patients with dual disorders are ideal, but if they are not available, AA or Narcotics Anonymous (NA) can be useful.[45]

Contingency management. The strategy of providing incentives such as money, vouchers, or prizes for the achievement of a previously agreed-upon goal, (e.g., a drug-free urine sample) can be effective in reducing substance use. Preliminary studies suggest that this strategy may be helpful for reducing cannabis,[46] tobacco,[47,48] and cocaine use[49] in dual disorder patients. In a promising study[24] of 22 patients with dual disorders, contingency management of Social Security disability benefits by a mental health center resulted in significantly ($p < .05$) less time spent using drugs and alcohol and better money management in the experimental group than in the control group.

Medication. Medications, such as naltrexone,[50] acamprosate,[51] and disulfiram,[50,52] may be prescribed to address alcohol abuse.

Research suggests that many of these active treatment interventions, including cognitive-behavioral therapy and self-help, show promise when utilized as a part of larger case management–based service[32] or in combination with, usually following, motivational interventions.[42,53] For example, Jerrell and Ridgely[54] showed that behavioral skills training in combination with case management and 12-step recovery programs reduced substance use and symptoms as well as improved residential stability, employment, and psychosocial functioning.

Relapse Prevention

Dual disorder patients who attain stable remission remain vulnerable to relapse.[55] To help patients maintain remission in the *relapse prevention stage*, clinicians can help patients to acquire new skills, attitudes, relationships, and supports. Typical treatment strategies used during this stage are described below.

Relapse prevention plan. A written and rehearsed plan of action is helpful to prepare people for both what to do when they experience a trigger to use substances and how to deal with a lapse so that they can prevent a full relapse from occurring. Early warning signs of mental illness relapse can be identified, and a plan to address them is also written out.

Cognitive-behavioral and supportive interventions. Teaching patients the skills to enhance functioning in other areas of life, including work, relationships, leisure activities, health, and quality of life, may help people maintain sobriety.[56]

Self-help programs. Some people find self-help programs useful during the relapse prevention stage of treatment and continue to use them for years. Increasing numbers of self-help programs for people with dual disorders exist, but traditional self-help groups such as AA and NA can also be useful for people with dual diagnosis during this stage.

The interventions described here are designed to address the risk and protective factors associated with substance use relapse. In particular, being aware of vulnerability, participating in meaningful daytime activities (including employment), utilizing sober social supports, living in stable housing, and continuing supportive treatment are thought to protect against relapse.[19,56–59] Although interventions to specifically treat patients in this stage have not been tested in stand-alone trials, research is underway.

THE ROLE OF MEDICATION IN IDDT

In IDDT, medication treatment for the mental illness and substance use disorders is integrated and coordinated

with psychosocial interventions. Prescribers meet regularly with the team and have a leadership role. Often, teams will work with patients on developing motivation to manage their mental illness with medications prior to working on other rehabilitation and treatment efforts, because psychiatric stabilization with medication enhances participation in rehabilitation and addiction treatment. Once psychiatric symptoms are stabilized, clinicians will work with patients on developing motivation for managing their substance use disorder. When this motivation is developed, medication for the substance use disorder may be indicated. Prescribers utilize motivational interviewing techniques[36] to enhance motivation to take and adhere to medications, in part by linking the beneficial effects of medication to making progress toward patients' own personal goals. Prescribers may also use cognitive and behavioral strategies to help patients who are motivated to take medications to remember to take them.

CONCLUSION

For patients with severe mental illness and co-occurring substance abuse, integrated treatment of mental health and substance use disorders is more effective than treating each disorder separately. Psychosocial interventions are the foundation of treatment and are most effective when they are matched to the patient's stage of change, i.e., offered in combinations or sequences tailored to the individual's needs and preferences over the long term. A growing body of research suggests that a variety of integrated psychosocial strategies are effective at improving outcomes.

Drug names: acamprosate (Campral), disulfiram (Antabuse), naltrexone (Revia and others).

Disclosure of off-label usage: The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration–approved labeling has been presented in this article.

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