

References for Evidence-based Practices and Articles on Recovery Management and Peer Support Services

Introduction – why we are here followed by articles and references on evidence based practices and programs

Recovery Management

What if we really believed that addiction was a chronic disorder?

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A quiet revolution is unfolding within the worlds of addiction treatment and recovery support. This revolution is founded on new understandings of the nature of substance use disorders and their management. It calls for shifting the treatment of severe and persistent alcohol and other drug (AOD) problems from an emergency room model of acute care (AC) to a model of sustained recovery management (RM). The RM model wraps traditional interventions in a continuum of recovery support services spanning the prerecovery (recovery priming), recovery initiation and stabilization, and recovery maintenance stages of problem resolution. Particularly distinctive is the model's emphasis on post-treatment monitoring and support; long-term, stage-appropriate recovery education; peer-based recovery coaching; assertive linkage to communities of recovery; and, when needed, early re-intervention.

PROMOTIONAL FORCES

There are several forces pushing the addiction field toward a redesign of its treatment processes. Frontline addiction professionals are articulating (and a growing number of scientific studies are confirming) the limitations of addiction treatment as currently practiced. Grassroots recovery advocacy organizations are calling upon the treatment industry to reconnect professional treatment to the larger and more sustained process of addiction recovery. Pioneer states (e.g., Connecticut) are building research, clinical, and recovery advocacy coalitions to infuse the recovery management model into new “recovery-oriented systems of care.” And finally, technological advances in the management of primary chronic health care problems (e.g., diabetes, heart disease, asthma, arthritis, cancer, chronic lung disease, glaucoma, irritable bowel syndrome) are suggesting alternative approaches through which severe and complex behavioral health disorders might be managed more effectively.

PREMISES

The shift from acute care to sustained recovery management models rests upon six propositions.

Alcohol and other drug problems present in transient and chronic forms. The transient forms vary in intensity, from the clinical (substance abuse and substance dependence) to the subclinical (problems not meeting DSM-IV criteria for abuse or dependence). Transient forms share a short duration (a single episode or period of problematic use) and a propensity for natural resolution or resolution through brief professional intervention. Transient AOD problems are common in community populations, but are more rarely represented among populations entering addiction treatment.

Compared to community populations, clients entering addiction treatment .are distinguished by: greater personal vulnerability (e.g., family history of substance use disorders, early age of onset of AOD use, developmental trauma), greater severity and intensity of use and related consequences, high concurrence of medical/psychiatric illnesses, greater personal and environmental obstacles to recovery, and less “recovery capital” (the internal and external resources required to initiate and sustain recovery).

The evidence is overwhelming that the course of severe substance use disorders and their successful resolution (addiction, treatment, and recovery careers) can span years, if not decades. Alcohol and other drug dependencies resemble chronic disorders (e.g., type 2 diabetes mellitus, hypertension, and asthma) in their etiological complexity (interaction of genetic, biological, psychological, and physical/social environmental factors), onset (gradual), course (prolonged waxing and waning of symptoms), treatment (management rather than cure), and clinical outcomes. To characterize addiction as a chronic disorder is not to suggest that recovery is not a possibility. There are millions of people in stable, long-term recovery from addiction.

The notion of addiction as a chronic disorder does, however, underscore the often long course of such disorders and the sustained “treatment careers” that can precede stable recovery. Recent studies have confirmed that the majority of people with severe and persistent substance use disorders (e.g., substance dependence) who achieve a year of stable recovery do so following 3-4 treatment episodes over a span of eight years.

*Severe and persistent AOD problems have been collectively depicted as a “chronic, progressive disease” for more than 200 years, but their historical treatment more closely resembles interventions into acute health conditions (e.g., traumatic injuries, bacterial infections). **If we (the practitioners of addiction treatment) really believed addiction was a chronic disorder, we would not: view prior treatment as a predictor of poor prognosis (and grounds for denial of treatment admission); convey the expectation that all clients should achieve complete and enduring sobriety following a single, brief episode of treatment; punitively discharge clients for becoming symptomatic; relegate post-treatment continuing care services to an afterthought; terminate the service relationship following brief intervention; or treat serious and persistent AOD problems in serial episodes of self-contained, unlinked interventions.***

*Acute models of treatment are not the best frameworks for treating severe and persistent AOD problems. **The limitations of the acute model of addiction treatment as currently practiced include: Failure to Attract: Less than 10% of U.S. citizens who meet DSM-IV criteria for substance abuse or dependence currently seek treatment, and most of those admitted to treatment arrive under coercive influences. Failure to Engage/Retain: More than half of the people admitted to addiction treatment in the U.S. do not successfully complete treatment, and 18% of people admitted to addiction treatment are administratively discharged from treatment. Inadequate Service Dose: A significant percentage of individuals completing treatment receive less than the optimum dose of treatment recommended by the National Institute on Drug Abuse.***

Lack of Continuing Care: Post-discharge continuing care can enhance recovery outcomes, but only one in five clients actually receive such care. Recovery Outcomes: The majority of people completing addiction treatment in the U.S. resume AOD use in the year following treatment, most within 90 days of discharge from treatment.

Revolving Door: Of those admitted to publicly funded addiction treatment, 60% already have one or more prior treatment admissions, and 24% have three or more prior admissions. Between 25% and 35% of clients who complete addiction treatment will be re-admitted to treatment within one year, and 50% will be re-admitted within 2-5 years.

A large number of people are undergoing repeated episodes of brief interventions whose designs have little ability to fundamentally alter the trajectory of substance dependence and its related consequences. This failure does not result from client foibles or the inadequate execution of clinical protocol by service professionals. It flows instead from a fundamental flaw in the design of the intervention — an acute care model of treating addiction that is analogous to treating diabetes or asthma through a single, self-contained episode of inpatient stabilization. In the AC model, brief symptom stabilization is misinterpreted as evidence of sustainable recovery.

Most people discharged from addiction treatment are precariously balanced between recovery and re-addiction in the weeks, months, and years following treatment. Recent studies have confirmed the fluidity of post-treatment adjustment. One such study conducted quarterly monitoring interviews of 1,326 clients over three years following an index episode of addiction treatment. Each client was categorized each quarter as 1) in the community using, 2) incarcerated, 3) in treatment, or 4) in the community not using. More than 80% of the clients changed status one or more times over the course of the three years. Beyond the groups of clients who categorically succeed or do not succeed stands a larger body of clients who vacillate between periods of recovery and periods of re-addiction. The precarious nature of early recovery is further confirmed by longer-term studies finding that stable recovery from alcoholism (the point at which the future risk of lifetime relapse drops below 15%) is not achieved until 4-5 years of continuous recovery, and that stable recovery from opiate addiction takes even longer. Such findings beg for models of sustained post-treatment monitoring and support.

PROMISES AND PROSPECTS

Recovery management models hold great promise in treating severe and complex substance use disorders. Chronic disorders are disorders that resist cure via brief intervention but can often be successfully managed (the achievement of full or partial recovery). Such management entails care and sustained support aimed at enhancing the strength, quality, and durability of remission periods and shortening the frequency, duration, and intensity of relapse episodes. This longer-term vision of the treatment and recovery process is based on several critical assumptions:

A single brief episode of treatment rarely has sufficient effect for those with the most severe substance use disorders to sustain recovery following the intervention. Multiple episodes of treatment, if they are integrated within a recovery management plan, can constitute incremental steps in the developmental process of recovery. Treatment episodes over time may generate cumulative effects.

Particular combinations and sequences of professional treatment interventions and peer-based recovery support services may generate synergistic effects (dramatically elevated long-term recovery outcomes).

RM models are focusing initially on the power of post-treatment monitoring and recovery support services. Early studies are confirming the potential utility of such approaches. One study of recovery management checkups (RMC) and early re-intervention over 24 months following treatment found that members of the RMC group had significantly fewer post-treatment days of substance use, were more likely to return to treatment, were more likely to return to treatment sooner, received treatment on a greater number of days following discharge from the index episode, and experienced fewer quarters during follow-up in which they were in need of treatment.

Treating alcohol and other drug dependence solely through repeated episodes of detoxification and brief stabilization is clinically ineffective and constitutes a poor stewardship of personal and community resources. It contributes to the pessimism of clients, service providers, policy makers, and the public regarding the prospects for permanent resolution of alcohol and other drug problems. It is time we acted as if we really believed addiction was a chronic disorder. Today millions of people are reaping the fruits of recovery while others continue to suffer. It is

time we widened the doorway of entry into recovery for those with the most severe and persistent substance use disorders. To achieve that will require changes in our thinking, changes in our clinical technologies, and changes in systems of service reimbursement.

MODEL DEFINITION

The recovery management model of addiction treatment shifts the focus of care from professional-centered episodes of acute symptom stabilization toward the client-directed management of long-term recovery. It wraps traditional interventions within a more sustained continuum of:

- **pre-recovery support services to enhance recovery readiness,**
- **in-treatment recovery support services to enhance the strength and stability of recovery**
- **initiation, and**
- **post-treatment recovery support services to enhance the durability and quality of recovery maintenance.**

The influence of this emerging model is evident in many quarters. It is evident in the research community's exploration of addiction as a chronic disease (O'Brien & McLellan, 1996; McLellan, Lewis, O'Brien, & Kleber, 2000). It is reflected in the work of the Behavioral Health Recovery Management project in Illinois (White, Boyle, & Loveland, 2003a/b) and other pioneer state efforts to reshape addiction treatment into a "recovery-oriented system of care" (e.g., see <http://www.dmhas.state.ct.us/recovery.htm>). Interest in recovery management at the federal level is revealed in the move toward a more recovery-oriented research agenda at NIAAA and NIDA, in SAMHSA and CSAT's growing interest in peer-based models of recovery support services (particularly within CSAT's Recovery Community Support Program), and in the White House-initiated Access to Recovery program funded and administered by CSAT. Private sector interest in recovery-focused treatment system enhancements is reflected in the Robert Wood Johnson Foundation's Paths to Recovery Initiative (<http://www.pathstorecovery.org>).

The shift from acute intervention models to models of sustained recovery support are further reflected in the policy agendas of new grassroots recovery advocacy organizations across the country (see <http://www.facesandvoiceofrecovery.org>). Describing the emerging "model" of recovery management is a bit like describing a painting while it is being created, but there are broad principles and early changes in clinical practices that are becoming visible.

There may be no single program in the country that reflects all the changes described below, but these changes do collectively represent what is increasingly being characterized as a model of *recovery management*.

MODEL PRINCIPLES

There are several cornerstone beliefs that distinguish the recovery management model from acute models of addiction treatment. These principles and values include:

- **emphasis on resilience and recovery processes (as opposed to pathology and disease processes),**
 - **recognition of multiple long-term pathways and styles of recovery,**
 - **empowerment of individuals and families in recovery to direct their own healing,**
 - **development of highly individualized and culturally nuanced services,**
 - **heightened collaboration with diverse communities of recovery, and**
 - **commitment to best practices as identified in the scientific literature and through the collective experience of people in recovery.**
- (<http://www.bhrm.org/papers/principles/BHRMprinciples.htm> and <http://www.dmhas.state.ct.us/corevalues.htm>)**

MODEL PRACTICES

White, Boyle, and Loveland's (2003a/b) **review of recovery management (RM) pilot programs reveals several critical differences between the RM models and traditional acute care (AC) models of intervention.** These differences span seven broad areas of clinical practice. **Engagement and Motivational Enhancement:** RM models place great emphasis on engagement and motivational enhancement. This emphasis is reflected in low thresholds of engagement (inclusive recruitment and admission processes), an investment in outreach and pre-treatment support services, and high retention and low post-admission extrusion (administrative discharge) rates.

Within the RM model, motivation is viewed as an important factor in long-term recovery, but is viewed as something that emerges within the service relationship rather than a precondition for service initiation. This emphasis is based on two premises: 1) chronic disorders increase in complexity and severity over time, and 2) recovery outcomes are enhanced by the earliest possible point of recovery initiation and stabilization. AC models of addiction treatment are essentially reactive in their wait for individuals to enter states of crisis that bring them to treatment. RM models reach out to people prior to such crises and sustain contact with them to re-nurture motivation for recovery following such crises.

Assessment and Service Planning: In traditional treatment, the clinical assessment is categorical (focused on substance use and its consequences), is pathology-based (focused on the identification and elucidation of problems), and is an intake activity. Problem severity dictates level of care, and the problems list drives the development of the treatment plan. In recovery management models, assessment is global (focused on the whole life of the recovering person), asset-based (focused on recovery capital — internal and external assets that can help initiate and sustain recovery), and is continual over the span of the service relationship. This altered view of the assessment process is based on three propositions:

- **Chronic disorders beget other acute and chronic problems; therefore, all aspects of the life of the recovering person must be assessed and incorporated into an integrated recovery process.**
- **Service intensity and duration are dictated by the interaction of problem severity and recovery capital; therefore, problem severity alone is an inadequate and disempowering framework for service planning.**
- **There are developmental stages of long-term recovery and service and support needs can shift dramatically in the transition from one stage to another; therefore, stage-dependent service needs must be continually reevaluated.**

The traditional professionally directed, short-term treatment plan of the acute care model is replaced in the RM model by long-term and short-term recovery plans prepared by the person seeking recovery. The former focuses primarily on reducing pathology; the latter focuses on building recovery capital and a meaningful life.

Service Duration and Emphasis: Acute care models do an excellent job of biopsychosocial stabilization, but often fail to facilitate the transition between recovery initiation and recovery maintenance. The evidence of such failure can be found in post-treatment relapse and treatment re-admission rates (see previous article in this series). Recovery management models rest on the assumption that the factors required to sustain recovery over a lifetime are different than those factors that spark brief sobriety experiments. The recovery management model emphasizes four post-treatment service activities: sustained post-stabilization monitoring; stage-appropriate recovery education and coaching; assertive linkage to local communities of recovery; and, when needed, early re-intervention.

Detoxification and traditional treatment exist within RM models, but the focus of service shifts from crisis intervention to post-treatment recovery support services. Locus of Services: The institutional focus of the acute care model (“How do we get the addicted person into treatment?”) shifts within the RM model to the larger community (“How do we nest the process of recovery within the client’s natural environment?”). With this shift, there is a greater emphasis on home- and neighborhood-based services and indirect monitoring technology (e.g., telephone, mail, Internet), as well as an emphasis on organizing indigenous recovery support services within the client’s physical and social environment. The RM model also pushes treatment agencies toward greater advocacy responsibilities related to stigma and discrimination, the removal of environmental obstacles to recovery, and the development of needed recovery support resources within local communities.

Role of the Client: In acute care models of intervention, the person entering treatment is viewed as the major obstacle to his or her own recovery, and thus is dependent upon an expert who assumes fiduciary responsibility for diagnosis and treatment. RM models champion the necessity and right of the person who is seeking recovery to self-manage his or her own recovery process. Each client must become an expert on his or her condition and its management. This emphasis is reflected in the client’s role in service planning and evaluation, as well as in the RM model’s inclusion of recovering people and family members in policy-making positions and as volunteers and paid service providers.

Service Relationship: The service relationship within the RM model shifts from one that is hierarchical, time-limited, and highly commercialized (the AC model) to one that is less hierarchical, more time-sustained, and more natural. In the RM model, the service provider role is more that of a teacher and ally within a long-term health care partnership. RM models are also pioneering new approaches to peer-based recovery support services that utilize new service roles, e.g., peer counselors, recovery coaches, recovery support specialists (White, 2004).

The RM model emphasizes the importance of sustained continuity of contact in a primary recovery support relationship. This relationship would be analogous to the long-term alliance between a primary care physician and his or her diabetic patient or the long-term support that exists within addiction recovery mutual aid societies.

IMPLEMENTATION CHALLENGES

The scientific evidence documenting the need to shift addiction treatment from an acute model of intervention to a model of sustained recovery management is so overwhelming it leaves one wondering why this model is not yet fully implemented. The roots of this failure are historical, conceptual, financial, organizational, and technical. The first barriers to treating addiction as a chronic disorder are the forces of historical and conceptual momentum. The modern field of addiction treatment is rooted in an acute biopsychological model of intervention. Addiction treatment programs were created in the image of the acute care hospital (via the profound influence of hospital-derived accreditation standards).

The central service role in addiction treatment was similarly modeled after the therapy disciplines of psychiatry, psychology, and social work (via addiction counselor certification and licensure standards). For those of us steeped in the modern world of addiction treatment, it is almost impossible to think of treatment in terms other than number of days or number of sessions, and hard to think about continuing care as anything beyond the availability of a short regimen of “aftercare” sessions. We have viewed addiction treatment in terms of multiple levels of care and theory-based modalities, but have failed to recognize that all of these approaches are nested within an acute care model of assess, admit, treat, and discharge. To escape this closed conceptual world, programs exploring the RM model are re-educating their service workers and are conducting a rigorously honest, recovery-focused inventory of their current service practices.

All of the reimbursement and regulatory systems that govern addiction treatment are based on the acute care model. These structures, originally designed to elevate the consistency and quality of addiction treatment, now constitute a major barrier to shifting to more recovery-oriented systems of care. When programs embracing the RM philosophy seek to admit families rather than individuals, create multi-agency service teams that include indigenous institutions and cultural healers, utilize long-term recovery plans rather than short-term treatment plans, incorporate peer-based recovery support roles/teams, develop non-clinical recovery support systems in local communities, and provide long-term monitoring and early re-intervention services, they find themselves facing almost insurmountable fiscal and regulatory barriers. It is tragic and ironic that the major challenges of recovery management are posed, not by the complex needs of individuals and families seeking recovery, but by the systems originally set up to help facilitate that recovery. The mainstream implementation of recovery management will require a major overhaul of the reimbursement and regulatory systems governing addiction treatment.

States like Connecticut that have begun this overhaul process are making a significant contribution to the future of addiction treatment and recovery in America (<http://www.dmhas.state.ct.us/recovery.htm>).

Slowing the development and implementation of RM models are the weak organizational infrastructures and high staff turnover rates that pervade the world of addiction treatment (McLellan, Carise, & Kleber, 2003). RM is founded on the continuity of relationship between an organization and the communities it serves and the capacity for sustained continuity of contact between each organization's front-line service professionals and the individuals and families within those communities who suffer from severe and persistent AOD problems. If there is an Achilles heel of the RM model, it is in the combined effects of organizational instability and staff turnover within the addictions field (Roman, Blum, Johnson, & Neal, 2002). If the process of RM is to parallel that of the long-term relationship between a primary care physician and a patient/family impacted by a chronic disease, that instability and turnover must be reversed.

The lack of a science-based understanding of long-term recovery constitutes a significant obstacle to the design of RM programs. As a field, our scientific knowledge about addiction and brief models of treatment has grown exponentially in recent decades, but our science has yet to connect the problem and the intervention to the process of long-term recovery. We know comparatively little from the standpoint of science about the prevalence, pathways, and styles of long-term recovery.

The ability to find potent combinations and sequences of professionally directed treatment interventions and peer-based recovery support services rests on the emergence of a recovery research agenda at the federal level. Without scientific data, RM pioneers will lack a reliable compass to navigate the recovery frontier.

A fifth obstacle in implementing RM models of care involves the integration of professional-directed treatment services and peer-based recovery support services (particularly within the newly emerging role of recovery coach). Questions abound related to such integration.

- **Are recovery support services best provided by addiction treatment organizations or by free-standing recovery support and recovery advocacy organizations?**
- **Should recovery support services be added to the role of addiction counselor or segregated within a new specialized role?**
- **What are the best ways to recruit, train and supervise recovery support specialists?**
- **What are the boundaries of competence of these new recovery support specialist roles, and how do they fit into larger multidisciplinary teams?**
- **Which models of integrating or coordinating professional and peer-based recovery support services are associated with the best long-term recovery outcomes?**

Answers to such questions are crucial to the future evolution of the RM model, and their absence constitutes a major implementation obstacle.

The ethical guidelines that have guided addiction treatment agencies and addiction counselors for the past three decades grew out of the acute care service relationship and were closely modeled after the ethical guidelines for psychologists and social workers (e.g., discouragement or prohibition of self-disclosure, prohibition of all dual relationships, prohibition of gifts, etc.). These guidelines, which presupposed a short-term, expert-based fiduciary service relationship, do not easily fit the less hierarchical and more enduring service relationships that characterize the RM model. It is crucial that ethical standards evolve to guide the provision of professionally delivered and peer-based recovery support services. The lack of current ethical guidelines for recovery support services raises the ethical vulnerability of service organizations and service professionals.

POTENTIAL PITFALLS

This three-part series on the recovery management model of addiction treatment and recovery support would be incomplete without an exploration of some of the potential pitfalls of the RM model. Experience to-date suggests three potential pitfalls beyond the implementation challenges noted above.

Not everyone with an AOD-related problem needs RM services. Many individuals with such problems will resolve these problems on their own or will do so through mutual aid or brief professional intervention. Misapplying an RM model to persons with low problem severity and high recovery capital could generate iatrogenic effects within the RM model. Such misapplication could injure persons with transient AOD problems by inappropriately attaching a stigma-laden diagnosis and delivering services that are ineffective, a financial burden, and potentially harmful.

The emphasis on addiction as a chronic disorder within the RM model could inadvertently contribute to cultural pessimism about the resolution of AOD problems and heighten the stigma and discrimination attached to those problems (Brown, 1998). To counter such effects, **RM models must constantly emphasize the reality of full recovery in the lives of millions of people who have suffered from severe and prolonged AOD problems.**

The 1980s witnessed a period of institutional profiteering in which persons with alcohol and other drug problems were viewed as a crop to be harvested for financial profit. A too-rapid shift to RM models of reimbursement could unleash the same forces. Profiteers could garner large, capitated contracts for recovery support services, but then minimize the services delivered through such contracts to maximize institutional and personal profit. These profiteers could escape accountability for recovery outcomes behind the rhetoric that addiction is a chronic disease. To avoid this, RM models of reimbursement must include a high level of accountability for recovery outcomes. This will require clinical information systems that can track clinical outcomes and other performance indicators across multiple episodes of care.

Attempts to shift addiction treatment from a revolving emergency room door (via unending cycles of brief intervention) to a model of sustained recovery management face many implementation obstacles and potential pitfalls. These obstacles and pitfalls are offset by the potential of the RM model to align the design of addiction treatment with the growing body of scientific evidence documenting the chronicity of severe AOD problems and the complexity of long-term recovery. That potential and what it means for millions of people suffering from addiction will inspire many addiction professionals and addiction treatment organizations to experiment with this fundamental redesign of addiction treatment.

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Reviews of Note: An Update on the Neurobiology of Addiction

Chronic overstimulation of dopaminergic centers appears to skew systems for brain reward and for planning.

Although the nomenclature of the DSM-IV does not include the term "addiction," investigators use it to describe the compulsive preoccupation with obtaining substances that is so disastrous for people with substance-use disorders and for society. A recent issue of *Nature Neuroscience* contained several reviews of recent advances in addiction research in humans and animals. A synopsis of these reviews follows.

With addictions (and these might include addictions to "natural" stimuli such as food, sex and gambling), the inherent properties of the substance interact with the inherent vulnerability to these effects in an individual. Brain reward systems begin to dominate systems for planning and control of impulsivity. All addicting substances have common effects in vulnerable people, including acute reward, craving, sensitization, tolerance, conditioned responses to environmental cues (including memories of substance use), negative affective and cognitive states upon withdrawal, and propensity to relapse. Even substances that are not primarily dopaminergic (again, including natural stimuli) have effects that are mediated by mesolimbic dopamine pathways. These pathways include the ventral tegmental area of the midbrain, the nucleus accumbens, and their targets (e.g., the amygdala, the hippocampus, the hypothalamus, and regions of the frontal cortex). Addicting substances also influence the activity of endorphins, excitatory amino acids, corticotropin-releasing factor (CRF), and gene transcription factors.

Chronic overstimulation of dopaminergic centers appears to burn out these reward and planning systems and leads to reduced efficacy of normal rewards. Increased stimulation becomes necessary to produce euphoria; dysphoria occurs when the drug is not available; and repeated drug exposure decreases sensitization and escalates the increases in dopamine release. CRF changes and dopamine depletion in the prefrontal cortex may contribute to the hypofrontality that characterizes substance-use disorders, that increases perseverative behavior, and that impairs decision making, assessment of risks and rewards, and impulse control.

Comment: Diverse substances are associated with similar changes in animals and people. This indicates that the physiology of addiction is a primary force that skews systems that exist to capture attention and compel behavior in the direction of goals that should promote survival. Instead, the systems redirect individuals who are constitutionally vulnerable to overstimulation by rewarding substances or activities.

— *Steven Dubovsky, MD*

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Citation(s):

Dackis C and O'Brien C. Neurobiology of addiction: Treatment and public policy ramifications. *Nat Neurosci* 2005 Nov; 8:1431-6.

- [Medline abstract](#) (Free)

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- [Medline abstract](#) (Free)

Successful Trial Caps 25-Year Buprenorphine Development Effort

Research Findings
Vol. 19, No. 3
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By Arnold Mann, *NIDA NOTES* Contributing Writer

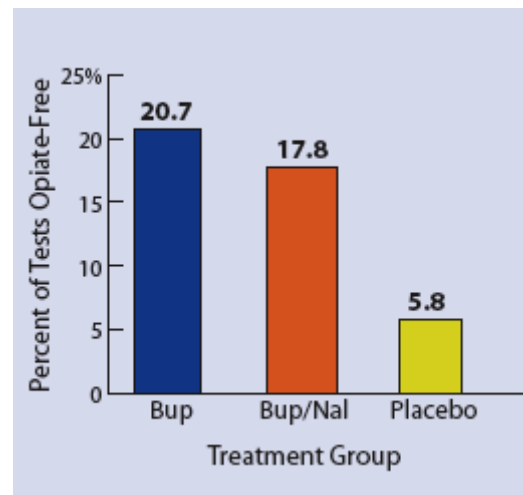
Twenty-five years ago it would have been almost impossible to imagine a treatment for opiate addiction that could be prescribed in a physician's office, picked up at a pharmacy, and taken at home. But that scenario has been achieved after a quarter-century of collaborative effort—and the overcoming of several barriers—by NIDA's medication development program and Reckitt Benckiser Pharmaceuticals, Inc.

Dr. Don Jasinski, a scientist at NIDA's Intramural Research Program (IRP), was the first to recognize the characteristics of buprenorphine—developed in the 1970s as an injectable pain medication—as useful for addiction treatment. He led the initial 1978 study demonstrating the drug's effectiveness and its acceptability to patients as a treatment for opiate dependence.

Early on, NIDA scientists realized that medications for addiction not only had to be safe and efficacious, but also had to be available in a form that would be practical for therapeutic use over the long term. NIDA worked with Reckitt Benckiser (then Reckitt & Colman) to develop noninjectable formulations of buprenorphine; by 1990, Dr. Ed Johnson and colleagues at the IRP demonstrated that a solution form of the drug administered under the tongue was safe, effective, and acceptable to patients as an opiate dependence treatment.

As with any opioid, however, there were concerns about buprenorphine diversion and the potential for abuse. NIDA again collaborated with the manufacturer, and by the mid-1990's, developed a combination tablet of buprenorphine and naloxone that would minimize the potential for abuse—a development that put the vision of take-home treatment for opiate dependence within reach. In the next decade, scientists at NIDA and Reckitt Benckiser conducted clinical trials with more than 2,400 patients that established buprenorphine's safety and efficacy in treating opiate dependence.

Buprenorphine and Buprenorphine/Naloxone Help Patients Quit Opiate Abuse



Patients undergoing treatment for opiate addiction who received buprenorphine or buprenorphine plus naloxone were more likely to test negative for opiate abuse than patients given placebo. Craving for opiates also was reduced in the two treatment groups.

And finally, a NIDA-funded collaborative clinical trial, codirected by Dr. Paul

Fudala of the Veterans Affairs Medical Center and the University of Pennsylvania in Philadelphia, established the safety and effectiveness of the buprenorphine-naloxone combination as a prescribed take-home treatment. Data from this study and two other pivotal trials formed the basis for the U.S. Food and Drug Administration's (FDA's) approval of buprenorphine and the combination medication in 2002.

"People at NIDA knew of the great need to move opiate addiction treatment from the traditional clinic settings to individual physicians' offices. But we had to address concerns about diversion and unprescribed use. Drs. Jasinski, Johnson, and Fudala deserve a great deal of credit for their contributions to this collaborative achievement—a safe and effective take-home treatment with minimal likelihood for abuse," says Dr. Frank Vocci, director of NIDA's Division of Treatment Research and Development.

Dr. Fudala's research, a nationwide study of 472 opiate-addicted men and women, was codirected by Dr. T. Peter Bridge, then of NIDA, and was recently published. The study confirmed that the efficacy and safety of the combined therapy are equivalent to those of buprenorphine alone and superior to placebo. The combination reduces craving for and use of opiates, presents limited potential for abuse, and is suitable for office-based use, the investigators concluded.

Initial Treatment Outcomes

The study began with a double-blind phase in which 323 opiate-addicted individuals (ages 18 to 59) received one of three treatments for 4 weeks. One group of 109 patients received tablets totaling 16 mg buprenorphine and 4 mg naloxone; the second group (105 patients) received tablets totaling 16 mg buprenorphine only; and the third group (109 patients) received placebo tablets. All tablets were identical in appearance and taste. Patients reported to the clinics for dosing every weekday and took their medications home for weekends and holidays. Study patients and placebo patients also participated in up to 1 hour of individualized counseling per week. Opiate use was monitored through urine tests every Monday, Wednesday, and Friday.

The plan for the initial double-blind, 4-week arm of the study was to recruit 384 patients and provide each patient with 4 full weeks of therapy. However, recruitment was halted at 323 subjects because the patients receiving either medication clearly were doing better than the placebo patients. Both medication groups showed significant reductions in opiate use and craving and significant improvements in perceptions of overall health compared with those receiving placebo.

In the buprenorphine-naloxone group, the proportion of opiate-free tests was 17.8 percent; the buprenorphine group had 20.7 percent opiate-free tests; and the placebo group, 5.8 percent. The presence of cocaine, the nonopiate drug most commonly found in urine samples in this study, did not vary significantly among the three groups. Nor was there a noticeable difference among the treatment groups in drug-positive results for amphetamines, barbiturates, or methadone.

"The number of urine samples negative for drugs probably would have been higher if investigators had used the results to counsel patients. Such feedback is known to further reduce patients' drug use, but that information was not revealed to the researchers to prevent bias.

The urine test results reflect higher use at the beginning of the study—when

patients are ambivalent about treatment and in the grip of addiction. It's positive that opioid use decreased over the course of the study," says Dr. Vocci.

Patients in both medication groups also reported reduced craving for opiates. All groups showed the same average self-reported craving level before treatment—approximately 60 on a 100-point scale. By week 4 of the study, the average craving scores fell by half for both medication groups but did not change for the placebo group. Patients receiving medications reported greater improvement in overall health and well-being than those in the placebo group—perceptions confirmed by higher weekly clinician ratings of patients' overall health and well-being for the two buprenorphine-treated groups. Because both medications were clearly effective, the researchers halted the first phase of the study. Patients receiving placebo during this phase went on to receive buprenorphine-naloxone combination treatment in the second phase of the study.

Longer-term Efficacy

The goal of the study's second phase was to evaluate the safety of the combination tablet in more natural conditions and over a longer term, without the restrictions associated with the double-blind condition. In this open-label portion of the study, which lasted up to 52 weeks, all patients received the combination tablet. Weekly counseling was available along with a daily dose of up to 24 mg buprenorphine and 6 mg naloxone, tailored to each patient's individual response. The sublingual tablet was administered at the clinic each weekday for the first 2 weeks; after that, patients could take home up to a 10-day medication supply at the discretion of the investigator.

Of the 472 patients who began this phase of the study, 385 received at least 8 weeks of treatment, and 261 were treated for at least 6 months. Fourteen patients discontinued therapy because of adverse events, of which detoxification or withdrawal symptoms were the most common. Opiate-free urine samples in the open-label phase of the study ranged from 35.2 percent to 67.4 percent in multiple assessments. The overall rate of opiate use was lower than in the first phase of the study, but cocaine and benzodiazepine use remained relatively constant, the researchers reported.

The study concluded that the addition of naloxone to protect against illicit use of the treatment medication did not reduce the efficacy of buprenorphine.

"This new treatment option is historic," says Dr. Vocci. "Congress passed the Drug Abuse Treatment Act of 2000 so that buprenorphine products, and other Schedule III, IV, and V medications approved for opioid treatment by FDA, can be prescribed by qualified doctors for the treatment of opioid addiction. This represents a change to a level of prescribing privileges that American doctors have not had since the Harrison Narcotic Act of 1914."

Who Can Benefit

In the two years since the medication was approved, clinicians have gained an understanding of which patients are most likely to benefit from a take-home treatment option. Dr. Fudala cautions that buprenorphine is not likely to work well for every patient. Those less likely to benefit may include patients who require very high doses of methadone. Buprenorphine is a partial agonist, which means that in severely addicted people, it may not provide enough opiate agonist activity to treat them adequately.

Dr. Fudala says the combined agent may be especially useful for patients who do

not have extremely high levels of addiction and for younger individuals, who typically have a shorter abuse history and may be using smaller amounts of an addictive substance. "We're seeing younger and younger heroin addicts these days," says Dr. Fudala. "It may be a good initial treatment for them, either as a medical detoxification or, if necessary, as a longer term treatment. We'll have a better understanding of this as we gain more experience." Another suitable population may be addicted professionals, including those in health care, who could be motivated to seek treatment in the privacy of a physician's office setting.

Buprenorphine's suitability for office-based prescribing is based on its pharmacologic profile. Like methadone, buprenorphine activates opiate receptors, but its effects level off as the patient takes higher and higher doses; this reduces the likelihood of dangerous side effects such as severe respiratory depression. The addition of naloxone reduces the potential for abuse by illicit injection: If a combination tablet is crushed and injected by a heroin-addicted individual in an attempt to intensify buprenorphine's euphoric effect, naloxone kicks in to induce the symptoms of opiate withdrawal. Finally, buprenorphine has a relatively long duration of action and causes comparatively mild withdrawal discomfort on cessation, affording flexibility in dosing regimens and a margin of convenience for patients and physicians.

As of March 2004, 3,951 U.S. physicians were eligible to prescribe buprenorphine. Of that group, 2,848 were granted waivers of a Federal requirement for previous experience in addiction medicine. This number is growing, according to Dr. Vocci. "We had estimated that about 6,000 physicians would eventually take the training and get the waiver. So we're at about 50 percent," he says. At this time, he notes, certified physicians are restricted to treating no more than 30 patients. In October 2005, 3 years from the approval of the new drug combination, the Department of Health and Human Services and the Drug Enforcement Administration will evaluate the program and possibly adjust the restrictions. The overall picture, however, is positive, says Dr. Vocci. "Very little diversion has been reported with this new combination," he says.

Source

Fudala, P.J., et al. Office-based treatment of opiate addiction with a sublingual-tablet formulation of buprenorphine and naloxone. *New England Journal of Medicine* 349(10):949-958, 2003.
[\[Abstract\]](#)

Volume 19, Number 3 (September 2004)



Pursuing New Medications

In recent years, people from all walks of life have sought treatment for addiction to powerful narcotic pain-relieving medications, such as OxyContin and Vicodin, that they have abused outside of a medical regimen. These medications share many properties with heroin, which currently ensnares more than a million people nationwide in the web of addiction. Those who become addicted to legal painkillers or street opiates now have a new medication to help them reclaim their lives. Approved by FDA in 2002, buprenorphine joins two other approved opiate treatment medications--methadone, used in long-term treatment, and the NIDA-developed opiate blocker naltrexone, used to help patients remain drug-free after they have stopped using opiates.

Buprenorphine is the first medication for opiate addiction treatment that can be prescribed by private physicians in offices and clinics. Use of this medication in mainstream medicine should help reduce the stigma still associated with drug abuse treatment, while encouraging more patients to seek treatment for addiction to heroin and other opiates. NIDA also is pursuing medications for cocaine and methamphetamine abuse and addiction, for which no medications are yet available. To fill this void, the Institute is applying the same scientific medications development methodologies that put effective opiate treatment medications into the hands of clinicians and their patients.



On one research track, clinical researchers are screening medications previously approved to treat other disorders. In these small-scale trials, several agents have appeared to weaken the addictive cycle of drug-craving, drug-seeking, and drug-taking. Among them are amantadine (currently used for Parkinson's disease), disulfiram (Antabuse), baclofen (an antispasticity agent), tiagabine and topiramate (antiepileptics), and modafinil (used in narcolepsy). Disulfiram and naltrexone, both effective in treating alcoholism, may fill a critical need for medications that can help cocaine-abusing individuals who also abuse alcohol. Propranolol, a medication used to lower blood pressure, may help substance abuse patients stay the course during the critical early days of treatment, by alleviating their unpleasant withdrawal symptoms. Researchers are now conducting larger, longer studies to confirm these encouraging results. Because the medications work by a variety of different mechanisms, some of which may complement each other, researchers also will examine whether they may be more effective in combination than alone. Some may also work optimally with specific behavioral therapies.

On another track, researchers in NIDA's cocaine and methamphetamine treatment discovery programs are working to identify new chemical compounds whose pharmacological actions modulate the effects of psychostimulants on the brain and behavior. They already have shown that one compound that blocks a brain cannabinoid receptor can prevent animals from reinitiating cocaine use after exposure to drug-related cues and stressful events. Other compounds that curb the drug-induced flooding of the brain's reward pathways with dopamine may be able to treat addiction to all abused drugs. Still other compounds counter psychostimulants' ability to activate receptor molecules, nerve networks, and neurochemical mechanisms to create pleasure and craving.



NIDA uses art cards, displayed in restaurants and other public places, to warn smokers that nicotine, like other drugs, can be addictive.

Another NIDA initiative is focusing on new medications for treating nicotine addiction. Launched in the 1970s, NIDA's basic research in this area provided the scientific basis for nicotine replacement therapies, such as the transdermal patch, that today help many patients overcome nicotine dependence. The Institute is now pursuing several approaches to medications that could intercept and neutralize nicotine, cocaine, and methamphetamine in the bloodstream before they can act in the brain. In one approach, vaccines containing the abused substance are linked with a larger carrier molecule and stimulate the body to produce antibodies to the drug. Another approach enhances the rate at which the body's enzymes break down the drug molecules into inactive byproducts.

Identifying Effective Behavioral Therapies

Therapies that help drug abuse patients overcome erroneous thought patterns and behaviors that reinforce their abuse and addiction are critical in treating drug abuse and preventing its harmful consequences. Cognitive-behavioral therapies can stand alone as front-line interventions that help many patients stop using drugs and remain drug-free. And they can increase the effectiveness of treatment medications by boosting patients' motivation to remain in treatment, take their medication as scheduled, and learn strategies to avoid relapse and lead drug-free lives. NIDA-supported research has demonstrated that combining medications, as available, with behavioral treatments is the best way to enhance success for most patients.



Over the last decade, NIDA's Behavioral Therapies Development Program established a three-stage process to develop and introduce new behavioral approaches into clinical practice, similar to that required by the Food and Drug Administration to establish the safety and efficacy of medications. Building on research that suggests avenues for developing new therapies or refining existing ones, pilot studies explore the potential of each new or refined treatment. Those showing promise are then tested in research settings in small- and large-scale clinical trials. Finally, clinical trials can be done in community settings for those therapies that demonstrate therapeutic efficacy.

NIDA behavioral therapy researchers have designed several cognitive-behavioral therapies to help methamphetamine abusers. One innovative therapy gives patients a voucher each time they submit a drug-free urine sample. Vouchers may be exchanged for goods or services that provide pleasurable, legal alternatives to drug use or, as in methadone treatment programs, for special privileges, like reducing the number of required visits to a treatment clinic. Studies show that providing vouchers for drug-free urine tests can help patients stop cocaine and methamphetamine use and remain abstinent for extended periods. Variations of voucher-based therapies that use lower cost vouchers or involve family and other community resources in treatment can be matched to the resources of treatment programs and needs of cocaine-addicted individuals.



Family therapies tailored to the ethnicity or race of substance-abusing teens have proven successful.

In the last 10 years, behavioral treatments have demonstrated their potency in improving the health of diverse individuals with many types of drug abuse and other mental disorders. Proven treatments include individual cognitive-behavioral therapy, family therapies for Hispanic and African-American adolescent substance abusers, combination behavioral and medication therapies for adult smokers, and couples therapy for opiate-addicted men and women in methadone treatment programs. The benefits of many of these treatments endure long after treatment has ended. And with individual cognitive-behavioral therapy, the benefits appear to increase over time.

Pharmacologic Treatment of Alcohol Dependence

It is unclear which pharmacological interventions for alcoholism are most effective. These authors rigorously reviewed evidence to assess the efficacy of five pharmacological treatments. Of 375 articles published from 1966 to 1997, 52 met their criteria of single- or double-blind randomized controlled trial (prospective or retrospective) with standardized outcome data. They judged the strength of the evidence of efficacy by the consistency of findings across studies, sample sizes, and the magnitude of the effect of the intervention.

Naltrexone and acamprosate (a new drug used widely in Europe whose mechanism of action is unclear but that appears to interact with glutamate receptors and calcium channels) were judged superior to placebo; disulfiram had inconsistent efficacy data; serotonergic agents (SSRIs, buspirone, and ondansetron) had insufficient data; and lithium was no more effective than placebo. Although naltrexone and acamprosate reduced the relapse rate and drinking frequency in heavy drinkers, neither drug induced abstinence. Naltrexone positively affected abstinence when combined with supportive psychotherapy, but not when combined with the teaching of coping skills. The studies did not indicate whether combinations of these agents would be useful or for how long they should be administered.

Comment: This analysis of agents used to treat alcohol dependence helps us understand which are most useful. (For a discussion of the metabolic mechanisms of these agents, see *N Engl J Med* 1999; 340:1482). It is interesting that a long-standing drug such as disulfiram has been subjected to so few well-designed studies. This study also provides a base for launching effectiveness studies in clinical practice.

— *G Tucker*

Published in Journal Watch Psychiatry July 1, 1999

Citation(s):

Garbutt JC et al. Pharmacological treatment of alcohol dependence. *JAMA* 1999 Apr 21 281 1318-1325.

- [Original article](#) (Subscription may be required)
- [Medline abstract](#) (Free)

FDA-Approved Medications for Alcohol Dependence

- Disulfiram: 250-500 mg/day
- Oral naltrexone: 50-100 mg/day
- Injectable extended-release naltrexone: 380 mg/day
- Acamprostate: 666 mg 3 times/day

Two new drugs showing promise

Topiramate or Quetiapine for Alcohol Dependence?

Early results are promising, especially for patients with difficult-to-treat Type B alcoholism.

Alcohol dependence remains difficult to treat pharmacologically. Disulfiram requires regular compliance, and acamprostate and naltrexone have only small-to-medium effect sizes. Two research groups examined other pharmacologic agents added to brief behavioral interventions.

In 2003, researchers conducting a randomized controlled [trial](#) established the efficacy of topiramate for alcohol dependence. Now, the same group has conducted a longer and larger (14 vs. 8 weeks; n=371 vs. 150), multisite, randomized, placebo-controlled, manufacturer-funded trial of topiramate. Topiramate (dose, 300 mg/day, titrated over 6 weeks [titration lasted 8 weeks in the previous study]), was superior to placebo in reducing the percentage of heavy drinking days, reducing drinks per drinking day, and increasing abstinent days. Still, effect sizes were smaller and topiramate was less well tolerated than in the initial study, with paresthesia, anorexia, and poor concentration commonly reported. Only 63% of topiramate recipients versus 78% of placebo recipients completed the trial.

In a pilot, randomized, placebo-controlled, 12-week study, researchers examined the efficacy of the atypical antipsychotic quetiapine in 61 subjects with alcohol dependence (33 with Type A and 28 with Type B alcoholism). Patients with Type B alcoholism are particularly difficult to treat, as it has an early onset and is associated with antisocial behavior, other psychopathology, and more severe polysubstance abuse. Patients with current severe psychiatric symptoms were excluded. Fewer Type B (64%) than Type A (90%) patients completed the trial, but placebo and quetiapine groups had similar completion rates. Rates of abstinence were significantly higher with quetiapine (31%) than with placebo (6%). Compared with placebo, quetiapine significantly reduced drinking days and heavy drinking days in Type B patients; these effects were not significant in Type A patients. Quetiapine had no significant effects on time to drinking relapse.

Comment: The topiramate study replicates positive findings from a smaller study (although with smaller effect sizes) and suggests that medications with anticonvulsant and GABA agonist properties may be useful. However, it also highlights important adverse effects, possibly uncovered in this study not because of its faster titration, but because of its larger sample size.

The promising findings for quetiapine, while preliminary, suggest that it has some efficacy in treating alcohol dependence, particularly in patients with Type B alcoholism. Dopaminergic blocking effects of quetiapine might reduce the rewarding properties of alcohol, or the general psychotropic effects of quetiapine — which has been shown to have antidepressant, antimanic, and antipsychotic effects — might play a role. Clearly, this agent should be tested in larger trials.

— [Peter Roy-Byrne, MD](#) Published in *Journal Watch Psychiatry* October 15, 2007

Citation(s):

Johnson BA et al. Topiramate for treating alcohol dependence: A randomized controlled trial. *JAMA* 2007 Oct 10; 298:1641.

- [Original article](#) (Subscription may be required)
- [Medline abstract](#) (Free)

Kampman KM et al. A double-blind, placebo-controlled pilot trial of quetiapine for the treatment of Type A and Type B alcoholism. *J Clin Psychopharmacol* 2007 Aug; 27:344.

- [Medline abstract](#) (Free)

Part 2 Peer Involvement in Treatment

Intervention/treatment practices and peer delivered services

(Harm Reduction (as a stage of recovery): is most often viewed as an alternative to, and even antagonistic to, recovery, but can also be viewed as a strategy of initiating or enhancing early recovery. The mechanisms through which this can occur include preventing the further depletion of recovery capital, increasing recovery capital when it does not exist, and enhancing the person's readiness for recovery via the change-encouraging relationships through which harm reduction approaches are delivered.

This practice is an essential part of recovery management)

Peer Specialist: a peer who has been trained and employed to offer peer support to people with behavioral health conditions in any of a variety of settings. These settings may range from assertive or homeless outreach in shelters, soup kitchens, or on the streets, to part of a multi-disciplinary inpatient, intensive outpatient, or ambulatory team, to roles within peer-run or peer-operated programs. They often serve recovery coaches

Recovery Coach/Guide (Recovery Support Specialist): is a person who helps remove personal and environmental obstacles to recovery, links the newly recovering person to the recovery community and his or her broader local community, and, where not available in the natural community, serves as a personal guide and mentor in the management of personal and family recovery.

Peer Support: while falling along a theoretical continuum, peer support differs both from traditional mutual support groups as well as from consumer-run drop-in centers or businesses. In both mutual support groups and consumer-run programs, the relationships peers have with each other are thought to be reciprocal in nature; even though some peers may be viewed as more skilled or experienced than others, all participants are expected to benefit. Peer support, in contrast, is conceptualized as *involving one or more persons who have a history of significant improvement in either a mental illness and/or addiction and who offers services and/or supports to other people with mental illnesses or addictions who are considered to be not as far along in their own recovery process.* The Peer Specialist, Recovery Coach, and the Peer support individuals often provide Recovery Support services as part of a recognized organization.

Recovery Support Services: are designed to 1) remove personal and environmental obstacles to recovery, 2) enhance identification and participation in the recovery community, and 3) enhance the quality of life of the person in recovery. Such services include outreach, engagement and intervention services; recovery guiding or coaching, post-treatment monitoring and support; sober or supported housing; transportation; child care; legal services; educational/vocational supports; and linkage to leisure activities.

Effectiveness of a risk reduction intervention among African American women who use crack cocaine.

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The primary objective of this study was to evaluate the effectiveness of an HIV intervention for African American women who use crack cocaine. Two hundred sixty-five women (aged 18-59 years) were randomly assigned to one of two enhanced intervention conditions or to the National Institute on Drug Abuse standard condition. A substantial proportion of women reported no past 30-day crack use at 6-month follow-up (100%-61%, $p < .001$). Significant ($P < .05$) decreases in the frequency of crack use; the number of paying partners; the number of times vaginal, oral, or anal sex was had with a paying partner; and sexual risks, such as trading sex for drugs, were reported over time. Significant ($p < .05$) increases in male condom use with sex partners were observed, as well as decreases in casual partners' refusal of condoms. Findings suggest that combined components of our culturally appropriate, gender-tailored intervention may be most effective at enhancing preventive behavior among similar populations.

PMID: 12627741 [PubMed - indexed for MEDLINE]

HIV risk reduction among African-American women who inject drugs: a randomized controlled trial.

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A community-based HIV intervention for African-American women who are active injection drug users (IDUs) was evaluated. Seventy-one women (aged 20-54 years) were randomly assigned to one of two enhanced gender- and culturally specific intervention conditions or to the NIDA standard condition. Substantial decreases ($p < .001$) were found in the frequency of drug use and the frequency of drug injection as well as in the sharing of injection works or water and the number of injections. Trading

sex for drugs or money, having sex while high, as well as other sexual risk behaviors were also reduced significantly. Furthermore, women in both enhanced intervention conditions were more likely to reduce their drug-using and sexual risk behaviors than were women in the standard condition. Results indicate the value of including additional components in interventions designed to reduce the risk of infection with HIV among women who inject drugs.

PMID: 14534392 [PubMed - indexed for MEDLINE]

Peer-delivered interventions reduce HIV risk behaviors among out-of-treatment drug abusers.

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OBJECTIVE: The purpose of this chapter is to describe the results of a randomized study (funded by the National Institute on Drug Abuse [NIDA]) comparing a peer-delivered enhanced intervention to the NIDA standard intervention for reducing human immunodeficiency virus (HIV) risk behaviors. **METHODS:** Data come from the ongoing St. Louis Each One Teach One (EOTO) study on HIV risk behaviors among out-of-treatment crack cocaine users and injecting drug users (IDUs). The study has a randomized prospective design, and for this chapter, three risk behaviors were analyzed--the frequency of crack cocaine use and the number of sex partners and condom use over the past 30-day period. We report the level of risk at baseline and at the three-month follow-up period to determine the proportion of individuals improving or worsening based on a dichotomous outcome in which remaining at low risk or decreasing moderate or high risk behaviors is considered "improving" and increasing risk behavior or remaining at moderate or high risk is considered "worsening". **RESULTS:** Overall, 80% of the sample "improved" their crack cocaine use, meaning they maintained at low level or reduced their use. Although both the standard and enhanced intervention groups made substantial improvement in their crack cocaine use, individuals in the enhanced intervention group were statistically more likely to reduce their risk than those assigned to the standard intervention (83% vs. 75%, $P < 0.05$). As for the number of sex partners, 75% of the overall sample improved; that is, they reduced the number of sex partners or remained abstinent or in a one-partner relationship at baseline and follow-up. There was no statistically significant difference between the enhanced and standard groups (76% vs 73%). Stratified by gender, the results showed a trend toward improvement among women assigned to the enhanced intervention compared with those assigned to the standard. In terms of condom use, the overall sample worsened more than it improved (65% vs. 44%), and no differences were found between the enhanced and standard groups. **CONCLUSIONS:** These findings show that the use of peers as role models in promoting HIV risk reduction is feasible and effective among out-of-treatment drug abusers, particularly for drug use itself. Condom use was found to be more difficult to change than other behaviors. Possible reasons for this lack of improvement and suggestions for future interventions are given.

PMID: 9722808 [PubMed - indexed for MEDLINE]

Part 3 Evidence Based Practices and Programs

NIDA researched techniques for motivational counseling

Protocols for Standard, Motivation, and Negotiation Interventions

All interventions include discussion of the local HIV epidemic, sex and drug-related risk behaviors, safer sex and drug use, and HIV risk-reduction strategies. The two tailored interventions also include a discussion of the impact of race and gender on HIV risk and protective behaviors.

The NIDA standard intervention is an HIV/AIDS education program that was developed in the early 1990s. It builds on standard HIV testing and counseling developed by CDC and adds discussion of the principles of HIV prevention for drug users and their sex partners. The intervention involves testing, counseling, and educating participants through use of cue cards on such topics as the definition of HIV/AIDS, who is at risk, and ways to reduce risk. Also offered are demonstrations on condom use and equipment-bleaching techniques for IDUs. Referrals to counseling and other services are provided.

The motivation intervention follows the format of the standard intervention for the first session but ends with asking participants to consider what they are motivated to change in their lives. During the second session, this list is reviewed and short- and long-term goals are set. The third and fourth sessions involve discussion of experiences with behavior change, including the woman's sense of control and feelings of ambivalence about behavior change. Risk-reduction messages tailored to the participant's level of readiness to change are also delivered in the fourth session.

The negotiation/conflict-resolution intervention also follows the NIDA standard intervention for the first session, but it ends with a discussion of intended behavior changes. The second session reviews the list of possible behavior changes and the level of control the participant believes she has and introduces general communication skills and strategies to develop assertiveness. Short-term goals are set for strengthening communication, gaining control, and developing assertiveness. Negotiation and conflict-resolution strategies are introduced during the third session and tailored to the individual during the final session.

Principles That Guide Format, Content of Interventions

The interventions used by Dr. Sterk and her colleagues in this study are firmly based in theoretical research. The researchers conducted a series of one-on-one interviews and focus groups with the target population. These interviews yielded the following key principles that guided both the format and the

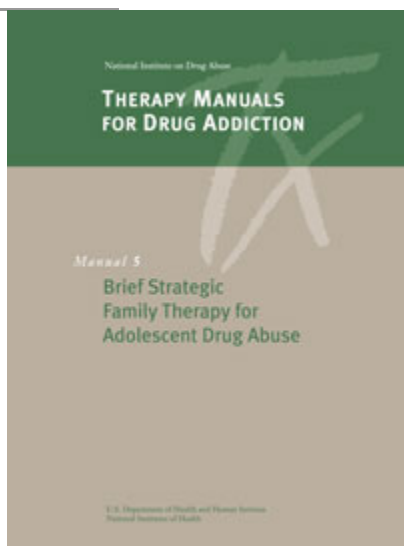
content of the interventions.

- **Offer counseling sessions on an individual basis.** "It was very clear that women wanted to start with one-on-one sessions," says Dr. Sterk. "HIV risk behaviors involve so many private, personal issues-- previous abuse experiences, actions to support their drug habits, things they'd never before discussed. They found it easier to discuss these experiences with one person, not a group."
- **Adopt a holistic approach.** Along with this research project, a clothing fair was conducted and clothes made available to program participants. Food for breakfast was provided; daycare was close by; and ongoing services, such as help preparing for job interviews, were provided.
- **Make programs community-based.** The project was headquartered in a house in the community, which was key to participants' convenience and comfort. Researchers also found it important for the women to link participation in this project to local social and health services, including local drug treatment, daycare centers, health services, and other community-based organizations. Community consultants played a key role in the project.
- **Address women's multiple social roles in the intervention.** Participants insisted that they didn't want to be labeled simply as drug users. Instead, they wanted the social context of their daily lives to be addressed, including their roles as mothers and steady partners.

Volume 19, Number 1 (April 2004)

Brief Strategic Family therapy and references/manuals for EVIDENCE BASED treatments of cocaine addiction

Treating Adolescent Substance Abuse by Addressing Family Interactions



Brief Strategic Family Therapy (BSFT) is described in the latest addition to the *Therapy Manuals for Drug Addiction* series. The short-term intervention is used to treat adolescent drug use that occurs along with other problem behaviors. This therapy focuses on an adolescent's drug use within the context of family dynamics.

The BSFT manual introduces counselors to concepts they need to understand the family as a vital context within which adolescent drug abuse occurs. It also describes strategies for creating a therapeutic relationship with families, assessing and diagnosing maladaptive patterns of family interactions, and changing family interaction patterns from maladaptive to adaptive.

BSFT can be adapted to a range of family situations and used in a variety of service settings--such as mental health clinics, drug abuse treatment programs, and other social service settings. It also can be delivered in various ways, such as on an outpatient basis or in combination with residential or day treatment. Treatment lasts 8 to 24 sessions, depending on the severity of the problem.

In addition to targeting an adolescent's conduct problems at home and at school, BSFT addresses oppositional, aggressive, violent, or risky sexual behavior; association with antisocial peers; and delinquency. Family dynamics are a key focus of this therapy.

Over 25 years of extensive evaluation has found BSFT to be effective in treating adolescent drug abuse, conduct problems, association with antisocial peers, and impaired family functioning. It has been shown to be particularly successful with cultural groups that emphasize family and interpersonal relationships. BSFT has not been tested with adult addicts and is not considered a treatment for adult addiction.

The upcoming manual and the series of which it is a part exemplify NIDA's commitment to applying basic research findings to treatment needs. In addition to describing scientifically based therapies for addiction, the five manuals provide guidance on content for counseling sessions and effective counseling techniques. Audiences include drug abuse treatment practitioners, mental health

professionals, and others involved in treating drug abuse and addiction.

Therapy Manuals Offer a Range of Treatment Strategies

The four earlier therapy manuals can be downloaded from NIDA's Web site, www.drugabuse.gov, or ordered through the National Clearinghouse for Alcohol and Drug Information, ncadi.samhsa.gov or 800-729-6686 (TDD, 800-487-4889). The *Brief Strategic Family Therapy* manual also will soon be available from these sources.

- *A Cognitive-Behavioral Approach: Treating Cocaine Addiction (Manual 1)* describes cognitive-behavioral coping skills treatment, a short-term, focused approach to helping cocaine-dependent individuals abstain from cocaine and other drugs.
- *A Community Reinforcement Plus Vouchers Approach: Treating Cocaine Addiction (Manual 2)* integrates a community reinforcement approach with an incentive program that uses vouchers. Patients earn points to redeem for retail items by remaining in treatment and abstaining from cocaine.
- *An Individual Counseling Approach to Treat Cocaine Addiction: The Collaborative Cocaine Treatment Study Model (Manual 3)* presents a guide for the individual treatment of cocaine addiction that emphasizes an individual's physical, emotional, spiritual, and interpersonal needs in supporting recovery.
- *Drug Counseling for Cocaine Addiction: The Collaborative Cocaine Treatment Study Model (Manual 4)* describes the Group Drug Counseling (GDC) model developed for the Collaborative Cocaine Treatment Study (CCTS), a multisite clinical trial. The study found the combination of GDC and individual drug counseling to be more effective than GDC alone or the combination of GDC and psychotherapy.

Volume 18, Number 1 (June 2003)

Principles of Drug Addiction Treatment: A Research Based Guide

Scientifically Based Approaches to Drug Addiction Treatment

This section presents several examples of treatment approaches and components that have been developed and tested for efficacy through research supported by the National Institute on Drug Abuse (NIDA). Each approach is designed to address certain aspects of drug addiction and its consequences for the individual, family, and society. The approaches are to be used to supplement or enhance existing treatment programs.

This section is not a complete list of efficacious, scientifically based treatment approaches. Additional approaches are under development as part of NIDA's continuing support of treatment research.

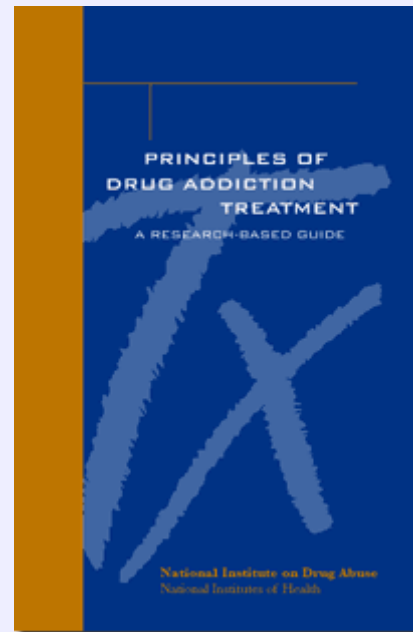
Relapse Prevention, a cognitive-behavioral therapy, was developed for the treatment of problem drinking and adapted later for cocaine addicts. Cognitive-behavioral strategies are based on the theory that learning processes play a critical role in the development of maladaptive behavioral patterns. Individuals learn to identify and correct problematic behaviors. Relapse prevention encompasses several cognitive-behavioral strategies that facilitate abstinence as well as provide help for people who experience relapse.

The relapse prevention approach to the treatment of cocaine addiction consists of a collection of strategies intended to enhance self-control. Specific techniques include exploring the positive and negative consequences of continued use, self-monitoring to recognize drug cravings early on and to identify high-risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use. A central element of this treatment is anticipating the problems patients are likely to meet and helping them develop effective coping strategies.

Research indicates that the skills individuals learn through relapse prevention therapy remain after the completion of treatment. In one study, most people receiving this cognitive-behavioral approach maintained the gains they made in treatment throughout the year following treatment.

References:

Carroll, K.; Rounsaville, B.; and Keller, D. Relapse prevention strategies for the treatment of cocaine abuse. *American Journal of Drug and Alcohol Abuse* 17(3): 249-



- [Index](#)
- [Principles of Effective Treatment](#)
- [Preface](#)
- [Acknowledgments](#)
- [Frequently Asked Questions](#)
- [Drug Addiction Treatment in the United States](#)
- [Scientifically Based Approaches to Drug Addiction Treatment](#)
- [Resources](#)

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265, 1991.

Carroll, K.; Rounsaville, B.; Nich, C.; Gordon, L.; Wirtz, P.; and Gawin, F. One-year follow-up of psychotherapy and pharmacotherapy for cocaine dependence: delayed emergence of psychotherapy effects. *Archives of General Psychiatry* 51: 989-997, 1994.

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This Booklet is available
in PDF format



[PODAT.pdf \[236K\]](#)

[This Booklet is also available in Spanish](#)

The Matrix Model provides a framework for engaging stimulant abusers in treatment and helping them achieve abstinence. Patients learn about issues critical to addiction and relapse, receive direction and support from a trained therapist, become familiar with self-help programs, and are monitored for drug use by urine testing. The program includes education for family members affected by the addiction.

The therapist functions simultaneously as teacher and coach, fostering a positive, encouraging relationship with the patient and using that relationship to reinforce positive behavior change. The interaction between the therapist and the patient is realistic and direct but not confrontational or parental. Therapists are trained to conduct treatment sessions in a way that promotes the patient's self-esteem, dignity, and self-worth. A positive relationship between patient and therapist is a critical element for patient retention.

Treatment materials draw heavily on other tested treatment approaches. Thus, this approach includes elements pertaining to the areas of relapse prevention, family and group therapies, drug education, and self-help participation. Detailed treatment manuals contain work sheets for individual sessions; other components include family educational groups, early recovery skills groups, relapse prevention groups, conjoint sessions, urine tests, 12-step programs, relapse analysis, and social support groups.

A number of projects have demonstrated that participants treated with the Matrix model demonstrate statistically significant reductions in drug and alcohol use, improvements in psychological indicators, and reduced risky sexual behaviors associated with HIV transmission. These reports, along with evidence suggesting comparable treatment response for methamphetamine users and cocaine users and demonstrated efficacy in enhancing naltrexone treatment of opiate addicts, provide a body of empirical support for the use of the model.

References:

Huber, A.; Ling, W.; Shoptaw, S.; Gulati, V.; Brethen, P.; and Rawson, R. Integrating treatments for methamphetamine abuse: A psychosocial perspective. *Journal of Addictive Diseases* 16: 41-50, 1997.

Rawson, R.; Shoptaw, S.; Obert, J.L.; McCann, M.; Hasson, A.; Marinelli-Casey, P.; Brethen, P.; and Ling, W. An intensive outpatient approach for cocaine abuse: The Matrix model. *Journal of Substance Abuse Treatment* 12(2): 117-127, 1995.

Supportive-Expressive Psychotherapy is a time-limited, focused psychotherapy that has been adapted for heroin- and cocaine-addicted

individuals. The therapy has two main components:

- Supportive techniques to help patients feel comfortable in discussing their personal experiences.
- Expressive techniques to help patients identify and work through interpersonal relationship issues.

Special attention is paid to the role of drugs in relation to problem feelings and behaviors, and how problems may be solved without recourse to drugs.

The efficacy of individual supportive-expressive psychotherapy has been tested with patients in methadone maintenance treatment who had psychiatric problems. In a comparison with patients receiving only drug counseling, both groups fared similarly with regard to opiate use, but the supportive-expressive psychotherapy group had lower cocaine use and required less methadone. Also, the patients who received supportive-expressive psychotherapy maintained many of the gains they had made. In an earlier study, supportive-expressive psychotherapy, when added to drug counseling, improved outcomes for opiate addicts in methadone treatment with moderately severe psychiatric problems.

References:

Luborsky, L. Principles of Psychoanalytic Psychotherapy: A Manual for Supportive-Expressive (SE) Treatment. New York: Basic Books, 1984.

Woody, G.E.; McLellan, A.T.; Luborsky, L.; and O'Brien, C.P. Psychotherapy in community methadone programs: a validation study. American Journal of Psychiatry 152(9): 1302-1308, 1995.

Woody, G.E.; McLellan, A.T.; Luborsky, L.; and O'Brien, C.P. Twelve month follow-up of psychotherapy for opiate dependence. American Journal of Psychiatry 144: 590-596, 1987.

Individualized Drug Counseling focuses directly on reducing or stopping the addict's illicit drug use. It also addresses related areas of impaired functioning such as employment status, illegal activity, family/social relations as well as the content and structure of the patient's recovery program. Through its emphasis on short-term behavioral goals, individualized drug counseling helps the patient develop coping strategies and tools for abstaining from drug use and then maintaining abstinence. The addiction counselor encourages 12-step participation and makes referrals for needed supplemental medical, psychiatric, employment, and other services. Individuals are encouraged to attend sessions one or two times per week.

In a study that compared opiate addicts receiving only methadone to those receiving methadone coupled with counseling, individuals who received only methadone showed minimal improvement in reducing opiate use. The addition of counseling produced significantly more improvement. The addition of onsite medical/psychiatric, employment, and family services further improved outcomes.

In another study with cocaine addicts, individualized drug counseling, together with group drug counseling, was quite effective in reducing cocaine use. Thus, it appears that this approach has great utility with both heroin and cocaine addicts in outpatient treatment.

References:

McLellan, A.T.; Arndt, I.; Metzger, D.S.; Woody, G.E.; and O'Brien, C.P. The

effects of psychosocial services in substance abuse treatment. *Journal of the American Medical Association* 269(15): 1953-1959, 1993.

McLellan, A.T.; Woody, G.E.; Luborsky, L.; and O'Brien, C.P. Is the counselor an 'active ingredient' in substance abuse treatment? *Journal of Nervous and Mental Disease* 176: 423-430, 1988.

Woody, G.E.; Luborsky, L.; McLellan, A.T.; O'Brien, C.P.; Beck, A.T.; Blaine, J.; Herman, I.; and Hole, A. Psychotherapy for opiate addicts: Does it help? *Archives of General Psychiatry* 40: 639-645, 1983.

Crits-Cristoph, P.; Siqueland, L.; Blaine, J.; Frank, A.; Luborsky, L.; Onken, L.S.; Muenz, L.; Thase, M.E.; Weiss, R.D.; Gastfriend, D.R.; Woody, G.; Barber, J.P.; Butler, S.F.; Daley, D.; Bishop, S.; Najavits, L.M.; Lis, J.; Mercer, D.; Griffin, M.L.; Moras, K.; and Beck, A. Psychosocial treatments for cocaine dependence: Results of the NIDA Cocaine Collaborative Study. *Archives of General Psychiatry* (in press).

Motivational Enhancement Therapy is a client-centered counseling approach for initiating behavior change by helping clients to resolve ambivalence about engaging in treatment and stopping drug use. This approach employs strategies to evoke rapid and internally motivated change in the client, rather than guiding the client stepwise through the recovery process. This therapy consists of an initial assessment battery session, followed by two to four individual treatment sessions with a therapist. The first treatment session focuses on providing feedback generated from the initial assessment battery to stimulate discussion regarding personal substance use and to elicit self-motivational statements. Motivational interviewing principles are used to strengthen motivation and build a plan for change. Coping strategies for high-risk situations are suggested and discussed with the client. In subsequent sessions, the therapist monitors change, reviews cessation strategies being used, and continues to encourage commitment to change or sustained abstinence. Clients are sometimes encouraged to bring a significant other to sessions. This approach has been used successfully with alcoholics and with marijuana-dependent individuals.

References:

Budney, A.J.; Kandel, D.B.; Cherek, D.R.; Martin, B.R.; Stephens, R.S.; and Roffman, R. College on problems of drug dependence meeting, Puerto Rico (June 1996). Marijuana use and dependence. *Drug and Alcohol Dependence* 45: 1-11, 1997.

Miller, W.R. Motivational interviewing: research, practice and puzzles. *Addictive Behaviors* 61(6): 835-842, 1996.

Stephens, R.S.; Roffman, R.A.; and Simpson, E.E. Treating adult marijuana dependence: a test of the relapse prevention model. *Journal of Consulting & Clinical Psychology*, 62: 92-99, 1994.

Behavioral Therapy for Adolescents incorporates the principle that unwanted behavior can be changed by clear demonstration of the desired behavior and

consistent reward of incremental steps toward achieving it. Therapeutic activities include fulfilling specific assignments, rehearsing desired behaviors, and recording and reviewing progress, with praise and privileges given for meeting assigned goals. Urine samples are collected regularly to monitor drug use. The therapy aims to equip the patient to gain three types of control:

Stimulus Control helps patients avoid situations associated with drug use and learn to spend more time in activities incompatible with drug use.

Urge Control helps patients recognize and change thoughts, feelings, and plans that lead to drug use.

Social Control involves family members and other people important in helping patients avoid drugs. A parent or significant other attends treatment sessions when possible and assists with therapy assignments and reinforcing desired behavior.

According to research studies, this therapy helps adolescents become drug free and increases their ability to remain drug free after treatment ends. Adolescents also show improvement in several other areas employment/school attendance, family relationships, depression, institutionalization, and alcohol use. Such favorable results are attributed largely to including family members in therapy and rewarding drug abstinence as verified by urinalysis.

References:

Azrin, N.H.; Acierno, R.; Kogan, E.; Donahue, B.; Besalel, V.; and McMahon, P.T. Follow-up results of supportive versus behavioral therapy for illicit drug abuse. *Behavioral Research & Therapy* 34(1): 41-46, 1996.

Azrin, N.H.; McMahon, P.T.; Donahue, B.; Besalel, V.; Lapinski, K.J.; Kogan, E.; Acierno, R.; and Galloway, E. Behavioral therapy for drug abuse: a controlled treatment outcome study. *Behavioral Research & Therapy* 32(8): 857-866, 1994.

Azrin, N.H.; Donohue, B.; Besalel, V.A.; Kogan, E.S.; and Acierno, R. Youth drug abuse treatment: A controlled outcome study. *Journal of Child & Adolescent Substance Abuse* 3(3): 1-16, 1994.

Multidimensional Family Therapy (MDFT) for Adolescents is an outpatient family-based drug abuse treatment for teenagers. MDFT views adolescent drug use in terms of a network of influences (that is, individual, family, peer, community) and suggests that reducing unwanted behavior and increasing desirable behavior occur in multiple ways in different settings. Treatment includes individual and family sessions held in the clinic, in the home, or with family members at the family court, school, or other community locations.

During individual sessions, the therapist and adolescent work on important developmental tasks, such as developing decision-making, negotiation, and problem-solving skills. Teenagers acquire skills in communicating their thoughts and feelings to deal better with life stressors, and vocational skills. Parallel sessions are held with family members. Parents examine their particular parenting style, learning to distinguish influence from control and to have a positive and developmentally appropriate influence on their child.

References:

Diamond, G.S., and Liddle, H.A. Resolving a therapeutic impasse between parents and adolescents in Multi-dimensional Family Therapy. *Journal of Consulting and*

Clinical Psychology 64(3): 481-488, 1996.

Schmidt, S.E.; Liddle, H.A.; and Dakof, G.A. Effects of multidimensional family therapy: Relationship of changes in parenting practices to symptom reduction in adolescent substance abuse. *Journal of Family Psychology* 10(1): 1-16, 1996.

[\[Guide Index\]](#)[\[Previous Section\]](#)[\[Next Section - Scientifically Based Approaches \(cont.\)\]](#)

Multisystemic Therapy (MST) addresses the factors associated with serious antisocial behavior in children and adolescents who abuse drugs. These factors include characteristics of the adolescent (for example, favorable attitudes toward drug use), the family (poor discipline, family conflict, parental drug abuse), peers (positive attitudes toward drug use), school (dropout, poor performance), and neighborhood (criminal subculture). By participating in intense treatment in natural environments (homes, schools, and neighborhood settings) most youths and families complete a full course of treatment. MST significantly reduces adolescent drug use during treatment and for at least 6 months after treatment. Reduced numbers of incarcerations and out-of-home placements of juveniles offset the cost of providing this intensive service and maintaining the clinicians' low caseloads.

References:

Henggeler, S.W.; Pickrel, S.G.; Brondino, M.J.; and Crouch, J.L. Eliminating (almost) treatment dropout of substance abusing or dependent delinquents through home-based multisystemic therapy. *American Journal of Psychiatry* 153: 427-428, 1996.

Henggeler, S.W.; Schoenwald, S.K.; Borduin, C.M.; Rowland, M.D.; and Cunningham, P. B. *Multisystemic treatment of antisocial behavior in children and adolescents*. New York: Guilford Press, 1998.

Schoenwald, S.K.; Ward, D.M.; Henggeler, S.W.; Pickrel, S.G.; and Patel, H. MST treatment of substance abusing or dependent adolescent offenders: Costs of reducing incarceration, inpatient, and residential placement. *Journal of Child and Family Studies* 5: 431-444, 1996.

Community Reinforcement Approach (CRA) Plus Vouchers is an intensive 24-week outpatient therapy for treatment of cocaine addiction. The treatment goals are twofold:

- To achieve cocaine abstinence long enough for patients to learn new life skills that will help sustain abstinence.
- To reduce alcohol consumption for patients who's drinking is associated with cocaine use.

Patients attend one or two individual counseling sessions per week, where they focus on improving family relations, learning a variety of skills to minimize drug use, receiving vocational counseling, and developing new recreational activities and social networks. Those who also abuse alcohol receive clinic-monitored disulfiram (Antabuse) therapy. Patients submit urine samples two or three times each week and receive vouchers for cocaine-negative samples. The value of the vouchers increases with consecutive clean samples. Patients may exchange vouchers for retail goods that are consistent with a cocaine-free lifestyle.

This approach facilitates patients' engagement in treatment and systematically aids them in gaining substantial periods of cocaine abstinence. The approach has been tested in urban and rural areas and used successfully in outpatient detoxification of opiate-addicted adults and with inner-city methadone maintenance patients who have high rates of intravenous cocaine abuse.

References:

Higgins, S.T.; Budney, A.J.; Bickel, H.K.; Badger, G.; Foerg, F.; and Ogden, D. Outpatient behavioral treatment for cocaine dependence: one-year outcome. *Experimental & Clinical Psychopharmacology* 3(2): 205-212, 1995.

Higgins, S.T.; Budney, A.J.; Bickel, W.K.; Foerg, F.; Donham, R.; and Badger, G. Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. *Archives of General Psychiatry* 51: 568-576, 1994.

Silverman, K.; Higgins, S.T.; Brooner, R.K.; Montoya, I.D.; Cone, E.J.; Schuster, C.R.; and Preston, K.L. Sustained cocaine abstinence in methadone maintenance patients through voucher-based reinforcement therapy. *Archives of General Psychiatry* 53: 409-415, 1996.

Voucher-Based Reinforcement Therapy in Methadone Maintenance

Treatment helps patients achieve and maintain abstinence from illegal drugs by providing them with a voucher each time they provide a drug-free urine sample. The voucher has monetary value and can be exchanged for goods and services consistent with the goals of treatment. Initially, the voucher values are low, but their value increases with the number of consecutive drug-free urine specimens the individual provides. Cocaine- or heroin-positive urine specimens reset the value of the vouchers to the initial low value. The contingency of escalating incentives is designed specifically to reinforce periods of sustained drug abstinence.

Studies show that patients receiving vouchers for drug-free urine samples achieved significantly more weeks of abstinence and significantly more weeks of sustained abstinence than patients who were given vouchers independent of urinalysis results. In another study, urinalyses positive for heroin decreased significantly when the voucher program was started and increased significantly when the program was stopped.

References:

Silverman, K.; Higgins, S.; Brooner, R.; Montoya, I.; Cone, E.; Schuster, C.; and Preston, K. Sustained cocaine abstinence in methadone maintenance patients

through voucher-based reinforcement therapy. Archives of General Psychiatry 53: 409-415, 1996.

Silverman, K.; Wong, C.; Higgins, S.; Brooner, R.; Montoya, I.; Contoreggi, C.; Umbricht-Schneiter, A.; Schuster, C.; and Preston, K. Increasing opiate abstinence through voucher-based reinforcement therapy. Drug and Alcohol Dependence 41: 157-165, 1996.

Day Treatment With Abstinence Contingencies and Vouchers was developed to treat homeless crack addicts. For the first 2 months, participants must spend 5.5 hours daily in the program, which provides lunch and transportation to and from shelters. Interventions include individual assessment and goal setting, individual and group counseling, multiple psychoeducational groups (for example, didactic groups on community resources, housing, cocaine, and HIV/AIDS prevention; establishing and reviewing personal rehabilitation goals; relapse prevention; weekend planning), and patient-governed community meetings during which patients review contract goals and provide support and encouragement to each other. Individual counseling occurs once a week, and group therapy sessions are held three times a week. After 2 months of day treatment and at least 2 weeks of abstinence, participants graduate to a 4-month work component that pays wages that can be used to rent inexpensive, drug-free housing. A voucher system also rewards drug-free related social and recreational activities.

This innovative day treatment was compared with treatment consisting of twice-weekly individual counseling and 12-step groups, medical examinations and treatment, and referral to community resources for housing and vocational services. Innovative day treatment followed by work and housing dependent upon drug abstinence had a more positive effect on alcohol use, cocaine use, and days homeless.

References:

Milby, J.B.; Schumacher, J.E.; Raczynski, J.M.; Caldwell, E.; Engle, M.; Michael, M.; and Carr, J. Sufficient conditions for effective treatment of substance abusing homeless. Drug & Alcohol Dependence 43: 39-47, 1996.

Milby, J.B.; Schumacher, J.E.; McNamara, C.; Wallace, D.; McGill, T.; Stange, D.; and Michael, M. Abstinence contingent housing enhances day treatment for homeless cocaine abusers. National Institute on Drug Abuse Research Monograph Series 174, Problems of Drug Dependence: Proceedings of the 58th Annual Scientific Meeting. The College on Problems of Drug Dependence, Inc., 1996.

The link to obtain the manuals useful for implementation is below

http://ncadistore.samhsa.gov/catalogNIDA/Pub_Details.aspx?ItemID=13292

]

NIDA Manuals and Clinical Reports available if one desires expanded details for the implementation of the above treatment approaches (excellent resources with specific and practical information for programs)

Measuring and Improving Cost, Cost-Effectiveness, and Cost-Benefit for Substance Abuse Treatment Programs (1999). Offers substance abuse treatment program managers tools with which to calculate the costs of their programs and investigate the relationship between those costs and treatment outcomes. NCADI # BKD340. Available online at <http://www.nida.nih.gov/IMPCOST/IMPCOSTIndex.html>.

A Cognitive-Behavioral Approach: Treating Cocaine Addiction (1998). This is the first in NIDA's "Therapy Manuals for Drug Addiction" series. Describes cognitive-behavioral therapy, a short-term focused approach to helping cocaine-addicted individuals become abstinent from cocaine and other drugs. NCADI # BKD254. Available online at <http://www.nida.nih.gov/TXManuals/CBT/CBT1.html>.

A Community Reinforcement Plus Vouchers Approach: Treating Cocaine Addiction (1998). This is the second in NIDA's "Therapy Manuals for Drug Addiction" series. This treatment integrates a community reinforcement approach with an incentive program that uses vouchers. NCADI # BKD255. Available online at <http://www.nida.nih.gov/TXManuals/CRA/CRA1.html>.

An Individual Drug Counseling Approach to Treat Cocaine Addiction: The Collaborative Cocaine Treatment Study Model (1999). This is the third in NIDA's "Therapy Manuals for Drug Addiction" series. Describes specific cognitive-behavioral models that can be implemented in a wide range of differing drug abuse treatment settings. NCADI # BKD337. Available online at <http://www.nida.nih.gov/TXManuals/IDCA/IDCA1.html>.

Mental Health Assessment and Diagnosis of Substance Abusers: Clinical Report Series (1994). Provides detailed descriptions of psychiatric disorders that can occur among drug-abusing clients. NCADI # BKD148.

Relapse Prevention: Clinical Report Series (1994). Discusses several major issues to relapse prevention. Provides an overview of factors and experiences that can lead to relapse. Reviews general strategies for preventing relapses, and describes four specific approaches in detail. Outlines administrative issues related to implementing a relapse prevention program. NCADI # BKD147.

Some of the articles below cost \$\$ and they are noted in the citation

Addiction Severity Index Package (1993). Provides a structured clinical interview designed to collect information about substance use and functioning in life areas from adult clients seeking drug abuse treatment. Includes a handbook for program administrators, a resource manual, two videotapes, and a training facilitator's manual. NTIS # AVA19615VNB2KUS. \$150.

Program Evaluation Package (1993). A practical resource for treatment program administrators and key staff. Includes an overview and case study manual, a guide for evaluation, a resource guide, and a pamphlet. NTIS # 95-167268/BDL. \$86.50.

Relapse Prevention Package (1993). Examines two effective relapse prevention models, the Recovery Training and Self-Help (RTSH) program and the Cue Extinction model. NTIS # 95-167250/BDL. \$189; GPO # 017-024-01555-5. \$57. (Sold by GPO as a set of 7 books)

Research Monographs

Beyond the Therapeutic Alliance: Keeping the Drug-Dependent Individual in Treatment (Research Monograph 165) (1997). Reviews current treatment research on the best ways to retain patients in drug abuse treatment. NTIS # 97-181606. \$47; GPO # 017-024-01608-0. \$17. Available online at <http://www.nida.nih.gov/pdf/monographs/monograph165/download165.html>.

Treatment of Drug-Exposed Women and Children: Advances in Research Methodology (Research Monograph 166) (1997). Presents experiences, products, and procedures of NIDA-supported Treatment Research Demonstration Program projects. NCADI # M166; NTIS # 96-179106. \$75; GPO # 017-01592-0. \$13. Available online at <http://www.nida.nih.gov/pdf/monographs/monograph166/download.html>.

Treatment of Drug-Dependent Individuals With Comorbid Mental Disorders (Research Monograph 172) (1997). Promotes effective treatment by reporting state-of-the-art treatment research on individuals with comorbid mental and addictive disorders and research on HIV-related issues among people with comorbid conditions. NCADI # M172; NTIS # 97-181580. \$41; GPO # 017-024-01605. \$10. Available online at <http://www.nida.nih.gov/pdf/monographs/monograph172/download172.html>

Medications Development for the Treatment of Cocaine Dependence: Issues in Clinical Efficacy Trials (Research Monograph 175) (1998). A state-of-the-art handbook for clinical investigators, pharmaceutical scientists, and treatment researchers. NCADI # M175. Available online at <http://www.nida.nih.gov/pdf/monographs/monograph175/download175.html>

Motivational Interviewing Effectiveness

Czuchry, M., Sia, T. L., & Dansereau, D. F. (2006). Improving early engagement and treatment readiness of probationers: Gender differences. *The Prison Journal, 86*(1), 56-74.

Abstract: A total of 294 probationers either received treatment as usual (standard treatment) or standard treatment enhanced with three 2-hour motivational modules. The results indicated that probationers receiving the motivational modules perceived their treatment communities as being more engaged and likely to remain clean and sober than those receiving standard treatment. These findings were strongest for female probationers.

Czuchry, M., & Dansereau, D. F. (2005). Using motivational activities to facilitate treatment involvement and reduce risk. *Journal of Psychoactive Drugs, 37*(1), 7-13. [[Abstract](#)]

EB PROGRAMS MAINLY FOR WOMEN

Intervention Summary: Seeking Safety

http://nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=69

Keywords: Co-occurring disorders, Mental health treatment, Substance abuse treatment, Experimental, Pre-experimental, 13-17 (Adolescent), 18-25 (Young adult), 26-55 (Adult), American Indian/Alaska Native, Asian American, Black or African American, Hispanic or Latino, Other/unspecified, White, Female, Male, Inpatient, Outpatient, Residential, Mix of public and proprietary

All information below was current as of the date of review. To request more information, or to see if new studies or materials are available, please contact the developer or other representatives listed at the bottom of this page.

Descriptive Info	Outcomes	Ratings	Demographics
Studies/Materials	Replications	Contact Info	

Descriptive Information

Topics	Co-occurring disorders, Mental health treatment, Substance abuse treatment
Populations	Age: 13-17 (Adolescent), 18-25 (Young adult), 26-55 (Adult) Gender: Female, Male Race: American Indian/Alaska Native, Asian American, Black or African American, Hispanic or Latino, Other/unspecified, White
Outcomes	Outcome 1: Substance use Outcome 2: Trauma-related symptoms Outcome 3: Psychopathology Outcome 4: Treatment retention
Abstract	Seeking Safety is a present-focused treatment for clients with a history of trauma and substance abuse. The treatment was designed for flexible use: group or individual format, male and female clients, and a variety of settings (e.g., outpatient, inpatient, residential). Seeking Safety focuses on coping skills and psychoeducation and has five key principles: (1) safety as the overarching goal (helping clients attain safety in their relationships, thinking, behavior, and emotions); (2) integrated treatment (working on both PTSD and substance abuse at the same time); (3) a focus on ideals to counteract the loss of ideals in both PTSD and substance abuse; (4) four content areas: cognitive, behavioral, interpersonal, and case management; and (5) attention to clinician processes (helping clinicians work on countertransference, self-care, and other issues).
Settings	Inpatient, Outpatient, Residential
Replications	This intervention has been replicated. (See Replications section below)
Public or Proprietary Domain	Mix of public and proprietary
Costs	Required materials include the Seeking Safety manual in English (\$40) and/or Spanish (\$48). Optional materials and services include the Seeking Safety Adherence Scale (can be downloaded free from http://www.seekingsafety.org); articles on the model (free from the Web site); 4.5 hours of training videos (\$250), poster of safe coping skills (\$14), and on-site training and/or telephone consultation (rates are negotiable). Other possible costs include clinicians' salaries and overhead costs.
Adaptations	Seeking Safety has been tested with dually diagnosed women, men, and adolescent girls. Samples have included clients in outpatient and residential settings, low-income urban women, incarcerated women, and veterans (both men and women). The treatment manual is available in both English and Spanish.
Adverse Effects	No adverse effects, concerns, or unintended consequences were identified by the applicant.

Implementation History	Since 1992, Seeking Safety has been implemented in over 500 clinical settings and as part of statewide initiatives in Oregon, Wyoming, Connecticut, and Hawaii. It has been implemented in programs for substance abuse, mental health, domestic violence, homelessness, women and children, and veterans and in correctional, medical, and school settings in Australia, Canada, Germany, Japan, the Netherlands, New Zealand, Scotland, Sweden, and the United States.
Date Reviewed	October 2006
Review Funded By	CSAT

Trauma Recovery and Empowerment Model (TREM)

March-2007

Outcomes: 1. Severity of problems related to substance use, 2. Psychological problems/symptoms, 3. Trauma symptoms

Abstract: The Trauma Recovery and Empowerment Model (TREM) is a fully manualized group-based intervention designed to facilitate trauma recovery among women with histories of exposure to sexual and physical abuse. Drawing on cognitive restructuring, psychoeducational, and skills-training techniques, the gender-specific 24-29 session group emphasizes the development of coping skills and social support. It addresses both short- and long-term consequences of violent victimization, including mental health sym.

Keywords: Co-occurring disorders, Mental health treatment, Substance abuse treatment, Criminal/juvenile justice, HIV/AIDS, Homelessness, Quasi-experimental, 18-25 (Young adult), 26-55 (Adult), American Indian/Alaska Native, Black or African American, Hispanic or Latino, Other/unspecified, White, Female, Outpatient, Residential, Urban, Mix of public and proprietary

Co-occurring Treatment

Flynn, P. M., & Brown, B. S. (in press). Co-Occurring Disorders in Substance Abuse Treatment: Issues and Prospects. *Journal of Substance Abuse Treatment*. [[Abstract](#)]

Comorbid Drug Abuse and Mental Illness

A Research Update from the National Institute on Drug Abuse

What Is Comorbidity and What Are its Causes?

When two disorders or illnesses occur simultaneously in the same person, they are called *comorbid*. Surveys show that drug abuse and other mental illnesses are often comorbid. As many as 6 in 10 people who have an illicit drug use disorder also suffer from mental illnesses. But the high prevalence of these

comorbidities does not mean that one condition caused the other, even if one appeared first. In fact, there are at least three scenarios that we should consider:

- ⌚ drug abuse can cause a mental illness
- ⌚ mental illness can lead to drug abuse
- ⌚ drug abuse *and* mental disorders are both caused by other common risk factors

In reality, all three scenarios can contribute, in varying degrees, to the establishment of specific comorbid mental disorders and addiction.

Why Do Drug Abuse and Mental Disorders Commonly Co-occur?

⌚ Overlapping genetic vulnerabilities. Mounting evidence suggests that common *genetic factors* may predispose individuals to both mental disorders and addiction or to having a greater risk of the second disorder once the first appears.

⌚ Overlapping environmental triggers. Stress, trauma (e.g., physical or sexual abuse), and early exposure to drugs are common factors that can lead to addiction and to mental illness, particularly in those with underlying genetic vulnerabilities.

⌚ Involvement of similar brain regions. Some areas of the brain are affected by both drug abuse and mental disorders. For example, brain circuits linked to reward processing as well as those implicated in the stress response are affected by abused substances and also show abnormalities in specific mental disorders.

⌚ Drug abuse and mental illness are developmental disorders. They often begin in adolescence or even childhood, periods when the brain is undergoing dramatic developmental changes. Early exposure to drugs of abuse can change the brain in ways that increase the risk for mental illness (figure), just as early symptoms of a mental disorder may increase vulnerability to drug abuse.

The COMT gene, which is known to modulate the risk for schizophrenia, comes in two forms: “Met” and “Val”. The hatched vertical bars in this figure show that individuals with one or two copies of the Val variant are more likely to develop symptoms of psychosis and even schizophrenic-type disorders if they used cannabis during adolescence. This study highlights the complex interactions between genetics, drug exposure, and age of use in the risk for developing a mental disorder.

How Common Are Comorbid Drug Abuse and Mental Disorders?

Compared with the general population: patients with mood or anxiety disorders are about twice as likely to also suffer from a drug disorder (figure) patients with drug disorders are roughly twice as likely to be diagnosed with mood or anxiety disorders.

The rates of specific comorbidities also vary by gender. Among men and women in drug treatment, antisocial personality disorder is more common in men, while women have higher rates of major depression, post-traumatic stress disorder, and other anxiety disorders.

How Can Comorbidity Be Diagnosed and Treated?

The high rate of comorbid substance abuse and mental illness points to the need for a comprehensive approach that identifies, evaluates, and simultaneously treats *both* disorders. Patients with co-occurring disorders often exhibit more severe symptoms than those caused by either disorder alone, underscoring the need for integrated treatment. Careful diagnosis and monitoring will help ensure that symptoms related to drug abuse (e.g., intoxication, withdrawal) are not mistaken for a discrete mental disorder.

Even in people whose comorbidities do not occur simultaneously, research shows that mental disorders can increase vulnerability to subsequent drug abuse and that drug abuse constitutes a risk factor for subsequent mental disorders. Therefore, diagnosis and treatment of one disorder will likely reduce risk for the other, or at least improve its prognosis.

The need to develop effective interventions to treat both conditions concurrently is strongly supported by research, but has been difficult to implement in practice because:

⌚ The health care systems in place to treat substance abuse and mental illness are typically disconnected, hence inefficient. Physicians tend to treat patients with mental illnesses, whereas a mix of providers with varying backgrounds delivers drug abuse treatment.

⌚ Some substance abuse treatment centers are biased against using *any* medications, including those necessary to treat patients with severe mental disorders.

Still, behavioral treatment options customized for a given age group or gender have shown promise for treating drug abuse and mental disorder comorbidities, and research is under way to identify medications targeting both disorders. Clinicians and researchers generally agree that broad-spectrum diagnosis and concurrent therapy (pharmacological and behavioral) will lead to better outcomes for patients with comorbid disorders.

The stigma attached to substance abuse and mental disorders often hinders early diagnosis and proper treatment. Greater understanding resulting from recent scientific findings that substance abuse and mental illness disrupt some of the same brain functions will reduce the social stigma that hinders treatment seeking, quality, and access by patients with either or both conditions.

For further information, please visit NIDA on the web at www.drugabuse.gov or contact:

Public Information and Liaison Branch
Office of Science Policy and Communications
Phone 301-443-1124/Fax 301-443-7397
information@nida.nih.gov

National Institutes of Health, U.S. Department of Health and Human Services June 2007

List of issues facing programs in implementing changes

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- 6) Saldana, L., Chapman, J., Henggeler, S., & Rowland, M. (2007) The Organizational Readiness for Change scale in adolescent programs: Criterion validity. *Journal of Substance Abuse Treatment*, 33(2), 159-169. [[Abstract](#)]
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- 8) Fuller, B., Rieckmann, T., Nunes, E., Miller, M., Arfken, C., Edmundson, E., & McCarty, D. (2007). Organizational Readiness for Change and opinions toward treatment innovations. *Journal of Substance Abuse Treatment*, 33(2), 183-192. [[Abstract](#)]
- 9) Bartholomew, N. G., Joe, G. W., Rowan-Szal, G. A., & Simpson, D. D. (2007). Counselor assessments of training and adoption barriers. *Journal of Substance Abuse Treatment*, 33(2), 193-199. [[Abstract](#)]
- 10) Simpson, D. D., Joe, G. W., & Rowan-Szal, G. A. (2007). Linking the elements of change: Program and client responses to innovation. *Journal of Substance Abuse Treatment*, 33(2), 201-209. [[Abstract](#)]

The Links to the clinical guidelines listed below for implementing these evidence based and clinically effective programs do not work so go to the link below and you will be able to download them for free!!

<http://www.bhrm.org/guidelines/addguidelines.htm>

Behavioral Health Recovery Management

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[Clinical Guidelines](#) - Addiction Guidelines



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The End