

NQF

NATIONAL QUALITY FORUM

**Evidence-Based  
Treatment Practices  
for Substance Use  
Disorders**

WORKSHOP  
PROCEEDINGS



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**Evidence-Based  
Treatment Practices  
for Substance Use  
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*Editors*

WORKSHOP  
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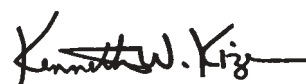
## Foreword

**E**xcessive or inappropriate use of alcohol and drugs (legal and illegal) is a major public health and healthcare problem in the United States and worldwide. Substance use disorders (SUDs) are also a major problem for employers, law enforcement, and social services programs.

In recent years, it has become clear that SUDs, like other chronic health conditions, demand—and respond to—evidence-based therapies, and the knowledge of what constitutes appropriate treatment has grown markedly. Unfortunately, however, we have not witnessed a consistent implementation of proven methods of treatment.

On December 13, 2004, the National Quality Forum (NQF) convened a workshop to discuss evidence-based treatment for SUDs. The workshop, *Evidence-Based Treatment Practices for Substance Use Disorders*, sought to recommend a few high-priority, evidence-based treatment practices that would help focus subsequent consensus and quality measurement efforts. The workshop's 19 stakeholder experts identified 7 core treatment practices that are supported by sufficient scientific evidence to merit widespread implementation and 4 attributes of high-performing SUD treatment programs. In addition, participants identified five barriers to the adoption of evidence-based treatment practices.

We thank the Robert Wood Johnson Foundation for supporting this workshop. We also thank the workshop's participants for their generous time and intellectual input.



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President and Chief Executive Officer

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# Evidence-Based Treatment Practices for Substance Use Disorders

## Table of Contents

Executive Summary .....	vii
Introduction .....	1
Workshop Overview .....	2
Establishing Candidate Evidence-Based SUD Treatment Practices .....	3
The SUD Treatment Environment.....	4
High-Priority Evidence-Based Treatment Practices for SUDs.....	5
Initial Services .....	5
Box A. Elements of a Brief Intervention for SUDs.....	6
Assessment .....	7
Therapeutic Interventions.....	8
Engagement, Retention, and Recovery Management.....	8
Ineffective Practices.....	10
Attributes of Evidence-Based Treatment Programs .....	11
Accelerating Adoption of Evidence-Based SUD Treatments.....	15
Postscript: After the Workshop .....	21
Acknowledgments .....	22
References and Notes .....	22
Appendix A – Workshop Participants and Project Staff.....	A-1
Appendix B – Workshop Agenda .....	B-1
Appendix C – Luc R. Pelletier, “Evidence-Based Practices and Effective Program Attributes in the Treatment of Substance Use Disorders” .....	C-1





## NATIONAL QUALITY FORUM

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# Evidence-Based Treatment Practices for Substance Use Disorders

## Executive Summary

**O**ver the past 15 years, scientific knowledge of effective, evidence-based therapies to treat people with substance use disorders (SUDs) has increased substantially. However, as with other aspects of health-care, the increase in scientific knowledge has not been accompanied by the consistent implementation of proven methods of treatment.

The National Quality Forum (NQF) undertook this project, with support from the Robert Wood Johnson Foundation, as a first step toward addressing the need for SUD treatment performance measures and benchmarks of effective treatment for SUDs. NQF convened an expert panel of stakeholders to begin defining and prioritizing evidence-based practices in the treatment of SUDs. A commissioned background paper provided the starting point for discussion (appendix C).

## Recommended High-Priority Evidence-Based Treatment Practices for SUDs

Treatment for SUDs takes place within a care continuum that includes:

- screening, diagnosis, and assessment;
- active treatment, including stabilization, early recovery treatment, and management of comorbidities (such as mental illness); and
- continuing engagement as part of a longer-term chronic care plan.

Despite significant progress in improving the evidence base for SUD treatment, only a fraction of the spectrum of care for SUDs is validated by the most rigorous evidence in the current scientific literature. Nonetheless, workshop participants concluded that seven core

practices for SUD treatment are supported by scientific evidence sufficient to merit widespread implementation.

### **Practice 1. Screening**

**All patients in general and mental healthcare settings (including primary care, urgent care, and emergency care) should be screened for alcohol misuse whenever a care encounter provides the opportunity.** Screening methods should be evidence based and population specific. Providers should employ screening tools specifically shown to be effective for identifying misuse in a given population. Screening is not just for those who meet diagnostic criteria. Participants concluded that although opportunistic screening for drug misuse is likely to be similarly effective in some clinical settings, the evidence to support routine drug screening is less extensive so far.

### **Practice 2. Initial Brief Intervention**

**All patients with a positive screen should receive a brief intervention by a healthcare practitioner trained in this technique.** Brief intervention should include assessment and follow-up care, including referral to specialty services and systematic monitoring as needed.

### **Practice 3. Prescription for Services**

**Each patient assessed and diagnosed with SUDs should receive a written “dosing recommendation” that clarifies the treatment plan (i.e., explicitly prescribes the specific services and the initial duration and quantity of each service) for the patient.** Providers should conduct or arrange systematic patient reassessment and matching of the patient’s problems with appropriate services, including a new prescription for services if a need is identified.

### **Practice 4. Psychosocial Intervention**

**Evidence-based psychosocial treatment interventions should be initiated for all patients referred to specialty care treatment of SUDs.** Studies of trained clinicians using the following interventions have found these therapies to be effective for at least some populations and diagnoses:

- motivational interviewing;
- motivational enhancement therapy;
- cognitive behavioral therapy;

- structured family and couples therapy;
- contingency management (also known as motivational incentives);
- community reinforcement therapy; and
- 12-step facilitation therapy.

### **Practice 5. Pharmacotherapy**

**Addiction-focused pharmacotherapy should be considered for all patients diagnosed with alcohol and/or opioid dependence. Pharmacotherapy, if prescribed, should be provided in addition to, and directly linked with, psychosocial treatment.** Not all patients with alcohol or opioid dependence are good candidates for pharmacotherapy. For appropriate patients, however, there is solid evidence that pharmacotherapy provided by trained clinicians is effective in combination with psychosocial therapy. All patients with SUDs should be assessed, and, if appropriate, pharmacotherapy should be initiated.

### **Practice 6. Patient Engagement and Retention**

**Specialty providers should systematically promote patient engagement and improve retention in SUD treatment.** Although evidence regarding the relative effectiveness of different strategies for engaging patients is emerging, some evidence indicates that, overall, engagement and retention are important components of successful treatment for patients with SUDs. Both initial engagement and ongoing retention in treatment can be affected by provider actions and patient readiness to change.

**Practice 7. Recovery/Chronic Care Management**  
**Patients treated for SUDs should be engaged in long-term, ongoing management of their care. Primary medical care providers should support and monitor ongoing recovery in collaboration with the specialty provider who is managing the SUDs.** Over the

long term, primary medical care providers should take responsibility for overall care, with referral back to and coordination with specialty treatment when appropriate.

## **Ineffective Practices**

Participants agreed that the evidence suggests that the following practices or treatment approaches are generally ineffective and should not be provided as a routine component of treatment:

- Any of the following as a standalone treatment for SUDs:
  - acupuncture,
  - relaxation therapy,
  - didactic group education, or
  - biological monitoring of substance use;
- detoxification as a standalone treatment for dependence syndrome;
- individual psychodynamic therapy;
- unstructured group therapy;
- confrontation as a principal treatment approach; and
- discharge from a treatment program in response to relapse.

## **Attributes of Evidence-Based Treatment Programs**

Workshop participants concluded that SUD treatment programs that have the following attributes are more likely to implement evidence-based practices successfully than those that do not have them. Programs without these attributes are less likely to successfully translate evidence-based practice to the treatment setting:

- **Organizational structure and culture.** The program has procedures in place to facilitate timely access to care, provide services, measure, monitor, and evaluate care, provide appropriate clinical supervision, foster a collaborative model, and demonstrate ability to provide or facilitate culturally competent care. The organization has appropriate patient/consumer representation and other stakeholder perspectives in the governing structure.
- **Staffing.** The program has a strong process for developing and measuring staff competence, ensuring staff communication, and ensuring availability of appropriately trained nursing and medical staff with relevant clinical competencies. The program has the ability to provide individualized, culturally competent care.
- **Information and clinical care systems.** The program has a clinical information support system that can be used by staff to generate clinically relevant information and that is used to facilitate comprehensive care across a spectrum of providers and services.
- **Strategies for patient engagement.** The program employs strategies to engage patients in self-management as part of recovery management support and includes patient perspectives in program management.

## Accelerating Adoption of Evidence-Based SUD Treatment

Workshop participants identified a number of system-level and individual barriers to adoption of evidence-based SUD treatment practices. Adoption of evidence-based treatment can be encouraged by aligning structure and policy in these identified areas.

### 1. Financial Factors

- Improved insurance coverage and benefit design, including parity in implementation of benefits.
- Increased funding to improve use of and access to evidence-based SUD treatment.
- More precise and consistent reimbursement billing codes for SUD diagnosis and treatment.
- Improved data linkages within and across insurers and insurance products.
- Payment mechanisms and incentives to promote evidence-based practice.

### 2. Legal/Regulatory and Oversight Factors

- Greater alignment of accreditation, legal, and regulatory systems, including licensure and scope-of-practice regulations, with evidence-based practice.
- Mechanisms to reduce discontinuity of services due to financial issues.
- Recognition of a single state-level authority charged with facilitating consensus on and implementation of evidence-based SUD treatment practices.

### **3. Education/Training Factors**

- Improvements in health professional curricula and continuing education.
- Improved training, supervision, and accountability for all levels of SUD treatment providers.

### **4. Healthcare Infrastructure Factors**

- Enhanced networks and communications for SUD providers.
- Development of a standardized nomenclature for SUD diagnosis and treatment.
- Improved identification and retention of qualified staff.
- Increased consensus on outcome goals relating to SUD treatment and the systems required to monitor goals.
- Clearly defined “essential community services” with increased availability.
- Increased collaboration with providers to enhance uptake of evidence-based practices.

### **5. Research and Knowledge Translation Factors**

- Research on the effectiveness of evidence-based practices.
- Improved understanding of how to implement evidence-based practice.



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# Evidence-Based Treatment Practices for Substance Use Disorders

## Introduction

Over the past 15 years, scientific knowledge of effective, evidence-based therapies to treat people with substance use disorders (SUDs) has increased substantially. By 2002, for example, a research synthesis effort known as the Mesa Grande project had reviewed more than 360 controlled clinical studies related to treatments for alcohol use disorders alone.<sup>1</sup> As of 2004, the Cochrane Collaboration's Drug and Alcohol Group had conducted 21 separate systematic reviews of the scientific literature related to specific treatments for drug and alcohol addiction.<sup>2</sup>

At the same time, SUD—the misuse and abuse of both legal substances (e.g., alcohol) and illegal ones (e.g., drugs not legally prescribed)—is gaining recognition as a chronic condition for many patients that must be managed in a manner similar to diseases such as diabetes or heart disease. Furthermore, SUDs, mental illness, and physical illness commonly occur together in an individual, and all of these comorbidities must be treated effectively to achieve good health.

As with other areas of healthcare, the increase in scientific knowledge has not been accompanied by consistent implementation of proven methods of treatment. Implementation of evidence-based practices varies widely across programs and providers. In addition, significant gaps exist in the evidence base for SUD treatment. Despite some progress, no standardized measures exist to indicate whether programs in place are effective or whether goals are achieved.<sup>3</sup> Even assessing the degree to which programs offer evidence-supported services and treatments is difficult.

The National Quality Forum (NQF) undertook this project, with support from the Robert Wood Johnson Foundation, as a first step toward addressing the need for SUD treatment performance measures and benchmarks of effective treatment for SUDs. NQF convened a panel of stakeholders with expertise in SUD treatment and research to begin the process of defining and prioritizing evidence-based practices in treating SUDs.

The NQF project was designed to enhance the adoption of evidence-based SUD practices by focusing on a few practices for which the evidence is strongest and most accepted and that are most likely to have significant effect in improving care for those undergoing treatment. Over time, these practices may become the basis for measures of performance in SUD treatment programs.

## Workshop Overview

**A**ssessing the overall quality of care offered by a provider of SUD treatment services is extremely difficult. Among the substantial barriers to determining quality is the lack of a sufficiently rigorous scientific research evidence (particularly evidence from randomized controlled trials) that could indicate which practices and processes are effective and for which patients. Despite considerable recent progress in this area, many current practices related to the assessment and treatment of patients with diagnosed SUDs still have not been rigorously studied. Indeed, there remain differences in the primary outcome goals providers are trying to achieve for their patients: Some emphasize complete abstinence, while others initially focus on improvements in health, social, or job functioning.

Although the existing scientific literature addresses only a small portion of the spectrum of current care for SUDs, it does provide a starting point for moving the quality of care forward. Thus, on December 13, 2004, NQF convened a group of 19 expert stakeholders to discuss evidence-based treatment for SUDs (appendix A; see appendix B for the workshop agenda). The multidisciplinary group included consumers, providers, purchasers, and researchers.



The purpose of the workshop was to recommend a few high-priority, evidence-based treatment practices for SUDs that would serve as the focal point for subsequent consensus and quality measurement efforts. Workshop participants were asked to:

- establish a candidate set of effective evidence-based SUD treatment practices;
- recommend practices of highest priority for widespread implementation;
- identify the attributes of treatment programs that are ready to implement evidence-based SUD treatment practices; and
- identify barriers to the implementation of evidence-based SUD treatments and ways that these barriers can be addressed in order to accelerate the adoption of evidence-based practices.

Participants met by conference call before the workshop to establish common ground and discuss the scope of candidate practices to be addressed. During this call, several participants emphasized that improving evidence-based quality of care could be achieved not only by increasing the use of treatments of demonstrated effectiveness, but also by reducing the use of treatments that have been shown to be ineffective or detrimental to care. As a result, participants established an additional objective for the workshop:

- establish a list of practices that current evidence indicates are not effective and should be abandoned.

## Establishing Candidate Evidence-Based SUD Treatment Practices

A background paper was used as the basis for establishing a set of candidate evidence-based practices. The paper reviewed existing syntheses of the research (see appendix C). A list of potential candidate practices, extracted from the paper, was circulated to participants in advance of the workshop and was augmented by conversations with participants and other experts who were unable to attend the workshop.

In the preworkshop phase, participants were asked to rate the effectiveness of candidate practices based on their own experience and their knowledge of the literature. The practices that were most frequently highly rated, and those most frequently rated as ineffective, became the starting point for workshop discussion.

Prior to the workshop, participants also discussed and refined a number of criteria for establishing whether a practice was evidence based and whether it was sufficiently important to be considered a high-priority practice for widespread implementation. Participants identified 10 criteria that were used both implicitly and explicitly in recommending the SUD treatment practices highlighted in this report (table 1).

**Table 1 – Criteria for Prioritizing Evidence-Based SUD Treatment Practices**

1. Breadth, depth, and methodological strength of the evidence base
2. Strength of the link between the practice and outcomes of treatment
3. Importance of the practice in affecting outcomes
4. Generalizability and applicability of the practice (e.g., its relevance and effectiveness with a variety of different populations and substances, including patients who are not actively seeking care and for a range of SUDs)
5. Feasibility (including the financial, geographic, and technological feasibility of providing the practice)
6. Understandability and credibility (whether the practice makes sense to, and is considered credible by, both providers and payers)
7. Current extent of the practice (because increasing the use of practices that are already nearly universal has little incremental effect on improving overall care)
8. The ability to implement the practice as part of a quality improvement program
9. Measurability
10. Usefulness of the recommended practices as a set, including whether there are critical corollaries or co-practices needed for treatment to be successful and their potential impact on the use of other evidence-based practices

## The SUD Treatment Environment

**B**efore developing recommendations, workshop participants discussed the framework and environment within which SUD treatment has been offered. SUD has traditionally been considered and treated as an acute disease. The perception that SUD therapy is not effective stems largely from the view that “if a treatment that is applied in one course (like an antibiotic) is not effective, then the treatment itself is not effective.” Participants agreed that chronic disease, with its periodic relapses and exacerbations, is a more appropriate model for most patients.<sup>4,5</sup> They recommended that a chronic care model should be applied to SUD management and research in order to identify more effective models for management and treatment.

Throughout the workshop, participants referred repeatedly to the need not only to promote evidence-based, effective care practices, but also to promote the coordination of care across primary and specialty services. The schisms between alcohol and other drug addiction treatment, between SUD treatment and mental healthcare, and between behavioral healthcare and general healthcare, all contribute to inadequate treatment and poor chronic care management for people with SUDs. SUD specialty and non-specialty care providers must play appropriate roles in a coordinated system that provides for the screening and assessment of patients and the ongoing management of medication, psychosocial, and other healthcare needs.

Fragmentation of care for SUDs is particularly problematic because patients with SUDs often present with multiple comorbid physical, mental, and psychosocial conditions. In addition, SUD programs often focus only on alcohol and drug problems and undertreat nicotine and tobacco addictions, which are common comorbid conditions in SUD patients.

Treatment for SUDs takes place within a care continuum that includes:

- screening, diagnosis, and assessment;
- active treatment, including stabilization, early recovery treatment, and management of comorbidities (such as mental illness); and
- continuing engagement as part of a longer-term chronic care plan.

The current scientific literature addresses only a small portion of the many clinical decisions required across the spectrum of current care for SUDs. Over the course of the workshop, the group identified high-priority, evidence-based practices that address all three phases of care for SUDs.

## High-Priority Evidence-Based Treatment Practices for SUDs

**A**fter extensive discussion of the candidate evidence-based practices and the criteria for selecting those of the highest priority, participants identified seven core practices for SUD management. They concluded that the following seven practices are supported by evidence of effectiveness and, if implemented widely, are likely to benefit patients with SUDs.

### Initial Services

#### Practice 1. Screening

**All patients in general and mental healthcare settings (including primary care, urgent care, or emergency care) should be screened for alcohol misuse whenever a care encounter provides the opportunity.** Screening methods should be evidence based and population specific. They should employ tools specifically shown to be effective for identifying misuse in a given population. Screening is not

just for those who meet diagnostic criteria. Participants concluded that although opportunistic screening for drug misuse is likely to be similarly effective in some clinical settings, the evidence to support routine drug screening is less extensive so far.

### **Practice 2. Initial Brief Intervention**

**All patients with a positive screen should receive a brief intervention by a healthcare practitioner trained in this technique.** Brief intervention should include assessment and follow-up care, including referral to specialty services and systematic monitoring as needed. (Box A presents a description of the elements of brief intervention.)

#### **Box A – Elements of a Brief Intervention for SUD**

A brief intervention may be accomplished in the following general sequence:

1. Give feedback about screening results, relating the risks of negative health effects to the patient's presenting health concerns.
2. Inform the patient about safe consumption limits and offer advice about change.
3. Offer to involve family members in this process to educate them and solicit their input (consent is required).
4. Assess the patient's degree of readiness for change (e.g., "How willing are you to consider reducing your use at this time?").
5. Negotiate goals and strategies for change.
6. Schedule an initial follow-up appointment in two to four weeks.
7. Monitor changes at follow-up visits by asking patient about use, health effects, and barriers to change.
8. If the patient declines referral to specialty evaluation or treatment, continue to encourage reduction or cessation of use and reconsider referral to specialized treatment at subsequent visits.

Source: Management of Substance Use Disorders Working Group. Veterans Health Administration/Department of Defense Clinical practice guideline for the Management of Substance Use Disorders. Washington, DC: Veterans Health Administration/Department of Defense; 2001. Also available online at [www.guideline.gov](http://www.guideline.gov).

## Discussion

The group noted that some evidence-based interventions must be paired with others to be effective. Workshop participants included some paired activities in their prioritized list, even if the evidence was weaker for one component of a paired process. For example, research on brief intervention has used screening as a precursor. The evidence base for screening currently applies mainly to alcohol misuse, not other drug use. The group's recommendation thus focused on alcohol screening as an evidence-based intervention, recognizing that screening is a necessary precursor to any type of intervention for SUDs.

Workshop participants felt it was important to distinguish the actual evidence-based practices, or interventions, from the level of care at which they are provided. A level of care can be inpatient, non-hospital residential, outpatient, intensive outpatient, or emergency, while an intervention or practice (e.g., screening and brief intervention) may be applicable in any setting. Some interventions may be for monitoring, rather than for a therapeutic outcome. For example, the use of periodic urinalysis is an important part of a treatment program for SUD but it is not in itself a therapeutic intervention. Different levels of care will deliver different interventions to identify, refer, and treat SUDs.

## Assessment

### Practice 3. Prescription for Services

**Each patient assessed and diagnosed with SUD should receive a written "dosing recommendation" that clarifies the treatment plan (i.e., explicitly prescribes the specific services and the initial duration and quantity of each service) for the patient.** Providers should conduct or arrange systematic patient reassessment and matching of the patient's problems with appropriate services, including a new prescription for services if a need is identified.

## Discussion

Participants agreed that although systematic assessment is an essential precursor to an evidence-based treatment strategy, it often has been ineffectively utilized in practice. Evidence-based assessment should support and guide treatment and intervention; in current practice patient assessments are often used repeatedly to collect insurance and demographic information for administrative, rather than treatment, purposes. Improvement and integration of information technology (IT) systems will support the transformation of assessment from an administrative to a clinical process.

More comprehensive and systematic assessment of patients' clinical and psychosocial needs supports better matching of the patient and the service. "Problem-service matching" is more than a referral; it is precise matching of client needs to psychosocial and clinical/pharmacologic treatment interventions, and it should culminate in an individualized and explicit prescription for services. Better evidence is needed to support the consistent use of effective assessment tools.

## Therapeutic Interventions

### Practice 4. Psychosocial Intervention

**Evidence-based psychosocial treatment interventions should be initiated for all patients referred to specialty care treatment of SUDs.** Studies of trained clinicians using the following interventions have found these therapies to be effective for at least some populations and diagnoses:

- motivational interviewing;
- motivational enhancement therapy;
- cognitive behavioral therapy;
- structured family and couples therapy;
- contingency management (also known as motivational incentives);
- community reinforcement therapy; and
- 12-step facilitation therapy.

### Practice 5. Pharmacotherapy

**Addiction-focused pharmacotherapy should be considered for all patients diagnosed with alcohol and/or opioid dependence. Pharmacotherapy, if prescribed, should be in addition to, and directly linked with, psychosocial treatment.** Not all patients with alcohol or opioid dependence are good candidates for pharmacotherapy. For appropriate patients, however, there is solid evidence that pharmacotherapy from trained clinicians is effective in combination with psychosocial therapy. All patients with SUDs should be assessed and, if appropriate, pharmacotherapy should be initiated.

### Discussion

“Treatment” for most patients represents a constellation of approaches and services. Participants cautioned that the value of

many evidence-based practices is only fully realized when the practices are applied in conjunction with other programs and services. It may not be effective to apply a single intervention as a standalone therapy. Further research is needed to evaluate the effect of combined and complementary interventions. Participants agreed that addiction-focused psychosocial interventions should be a part of every treatment plan and should be specific to client readiness and need.

Evaluation for pharmacotherapy should be a standard element of SUD treatment and a part of the treatment plan considered for all eligible patients. Workshop participants did not address specific pharmacotherapy treatment options for SUDs. They noted, however, that new pharmaceuticals have been developed for effective management and that many therapies are underutilized.

## Engagement, Retention, and Recovery Management

**Practice 6. Patient Engagement and Retention** Specialty providers should systematically promote patient engagement and improve retention in SUD treatment. Although evidence regarding the relative effectiveness of different strategies for engaging patients is emerging, there is evidence that, overall, engagement and retention are important components of successful treatment for patients with SUDs. Both initial engagement and ongoing retention in treatment can be affected by provider actions and patient readiness to change.



**Practice 7. Recovery/Chronic Care Management**

**Patients treated for SUDs should be engaged in long-term, ongoing management of their care. Primary medical care providers should support and monitor ongoing recovery in collaboration with the specialty provider who is managing the SUD.** Over the long term, primary medical care providers should take responsibility for overall care, with referral back to and coordination with specialty treatment when appropriate.

**Discussion**

Patients who are engaged in their treatment with a strong therapeutic alliance and who have greater satisfaction with care stay in treatment longer. Long-term retention is a strong predictor of positive outcomes. Programs can increase patient engagement and retention through specific activities, such as periodic phone calls or other direct patient outreach and specified intervals for addiction treatment follow-up.

For purposes of measuring program quality, it may be more useful to focus on intermediate process measures under the control of the provider (e.g., frequency of direct patient contact) rather than on patient retention. If a program is measured on the basis of long-term retention, it may have disincentives to engage with high-risk groups such as homeless or other populations that are at increased risk of relapse and early treatment dropout.

People with SUDs often have other healthcare needs. Keeping patients connected to both specialty SUD treatment and primary care (as well as other types of specialty care) is crucial to managing a chronic condition. Workshop participants recommended that primary care providers (PCPs) be responsible for recovery management once patients' disorders are well controlled, with appropriate SUD specialty referral as needed.

PCPs are not always well trained to manage either the initial or the chronic phases of SUDs. However, they are typically the first line of providers to determine the need for screening and brief intervention. PCPs thus may need additional information, training, and SUD treatment specialist support to fulfill this management role effectively.

Reimbursement policies also need to recognize the comprehensive and coordinating care role of PCPs for patients with SUDs.

The workshop participants cautioned that there is lack of agreement on the primary goals of SUD therapy. Many providers believe that abstinence (or “recovery”) is the only acceptable outcome of therapy. Others believe that symptom reduction, with improved functioning or harm reduction, is an acceptable and realistic goal, although perhaps not constituting optimal recovery. Similarly, some patients desire complete abstinence, while others may only agree to harm reduction as an acceptable goal. Initial treatment and ongoing care management must address the issue of acceptable patient-identified outcomes.

### **Ineffective Practices**

Research has been unable to document the effectiveness of a number of treatments used to varying extents for SUDs. Participants agreed that the evidence also suggests that the following practices or treatment approaches generally are ineffective and should not be provided as routine components of treatment:

- any of the following as a standalone treatment for SUDs:
  - acupuncture,
  - relaxation therapy,
  - didactic group education, or
  - biological monitoring of substance use;
- detoxification as a standalone treatment for dependence syndrome;
- individual psychodynamic therapy;
- unstructured group therapy;
- confrontation as a principal treatment approach; and
- discharge from a treatment program in response to relapse.

Some practices that were deemed to be ineffective were considered such only if applied alone, in the absence of other evidence-based interventions. Thus, the group noted that it is still possible that some of these services eventually could be



demonstrated to be useful in some populations as adjunct or supportive services. For example, detoxification has a place in treatment programs, but it is insufficient as a standalone treatment. Participants commented that using relapse as grounds for discharge is equivalent to penalizing a diabetic patient for an episode of hyperglycemia. Similarly, sanctioning individuals with SUDs may cause reluctance to enter treatment and, for those sanctioned, it may also cause the loss of employment, health insurance, and the ability to pay for treatment.

Workshop participants did not support the use of biological monitoring as a standalone therapy for SUDs. There is no evidence that monitoring patients' substance use status by itself helps them to reduce their substance use and improve their functioning. The group did, however, support biological monitoring as a routine part of care management and quality management. Monitoring SUD indicators is the equivalent of monitoring blood glucose or blood pressure in individuals with other chronic diseases. Biological monitoring is effective as part of a comprehensive care plan, but it is ineffective when used as the only approach or when a positive test is used as grounds for automatic discharge from a treatment program. Biological monitoring does have the potential to be used as an intermediate outcome measure of treatment effectiveness and thus could be part of a performance measurement and quality improvement strategy.

## Attributes of Evidence-Based Treatment Programs

Participants examined the question of which attributes of SUD treatment programs are likely to be associated with the use of evidence-based SUD treatment practices and improved patient care and outcomes. The Institute of Medicine (IOM), with support from the Substance Abuse and Mental Health Services Administration (SAMHSA), is developing a framework for SUD treatment infrastructure that applies the model presented in the IOM publication *Crossing the Quality Chasm: A New Health System for the 21st Century*<sup>6</sup> to mental health and addictions. The framework may help further delineate the crucial attributes of high-quality SUD providers and programs.

In the meantime, workshop participants concluded that many cultural attributes of an organization influence its capability to adopt evidence-based SUD treatments. These attributes also affect the fidelity (integrity) with which evidence-based practices are implemented. Participants expressed concern that the fidelity of evidence-based practice may be low in real-world practice settings. Achieving fidelity depends on many factors, including financing, a willing provider population, training and supervision, monitoring, accountability, and appropriate application to the patient population.

The group noted that many evidence-based practices have been studied only in narrow populations (e.g., white and African American men, pregnant women) or as delivered by select provider groups.

There is currently little evidence on the correlation between program attributes and the implementation of evidence-based practices. However, workshop participants thought it would be possible to use expert opinion and observation to develop a crosswalk of system attributes that appear to enable the adoption of evidence-based practices.

The group discussed how SUD treatment programs potentially could be measured in relation to organizational attributes. Attributes can be classified as related either to structure (how the organization is set up) or performance (what the organization does). Quality improvement and process improvement are tools used to ensure fidelity of practice and improve performance. With additional testing, some organizational attributes may be developed into structural or performance measures of SUD treatment quality.

### 1. Organizational Structure and Culture

Participants concluded that evidence-based SUD treatment practices are most likely to be adopted and maintained in treatment programs that have the following characteristics:

- explicit procedures regarding how to deliver, measure, monitor, and evaluate care;
- accessible, active clinical supervisors to support front line staff;
- a culture of multidisciplinary collaboration to address clinical and psychosocial needs of patients;
- the ability to plan, arrange, and/or provide individualized culturally competent care, including access to multiple levels of care; and

- appropriate representation of patient/consumer and other stakeholder perspectives on the provider's board or other leadership entity.

There is a body of literature on organizational "readiness to change" that could be applied to SUD treatment organizations. The literature suggests that organizations are more effective when they are ready to adopt new practices and be influenced by new evidence and that outcomes of SUD treatment are influenced by many factors, including patient characteristics and non-treatment factors. Structural features of a healthcare organization that affect outcomes include infrastructure and providers of treatment. Infrastructure includes financing, clinical policy, facilities, and settings of care, each of which must be engaged or addressed in the process of adopting evidence-based practices.

### 2. Staffing

Evidence-based practices are more likely to be adopted with fidelity in SUD treatment programs that have:

- strong staff communications;
- continuous staff development and measurement of staff competence; and
- availability of staff with relevant clinical competencies, including nursing and medical staff.

The skill level of the staff involved in SUD treatment influences all aspects of identifying and managing SUDs. Staff may have a wide variety of educational levels and formal training. Supervision of staff by knowledgeable health professionals with appropriate formal clinical training is

crucial to ensuring that patients are appropriately matched to the services they need. Appropriate clinical supervision is also necessary to ensure that SUD services are coordinated with other healthcare services a patient may receive and that evidence-based SUD treatments are considered and provided to each patient.

Clinical professionals throughout the healthcare system (not just SUD professionals) need core competencies in SUD identification and initial management. (See appendix C, table 10 for a listing of core competencies.)

The group gave special emphasis to the issue of training for SUD program staff. Participants commented that the end goal is not delivering the training itself, but the resulting improvement in the competency of the staff and infrastructure. It was noted that ongoing staff development and training creates three levels of competency. The first level provides face validity that the organization has sufficient staff expertise and experience. The second level is foundational knowledge: the capability to use clinical information and financial systems. The third level of competency focuses on evidence-based practices themselves and on ensuring that providers have access to the knowledge and skill building needed to deliver evidence-base practices.

### **3. Information and Clinical Care Systems**

Evidence-based practices are more likely to be adopted in SUD treatment programs that have:

- the presence of a clinical information support system and staff who have the ability to generate clinically relevant information from data; and
- ready access to the spectrum of care services – that is, care delivered in the context of a comprehensive or networked clinical system.

Access to timely, relevant, and accurate information is fundamental to both evidence-based practice and quality improvement. Although a program may be able to offer high-fidelity, evidence-based treatments without an electronic information system, well-functioning health IT systems can help sustain long-term improvements. Investment in health

IT is thus a critical indicator of capacity, and the use of electronic information to connect and improve care is an important attribute of evidence-based treatment programs.

SUD treatment programs that implement evidence-based practices also must have the capacity to connect patients with clinical, social, and other services. Effective programs are linked with providers of other services and can ensure that information about patients' overall care is available both to the SUD provider and to other clinical and social service providers. Health IT systems can facilitate care coordination, reduce isolation in SUD treatment sites, and increase the flow of evidence-based information.

#### **4. Strategies for Patient/Consumer Engagement in Treatment**

Program attributes that workshop participants believed to be associated with the overall engagement of patients in treatment, and better long-term outcomes, were:

- explicit strategies to engage patients in self-management as part of recovery management support; and
- representation of consumer perspectives in program management.

Consumer participation may vary in different types of SUD treatment programs. Community-based programs such as Alcoholics Anonymous have extensive consumer participation, while physician-based organizations tend to have less consumer representation. The group indicated that ensuring representation of consumer perspectives is important. Some consumers may be resistant to disease management models or evidence-based practices if the new models conflict with existing models, and this could be a barrier to best practice adoption.

The interface of provider recommendation, patient choice, and the interaction of multiple therapies plays a potentially significant role in the outcome of SUD treatment. Participants recognized that these factors present research challenges as well as fruitful avenues for future research. Ultimately, research on these interactions may yield information that is needed to apply specific evidence-based treatments to diverse client populations in order to achieve optimal outcomes.

## Accelerating the Adoption of Evidence-Based SUD Treatments

In the course of the discussion, participants identified a number of system-level and individual factors that are barriers to the adoption of evidence-based treatment practices. Many of these could be addressed by policy, payment, programmatic, or philosophical shifts that would accelerate the adoption and diffusion of evidence-based treatments.

### 1. Financial Factors

- Insurance coverage should be based on effective practices. Benefit structures and benefit management should provide financial incentives (or at least the absence of disincentives) for providing evidence-based practices. Coverage policy and benefit design should not encourage the provision of care practices that have been found to be ineffective.
- Increased funding is needed to promote the adoption of and access to evidence-based treatment practices and increase the evidence base for SUD treatment.
- Reimbursement billing codes should correspond to evidence-based practices. More precise definitions of SUD-related treatment services are needed to support this linkage.
- Data linkages should be developed within and across insurers and insurance products such as health, pharmacy, and employee assistance benefits. Information linkages should be supported by purchasers and regulators, although care also must be taken to ensure that patient privacy is protected.
- Payment mechanisms/cost models should encourage quality improvement and program changes to increase the adoption of evidence-based practices (e.g., adoption of IT systems; staff compensation that emphasizes training and retention of staff skilled in evidence-based practice).

Workshop participants emphasized the lack of parity in the availability of health insurance coverage and the comprehensiveness of coverage for SUD treatment. Major payers such as Medicare and Medicaid could create a template for other payers by shifting their model of benefit delivery for SUD treatment. Most insurance does not now cover management of SUDs as a chronic disease that may require lifelong need for recovery management. Some payers classify SUD as a mental disorder and will not pay for treatment in a primary care setting, despite evidence that such care can be cost-effective. To ensure access to care, patients must have continuity of care; payers need to recognize the source of that care and reimburse for it.

The group noted that inappropriate utilization policies, amplified by the stigma of using SUD and mental health benefits, tend to minimize patients' willingness and ability to use available benefits. The structure of healthcare benefits for SUD treatment is based on an artificial model of "visits." A more valid model could be linked to evidence-based recovery milestones such as periods of continuous abstinence or stable employment.



## 2. Legal/Regulatory and Oversight Factors

- Accreditation requirements should be linked to the implementation of evidence-based practices and should support innovation.
- Legal and regulatory systems should be consistent with evidence-based practice, including licensure and scope-of-practice regulations.
- Mechanisms should be developed to prevent the transfer of private pay patients to public settings (e.g., through benefit management), with the attendant discontinuity of services.
- A single state-level authority should be empowered and funded to facilitate consensus on and implement policies to promote evidence-based treatment practices.

Accreditation, regulatory, and licensing organizations have the potential to reinforce or promote implementation of evidence-based practices. There is a need for increased emphasis on evidence-based practice in oversight models, because current models are based on process indicators not necessarily related to evidence-based treatment effectiveness.

The privacy protections embedded in the Code of Federal Regulations 42 (CFR 42) enable individuals to be confident of privacy if they seek treatment. On the other hand, regulation can be a barrier to communication among health professionals seeking to provide continuous coordinated care.

Participants urged that more funding be provided to promote access to evidence-based treatment programs. Limited funding streams sometimes create interagency competition for funding and authority

between state and federal agencies with overlapping missions, such as state mental health and state substance abuse agencies. Greater coordination and clarity of mission is needed to reduce interagency competition and create an environment fully supportive of evidence-based SUD treatment.

The SUD treatment field is underserved partly because of the challenges involved in recruiting, retaining, and advancing qualified staff. According to participants, salaries in the SUD treatment field are not competitive, and incentives are low for training and education. This has led to poor staff retention and has had an adverse impact on quality. It was noted that the Health Resources and Services Administration has created a “medically underserved area” designation and related programs that could serve as a model to address the recruitment and retention of SUD treatment providers through the use of incentives.

## 3. Education/Training Factors

- Professional curricula should include continual updating of the basic knowledge involved in screening, assessing, and treating SUDs that is available throughout the career of an SUD care professional.
- Adequate training relevant to specific evidence-based practices should be made available to all levels of staff in SUD treatment programs.

Lack of professional education about SUDs can be addressed at many levels. At the most basic level, SUD issues should be addressed in undergraduate and graduate

professional curricula. The knowledge base could be reinforced through credentialing and recertification processes as well as licensing requirements.

There is a need to ensure competency among the diverse professionals and para-professionals who provide counseling for SUDs. The lack of standards affects professionalism in the field and is a barrier to the recruitment of qualified individuals. Variations in type of provider, qualifications, and capabilities also impact the implementation of evidence-based practice. As noted, this variation should be studied as an issue affecting the dissemination and implementation of evidence-based practices.

#### **4. Healthcare Infrastructure Factors**

- Increased development of SUD treatment networks and networked programs is needed to enhance communication while maintaining required privacy protections across programs and providers.
- Isolated programs and providers should be connected with state or national associations or with larger provider networks to increase the speed of diffusion and adoption of evidence-based practices.
- A standardized clinical nomenclature for SUD diagnoses and treatment services is needed to facilitate communication, reimbursement, research, and quality improvement.
- Initiatives should be developed for improving the identification and retention of qualified staff, including salary/compensation improvements.
- Increased consensus is needed to achieve clarity relating to the continuum of outcome goals relating to SUD. Depending on patient diagnosis and preferences, goals may range from complete abstinence as the outcome of treatment to the reduction of harm and hazard.
- “Essential community services” should be clearly defined and their availability increased.
- Providers should be engaged collaboratively in researching, developing, and implementing evidence-based practices in order to increase support for them.

Participants commented that federal dollars do not now support the evaluation of program outcomes and the structural and therapeutic elements of programs that result in better outcomes. They believed that quality improvement is itself an evidence-based practice that should be widely implemented and supported through reimbursement arrangements.

Because of the challenges in implementing evidence-based practices at the provider level, the role of the purchaser often has not been adequately addressed or leveraged. Purchasers (both private and public) have the potential to greatly influence the SUD treatment field by using evidence explicitly in benefit coverage and provider reimbursement policies. Managed care organizations, insurers, and state and federal agencies could be better informed in order to embrace evidence-based purchasing strategies.

Isolation and lack of access to information were recognized as important barriers to the uptake of evidence-based practices. Many provider facilities are reluctant to share information about patients, and their infrastructure is not adequate for managing information. Workshop participants noted that “networked” facilities could reduce this isolation and improve capability across facilities. The group recommended networking to improve the efficiency and effectiveness of treatment programs and increase the uptake of evidence-based practices.

Insurance coverage, stigma, lack of treatment options, and cost shifting all contribute to the barriers to SUD treatment access. Improvements in reimbursement and training and in the professionalism of practice all may increase the availability of qualified treatment providers and reduce access barriers.

## **5. Research and Knowledge Translation Factors**

- New research is needed to examine the effectiveness of methods to implement current evidence-based practices in everyday settings.
- Research is needed to better understand and improve the readiness of programs, providers, and systems to absorb new knowledge as it is generated and reduce the time lag involved in the diffusion of evidence-based practices.



The group supported the concept of measuring the performance of SUD providers. However, it identified a number of risks and unintended consequences that could result from measuring provider performance. For example, inadequately designed measures could increase the potential for providers to avoid treating sicker individuals who might adversely affect performance ratings. Linking payment to performance could create financial or access barriers. These consequences could have an adverse influence on access to SUD treatment and should be addressed in the performance measure development process.

Workshop participants also noted that by identifying high-priority practices, they might unintentionally deflect interest in further research on or the implementation of other less well-documented processes that may be of equal or greater effectiveness. They urged the development of evidence for other promising practices and increased study of current practices that are believed to be effective.

Participants proposed the following key research questions that address the credibility and effective implementation of evidence-based practices. Studies are needed to examine:

- the effectiveness of psychosocial interventions delivered in a group setting (most research on effectiveness relates to individual therapy, despite group therapy being the norm);
- the longitudinal effectiveness of SUD treatment, based on a chronic care model;

- the effectiveness of screening and brief intervention in settings other than primary care and their applicability to drug use (versus alcohol use) and to younger patients, including adolescents;
- the elements needed to conduct evidence-based comprehensive assessments on diverse populations;
- the cost-effectiveness/cost-benefit of “best practice” treatment to demonstrate a business case to both providers and payers. Longitudinal studies may demonstrate an overall improvement of health, with cumulative impact on costs over time;
- information on variations in the effectiveness of evidence-based practices relating to settings and patient and practitioner characteristics, including race/ethnicity, age, and gender; and
- the effectiveness of non-12-step mutual help and self-management programs.

Other areas especially in need of research and development include:

- **Standardized clinical nomenclature for SUDs.** There is great variability in the use of terms to denote different types and severity of SUDs. A common terminology or clinical nomenclature, widely used and associated with specific payment codes, is needed to move quality measurement forward. A common vocabulary will enable monitoring across the continuum of treatment levels and providers. It also will facilitate research, which often is focused on a single dimension—physical, psychological, or social—and cannot be merged across domains.

- **Data and coding.** Participants recognized that the SUD field has a need for greater data differentiation in order to more effectively describe SUDs and the interventions provided to clients. Current coding and data management systems are set up to facilitate payment, but not research or quality improvement. Data elements must be precisely defined to delineate a spectrum of SUDs and the precise evidence-based treatment practices applied to them. Payment methodologies should have equal precision, because payment practices drive the improvement of coding, which will facilitate improvements in population-based research on SUD treatment.
  - **Influence of the provider-patient relationship on the fidelity of implementing evidence-based practices.** Providers of SUD treatment services vary, as do the certification and licensing of their personnel. Qualifications of providers, their skill levels, and the quality of their relationships with patients will affect the use of evidence-based treatment and outcomes. The effectiveness of the intervention depends in part on the capability of the providers and the appropriateness of the match between provider and client. Any study of quality in SUD treatment and the use of evidence-based treatment must consider the effect of the provider-patient relationship on the outcome.
  - **Patient factors influencing evidence-based treatment outcomes.** There is a lack of research on population variations that affect treatment outcomes. For example, participants noted that gender and race can affect metabolism of drugs and alcohol, yet this factor has not been extensively addressed in the literature. Similarly, social factors, including homelessness and family status, affect the effectiveness of treatment, but they have not been adequately captured in research or evidence-based recommendations.
  - **Transferability of evidence.** Because of the many patient, provider, and treatment variations in SUD, it is challenging to understand which evidence-based practices can be applied to other settings, populations, or substances. The group noted, for example, that much of the evidence for screening was developed for alcohol use. Stakeholders and experts believe that the same strategy can be applied for drug screening, but this application has not been studied.
- ## 6. Other Issues
- Other important issues that were discussed in detail but not explicitly addressed by any of the recommendations included the following:
- **“Science-to-service” pipeline.** Translating evidence-based SUD practices into community practice is a slow and cumbersome process. The implementation process could be enhanced through greater consensus on high-priority evidence-based practices (such as through the NQF workshop) and by increasing the flexibility of funding agencies to move dollars in order to meet emerging needs and create incentives for evidence-based practices. Oversight and purchasing agencies, including accreditation organizations, state mental health and substance abuse agencies, SAMHSA, and the Centers for Medicare and Medicaid Services, could support implementation by recognizing and rewarding evidence-based practices.

- **Provider resistance.** Some providers resist changing their practices to implement evidence-based practices. Resistance may be the result of philosophical viewpoints, lack of resources, or lack of a local involvement in introducing evidence-based practice. It is critical to engage providers early in the move toward adopting evidence-based practices and to develop collaborative models for translating information to various types of providers and treatment settings.

## Postscript: After the Workshop

**T**he draft proceedings from this workshop were posted briefly on the NQF web site so that Members and the public could comment on the discussion and the recommendations of the workshop participants. This section summarizes the comments received during that review.

### Gaps in the Evidence Base

The workshop findings regarding both effective and ineffective treatments are solid, but the workshop discussion did not adequately reflect the gap between what researchers have studied and what SUD providers most often offer. Most treatment for SUDs is provided based on an overall “program” approach, rather than as a set of specific interventions, and most non-pharmacological treatments (e.g., therapies) are administered to patients as groups. It is possible that some of the current treatments are as effective as the best of the interventions discussed in the workshop. Unfortunately, to date neither researchers nor funders have emphasized the need for better research on the effectiveness of most of what currently is provided. One result is that providers are reluctant to replace their current programs with “effective” treatments, because they believe the current programs also are effective.

### Care Coordination

The recommendations regarding the integration of pharmacotherapy with other treatments, and the importance of PCPs in the ongoing management of patients with SUDs, are especially salient. At present, these activities are not well integrated, even in settings with a strong emphasis on care management, such as health maintenance organizations.

### Recovery and Chronic Care Management

The actual long-term management needs for people with SUDs vary just as the needs of patients with other conditions do. Many – probably most – people with SUDs recover without specialty care. Furthermore, some people need no further care for their condition after initial recovery, except perhaps increased vigilance; others may need ongoing care of different types and intensities. Workshop participants did not discuss approaches for evaluating severity as the basis for follow-up recommendations. All patients of any severity would need to be engaged at some level in ongoing care management, but variations in severity may affect specific management recommendations. Additional evidence is needed on this issue.

### Importance of a Framework for Conceptualizing Effective Treatments.

The emphasis on continuity of care and disease management is important to both the clinical and research fields and holds great promise for improving treatment for patients with SUDs. As noted in the background paper for the workshop, it is important to conceptualize treatment for SUDs within a framework of patient engagement and retention in SUD care. Since the workshop, additional information has been published on the framework for SUD care and the processes of outreach, induction, engagement, treatment, and aftercare.<sup>7</sup>

## Acknowledgments

This workshop was supported by a grant from the Robert Wood Johnson Foundation.

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## NATIONAL QUALITY FORUM

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### Appendix A

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## NATIONAL QUALITY FORUM

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### Appendix B

# Agenda—Workshop on Evidence-Based Treatment Practices for Substance Use Disorders

WASHINGTON, DC

MONDAY, DECEMBER 13, 2004

- 8:30 AM **Welcome and Introductions**
- 8:50 AM **Background and Context for the Workshop**
- 9:30 AM **Discussion of Evidence-Based Treatment Practices**
  - Ineffective Practices
  - Candidate Effective Practices
- 10:30 AM **Break**
- 10:45 AM **Prioritizing Effective Practices**
  - Criteria for Prioritizing Practices for Widespread Use
  - Limitations to Practices
  - ACTION: Recommended Highest Priority Practices
  - Research Needs
- 12:15 PM **Public Comment**
- 12:30 PM **Lunch Break**
- 1:30 PM **Attributes of Programs That Provide High-Priority Practices**
- 2:30 PM **Adoption of Treatment Practices**
  - Barriers to Adoption
  - Addressing Barriers
  - Research Needs
- 3:45 PM **Public Comment**
- 4:00 PM **Next Steps**
- 4:30 PM **Adjourn**





## **Appendix C**

# **EVIDENCE-BASED PRACTICES AND EFFECTIVE PROGRAM ATTRIBUTES IN THE TREATMENT OF SUBSTANCE USE DISORDERS**

**Luc R. Pelletier, MSN, RN, BC, FAAN  
San Diego, CA**

**November 2004**



## TABLE OF CONTENTS

<b>Purpose</b> .....	<b>C-5</b>
<b>Introduction</b> .....	<b>C-5</b>
<b>Evidence-Based Treatment Practices and Program Attributes</b> .....	<b>C-6</b>
Theoretical Models of Care .....	C-6
Stages of change model .....	C-6
Texas Christian University treatment process and outcomes model .....	C-7
Evidence-Based Treatment Practices .....	C-8
Time in care .....	C-8
Specific treatment interventions .....	C-8
Medications .....	C-8
Psychosocial services .....	C-9
Methods that reflect continuing/connected services .....	C-14
Ineffective practices .....	C-16
Practices that require further study to show evidence of effectiveness .....	C-16
Program Principles and Attributes .....	C-17
<b>Barriers to Using Evidence-Based Practices</b> .....	<b>C-18</b>
<b>Summary</b> .....	<b>C-19</b>
<b>References</b> .....	<b>C-21</b>
<b>Glossary of Key Terms</b> .....	<b>C-25</b>
<b>Tables</b>	
Table 1. Methods in Developing the Background Paper .....	C-29
Table 2. Estimated Total Costs for Substance Abuse Treatment and Cost per Admission, by Type of Care: 1997 .....	C-29
Table 3. Summary of Specific Treatment Interventions: Medications .....	C-30
Table 4. Summary of Specific Treatment Interventions: Medications Shown to Be Ineffective or Require Further Study .....	C-36
Table 5. Summary of Studies Related to Psychosocial Clinical Practices Shown to Be Effective ..	C-39
Table 6. Summary of Studies Related to Psychosocial Clinical Practices Shown to Be Ineffective.	C-45
Table 7. Motivational Interviewing: Three Kinds of Behavior Change Interventions .....	C-46
Table 8. Persons with Active Substance Use Presenting in Primary Care .....	C-47
Table 9. Phases of Treatment Model .....	C-55
Table 10. Core Competencies in Substance Abuse Education for Physicians and Nurses .....	C-57
Table 11. Core Competencies for Clinicians in the 21st Century .....	C-58



## PURPOSE

The focus of this background paper, which will support the discussion to take place at a public meeting, is on the treatment and care processes that have a scientific evidence base that addresses their effectiveness for patients diagnosed with a substance use disorder (SUD), including both legal (e.g., alcohol and prescription drugs) and illegal drugs. The discussion excludes primary prevention and screening; practices related to initial diagnosis are included if they are part of a larger discrete care process. The paper includes secondary prevention theories and techniques and presents standalone as well as combined therapies (multisystem approaches to care). Alternative therapies are included if they have been scientifically studied. Treatments for other addictive disorders (e.g., sexual addictions, tobacco use and abuse, gambling disorders) are excluded, unless there is treatment “best practice” concurrent to another substance use treatment discussion. The paper does not address treatment in criminal justice settings. Evidence will be further defined and described in another background document for the workshop.

This background paper is a synthesis of secondary source documents; this is not a primary, structured synthesis of the relevant scientific literature. The author has focused on literature and other documents in those areas where evidence has been interpreted to imply effectiveness.

In describing specific evidence-based interventions, the author also thought it necessary to provide context. Hence, widely accepted program principles and attributes are described, as are theoretical models of care that have been described in the literature. These theoretical models, principles and attributes provide an overarching framework within which specific treatment practices can be better understood. The methods employed to develop this paper are described in table 1.

## INTRODUCTION

SUDs, including substance abuse (the abuse of illicit substances and the misuse of alcohol and prescription drugs), are chronic, relapsing health conditions that affect an individual’s physical, emotional, and social well-being. From a public policy perspective, substance abuse is variously considered an illness, a social ill, a moral dilemma, a bad habit, or a crime.<sup>1</sup> From a healthcare perspective, however, it is a treatable condition with a substantial and growing literature supporting treatment effectiveness. At a fundamental level, research has confirmed that treatment is more effective than no treatment.<sup>2</sup>

The health and socioeconomic toll of substance abuse on the American populace is staggering. In 1998, the economic cost of drug abuse was estimated to be \$143.4 billion,<sup>3</sup> with roughly \$13 billion of that figure attributed to direct substance abuse treatment costs (see table 2).<sup>4</sup> (Productivity costs and drug control program expenditures accounted for most of the rest.)

The need for substance abuse treatment is far greater than the treatment received. In 2002, the estimated number of persons (aged 12 or older) needing treatment for an illicit drug problem was 7.7 million, but only 1.4 million (18.2 percent) of these received treatment for drug abuse at a specialty substance abuse facility. Of the remainder, some were presumably treated in general healthcare settings. However, an estimated 362,000 reported that they felt they needed (but did not get) treatment for their drug problem, including an estimated 88,000 who reported that they made an effort but were unable to get treatment.<sup>5</sup>

<sup>1</sup> United Nations Office on Drugs and Crime (UNODC), *Contemporary Drug Abuse Treatment: A Review of the Evidence Base*, New York: UNODC; 2002. Available at [www.unodc.org/pdf/report\\_2002-11-30\\_1.pdf](http://www.unodc.org/pdf/report_2002-11-30_1.pdf). Last accessed July 28, 2005.

<sup>2</sup> Ibid.

<sup>3</sup> White House, Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States*, Washington DC: ONDCP; 2001.

<sup>4</sup> National Institute on Drug Abuse (NIDA), *NIDA Info Facts: Costs to Society*. Available at [www.nida.nih.gov/Infofax/costs.html](http://www.nida.nih.gov/Infofax/costs.html). Last accessed August 23, 2004.

<sup>5</sup> Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Agency (SAMHSA), State estimates of persons needing but not receiving substance abuse treatment, *The National Survey on Drug Use and Health (NSDUH) Report*, 2004; June 11:1-3.

And substance abuse does not involve just illicit drugs; it is estimated that in 1999, 10 million individuals reported non-medical use of prescription drugs.<sup>6</sup>

## EVIDENCE-BASED TREATMENT PRACTICES AND PROGRAM ATTRIBUTES

Evidence-based practice (medicine) is defined by Sackett as “the conscientious, explicit, and judicious use of current best evidence in making decisions about healthcare.”<sup>7</sup> More recently, evidence-based practices are defined as “those clinical and administrative practices that have been proven to consistently produce specific, intended results.”<sup>8</sup> The following is a summary of the reviewed literature and other documents related to treatment practices (including principles and program attributes) that experts have concluded, based on scientific studies and/or expert consensus, are effective.

This section first summarizes theoretical models of care. Second (and the focus of this paper), evidence for particular treatment practices is described that may be provided in isolation or as part of larger models of care (e.g., time in care, specific treatment interventions [including medications and psychosocial services], methods that reflect continuing/connected services, and practices that have been shown to be ineffective or that require further study to show evidence of their effectiveness). Finally, this section reviews some general principles and attributes of treatment programs that have been found to be associated with effective care based on expert consensus or systematic reviews.

### Theoretical Models of Care

Theoretical models of care have been proposed in substance abuse treatment as specific approaches to improve the effectiveness of treatment. Although using fidelity scales for evidence-based practices has been described, there appears to be no evidence at present regarding the actual use of each of these models within substance abuse treatment programs.<sup>9</sup>

### Stages of change model

Prochaska and DiClemente proposed a transtheoretical model of behavior change based on motivation and applied it to the treatment of SUDs.<sup>10</sup> The model proposes that people pass through five stages of change to eventually change their behavior. These stages include:

- *Pre-Contemplation Stage* – the person may not be aware of the need for behavioral change or is unwilling to change.<sup>11</sup> There is little movement “that could shift their view of problem behavior and [the individual] can be rather defensive about the targeted problem behavior.”<sup>12</sup>
- *Contemplation Stage* – the person may be thinking about making a change in the near future. There is some movement “that could shift their view of problem behavior and [the individual] is less defensive about the targeted problem behavior.”<sup>13</sup>

<sup>6</sup>SAMHSA, *Summary of Findings from the 1999 National Household Survey on Drug Abuse*, DHHS Pub. No. SMA-00-3466, Rockville, MD: SAMHSA; 2000.

<sup>7</sup>Sackett DL, Richardson WS, Rosenberg W, et al., eds., *Evidence-Based Medicine: How to Practice and Teach EBM*, London: Churchill Livingstone; 1997.

<sup>8</sup>Hyde PS, Falls K, Morris JA, et al., *Turning Knowledge into Practice: A Manual for Behavioral Health Administrators and Practitioners About Understanding and Implementing Evidence-Based Practices*, Boston, MA: The Technical Assistance Collaborative; 2003.

<sup>9</sup>Center for Mental Health Services (CMHS), SAMHSA, *Co-occurring Disorders: Integrated Dual Disorders Treatment: Implementation Resource Kit—Using Fidelity Scales for Evidence-Based Practices*; 2003. Available at [www.mentalhealthpractices.org](http://www.mentalhealthpractices.org). Last accessed October 19, 2004.

<sup>10</sup>Prochaska JO, DiClemente CC, *Transtheoretical therapy: toward a more integrative model of change*, *Psychotherapy: Theory, Research, and Practice*, 1982;19:276-288; Prochaska JO, DiClemente CC, *Stages and processes of self-change of smoking: toward an integrative model of change*, *Journal of Consulting and Clinical Psychology*, 1983;51:390-395.

<sup>11</sup>DiClemente CC, Prochaska, JO, *Toward a comprehensive, trans-theoretical model of change: stages of change and addictive behaviors*. In: Miller WR, Heather N, eds., *Training Addictive Behaviors*, 2nd ed., New York: Plenum Press; 1998, 3-24.

<sup>12</sup>DiClemente CC, Velasquez MM, *Motivational interviewing and the stages of change*. In: Miller WR, Rollnick S, *Motivational Interviewing: Preparing People for Change*, 2nd ed., New York: The Guilford Press; 2002, 201-216, 204.

<sup>13</sup>DiClemente CC, Prochaska JO, 1998.

- *Preparation* – the person is on the verge of making a commitment to take action to change the behavior and develop a plan and strategy for change.<sup>14</sup> The individual decides to take action within the next month and makes immediate, small behavioral changes.<sup>15</sup>
- *Action* – the person is trying new behaviors but is still unstable; the individual takes the first active steps toward change. This is a time when it is essential to acknowledge difficulties, support attempts at change, and support perseverance.<sup>16</sup>
- *Maintenance* – individuals work to prevent relapse and to continue modifying and adapting their behavior to hold the gains made in previous stages.<sup>17</sup>

Six elements of brief interventions specifically designed to motivate clients to change their behavior have been identified. They are not linked with the stages of change model and have been proven to have an impact on alcohol addiction regardless of client readiness. This model is identified by the acronym FRAMES and is briefly described below.

- **F**eedback on personal risk or impairment is given to the client following assessment of substance use patterns and related problems.
- **R**esponsibility for change is placed squarely and explicitly on the client.
- **A**dvice about how to change alcohol use habits is given to the client by the clinician in a nonjudgmental manner.
- **M**enus of self-directed change options and treatment alternatives are offered to the client.
- **E**mpathic counseling, showing warmth, respect, and understanding, is used.
- **S**elf-efficacy or optimistic empowerment is engendered to the client to encourage changes in behavior.<sup>18</sup>

### **Texas Christian University treatment process and outcomes model**

Simpson has proposed a model that conceptualizes treatment in discrete phases—outreach, induction, engagement, treatment, and aftercare. He describes a “black box of treatment,” which includes clinical processes of program participation, behavioral change, therapeutic relationship, and psychosocial change.<sup>19</sup> “Multivariate analytic models tested in a variety of community and correctional settings have helped to establish more clearly the directional relationships between client motivation, treatment process variables (i.e., therapeutic rapport, program participation, behavioral compliance, and psychosocial improvements), retention, and follow-up outcomes.”<sup>20</sup>

<sup>14</sup>DiClemente CC, Bellino LE, Neavins, TM, Motivation for change and alcoholism treatment, *Alcohol Research and Health*, 23(2);1999:86-92.

<sup>15</sup>Prochaska JO, DiClemente CC, Norcross JC, In search of how people change: applications to addictive behaviors, *American Psychologist*, 1992;47:1102-1114.

<sup>16</sup>Center for Substance Abuse Treatment (CSAT), *Brief Interventions and Brief Therapies for Substance Abuse*, Treatment Improvement Protocol (TIP) Series No. 34, Rockville, MD: CSAT;1999:15.

<sup>17</sup>Prochaska JO, DiClemente CC, Norcross JC, 1992.

<sup>18</sup>CSAT, *Enhancing Motivation for Change in Substance Abuse Treatment*, TIP Series No. 35, Rockville, MD: CSAT; 1999.

<sup>19</sup>Simpson DD, *Research Summary: Focus on Treatment Process and Outcomes: Understanding Clinical Processes to Improve Treatment*, Fort Worth, TX: Institute of Behavioral Research, Texas Christian University; 2002.

<sup>20</sup>Simpson DD, 2002, 2; Simpson DD, Joe GW, Rowan-Szal GA, et al., Drug abuse treatment process components that improve retention, *Journal of Substance Abuse Treatment*, 1997;14(6):565-572; Simpson DD, Joe GW, Greener JM, et al., Modeling year 1 outcomes with treatment process and post-treatment social influences, *Substance Use and Misuse*, 2000;35(12-14):1911-1930; Joe GW, Simpson DD, Broome KM, Retention and patient engagement models for different treatment modalities in DATOS, *Drug and Alcohol Dependence*, 1999;57(2):113-125; Broome KM, Knight DK, Knight K, et al., Peer, family, and motivational influences on drug treatment process and recidivism for probationers, *Journal of Clinical Psychology*, 1997;53(4):387-397; Simpson DD, Modeling treatment process and outcomes, *Addiction*, 2001;96:207-211.

## Evidence-Based Treatment Practices

This section is divided into categories of specific treatment practices described in the literature to be effective and include time in care; specific treatment interventions (including medications and psychosocial services); methods that reflect continuing/connected services; and practices that have been shown to be ineffective or require further study.

### Time in care

- *Longer stays lead to better follow-up rates.* Hubbard and Ball and Ross proposed that longer stays in outpatient and residential rehabilitation programs generally lead to better follow-up rates.<sup>21</sup> Grella et al. found that patients who stayed in residential treatment for at least three months had more positive outcomes than those who stayed for a shorter duration.<sup>22</sup> Patients in methadone maintenance treatment who stayed at least a year were found to have substantially better outcomes than those who left treatment earlier.<sup>23</sup>
- *Remaining in treatment for an adequate period of time is critical for treatment effectiveness.*<sup>24</sup>

### Specific treatment interventions

**Medications.** A review of systematic reviews, meta-analyses, and clinical practice guidelines related to pharmacotherapy in substance abuse treatment yielded the following (see table 3 for detailed summaries and interventions):

#### Alcohol detoxification

- *Alcohol detoxification* interventions from the Veterans Health Administration (VHA)/Department of Defense (DoD) SUD practice guideline.<sup>25</sup>

#### Opiate detoxification

- *Opiate detoxification* interventions from the VHA/DoD SUD practice guideline.<sup>26</sup>
- *Opioid antagonists with minimal sedation for opioid withdrawal.* The use of opioid antagonists combined with alpha2 adrenergic agonists is feasible and probably increases the likelihood of transfer to naltrexone compared with withdrawal managed primarily with an adrenergic agonist.
- *Buprenorphine for the management of opioid withdrawal.* Buprenorphine has potential as a medication to ameliorate the signs and symptoms of withdrawal from heroin, and possibly methadone, but many aspects of the treatment protocol and relative effectiveness need to be investigated further. In addition to its use for opiate withdrawal, the Food and Drug Administration has approved the sublingual formulation combined with naloxone for maintenance therapy.
- *Methadone at tapered doses for the management of opioid withdrawal.* The studies included in this review confirm that slow tapering with temporary substitution of long acting opioids, accompanied by medical supervision and ancillary medications, can reduce withdrawal severity.

<sup>21</sup> Hubbard RL, ed., *Drug Abuse Treatment: A National Study on Effectiveness*, Chapel Hill, NC: University of North Carolina Press; 1989; Ball JC, Ross A, *The Effectiveness of Methadone Maintenance Treatment*, New York: Springer; 1991.

<sup>22</sup> Grella CA, Hser YI, Joshi V, et al., Patient histories, retention, and outcome model for younger and older adults in DATOS, *Drug and Alcohol Dependence*, 1999;57(2):151-166.

<sup>23</sup> Joe GW, Simpson DD, Broome KM, 1999; Simpson DD, Joe GW, Brown BS, Treatment retention and follow-up outcomes in the drug abuse treatment outcome study (DATOS), *Psychology of Addictive Behaviors*, 1997;11:239-260.

<sup>24</sup> NIDA, *Principles of Drug Addiction Treatment: A Research-Based Guide*, NIH Publication No. 00-4180, Rockville, MD: NIDA; 1999-2000:1-3. Available at 165.112.78.61/PODAT/PODATindex.html. Last accessed August 1, 2004; UNODC, *Investing in Drug Abuse Treatment: A Discussion Paper for Policy Makers*, New York: UNODC; 2003. Available at www.unodc.org/pdf/report\_2003-01-31\_1.pdf. Last accessed August 1, 2004.

<sup>25</sup> Management of Substance Use Disorders Work Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Abuse Disorders*, Washington, DC: VHA/DOD; 2001.

<sup>26</sup> Ibid.



## Sedative-hypnotic detoxification

- *Sedative-hypnotic detoxification* interventions from the VHA/DoD SUD practice guideline.<sup>27</sup>

## Opiate Agonist Therapy

- *Buprenorphine for the management of opioid agonist therapy* (see note above).
- *Opiate agonist therapy* interventions from the VHA/DoD SUD practice guideline.<sup>28</sup>
- *Naltrexone maintenance treatment for opioid dependence*. The available trials do not allow a final evaluation of naltrexone maintenance treatment. However, Miller, Wilbourne, and Hetteema, in their review of 381 clinical trials, ranked opiate antagonist treatment with naltrexone as the sixth most effective intervention, garnering a cumulative evidence score of +100.<sup>29</sup>
- *Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence*. Methadone is an effective maintenance therapy intervention for the treatment of heroin dependence, because it retains patients in treatment and decreases heroin use better than treatments that do not utilize opioid replacement therapy.
- *Methadone maintenance at different dosages for opioid dependence*. Methadone dosages ranging from 60 to 100 mg/day are more effective than lower dosages in retaining patients and in reducing the use of heroin and cocaine during treatment.
- *Use of levo-alpha-acetyl-methadol (LAAM)*. In its expert consensus process, the Substance Abuse and Mental Health Services Administration (SAMHSA) has presented recommendations for the use of LAAM, because it creates an effective “pharmacologic cross-tolerance to other opioids and therefore blocks the euphoric effects of those drugs while also controlling opiate craving.”<sup>30</sup>
- *Adolescents and adults requiring medication*. The Michigan Quality Improvement Consortium (MQIC) has developed recommendations for adolescents and adults, patients with a substance use disorder, and patients requiring medication.<sup>31</sup> All of its recommendations were based on the opinion of an expert panel and on the *VHA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders*.<sup>32</sup> The VHA/DoD guideline is comprehensive in its scope, specific to alcohol and opioid abuse and dependence, and provides recommended interventions for management of clients in primary care and specialty care rehabilitation settings (see table 3 and table 8).

**Psychosocial services.** A review of systematic reviews, meta-analyses and clinical practice guidelines related to psychosocial clinical practices in the treatment of SUDs yielded the following findings:

- *Psychosocial clinical practices* from the VHA/DoD SUD practice guideline (see table 5).<sup>33</sup>
- *Integrating substance abuse treatment and vocational services*.<sup>34</sup>
- *Assessment and therapeutic effectiveness, management and treatment for cocaine and methamphetamine use disorders*. The consensus panel strongly recommended the use of training manuals to “increase the likelihood that therapists will deliver a uniform set of services to their clients.”<sup>35</sup>

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Miller WR, Wilbourne PL, Hetteema JE, What works? A summary of alcohol treatment outcome research. In: Hester RK, Miller WR, *Handbook of Alcohol Treatment Approaches: Effective Alternatives*, 3rd ed., Boston: Allyn & Bacon; 2003:13-63.

<sup>30</sup> CSAT, *LAAM in the Treatment of Opiate Addiction*, TIP Series No. 22, Rockville, MD: CSAT; 1995:1.

<sup>31</sup> Michigan Quality Improvement Consortium (MQIC), *Diagnosis and Management of Substance Use Disorders*, Southfield, MI: MQIC; 2003.

<sup>32</sup> Management of Substance Use Disorders Work Group, 2001.

<sup>33</sup> Ibid.

<sup>34</sup> CSAT, *Integrating Substance Abuse Treatment and Vocational Services*, TIP Series No. 38, Rockville, MD: CSAT; 2000.

<sup>35</sup> CSAT, *Treatment for Stimulant Use Disorders*, TIP Series No. 33, Rockville, MD: CSAT; 1999:5.

- *Screening and assessment of adolescents, treatment of adolescents with SUD, and substance abuse treatment for persons with child abuse and neglect issues.*<sup>36</sup>
- *Motivational interviewing or motivational enhancement therapy.* Miller and Rollnick define their treatment method of motivational interviewing as a “client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence.”<sup>37</sup> The three kinds of interventions in the model include Brief Advice, Behavior Change Counseling, and Motivational Interviewing. These are described in more detail in table 7.

The researchers note that many entities have used their model and have adapted it to include a feedback component. Their inventory of studies of adaptations of motivational interviewing (AMI) yielded the following results regarding efficacy.<sup>38</sup> There are no studies evaluating the efficacy of “pure” motivational interviewing as previously defined by Miller and Rollnick.<sup>39</sup> In the areas of alcohol problems and drug addiction, relatively brief AMIs (one to four sessions) have yielded moderate to large effects and good maintenance over time.<sup>40</sup> In general, AMIs are more efficacious than no treatment, and they are not significantly different from credible alternative treatments.<sup>41</sup> AMIs are efficacious, both as stand-alone treatments and as preludes to other treatments.<sup>42</sup> And while the majority of outcome studies are in the areas of alcohol problems and drug addiction, there are also studies that support the efficacy of AMIs for people with hypertension, diabetes, dual diagnoses, and eating disorders.

Many of the outcomes for AMIs, especially for alcohol problems, appear to be clinically as well as statistically significant.<sup>43</sup> Most of the AMI studies are quite strong in external validity.<sup>44</sup> The internal validity of AMI studies, however, has been variable and often weak.<sup>45</sup>

Miller, Wilbourne, and Hettema, in their review of evidence on motivational enhancement therapy, ranked this treatment as second on a list of 48 frequently used treatment modalities for alcohol abuse.<sup>46</sup>

- *Enhancing motivation for change in substance abuse treatment.*<sup>47</sup>

<sup>36</sup> CSAT, *Screening and Assessing Adolescents with Substance Use Disorders*, TIP Series No. 31, Rockville, MD: CSAT; 1999; CSAT, *Treatment of Adolescents with Substance Use Disorders*, TIP Series No. 32; CSAT, *Substance Abuse Treatment for Persons with Child Abuse and Neglect Issues*, TIP Series No. 36, Rockville, MD: CSAT; 2000.

<sup>37</sup> Miller WR, Rollnick S, *Motivational Interviewing: Preparing People for Change*, 2nd ed, New York: Guilford Press; 2002:218.

<sup>38</sup> *Ibid*, 241.

<sup>39</sup> Miller WR, Rollnick S, *Motivational Interviewing: Preparing People to Change Addictive Behavior*, New York: Guilford Press; 1991.

<sup>40</sup> Burke B, Arkowitz H, Menchola M, The efficacy of motivational interviewing: a meta-analysis of controlled clinical trials, *Journal of Consulting and Clinical Psychology*, 2003;71(5):843-861; Dunn C, DeRoo L, Rivera, FP, The use of brief interventions adapted from motivational interviewing across behavioral domains: a systemic review, *Addiction*, 2001;96(12):1725-1742.

<sup>41</sup> Booth RE, Kwiatkowski, C, Iguchi MY, et al., Facilitating treatment entry among out-of-treatment injection drug users, *Public Health Reports*, 1998;113 (Supplement 1):116-128; Stephens RS, Roffman, RA, Curtin L, Comparison of extended versus brief treatments for marijuana use, *Journal of Consulting and Clinical Psychology*, 2000;68(5):898-908; Harland J, White M, Drinkwater C, et al., The Newcastle exercise project: a randomized control trial of methods to promote physical activity in primary care, *British Medical Journal*, 1999;319:828-831; Project MATCH Research Group, Project MATCH secondary a priori hypothesis, *Addiction*;92:1671-1698.

<sup>42</sup> Bien TH, Miller WR, Burroughs JM, Motivational interviewing with alcohol outpatients, *Behavioural and Cognitive Psychotherapy*, 1993;21:347-356; Bien TH, Miller WR, Tonigan JS, Brief interventions for alcohol problems: a review, *Addiction*, 1993;88:315-336; Brown JM, Miller WR, Impact of motivational interviewing on participation and outcome in residential alcoholism treatment, *Psychology of Addictive Behaviors*, 1993;7:211-218.

<sup>43</sup> Jacobsen NS, Roberts LJ, Berns SB, et al., Methods for defining and determining the clinical significance of treatment effects: description, application, and alternatives, *Journal of Consulting and Clinical Psychology*, 1999;67(3):300-307; Stephens RS, Roffman RA, Curtin L, 2000; Brown JM, Miller WR, 1993; Project Match Research Group, 1997; Saunders B, Wilkinson C, Phillips M, The impact of a brief motivational intervention with opiate users attending a methadone programme, *Addiction*, 1995;90:415-424.

<sup>44</sup> Kazden AE, *Research Design in Clinical Psychology*, 2nd ed., Needham Heights, MA: Allyn & Bacon; 1992.

<sup>45</sup> Luborsky L, Diguier L, Seligman DA, et al., The researcher’s own therapy allegiances: a “wild card” in comparison to treatment efficacy, *Clinical Psychology: Science and Practice*, 1999;6(1):95-106.

<sup>46</sup> Miller WR, Wilbourne PL, Hettema, 2003.

<sup>47</sup> CSAT, *Enhancing Motivation for Change in Substance Abuse Treatment*, TIP Series No. 35, Rockville, MD: CSAT.

- *Brief interventions in primary care.* Manwell et al. report that “20 percent of male patients and 10 percent of female patients who came to see their [primary care] physicians met the criteria for at-risk, problem, or dependent alcohol use” (as reported in Fleming and Manwell, 1999).<sup>48</sup> Since 70 percent of American adults visit a primary care physician at least twice per year, it is surmised that “primary care providers potentially can identify and treat a substantial proportion of people experiencing alcohol-related adverse effects.”<sup>49</sup> (See Glossary of Key Terms for a definition of “brief intervention.”)

Whitlock et al. summarized the efficacy of behavioral counseling interventions in primary care to reduce risk or harmful alcohol use by adults and found significant changes in use behavior. Of the 4,331 non-duplicative titles and abstracts they reviewed, 12 controlled clinical trials and random controlled trials met the selection criteria and formed the basis of the findings and conclusions.

Six to 12 months after good-quality, brief, multi-contact behavioral counseling interventions (those with up to 15 minutes of initial contact and at least 1 follow-up), participants reduced the average number of drinks per week by 13% to 34% more than controls did, and the proportion of participants drinking at moderate or safe levels was 10% to 19% greater compared with controls. One study reported maintenance of improved drinking patterns for 48 months.<sup>50</sup>

With regard to integrating substance abuse care with primary care, Partasarathy et al. found that patients with substance abuse and a substance abuse-related medical condition treated in an integrated care program had significantly lower medical care costs and had significant decreases in inpatient, outpatient, and total medical costs.<sup>51</sup>

A consensus panel also recommended treatment of clients with SUDs aimed at general practice clinicians and proposed specific evidence-based actions related to brief interventions and brief therapies.<sup>52</sup>

Moyer, Finney, Swearingen, and Vergun confirmed “positive evidence for brief interventions compared to control conditions typically delivered by health-care professionals to non-treatment-seeking samples.”<sup>53</sup> Results of the meta-analysis of 54 studies of opportunistic samples (n=34) and treatment-seeking samples (n=20) suggest that brief interventions can be successful in specific settings with selected populations.

The Department of Veterans Affairs and DoD have developed specific interventions for the assessment of substance abuse in primary care. These are listed in table 8.

- *Brief interventions in alcohol abuse care.* Miller, Wilbourne, and Hetterna found that brief intervention had the largest literature base and garnered a cumulative evidence score of +390, by far the most positive effect of any intervention.<sup>54</sup>
- *Screening and behavioral counseling interventions in primary care to reduce alcohol misuse.*<sup>55</sup>
- *The matrix model.* The Matrix Model is a here-and-now approach that “provides a framework for engaging stimulant abusers in treatment and helping them achieve abstinence.”<sup>56</sup> The program, which

<sup>48</sup>Manwell LB, Fleming MF, Johnson K, Tobacco, alcohol, and drug use in a primary care sample: 90-day prevalence and associated factors, *Journal of Addictive Diseases*, 1998;17:67-80; Fleming M, Manwell LB, Brief intervention in primary care settings: a primary treatment method for at-risk, problem, and dependent drinkers, *Alcohol Research and Health*, 1999;23(2):128-137, 129.

<sup>49</sup>Fleming M, Manwell LB, 1999, 129.

<sup>50</sup>Whitlock EP, Polen MP, Green CA, Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence of the U.S. Preventive Services Task Force, *Annals of Internal Medicine*, 2004;140(7):557-568, 557.

<sup>51</sup>Parthasarathy S, Mertens J, Moore C, et al., Utilization and cost impact of integrating substance abuse treatment and primary care, *Medical Care*, 2003;41(3):357-367.

<sup>52</sup>CSAT, *Brief Interventions and Brief Therapies for Substance Abuse*, TIP Series No. 34, Rockville, MD: CSAT; 1999.

<sup>53</sup>Moyer A, Finney JW, Swearingen, et al., Brief interventions for alcohol problems: a meta-analytic review of controlled investigations in treatment-seeking and non-treatment-seeking populations, *Addiction*, 2002;97:279-292, 289.

<sup>54</sup>Miller WR, Wilbourne PL, Hetterna JE, 2003.

<sup>55</sup>U.S. Preventive Services Task Force, Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: recommendation statement, *Annals of Internal Medicine*, 2004;140(7):554-556.

<sup>56</sup>NIDA, 1999, 2000, 34.

includes supportive education for family members, addresses substance abuse issues such as relapse, self-help programs, supportive counseling from therapists, and drug use monitoring (urinalyses). A critical element of the model is the relationship that is formed between the patient and therapist. Therapists employing this approach are trained to “conduct treatment sessions in a way that promotes the patient’s self-esteem, dignity and self-worth.”<sup>57</sup> “A number of projects have demonstrated that participants treated with the Matrix Model demonstrate statistically significant reductions in drug and alcohol use, improvement in psychological indicators, and reduced risky sexual behaviors associated with HIV transmission.”<sup>58</sup> The model has also been tested with patients who have abused methamphetamine and cocaine, with similar effective response.<sup>59</sup>

- *Supportive expressive psychotherapy.* Supportive-expressive psychotherapy is a time-limited, focused psychotherapy that has been adapted for heroin- and cocaine-addicted clients. Supportive techniques help clients feel comfortable in discussing their personal experiences, and expressive techniques help clients identify and learn interpersonal coping skills.<sup>60</sup> Crits-Christoph et al. studied the effect of 487 patients randomly assigned to 1 of 4 manual-guided treatments: individual drug counseling plus group drug counseling (GDC), cognitive therapy plus GDC, supportive-expressive therapy plus GDC, or GDC alone.<sup>61</sup> Compared with the two psychotherapies and with GDC alone, individual drug counseling plus GDC showed the greatest improvement on the Addiction Severity Index-Drug Use Composite score. Individual group counseling plus GDC was also superior to the two psychotherapies on the number of days of cocaine use in the past month.

The efficacy of individual supportive-expressive psychotherapy has been tested with patients in methadone maintenance treatment who also 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.<sup>62</sup>

- *Voucher-based reinforcement therapy, contingency management and behavior contracting.* This voucher-based system helps clients achieve and maintain abstinence from illegal drugs. The program provides a voucher when the client provides a drug-free urine. The voucher can be exchanged for goods and services consistent with the program’s goals for the client.<sup>63</sup>

Studies show that patients receiving vouchers for drug-free urine samples achieved significantly more weeks of sustained abstinence than patients who were given vouchers independent of urinalysis results.<sup>64</sup> In another study, urinalyses positive for heroin decreased significantly when the voucher program was started and increased significantly when the program was stopped.<sup>65</sup>

<sup>57</sup> Ibid.

<sup>58</sup> Ibid, 35.

<sup>59</sup> Huber A, Ling W, Shoptaw S, et al., Integrating treatments for methamphetamine abuse: a psychosocial perspective, *Journal of Addictive Diseases*, 1997;16(4):45-50; Rawson R, Shoptaw S, Obert JL, et al., An intensive outpatient approach for cocaine abuse: the matrix model, *Journal of Substance Abuse Treatment*, 1995;12(2):117-127.

<sup>60</sup> NIDA, 1999, 2000.

<sup>61</sup> Crits-Christoph P, Siqueland L, Blaine J, et al., Psychosocial treatments for cocaine dependence: National Institute on Drug Abuse Collaborative Cocaine Treatment Study, *Archives of General Psychiatry*, 1999;56(6):493-502.

<sup>62</sup> Luborsky L, *Principles of Psychoanalytic Psychotherapy: A Manual or Supportive-Expressive (SE) Treatment*, New York: Basic Books; 1984; Woody GE, McLellan AT, Luborsky L, et al., Psychotherapy in community methadone programs: a validation study, *American Journal of Psychiatry*, 1995;152(9):1302-1308; Woody GE, McLellan AT, Luborsky L, et al., Twelve-month follow-up of psychotherapy for opiate dependence, *American Journal of Psychiatry*, 1987;144:590-596.

<sup>63</sup> NIDA, 1999, 2000.

<sup>64</sup> Silverman K, Higgins S, Brooner R, et al., Sustained cocaine abstinence in methadone maintenance patients through voucher-based reinforcement therapy, *Archives of General Psychiatry*, 1996;53(5):409-415.

<sup>65</sup> Silverman K, Wong C, Higgins ST, et al., Increasing opiate abstinence through voucher-based reinforcement therapy, 1996, *Drug and Alcohol Dependence*, 1996; 41:157-165.

Contingency management or behavior contracting “specify desired behaviors that can objectively be measured (such as abstinence, taking medications as prescribed, and attending therapy sessions) and spell out the consequences of the patient’s success or failure in achieving these goals.”<sup>66</sup>

- *Integrated dual disorders treatment (IDDT)*. In 2002, 17.5 million adults aged 18 or older (about 8 percent of all adults) were estimated to have serious mental illness (SMI) in the past year. About 23 percent (4 million) of adults with SMI in 2002 also were dependent on or abused alcohol or an illicit drug (had co-occurring SMI and a SUD).<sup>67</sup>

A clear relationship exists between mental health treatment and substance abuse treatment.<sup>68</sup> Regier et al. report that as per the *Epidemiologic Catchment Area* study, nearly 20 percent of patients seeking specialty mental health treatment reported substance abuse or dependence.<sup>69</sup> According to Barker et al., adults with dependence on or abuse of alcohol or illicit drugs had the highest prevalence rates of mental health treatment compared with users without dependence or abuse and nonusers of alcohol and illicit drugs. Adults who had never used alcohol, illicit drugs, or cigarettes had the lowest rates of mental health treatment across all substances. Adults who received substance abuse treatment were far more likely to receive mental health treatment than those who were never treated for substance use problems.<sup>70</sup>

Notwithstanding the relationship between treatment for mental health and SUD, more than half of adults with co-occurring SMI and a SUD (a total of 2 million adults) received neither specialty substance abuse treatment nor mental health treatment during the past year.<sup>71</sup> Among adults with co-occurring SMI and a SUD, women were more likely to receive mental health treatment in the past year than men.

In 2002, among the 2 million adults with co-occurring SMI and a SUD who had not received treatment, 24 percent perceived an unmet need for mental health treatment in the past year, 6 percent perceived an unmet need for specialty substance use treatment in the past year, and 9 percent perceived an unmet need for both specialty substance use treatment and mental health treatment in the past year.<sup>72</sup>

IDDT has been found to be an effective treatment for clients with dual disorders (DD; mental health and substance abuse). The model proposes 13 evidence-based, program-specific ingredients of successful IDDT, which include a multidisciplinary team, integrated substance abuse specialist, stage-wise interventions, access for IDDT clients to comprehensive IDDT services, time-unlimited services, outreach, motivational interventions, substance abuse counseling, group DD treatment, family psychoeducation on DD, participation in alcohol and drug self-help groups, pharmacological treatment, interventions to promote health, and secondary interventions for substance abuse treatment non-responders.<sup>73</sup>

<sup>66</sup>Hon J, *Primer 4: The Active Ingredients of Effective Treatment for Alcohol Problems*, Washington DC: Ensuring Solutions to Alcohol Problems, George Washington University Medical Center; 2003, 13.

<sup>67</sup>OAS, SAMHSA, Adults with co-occurring serious mental illness and a substance abuse disorder, *The NSDUH Report*; June 23, 2004: 1-3, 2.

<sup>68</sup>Kessler RC, The National Comorbidity Survey, *International Review of Psychiatry*, 1994;6:365-376; Wu LT, Kouzis AC, Leaf PJ, Influence of comorbid alcohol and psychiatric disorders on utilization of mental health services in the National Comorbidity Survey, *American Journal of Psychiatry*, 1999;156:1230-1236.

<sup>69</sup>Regier DA, Farmer ME, Rae DS, et al., Comorbidity of mental disorders with alcohol and other drug abuse: results from the Epidemiological Catchment Area (ECA) study, *Journal of the American Medical Association*, 1990;264:2511-2518.

<sup>70</sup>Barker PR, Epstein FJ, Hourani LL, et al., *Patterns of Mental Health Services Utilization and Substance Abuse Among Adults, 2000-2001*, DHHS Pub. No. SMA 04-3901, Analytic Series A-22, Rockville, MD: OAS, SAMHSA; 2004, 102.

<sup>71</sup>OAS/SAMHSA, *National Survey of Substance Abuse Treatment Services (N-SSATS): 2002*, DASIS Series: S-19, DHHS Pub. No. SMA-03-3777, Rockville, MD: OAS/SAMHSA; 2003.

<sup>72</sup>OAS/SAMHSA, *Adults with Co-occurring Serious Mental Illness and a Substance Abuse Disorder*, 2004, 1.

<sup>73</sup>CMHS, SAMHSA, *Co-occurring Disorders: Integrated Dual Disorders Treatment: Implementation Resource Kit—Integrated Dual Disorders Treatment Fidelity Scale*; 2003. Available at [www.mentalhealthpractices.org](http://www.mentalhealthpractices.org). Last accessed October 19, 2004.



## Methods that reflect continuing/connected services

A review of systematic reviews, meta-analyses, clinical practice guidelines, and other documents related to continuity of care practices in the treatment of SUDs yielded the following evidence-based practices:

- *Level of care (LOC) matching.* Services provided to substance dependent clients range from homeless outreach to acute inpatient detoxification. The various types of care offered include outpatient, residential, and inpatient, with outpatient services most frequently used. According to the N-SSATS,<sup>74</sup> of the 13,720 facilities that were providing substance abuse treatment services in 2002,<sup>75</sup> 1,080 facilities dispense methadone or LAAM as part of an Opioid Treatment Program certified by SAMHSA.

Gastfriend and colleagues present research and background rationale for wide adoption of American Society of Addiction Medicine (ASAM) *Patient Placement Criteria for the Treatment of Substance-Related Disorders* (PPC).<sup>76</sup> They provide strong support for PPC to serve as 1) architecture to support evidence-based addiction treatment program competencies and a built-in program evaluation methodology, 2) a mechanism for appropriate, science-based client-to-treatment matching through multidimensional assessment, and 3) a standardized set of discharge criteria.

The PPC represents a standardized, automated set of criteria and hierarchical clinical algorithm for matching substance-abusing clients to the most appropriate LOC. It has been systematized in ASAM-endorsed software to guide the clinical interview and produce algorithm-derived LOC recommendations.

Gastfriend proposes strong qualitative and quantitative arguments that adoption of PPC by the more than 20,000 organizations in the United States that treat addictive disease will lead to improved outcomes. These outcomes include reduced hospital utilization, increased intensity of outpatient therapy and improved utilization of new levels of care, increased individualization in treatment planning, and promotion of greater practitioner professionalism and accountability.

LOC matching was previously reviewed by a SAMHSA consensus panel in 1995.<sup>77</sup>

- *Treatment matching in opioid substitution therapy.*<sup>78</sup>
- *Relapse prevention.* Relapse prevention should be a critical component of any substance abuse treatment program. As a scientifically based approach, relapse prevention is a cognitive-behavioral therapy originally developed for the treatment of problem drinking, then adapted for cocaine abusers.<sup>79</sup> The technique, based on learning to change maladaptive behaviors, includes specific techniques such as “exploring the positive and negative consequences of continued use, self-monitoring to recognize drug cravings early on and to recognize high risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use.”<sup>80</sup> A good deal of time is spent identifying “trigger” behaviors and anticipating how the client will address these episodes when they happen, using coping strategies taught by addiction specialists. Research has shown that clients use and retain these coping strategies even after treatment.<sup>81</sup>

<sup>74</sup> OAS/SAMHSA, 2003.

<sup>75</sup> Excluded from the survey were jails, prisons, or other organizations that treat incarcerated clients only, solo practitioners, and halfway houses that did not provide substance abuse treatment services.

<sup>76</sup> Gastfriend DR, *Addiction Treatment Matching: Research Foundations of the American Society of Addiction Medicine (ASAM) Criteria*, New York: Haworth Press;2004.

<sup>77</sup> CSAT, *The Role and Current Status of Patient Placement Criteria in the Treatment of Substance Use Disorders*, TIP Series No. 13, Rockville, MD: CSAT; 1995.

<sup>78</sup> CSAT, *Matching Treatment to Patient Needs in Opioid Substitution Therapy*, TIP Series No. 20, Rockville, MD: CSAT; 1995.

<sup>79</sup> Marlatt G, Gordon JR, eds., *Relapse Prevention: Maintenance Strategies on the Treatment of Addictive Behaviors*, New York: Guilford Press; 1985; Carroll K, Rounsaville B, Keller D, Relapse prevention strategies for the treatment of cocaine abuse, *American Journal of Drug and Alcohol Abuse*, 1991;17(3):249-265; Carroll K, Rounsaville B, Nich C, et al., One year follow-up of psychotherapy and pharmacotherapy for cocaine dependence: delayed emergency of psychotherapy effects, *Archives of General Psychiatry*, 1994;51:989-997.

<sup>80</sup> NIDA, 1999, 2000, 33, 34.

<sup>81</sup> Carroll K, Rounsaville B, Nich, et al., 1994.

- *Compensated work therapy and reduction in substance use.* Kashner et al. report on the impact of compensated work therapy (CWT) on homeless, substance-dependent veterans.<sup>82</sup> In this randomized controlled trial, compared with control subjects, the patients in the CWT program were more likely to 1) initiate outpatient addictions treatment; 2) experience fewer drug and alcohol problems; 3) report fewer physical symptoms related to substance use; 4) avoid further loss of physical functioning; and 5) have fewer episodes of homelessness and incarceration. No CWT effect on psychiatric status was detected. Kashner's findings are consistent with other published studies related to work therapy and reduction in psychiatric and substance abuse symptoms.<sup>83</sup>
- *Community recovery-oriented support programs.* Self-help organizations maintain a membership of over 1.6 million recovering individuals in the United States.<sup>84</sup> Alcoholics Anonymous (AA), Narcotics Anonymous (NA), and Cocaine Anonymous (12-step focus) acknowledge substance abuse as a spiritual and medical disease and employ a specific philosophy of recovery, with "peer support networks who meet for the purpose of supporting each other's efforts to maintain sobriety and to lead productive, fulfilling lives."<sup>85</sup> Other self-help or mutual help groups are "non-professional, peer-operated organizations devoted to helping individuals who have addiction-related problems."<sup>86</sup> While there is agreement among addiction professionals and recovering persons that this support is valuable, most outcomes research has been conducted on AA and NA, with little research having been conducted on non-12-step mutual help groups. The anonymous nature of these programs is an inherent barrier to studying the effect of this type of support. McKay et al. did find that participation in anonymous support groups predicted better outcomes among a group of cocaine- or alcohol-dependent veterans.<sup>87</sup>

The types of studies conducted to date include three RCTs, quasi-experiments, and correlational studies.<sup>88</sup> A synthesis of the research conducted to date allows the authors to reasonably conclude that:

- Longitudinal studies associate AA and NA participation with greater likelihood of abstinence, improved social functioning, and greater self-efficacy.
- Participation seems more helpful when members engage in other group activities in addition to attending meetings.
- Twelve-step self-help groups significantly reduce healthcare utilization and costs, removing a significant burden from the healthcare system.
- Self-help groups are best viewed as a form of continuing care rather than as a substitute for acute treatment services (e.g., detoxification, hospital-based treatment).
- Randomized trials with coerced populations suggest that AA combined with professional treatment is superior to AA alone.

<sup>82</sup> Kashner TM, Rosenheck R, Campinell AB, et al., Impact of work therapy on health status among homeless, substance-dependent veterans, *Archives of General Psychiatry*, 2003;59:938-944.

<sup>83</sup> Milby JB, Schumacher JE, Raczynski JM, et al., Sufficient conditions for effective treatment of substance abusing homeless persons, *Drug and Alcohol Dependence*, 1996;43:39-47; Bell MD, Lysacker PH, Clinical benefits of paid work activity in schizophrenia: 1-year follow-up, *Schizophrenia Bulletin*, 1997;23:317-328; Bell MD, Lysacker PH, Clinical benefits of paid work activity in schizophrenia, *Schizophrenia Bulletin*, 1996;22:51-67; Rosenheck R, Seibyl CL, Effectiveness of treatment elements in a residential-work therapy program for veterans with severe substance abuse, *Psychiatric Services*, 1997;48:928-935.

<sup>84</sup> Humphreys K, Wing S, McCarty D, et al., Self-help organizations for alcohol and drug problems: toward evidence-based practice and policy, *Journal of Substance Abuse Treatment*, 2003;26:151-158; Work Group on Substance Abuse Self-Help Organizations (WGSASO), Center for Health Care Evaluation, *Self-Help Organizations for Alcohol and Drug Problems: Towards Evidence-Based Practice and Policy*; 2003. Available at [www.chce.research.med.va.gov/chce/pdfs/VASma\\_feb1103.pdf](http://www.chce.research.med.va.gov/chce/pdfs/VASma_feb1103.pdf). Last Accessed November 8, 2004.

<sup>85</sup> Hon, 2003; Humphreys K, Wing S, McCarty D, et al., 2003, 151; UNODC, 2002, 13.

<sup>86</sup> Humphreys K, Wing S, McCarty D, et al., 2003.

<sup>87</sup> McKay JR, Alterman AI, Cacciola JS, et al., Group counseling versus individualized relapse prevention aftercare following intensive outpatient treatment for cocaine dependence: initial results, *Journal of Consulting and Clinical Psychology*, 1997;65(5):778-788.

<sup>88</sup> Humphreys K, Moos RH, Can encouraging substance abuse inpatients to participate in self-help groups reduce the demand for outpatient aftercare? a quasi-experimental study, *Alcoholism: Clinical and Experimental Research*, 2001;25:711-716.

- Non-12-step self-help groups have not been subjected to longitudinal outcome evaluation, but it is reasonable to suspect they also benefit members.<sup>89</sup>

### **Ineffective practices**

- *Acupuncture.* A randomized control trial by Margolin et al. examined the effect of auricular acupuncture or a relaxation control condition in cocaine addicts. Treatments were offered five times weekly for eight weeks. Concurrent drug counseling was offered to all research subjects. “Intent-to-treat analysis of urine samples showed a significant overall reduction in cocaine use but no differences in treatment condition. There were also no differences between the conditions in treatment retention.”<sup>90</sup>
- *Treatment of amphetamine dependence and abuse.* The limited evidence suggests that no treatment has been demonstrated to be effective for the treatment of amphetamine dependence and abuse (see table 4).
- *Dopamine agonists for cocaine dependence.* Current evidence does not support the clinical use of dopamine agonists in the treatment of cocaine dependence (see table 4).
- *Carbamazepine (CBZ) for cocaine dependence.* There is no current evidence supporting the clinical use of CBZ in the treatment of cocaine dependence (see table 4).
- *Antidepressants for cocaine dependence.* There is no current evidence supporting the clinical use of antidepressants in the treatment of cocaine dependence (see table 4).
- *Psychosocial treatment programs for people with both severe mental illness and substance misuse.* The current momentum for integrated programs is not based on good evidence (see table 6 for a detailed summary).
- *Onsite mental health workers (MHWs) in primary care.* This review does not support the hypothesis that adding MHWs to primary care provider organizations in “replacement” models causes a significant or enduring change in primary care physician behavior (see table 6 for detailed summaries).

### **Practices that require further study to show evidence of effectiveness**

- *Compare two anticraving drugs, acamprosate and naltrexone.* The lack of carry-over of effectiveness of naltrexone might be due to the shorter administration period compared with acamprosate (3 versus 12 months; see table 4).
- *Heroin maintenance for chronic heroin dependents.* No definitive conclusion about the overall effectiveness of heroin prescription is possible because of non-comparability of the experimental studies available to be included in this review (see table 4).
- *LOC matching.* In expanding the use of LOC matching, the laboratory for feasibility, reliability, and validity testing of the algorithm could also be expanded. After widespread adoption, the system will further require the development of a national network of data gathering, quantitative analysis, and reporting.
- *Phases of treatment model.* Hoffman and Moolchan developed a Phases-of-Treatment model specifically for methadone treatment. Its purpose is “to provide a clinical framework for the use of methadone to effectively meet the needs of individual patients.”<sup>91</sup> The model recognizes that the disease process and its treatment have a long-term course. After initial stabilization, the client and his/her treatment team decide on one of two tracks of further treatment – either methadone maintenance or tapering. The model and its distinct phases are described in table 9, but there appears to be no research related to the effectiveness of this model in the peer-reviewed literature.

<sup>89</sup>Humphreys K, Wing S, McCarty D, et al., 2003; WGSASO, 2003, 16.

<sup>90</sup>Margolin A, Kleber HD, Avants SK, Acupuncture for the treatment of cocaine addiction: a randomized controlled trial, *Journal of the American Medical Association*, 2002;287(1):55-62, 55.

<sup>91</sup>Hoffman JA, Moolchan ET, The phases-of-treatment model for methadone maintenance: implementation and evaluation, *Journal of Psychoactive Drugs*, 1994;26(2):181-197, 181.



## Program Principles and Attributes

Various private and public organizations and individuals have proposed program principles and attributes that lead to successful clinical outcomes for people with SUDs, based on expert interpretation of the evidence and group consensus. The most prominent of these include National Institute on Drug Abuse (NIDA) principles, United Nations Office on Drugs and Crime (UNODC) principles of effective treatment, and the work of individual authors.<sup>92</sup> A synthesis of principles found in the literature is presented below.

- Early detection is important, including screening and brief interventions.<sup>93</sup>
- No single treatment is appropriate for all individuals; medical detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug use.<sup>94</sup>
- Treatment needs to be readily available and well integrated into society to permit ready access for monitoring purposes and to forestall relapse.<sup>95</sup>
- Effective treatment integrates multiple needs of the individual – not just his or her drug use – such as medical (HIV/AIDS, Hepatitis B and C, Tuberculosis and other infectious diseases)<sup>96</sup> and psychiatric symptoms, employment and family problems,<sup>97</sup> and social stability. A multidisciplinary approach is vital.<sup>98</sup>
- The comprehensive assessment and individualized treatment plan developed with the client must be assessed continuously and modified as necessary to ensure that the plan meets the person's changing needs<sup>99</sup> and is individually delivered as a proven, professional intervention.<sup>100</sup>
- Remaining in treatment for an adequate period of time is critical for treatment effectiveness.<sup>101</sup> Recovery from drug addiction can be a long-term process and frequently requires multiple episodes of treatment,<sup>102</sup> like treatment for other chronic conditions,<sup>103</sup> and should include participation in self-help groups.<sup>104</sup> A continuum of care is cost-effective and will enhance care.<sup>105</sup>
- Counseling (individual and/or group) and other behavioral therapies are critical components of effective treatment for addiction<sup>106</sup> and should be offered contemporaneously with detoxification<sup>107</sup> to stabilize the gains made during the acute interventions stage. They should include social skills training.<sup>108</sup>

<sup>92</sup>NIDA, 1999, 2000, 1-3; UNODC, *Investing in Drug Abuse Treatment: A Discussion Paper for Policy Makers*, New York: UNODC; 2003. Available at [www.unodc.org/pdf/report\\_2003-01-31\\_1.pdf](http://www.unodc.org/pdf/report_2003-01-31_1.pdf). Last accessed August 1, 2004; Brannagan R, Shackman BR, Flaco M, et al., The quality of highly regarded adolescent substance abuse treatment programs; results of an in-depth national survey, *Archives of Pediatrics and Adolescent Medicine*, 2004;158(9):904-909; Drug Strategies, *Treating Teens: A Guide to Adolescent Drug Programs: Research Articles and Survey Instruments*. Available at [www.drugstrategies.org/teens/research.html](http://www.drugstrategies.org/teens/research.html). Last accessed September 2, 2004. Kraybill K, Zerger S., National Health Care for the Homeless Council, *Providing Treatment for Homeless People with Substance Use Disorders: Case Studies of Six Programs*. Available at [www.nhchc.org](http://www.nhchc.org). Last accessed August 1, 2004. Committee on Identifying Priority Areas for Quality Improvement (CIPAQI), Institute of Medicine (IOM), *Priority Areas for National Action: Transforming Health Care Quality*. Adams K, Corrigan JM, eds., Washington DC: National Academies Press; Amato L, Davoli M, Ferri M, et al., Methadone at tapered doses for the management of opioid withdrawal, *Cochrane Database of Systematic Reviews*, 2, 2004.

<sup>93</sup>Miller WR, Rollnick, 2002; NIDA, 1999, 2000; Project MATCH Research Group, 1997, as described in Hon J, 2003.

<sup>94</sup>NIDA, 1999, 2000, 1-3.

<sup>95</sup>Ibid.; UNODC, 2003, iii.

<sup>96</sup>NIDA, 1999, 2000, 1-3; CSAT, 1994, reprinted 1999.

<sup>97</sup>UNODC, 2003.

<sup>98</sup>CSAT, 1994, reprinted 1999.

<sup>99</sup>NIDA, 1999, 2000, 1-3; CIPAQI/IOM, 2003; CSAT, 1994, reprinted 1999.

<sup>100</sup>Hon J, 2003.

<sup>101</sup>NIDA, 1999, 2000, 1-3; UNODC, 2003.

<sup>102</sup>NIDA, 1999, 2000, 1-3.

<sup>103</sup>UNODC, 2003.

<sup>104</sup>Ibid., 26.

<sup>105</sup>CSAT, 1994, reprinted 1999.

<sup>106</sup>NIDA 1999, 2000, 1-3.

<sup>107</sup>Amato L, Davoli M, Ferri M, et al., 2004.

<sup>108</sup>Hon, 2003.

- Counseling should include helping patients modify or change behaviors that place them at risk. The treatment plan should include reinforcement, such as financial incentives or vouchers for attendance and abstinence.<sup>109</sup>
- Pharmacotherapy is an important element of treatment, especially when combined with counseling and other behavior therapies the goals of which are to block the craving for and effects of the drugs and to reduce psychiatric symptoms.<sup>110</sup>
- Treatment does not need to be voluntary to be effective.<sup>111</sup>
- Treatment programs should be accountable.<sup>112</sup>
- Staff should be cross-trained.<sup>113</sup>

## BARRIERS TO USING EVIDENCE-BASED PRACTICES

Currently, there are barriers to the widespread use of evidence-based interventions. These barriers, which have been present for many years, include a lack of attention at the federal level to funding and policy making, health professions education and training, and the long-lasting mental health and substance abuse schism. In a recent synthesis, Hon reported that only 2 of 11 active ingredients of effective treatment for alcohol problems were in wide use. These included contracting with patients and participation in support groups.<sup>114</sup>

The number of substance-abusing Americans is staggering and is increasing in size. The socioeconomic effects of drug abuse are compelling, but are not sufficient to elicit the appropriate attention of legislatures and the federal government. Horgan, Skwara, and Strickler conclude that substance abuse is the nation's number one health problem.<sup>115</sup> Nonetheless, substance abuse care (other than a mention of tobacco dependence) did not even make the list of the 20 recommended priority areas in the Institute of Medicine (IOM) report *Priority Areas for National Action: Transforming Health Care Quality*.<sup>116</sup>

Meehan proposes that substance abuse stakeholders may not be as powerful as the general medical lobby: "Maybe this is because mental illness and addiction are orphan children of organized medicine. Certainly, the conditions are acknowledged and treated, but neither gets the same support as do other diseases and illnesses."<sup>117</sup>

It is not surprising that on a global level, substance abuse does not receive the attention it deserves. The only references to substance abuse treatment performance included in the *First Report and Recommendations of the Commonwealth Fund's International Working Group on Quality Indicators* included those related to suicide rates (per 100,000 persons, stratified by age) and non-smoking rates.<sup>118</sup>

Primary care providers (physicians, advanced practice nurses, and nurse practitioners, for example) have an opportunity to provide brief interventions, which have been shown to be effective in reducing alcohol use. Yet, education about substance abuse identification and treatment is lacking for physician and nursing generalists.

<sup>109</sup> UNODC, 2003; Hon, 2003.

<sup>110</sup> NIDA, 1999, 2000, 1-3; UNODC, 2003, 26.

<sup>111</sup> NIDA, 1999, 2000, 1-3.

<sup>112</sup> CSAT, 1994, reprinted 1999.

<sup>113</sup> Ibid.

<sup>114</sup> Hon, 2003, 17.

<sup>115</sup> Horgan C, Skwara KC, Strickler G, *Substance Abuse: The Nation's Number One Health Problem—Key Indicators for Policy*, Princeton: The Robert Wood Johnson Foundation; 2001.

<sup>116</sup> CIPAQI, IOM, 2003.

<sup>117</sup> Meehan C, *Clinton Move a Victory in Struggle for Better Health Care for Troubled Minds*, Grand Rapids Press; January 18, 2001, B-3.

<sup>118</sup> The Commonwealth Fund, *First Report and Recommendations of the Commonwealth Fund's International Working Group on Quality Indicators*; 2004. Available at [www.cmfwf.org](http://www.cmfwf.org).

Traditionally, medical education has not included core competencies that would support the treatment of SUDs by non-mental health/substance abuse practitioners. The Association for Medical Education and Research in Substance Abuse (AMERSA) in 1985 highlighted the deficiencies in medical education related to substance abuse curricula and paved the way for education and training about substance abuse to be “routinely integrated with preclinical course work and repeated during subsequent years.”<sup>119</sup> The lack of SUD curricula in nursing programs has also been confirmed. As early as 1987, Murphy and Hoeffler “found that little content on SUD was incorporated into the curriculum and that few programs offered or considered developing a subspecialty in SUD. The amount of content on SUD was often insufficient and inconsistently taught, considering the scope of the problem in both the mental health and general healthcare sectors.”<sup>120</sup> More detailed descriptions of core competencies recommended by AMERSA for physicians and registered nurses are found in table 10.

Deficiencies in the educational preparation of health professionals also have been noted in IOM’s recent report entitled *Health Professions Education: A Bridge to Quality*. Similar deficiencies in curricula were found, and the committee recommended a future vision that “all professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics.”<sup>121</sup> More detailed descriptions of the core competencies are found in table 11.

This said, even if generalist health professionals were trained to identify and treat or refer patients with SUDs, it is well known that clients who are drug users do not typically visit medical providers. Case findings and population- and community-based interventions then become even more critical.

In addition to the acquisition of core competencies, UNODC encourages health professionals to be community minded and anticipate drug abuse treatment needs by:

- working with employers and social welfare agencies toward the goals of returning to – or finding – work;
- working with criminal justice agencies and parole/probation officers toward the goal of keeping the patient from returning to drug-related crime and incarceration; and
- working with family agencies and families toward the goals of returning to, or taking on, responsible family roles, especially parenting.<sup>122</sup>

Lastly, the traditional separation of mental health and substance abuse treatment has had long-term and lasting effects on the treatment system and its ability to care for clients in need of services. In its report to Congress in 2002, SAMHSA reported that “at least 36 states are attempting some change to their systems by addressing this problem through creative leadership with a sustained vision and by engaging strong local stakeholder support – including consumers and families – in program design and advocacy.”<sup>123</sup> Infrastructure at the national level (National Institute of Mental Health, NIDA, and the National Institute on Alcohol Abuse and Alcoholism) as well as state and local funding mechanisms have proven to be ongoing barriers to integrating mental health and substance abuse care.

## SUMMARY

Below is a summary listing practices for which the author has found strong support of evidence on their effectiveness in treating SUDs.

<sup>119</sup>NIDA, as reported in Association for Medical Education and Research in Substance Abuse, Strategic plan for interdisciplinary faculty development: arming the nation’s health professional workforce for a new approach to substance use disorders, Haack MR, Adger H, eds., *Substance Abuse*, 23(3); 2002.

<sup>120</sup>Ibid, 249.

<sup>121</sup>Committee on Health Professions Education Summit, IOM, *Health Professions Education: A Bridge to Quality*, Greiner AC, Knebel E, eds., Washington, DC: National Academies Press; 2003, 4.

<sup>122</sup>UNODC, iv.

<sup>123</sup>SAMHSA, as reported in the New Freedom Commission on Mental Health, *Achieving the Promise: Transforming Mental Health Care in America—Final Report*, DHHS Pub. No. SMA-03-3832, Rockville, MD: New Freedom Commission on Mental Health; 2003, 65.

## EFFECTIVE TREATMENT PRACTICES

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### Time

- Longer stays lead to better follow-up rates
- Remaining in treatment for an adequate period of time is critical for treatment effectiveness

### Specific treatment interventions

#### Medication

##### *Alcohol detoxification*

- Alcohol detoxification interventions (see table 3)

##### *Opiate detoxification*

- Opiate detoxification interventions (see table 3)
- Opioid antagonists with minimal sedation for opioid withdrawal (see table 8)
- Buprenorphine for the management of opioid withdrawal (see table 8)
- Methadone at tapered doses for the management of opioid withdrawal (see table 8)

##### *Sedative-hypnotic detoxification*

- Sedative-hypnotic detoxification interventions (from the VHA/DoD SUD practice guideline; see table 3)<sup>124</sup>

##### *Opiate Agonist Therapy*

- Buprenorphine for the management of opioid agonist therapy
- Opiate agonist therapy interventions (from the VHA/DoD SUD practice guideline; see table 3)<sup>125</sup>
- Naltrexone maintenance treatment for opioid dependence (see table 8)
- Methadone maintenance therapy (versus no opioid replacement therapy for opioid dependence; see table 8)
- Methadone maintenance at different dosages for opioid dependence (see table 8)
- Use of LAAM (see table 8)
- Adolescents and adults requiring medication (see table 3 and table 8)

#### Psychosocial services

- [See table 5]
- [See table 8]
- Integrating substance abuse treatment and vocational services
- Assessment and therapeutic effectiveness, management and treatment for treating cocaine and methamphetamine use disorders
- Screening and assessment of adolescents
- Treatment of adolescents with SUD
- Substance abuse treatment for persons with child abuse and neglect issues
- Motivational interviewing or motivational enhancement therapy
- Brief interventions in primary care
- Screening and behavioral counseling interventions in primary care to reduce alcohol misuse
- The matrix model
- Supportive expressive psychotherapy
- Voucher-based reinforcement therapy, contingency management and behavior contracting
- Integrated dual disorders treatment

#### Methods that reflect continuing/connected services

- [See table 8]
- Level of care matching
- Relapse prevention
- Compensated work therapy and reduction in substance use
- Community recovery-oriented support programs

<sup>124</sup>Management of Substance Use Disorders Work Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*, Washington, DC: VHA/DoD; 2001.

<sup>125</sup>Ibid.

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## GLOSSARY OF KEY TERMS

**Abuse** — A survey respondent was defined with abuse of a substance if he or she met one or more of the four criteria for abuse included in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) and did not meet the definition for dependence for that substance. Additional criteria for alcohol and marijuana abuse are that if respondents reported a specific number of days that they used these drugs in the past 12 months, they must have used these drugs on 6 or more days in that period. These questions have been included in the survey since 2000.<sup>126</sup>

**Alcohol use disorders** — Alcohol use disorders include 1) alcohol abuse, a condition characterized by recurrent drinking resulting in failure to fulfill major role obligations at work, school, or home; persistent or recurrent alcohol-related interpersonal, social, or legal problems; and/or recurrent drinking in hazardous situations and 2) alcohol dependence (also known as alcoholism), a condition characterized by impaired control over drinking, compulsive drinking, preoccupation with drinking, withdrawal symptoms, and/or tolerance to alcohol.<sup>127</sup>

**At-risk drinking** — Consumption of more than 7 standard drinks per week or more than 3 standard drinks per occasion for women and more than 14 standard drinks per week or more than 4 standard drinks per occasion for men.<sup>128</sup>

**Brief intervention** — According to Fleming and Manwell,<sup>129</sup> brief interventions in primary care include these five essential steps (italicized words indicate sample statements a primary care [provider] could use to elicit information about drinking):

### Step I. Assessment and direct feedback

- Ask questions regarding alcohol consumption.
- Ask CAGE<sup>130</sup> questions:
  - *Have you ever felt you should Cut down on your drinking?*
  - *Have people Annoyed you by criticizing your drinking?*
  - *Have you ever felt Guilty about your drinking?*
  - *Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (Eye opener)?*
- Assess medical, behavioral, and dependence problems.
- *As your [healthcare provider], I am concerned about how much you drink and how it is affecting your health.*
- *Less than 10 percent of men drink as much as you do.*
- *You are drinking alcohol at a level that puts you at serious risk for a number of alcohol-related problems.*

<sup>126</sup> OAS/SAMHSA, *Results from the 2002 National Survey on Drug Use and Health: National Findings*. NNSDA Series H-22, DHHS Publication No. SMA 03-3836. Rockville, MD: SAMHSA; 2003.

<sup>127</sup> Ibid.

<sup>128</sup> National Institute on Alcohol Abuse and Alcoholism (NIAAA), *The Physician's Guide to Helping Patients with Alcohol Problems*, NIH Pub. No. 95-3769, Bethesda, MD: NIAAA; 1995.

<sup>129</sup> Fleming M, Manwell LB, Brief intervention in primary care settings: a primary treatment method for at-risk, problem, and dependent drinkers, *Alcohol Research & Health*. 1999, 23(2):128-137.

<sup>130</sup> Allen JP, Eckardt MJ, Wallen J. Screening for alcoholism: techniques and issues, *Public Health Reports*, 1988;103:586-592.

## **Step II.** Negotiation and goal setting

- *You need to reduce your drinking.*
- *What do you think about cutting down to three drinks two or three times per week?*
- *Can you reduce your alcohol use for the next month?*

## **Step III.** Behavior modification techniques

- *Here is a list of situations when people drink and sometimes lose control of their drinking. Let's talk about ways you can avoid these situations.*
- *Can you identify a family member or a friend who can help you?*
- *What are the things you like about drinking?*
- *What are some of the things you don't like about your alcohol use?*

## **Step IV.** Self-help-directed bibliotherapy

- *I would like you to review this booklet and bring it with you to your next visit. It would be helpful if you would complete some of the exercises in the booklet.*

## **Step V.** Follow-up and reinforcement

- *I would like you to return to the clinic in 1 month to see if you have been able to change your drinking.*
- *[We] will call you in 2 weeks to check on your progress.*
- *I would like you to keep track of your drinking by using these diary cards. Bring them with you to your follow-up visit in 1 month.*

**Comprehensive assessment** — A comprehensive assessment provides a detailed picture of the kind of alcohol problem an individual is having at a particular point in time. It takes into consideration a patient's age, gender, ethnicity and culture, and should include the medical and psychiatric status of a patient as well as his or her social context. A comprehensive assessment forms the basis for an individualized treatment plan that addresses these variables (in addition to severity of dependence) and matches patients to an appropriate treatment setting.<sup>131</sup>

**Cumulative evidence score (CES)** — As defined by Miller, Wilbourne, and Hettema<sup>132</sup>; initially, a determination is made on the list of studies from which a specific outcome could be inferred for the modality in question. Next, for each of these studies, the researchers computed a cross-product of the study's methodological quality score (MQS) with the outcome logic score derived from the study for this specific modality. Finally, the cross products were summed to yield the CES for the treatment modality.

**Current drug use** — Use of an illicit drug during the month prior to the survey interview.<sup>133</sup>

**Detoxification** — A process of medical care and pharmacotherapy that seeks to help the patient achieve abstinence and physiologically normal levels of functioning with the minimum of physical and emotional discomfort.<sup>134</sup>

<sup>131</sup> Hon J, *Primer 4: The Active Ingredients of Effective Treatment for Alcohol Problems*, Washington, DC: Ensuring Solutions to Alcohol Problems, the George Washington University Medical Center; 2003, 5.

<sup>132</sup> Miller WR, Wilbourne PL, Hettema JE, What works? a summary of alcohol treatment outcome research. In: Hester, RK, Miller WR, *Handbook of Alcohol Treatment Approaches: Effective Alternatives*, 3rd ed. Boston: Allyn & Bacon; 2003:13-63.

<sup>133</sup> OAS/SAMHSA, 2003.

<sup>134</sup> Margolin A, Kosten TR, Opioid detoxification and maintenance with blocking agents. In: Miller NS, ed., *Comprehensive Handbook of Drug and Alcohol Addiction*, New York: Marcel Decker; 1991.

**Illicit drugs** — Illicit drugs include marijuana, cocaine, inhalants, hallucinogens (including LSD, PCP, or Ecstasy), heroin, or non-medical use of psychotherapeutics, which include stimulants, sedatives, tranquilizers, and pain relievers. Illicit drug use has referred to use of any of these drugs.<sup>135</sup>

**Individualized treatment plan** — An individualized treatment plan makes it possible to adjust the goals of treatment as appropriate and to engage a patient more actively in treatment. An individualized treatment plan also recognizes that patients will need varying combinations of active ingredients that can be adjusted as necessary during the course of treatment and recovery.<sup>136</sup>

**Level of care** — As used in the American Society of Addiction Medicine Patient Placement Criteria, this term refers to a discrete intensity of clinical and environmental support services bundled or linked together and available in a variety of settings.<sup>137</sup>

**Moderate or low-risk drinking** — Consumption of no more than two standard drinks per day for men and no more one standard drink per day for women and people over age 65.<sup>138</sup>

**Prevalence** — General term used to describe the estimates for lifetime, past year, and past month substance use, dependence or abuse, or other behaviors of interest within a given period (e.g., the past 12 months). The latter include delinquent behavior, driving under the influence of alcohol or drugs, mental health treatment, need for alcohol or illicit drug treatment, serious mental illness, substance abuse treatment, and unmet need for mental health treatment or counseling.<sup>139</sup>

**Race/Ethnicity** — Race/ethnicity is used to refer to the respondent's self-classification regarding racial and ethnic origin and identification. For Hispanic origin, respondents were asked, "Are you of Hispanic, Latino, or Spanish origin or descent?" For race, respondents were asked, "Which of these groups best describes you?" Response alternatives were (1) white, (2) black/African American, (3) American Indian or Alaska Native, (4) Native Hawaiian, (5) other Pacific Islander, (6) Asian, and (7) other. Categories for race/ethnicity included Hispanic, non-Hispanic groups where respondents indicated only one race (white, black, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, Asian), and non-Hispanic groups where respondents reported two or more races.<sup>140</sup>

**Serious mental illness** — Serious mental illness (SMI) is defined as having at some time during the past 12 months a diagnosable mental, behavioral, or emotional disorder that met the criteria for a DSM-IV disorder and that resulted in functional impairment that substantially interfered with or limited one or more major life activities. The questions that measured SMI in the 2002 National Survey on Drug Use and Health consisted of a short scale of 6 questions that asked respondents how often they experienced symptoms of psychological distress during the 1 month in the past 12 months when they were at their worst emotionally.<sup>141</sup>

**Specialty treatment facility** — Drug or alcohol rehabilitation facilities (inpatient or outpatient), hospitals (inpatient only), and mental health centers.<sup>142</sup>

<sup>135</sup> OAS/SAMHSA, 2003.

<sup>136</sup> Hon, 5.

<sup>137</sup> Graham AW, Schultz TK, Mayo-Smith MF, et al., American Society of Addiction Medicine (ASAM), *Principles of Addiction Medicine*, 3rd ed., Chevy Chase, MD: ASAM; 2003, 1604.

<sup>138</sup> NIAAA.

<sup>139</sup> OAS/SAMSHA, 2003.

<sup>140</sup> Ibid.

<sup>141</sup> Ibid.

<sup>142</sup> Ibid.

**Standard drink** — One 12-ounce beer or wine cooler, one 5-ounce glass of wine, or 1.5 ounces of distilled spirits. Each of these standard drinks contains approximately 0.5 ounce, or 14 grams, of pure alcohol.<sup>143</sup>

**Substance abuse treatment** — Survey respondents were asked if they had received treatment for alcohol use, illicit drug use, or both alcohol and illicit drug use in the past 12 months in any of the following locations: a hospital overnight as an inpatient, a residential drug or alcohol rehabilitation facility where he or she stayed overnight, a drug or alcohol rehabilitation facility as an outpatient, an emergency room, a private doctor's office, a prison or jail, a self-help group, or some other place.<sup>144</sup>

**Unmet need** — Unmet treatment or counseling need is defined as a perceived need for mental health treatment that was not received in the past 12 months. This measure also includes persons who received some mental health treatment in the past 12 months but also reported that they perceived a need for more treatment. Unmet need among those who received treatment may be interpreted as delayed or insufficient treatment in the past 12 months.<sup>145</sup>

<sup>143</sup> NIAAA.

<sup>144</sup> OAS/SAMHSA, 2003.

<sup>145</sup> Ibid.

**Table 1. Methods in Developing the Background Paper**

Both peer-reviewed and “gray” literature related to substance abuse treatment has informed the development of this background paper. The review includes descriptions of the following:

- substance abuse treatment practices (e.g., pharmaceutical and psychotherapies, diagnostic and assessment practices, training programs, coordination and maintenance services) that have been found in previous systematic reviews and expert consensus activities to be based on scientific evidence of effectiveness. This will include a review of inventories of evidence-based practices compiled by others;
- existing evidence-based, systematically developed treatment guidelines that incorporate the above practices; and
- the attributes of effective substance abuse treatment programs (both substance specific and general) that use these guidelines, or that routinely provide effective practices.

The scientific literature and other relevant documents were accessed and reviewed to identify evidence-based practices and programmatic attributes related to the identification and treatment of SUD. The consultant conducted electronic database searches; reviews of literature citations and references in published books and articles and reports in aggregated databases; a search of e-newsletters and listservs; reviews of consensus reports; and searches on the Internet for meta-analyses (e.g., Cochrane Reviews), authors, businesses, public and private organizations, and government agencies (e.g., National Guidelines Clearinghouse).

Initial feedback from workshop participants has also been integrated into the background paper.

**Table 2. Estimated Total Costs for Substance Abuse Treatment and Cost per Admission, by Type of Care: 1997 (inflated to 2002 cost levels)**

Type of Care	Annual Treatment Costs	Annual Admissions	Cost per Admission
Non-Hospital Residential (n=48)	\$2,736,348,408	712,643	\$3,840
Outpatient Methadone (n=44)	\$967,417,204	130,472	\$7,415
Outpatient Non-Methadone (n=222)	\$3,083,179,206	2,151,694	\$1,433

Source: ADSS Cost Study, Office of Applied Studies, July 2003.

(Costs updated to 2002 level)

**Table 3. Summary of Specific Treatment Interventions: Medications**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
<p><b>Alcohol Detoxification</b></p> <p><b>Clinical practice guideline</b></p>	<p>Facilities should develop local alcohol detoxification pathways, taking into consideration the following principles:</p> <ol style="list-style-type: none"> <li>Use either of the following two acceptable pharmacotherapy strategies for managing alcohol withdrawal symptoms: <ul style="list-style-type: none"> <li>Symptom-triggered therapy, where patients are given medication only when signs or symptoms of withdrawal appear (e.g., PRN dosing).</li> <li>A predetermined fixed medication dose, with gradual tapering over several days.</li> </ul> </li> <li>Consider standardized assessments, such as the Clinical Institute Withdrawal Assessment for Alcohol - Revised scale for alcohol withdrawal, to guide dosing decisions (e.g., if and when to dose).</li> <li>Consider the following empirically validated procedures for ambulatory alcohol detoxification monitoring as safe and effective alternatives to inpatient approaches: <ul style="list-style-type: none"> <li>Medical or nursing staff should assess the patient in person, either daily or every other day (patient contact may be made by telephone on other days), to include: <ul style="list-style-type: none"> <li>Patient report of any alcohol use the previous day</li> <li>Reported medication intake compared to the medication dispensed the previous day</li> <li>Tremor, restlessness, and previous night's sleep</li> <li>Skin (e.g., color and turgor)</li> <li>Urine toxicology or a breathalyzer test of blood alcohol concentration (BAC) should be completed.</li> </ul> </li> </ul> <p>The patient should be medically cleared before initiating or continuing outpatient detoxification, if the daily screening is positive for any one of the following:</p> <ul style="list-style-type: none"> <li>Blood sugar &gt;400 or positive anion gap</li> <li>History of recent hematemesis or other gastrointestinal (GI) bleeding disorder</li> <li>Bilirubin &gt;3.0</li> <li>Creatinine &gt;2.0</li> <li>Systolic blood pressure &gt;180 or diastolic blood pressure &gt;110</li> <li>Unstable angina</li> <li>Temperature &gt;101 degrees</li> <li>Blood alcohol concentration (BAC) &gt;0.08 on two outpatient visits</li> </ul> <ol style="list-style-type: none"> <li>For the treatment of alcohol withdrawal, use benzodiazepines over non-benzodiazepine sedative-hypnotics because of documented efficacy, decreased abuse potential, and a greater margin of safety. Benzodiazepines are the drug of choice because they reduce withdrawal severity, incidence of delirium, and seizures. All benzodiazepines appear to be effective.</li> <li>For geriatric patients, start with lower doses of benzodiazepines than for younger adults.</li> <li>For managing alcohol withdrawal, carbamazepine can be used as an effective alternative to benzodiazepines.</li> <li>Other agents, such as beta-blockers, dilantin, and clonidine, are generally not considered as appropriate monotherapy for alcohol withdrawal, but may be considered in conjunction with benzodiazepines in certain patients.</li> <li>During and after detoxification, emphasis should be placed on engagement in ongoing addiction treatment.</li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>Use symptom-triggered therapy or gradual dose tapering over several days for alcohol withdrawal management (Hayashida et al., 1989; Mayo-Smith, 1997; Saitz et al., 1994; APA, 1995; CSAT, 1995) (I, A).</li> <li>Consider ambulatory alcohol detoxification, when indicated (Hayashida et al., 1989) (I, B).</li> <li>Use benzodiazepines over non-benzodiazepine sedative-hypnotics for alcohol withdrawal management (Mayo-Smith, 1997) (I, A).</li> <li>For managing alcohol withdrawal, carbamazepine can be used as an effective alternative to benzodiazepines (Malcolm et al., 1989) (II, B).</li> </ol> </li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>

**Table 3. Summary of Specific Treatment Interventions: Medications (continued)**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
<p><b>Opioid Detoxification</b></p> <p><b>Clinical practice guideline</b></p>	<ol style="list-style-type: none"> <li>1. Focus treatment of opioid withdrawal on facilitating entrance into comprehensive long-term treatment, as well as alleviating acute symptoms.</li> <li>2. The preferred method of opioid detoxification remains short-term substitution therapy with methadone: <ul style="list-style-type: none"> <li>• Use initial doses sufficient to suppress signs and symptoms of withdrawal, usually 30-40 mg/day.</li> <li>• Set the length of the taper period based on the treatment setting and goal of the detoxification. Dose decreases of more than 5 mg/day are generally poorly tolerated.</li> </ul> </li> <li>3. Detoxification can usually be accomplished in 4-7 days in an inpatient setting, to quickly achieve opioid abstinence prior to treatment in a drug-free setting.</li> <li>4. Longer taper periods should be used in the outpatient setting to minimize patient discomfort and maximize chances of success.</li> <li>5. A period of 21 days is generally sufficient for short-term outpatient detoxification in the most stable and motivated individual. However, many patients presenting for treatment have very chaotic lives and should receive opioid agonist for a period of extended stabilization, before they can realistically hope to maintain a drug-free lifestyle. Frequently, long-term detoxification occurs in the setting of an opioid agonist therapy program. Longer-term detoxification protocols frequently allow for a 21-day or 180-day detoxification.</li> <li>6. The 180-day stabilization/detoxification regimen, done within an opioid agonist therapy program, should be considered to work on patients' early recovery problems, while stabilized on a relatively low dose (50-60 mg/day) of methadone. Stabilization is followed by short-term detoxification from methadone and transition to a drug-free rehabilitation program (for details refer to Table 3, Module S, in the original guideline document).</li> <li>7. Clonidine, an alpha-adrenergic agonist, can be considered as an effective alternative for inpatient opioid detoxification; however, outpatient success is much lower.</li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. During opioid detoxification, facilitate engagement in comprehensive long-term treatment (Simpson &amp; Sells, 1990; Magura &amp; Rosenblum, in press) (II-2, A).</li> <li>2. Use short-term agonist substitution therapy for opioid detoxification (Strain &amp; Stitzer, 1999) (III, A).</li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>



**Table 3. Summary of Specific Treatment Interventions: Medications (continued)**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Opioid antagonists with minimal sedation for opioid withdrawal</b></p>	<p>Ten studies (5 randomised and 5 non-randomised controlled trials), involving 770 participants, met the inclusion criteria for the review. Treatment regimes using opioid antagonists to induce withdrawal, with minimal sedation, varied in a number of aspects preventing a description of a “standard” approach. Antagonist-induced withdrawal is associated with similar or less overall severity than withdrawal managed primarily with an alpha2 adrenergic agonist. This is probably because of earlier resolution of withdrawal. Peak severity is likely to be higher with antagonist-induced withdrawal and requires the use of additional adjunct medications. Withdrawal from methadone may be more or less severe than withdrawal from heroin, but data are limited. Antagonist-induced withdrawal appears to be associated with somewhat higher rates of completion of withdrawal and achievement of maintenance doses of naltrexone but there were insufficient data for statistical analyses. The benefit of higher rates of completion of withdrawal is lessened by apparently low rates of retention on subsequent naltrexone maintenance treatment.</p>	<p>The use of opioid antagonists combined with alpha2 adrenergic agonists is feasible and probably increases the likelihood of transfer to naltrexone compared with withdrawal managed primarily with an adrenergic agonist. A high level of monitoring and support is desirable for several hours of administration of opioid agonists because of the possibility of vomiting, diarrhea and delirium. Further research is required to confirm the relative effectiveness of antagonist-induced regimes, as well as variables influencing the severity of withdrawal, adverse effects, the most effective antagonist-based regime, an approach that might increase retention in subsequent naltrexone maintenance treatment.</p>	<p>Gowing L, Ali R, White J. Opioid antagonists with minimal sedation for opioid withdrawal. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>Buprenorphine for the management of opioid withdrawal</b></p>	<p>Six studies (5 RCTs and 1 CPS) involving 357 participants met the criteria for inclusion in the review. Four studies compared buprenorphine with clonidine. All found withdrawal to be less severe in the buprenorphine treatment group. In three of these studies all participants were withdrawing from heroin. Participants in one study were withdrawing from methadone (10 mg/day). Aches, restlessness, yawning, mydriasis, tremor, insomnia, nausea, and mild anxiety were reported as being experienced by some participants. Rates of completion of withdrawal ranged from 65% to 100%. None of the studies included in the review reported adverse effects. However, a single-group study, which therefore did not meet the inclusion criteria, reported the occurrence in some participants of headaches, sedation, nausea, constipation, anxiety, dizziness, and itchiness, particularly in the first 2-3 days of treatment. In one of the six studies, and in two studies that did not meet the inclusion criteria, treatment was provided on an outpatient basis.</p>	<p>Buprenorphine has potential as a medication to ameliorate the signs and symptoms of withdrawal from heroin, and possibly methadone, but many aspects of treatment protocol and relative effectiveness need to be investigated further.</p>	<p>Mattick RP, Kimber J, Breen C, Davoli M. Buprenorphine for the management of opioid withdrawal. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>



**Table 3. Summary of Specific Treatment Interventions: Medications (continued)**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Methadone at tapered doses for the management of opioid withdrawal</b></p>	<p>20 studies were included in the review, with 1,357 people randomized. 10 studies compared methadone and adrenergic agonists, 7 studies compared different modalities of methadone detoxification, 2 studies compared methadone with other opioid agonists, 1 study compared methadone with chlordiazepoxide and with placebo.</p> <p>The conclusions of the 10 studies that compared methadone with adrenergic agonists showed no substantial clinical difference of the two treatments in terms of retention in treatment, degree of discomfort, and detoxification success rates.</p> <p>The conclusions of the studies that compare different methadone reduction schedules showed that different types of methadone withdrawal schedules produce different responses in terms of time course of withdrawal, the severity of withdrawal response, and possibly in terms of subsequent engagement in treatment.</p> <p>Regarding the studies that compare methadone with other opioid agonists, in Sorenson (1982), methadyl acetate performed similarly to methadone on most process and outcome measures, while in Tennant (1975), methadone reduced severity of withdrawal and had fewer drop-outs than did a propoxyphene group.</p> <p>In Drummond (1989), using chlordiazepoxide versus methadone, the results suggest that the two drugs had similar results in terms of overall effectiveness.</p> <p>San (1992) compared methadone with placebo and found more severe withdrawal and more drop-outs in the placebo group.</p> <p>The results indicate that tapered methadone and other medications used in the included studies are effective in the treatment of the heroin withdrawal syndrome, although symptoms experienced by subjects differed according to the medication used and the program adopted. It seems that regardless of which medication is selected for heroin detoxification, the rates of subsequent heroin abstinence are about equal. This suggests that the medications are similar in terms of overall effectiveness. Improvements were achieved when other services such as counseling and other supporting services were offered contemporaneously with detoxification.</p>	<p>Data from the literature are hardly comparable; programs vary widely with regard to duration, design, and treatment objectives, impairing the application of meta-analyses. Results of many outcomes could not be summarized because they were presented either in graphical form or provided only statistical tests and p-values. For most studies, standard deviation for continuous variables were not provided. The studies included in this review confirm that slow tapering with temporary substitution of long acting opioids, accompanied by medical supervision and ancillary medications can reduce withdrawal severity. Nevertheless, the majority of patients relapsed to heroin use. However, this cannot be considered a goal for a detoxification as heroin is a chronic, relapsing disorder, and the goal of detoxification should be to remove or reduce dependence on heroin in a controlled and human fashion and not a treatment for heroin dependence.</p>	<p>Amato L, Davoli M, Ferri M, et al. Methadone at tapered doses for the management of opioid withdrawal. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>

**Table 3. Summary of Specific Treatment Interventions: Medications (continued)**

CONSENSUS STATEMENTS/INTERVENTIONS		CITATION
<b>TOPIC</b> Opioid Agonist Therapy	<b>CONSENSUS STATEMENTS/INTERVENTIONS</b>	<b>CITATION</b>
<b>TOPIC</b> Clinical practice guideline	<p>Providers should adjust opioid agonist doses to maintain a therapeutic range between signs/symptoms of overmedication (e.g., somnolence, miosis, itching, hypotension, and flushing) and opioid withdrawal (e.g., drug craving, anxiety, dysphoria, and irritability).</p> <p>Deliver opioid agonist therapy in the context of a complete treatment program that includes counseling or psychotherapy (See Module R: Assessment and Management in Specialty Care).</p> <ul style="list-style-type: none"> <li>• Methadone, combined with weekly counseling for at least four weeks after admission, followed by at least monthly counseling, has been shown to be more effective than methadone alone.</li> <li>• Availability of more frequent counseling is associated with less illicit drug use.</li> <li>• No specific form of psychosocial intervention has consistently been shown to be more or less efficacious.</li> <li>• Programs with high-quality social services show better treatment retention.</li> <li>• Programs must provide adequate urine toxicology for drugs of abuse, including a minimum of eight random tests per year per patient.</li> </ul> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Methadone target dose is typically &gt;60 mg/day (Strain et al., 1999; Preston et al., 2000) (I, A).</li> <li>2. Methadone, combined with regular counseling, is more effective than methadone alone (McLellan et al., 1993) (I, A).</li> <li>3. Frequent counseling is associated with less illicit drug use (Magura et al., 1999) (II-2, A).</li> <li>4. High-quality social services show better treatment retention (Condelli, 1993) (I, A).</li> <li>5. Levo-alpha-acetylmethadol (LAAM) target dose is typically at least 50/50/70 mg on Monday/Wednesday/Friday (Jones et al., 1998; Eissenberg et al., 1997) (I, A).</li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>
<b>TOPIC</b> Naltrexone maintenance treatment for opioid dependence	<b>MAIN RESULTS</b>	<b>CONCLUSIONS</b>
	<p>Eleven studies met the criteria for inclusion in this review, even if not all of them were randomized. The methodological quality of the included studies varied, but was generally poor. Meta-analysis could be performed to a very low degree only, because the studies and their outcome measures were very heterogeneous. A statistically significant reduction of (re-)incarcerations was found for patients treated with naltrexone and behaviour therapy in respect to those treated with behaviour therapy only. The other outcomes considered in the meta-analysis did not yield any significant results. Final conclusions on whether naltrexone treatment may be considered effective in maintenance therapy cannot be drawn from the clinical trials available so far.</p>	<p>The available trials do not allow a final evaluation of naltrexone maintenance treatment yet. A trend in favor of treatment with naltrexone was observed for certain target groups (particularly people who are highly motivated), as has been previously described in the literature.</p>
		<p>Kirchmayer U, Davoli M, Verster A. Naltrexone maintenance treatment for opioid dependence. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>

**Table 3. Summary of Specific Treatment Interventions: Medications (continued)**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence</b></p>	<p>Six studies met the criteria for inclusion in this review, all were RCTs, two were double-blind. There were a total of 954 participants. The method of concealment of allocation was inadequate in one study, not clearly described in four studies, but adequate in a sixth study. Based on the meta-analysis, methadone appeared to be statistically significantly more effective than non-pharmacological approaches in retaining patient treatment and in the suppression of heroin use, but not statistically in criminal activity.</p>	<p>Methadone is an effective maintenance therapy intervention for the treatment of heroin dependence as it retains patients in treatment and decreases heroin use better than treatments that do not utilize opioid replacement therapy. It does not show a statistically significant superior effect on criminal activity.</p>	<p>Mattick RP, Breen C, Kimber J, et al. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>Methadone maintenance at different dosages for opioid dependence</b></p>	<p>Twenty-two studies were excluded from the review. Twenty-one studies were included; of them, 11 were RCTs with 2,279 people randomized and 10 were controlled prospective studies (CPSs) with 3,715 people followed-up.                      Outcomes: Retention rate – RCTs: High versus low doses at shorter follow-ups: RR=1.36 [1.13, 1.63], and at longer ones: RR=1.62 [0.95, 2.77].                      Opioid use (self-reported), times with – RCTs: high versus low doses WMD=-2.00 [-4.77, 0.77], high versus middle doses WMD=-1.89 [-3.43, -0.35].                      Opioid abstinence, (urine based) at &gt;3-4w – RCTs: high versus low ones: RR=1.59 [1.16, 2.18], high versus middle doses RR=1.51 [0.63, 3.61].                      Cocaine abstinence (urine based) at &gt;3-4 w – RCTs: high versus low doses RR=1.81 [1.15, 2.85].                      Overdose mortality – CPSs: high dose versus low dose at 6 years follow-up: RR=0.29 [0.02-5.34], high does versus middle dose at 6 years follow-up: RR=0.38 [0.02, 9.34], middle dose versus low dose at 6 years follow-up: RR=0.57 [0.06-5.06].</p>	<p>Methadone dosages ranging from 60-100 mg/day are more effective than lower dosages in retaining patients and in reducing use of heroin and cocaine during treatment. To find the optimal does is a clinical ability, but clinicians must consider these conclusions in treatment strategies.</p>	<p>Faggiano F, Vigna-Taglianti F, Versino E, et al. Methadone maintenance at different dosages for opioid dependence. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>TOPIC</b></p>	<p><b>CONSENSUS STATEMENTS/INTERVENTIONS</b></p>		
<p><b>Sedative Hypnotic Detoxification</b></p>	<p>There are three general treatment strategies for patients withdrawing from other sedative-hypnotic medications at doses above the therapeutic range, for a month or more:</p> <ol style="list-style-type: none"> <li>1. Substitute phenobarbital for the addicting agent and taper gradually.                             <ul style="list-style-type: none"> <li>• The average daily sedative-hypnotic dose is converted to a phenobarbital equivalent and divided into 3 doses per day for 2 days. Detailed information on phenobarbital equivalencies for sedative hypnotics can be found in Goodman and Gilman's The Pharmacological Basis of Therapeutics-Ninth Edition (1996).</li> <li>• Phenobarbital dose should be reduced by 30 mg per day, beginning on day 3.</li> </ul> </li> <li>2. For patients on a shorter acting benzodiazepine, substitute a longer acting benzodiazepine (e.g., chlordiazepoxide) and taper 10% per day, over 1 to 2 weeks.</li> <li>3. Gradually decrease the dosage of the long-acting substance the patient is currently taking.</li> </ol>		
<p><b>Clinical practice guideline</b></p>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>		

**Table 4. Summary of Specific Treatment Interventions: Medications Shown to Be Ineffective or Require Further Study**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Medications Found to Be Ineffective</b></p> <p><b>Treatment for amphetamine dependence and abuse</b></p>	<p>Fluoxetine, amlodipine, imipramine, and desipramine have been investigated in four RCTs. In comparison to placebo, short-term treatment of fluoxetine (40 mg/day) significantly decreased craving. In comparison to imipramine 10 mg/day, medium-term treatment of imipramine 150 mg/day significantly increased the duration of adherence to treatment. All four drugs had no benefits on a variety of outcomes, including amphetamine use.</p>	<p>The evidence about the treatment for amphetamine dependence and abuse is very limited. It shows that fluoxetine, amlodipine, imipramine, and desipramine have very limited benefits for amphetamine dependence and abuse. Fluoxetine may decrease craving in short-term treatment. Imipramine may increase duration of adherence to treatment in medium-term treatment. Apart from these, no other benefits, in particular proximal benefits, can be found. This limited evidence suggests that no treatment has been demonstrated to be effective for the treatment of amphetamine dependence and abuse.</p> <p>Although there is a large number of people with amphetamine dependence and abuse worldwide, very few controlled trials in this issue have been conducted. As the previous treatment trials show no promising result, other treatments, both biological and psychosocial, should be further investigated. However, the results of neurotoxic studies of amphetamines are also crucial for the study designs appropriate for further treatment studies for amphetamine dependence and abuse.</p>	<p>Srisurapanont M, Jarusuraisin N, Kittirattananapaboon P. Treatment for amphetamine dependence and abuse. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>Dopamine agonists for cocaine dependence</b></p>	<p>Seventeen studies were included, with 1,224 participants randomised. Amantadine, bromocriptine, and pergolide were the drugs evaluated. The main outcomes evaluated were positive urine sample for cocaine metabolites, for efficacy, and retention in treatment, as an acceptability measure. There were no significant differences between interventions, and in trials where participants had primary cocaine dependence or had additional diagnosis of opioid dependence and/or were in methadone maintenance treatment.</p>	<p>Current evidence does not support the clinical use of dopamine agonists in the treatment of cocaine dependence. Given the high rate of dropouts in this population, clinicians may consider adding other supportive measures aiming to keep patients in treatment.</p>	<p>Soares BGO, Lima MS, Reisser AAP, et al. Dopamine agonists for cocaine dependence. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>Carbamazepine (CBZ) for cocaine dependence</b></p>	<p>Five studies were included in the review, with 455 people randomised. No differences were found regarding positive urine sample for cocaine metabolites. Scores on Spielberg State Anxiety Inventory slightly favoured carbamazepine, but didn't reach statistical significance. Dropouts were high in both groups up to 70% in the placebo group. Less dropout occurred in the carbamazepine group (RR=0.87; 95% CI 0.71-1.06). When no retention in treatment was due to side effects no differences were found. The number of participants presenting at least one side effect, reported in Kranzler, Bauer, Hersch, Klinghoffer (1995), was higher in the carbamazepine group (RR=4.33; 95% CI 1.45-12.91).</p>	<p>There is no current evidence supporting the clinical use of CBZ in the treatment of cocaine dependence. Larger randomised investigation must be considered taking into account that these time-consuming efforts should be reserved for medications showing more relevant and promising evidence.</p>	<p>Lima, AR, Lima MS, Soares BGO, et al. Carbamazepine (CBZ) for cocaine dependence. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>

**Table 4. Summary of Specific Treatment Interventions: Medications Shown to Be Ineffective or Require Further Study (continued)**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Medications Found to Be Ineffective (continued)</b></p> <p><b>Antidepressants for cocaine dependence</b></p>	<p>Eighteen studies were included in the review, with 1,177 people randomised. Positive urine sample for cocaine metabolites was the main efficacy outcome, with no significant results obtained regardless of the type of antidepressant. Compared to other drugs, desipramine performed better but showed a non-significant trend with heterogeneity present as revealed by the chi-square test (8.6, df=3; p=0.04). One single trial showed imipramine performed better than placebo in terms of clinical response according to patient's self-report. A similar rate of patients remaining in treatment was found for both patients taking desipramine or placebo. Results from one single trial suggest fluoxetine patients on SSRIs are less likely to dropout. Similar results were obtained for trials where patients had additional diagnosis of opioid dependence and/or were in methadone maintenance treatment.</p>	<p>There is no current evidence supporting the clinical use of antidepressants in the treatment of cocaine dependence. Given the high rate of dropouts in this population, clinicians may consider adding psychotherapeutic supportive measures aiming to keep patients in treatment.</p>	<p>Lima MS, Reisser AAP, Soares BGO, et al. Antidepressants for cocaine dependence. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>Medications Requiring Further Study</b></p> <p><b>Compare two anticraving drugs, acamprosate and naltrexone</b></p>	<p>The review question was clear. The search strategy only featured one database and it was not clear which years the search had covered. This makes it likely that studies have been missed. The author did not report how decisions on inclusion or exclusion of studies were taken, how methodological quality was assessed, how data extraction was done, and how differences between studies were investigated.</p> <p>The author did not attempt to generate a summary estimate of effect across studies. Instead the results of primary studies were described in a narrative way. Considering the above factors, the findings from this review should be interpreted with caution.</p>	<p>The lack of carry-over of effectiveness of naltrexone might be due to the shorter administration period compared with acamprosate (3 versus 12 months). This remains to be studied.</p>	<p>NHS Centre for Reviews and Dissemination. Abstract and Commentary for Hoes MJ. Relapse prevention in alcoholics: a review of acamprosate versus naltrexone. <i>Clinical Drug Investigation</i>, 1999; 17(3):211-216.</p>

**Table 4. Summary of Specific Treatment Interventions: Medications Shown to Be Ineffective or Require Further Study (continued)**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Heroin maintenance for chronic heroin dependents</b></p>	<p>2,400 references were obtained and 20 studies were eligible; 4 met the inclusion criteria, for a total of 577 patients. The studies included could not be analyzed cumulatively because of heterogeneity of interventions and outcomes considered. Two studies compared injected heroin to oral methadone for 1 year (270 patients) but considered different outcomes; one study compared injected heroin and methadone to oral methadone for 6 months (51 patients); and one compared inhaled heroin and methadone to oral methadone for 1 year (235 patients). Retention in treatment: in two studies there was no statistical difference between groups; one study (N=96) had a RR=2.82 (95% CI 1.70-4.68) in favor of heroin; one study (N=235) had a RR=0.79 (95% CI 0.68-0.90) in favor of methadone. Relapse to illegal heroin use, based on self report: in one study the proportion of people still using heroin were 64% in the heroin group, 59% methadone group; in the other study the RR was 0.33 (95% CI 0.15-0.72) in favor of heroin. The remaining studies did not provide the data. Criminal offense: one of the two heroin prescription in reducing the risk of being charged RR=0.32 (95% CI 0.14-0.78). Social functioning: the two studies reporting this outcome did not show a statistical difference between intervention groups. The two most recent studies considered criminal offence and social functioning as part of a multi-domain outcome measure and showed higher improvement among those treated with heroin plus methadone over those on methadone only.</p>	<p>No definitive conclusions about the overall effectiveness of heroin prescription are possible because of non-comparability of the experimental studies available to be included in this review.</p> <p>Results favoring heroin treatment come from studies conducted in countries where the treatment system is comprehensive and easily accessible methadone maintenance treatment at effective dosages is available. In those studies heroin prescription was addressed to patients who had failed previous methadone treatments.</p>	<p>Ferri M, Davoli M, Perucci C.A. Heroin maintenance for chronic heroin dependents. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>

**Table 5. Summary of Studies Related to Psychosocial Clinical Practices Found to Be Effective**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
Clinical practice guideline	<p><b>Obtain a Comprehensive Biopsychosocial Assessment</b></p> <p>Include the following 10 general categories in a comprehensive assessment of substance use disorders:</p> <ol style="list-style-type: none"> <li>1. Patient’s demographics and identifying information, including housing, legal, and occupational status.</li> <li>2. Patient’s chief complaint and history of the presenting complaint.</li> <li>3. Recent substance use and severity of substance-related problems.</li> <li>4. Lifetime and family history of substance use.</li> <li>5. Co-morbid psychiatric conditions and psychiatric history.</li> <li>6. Social and family context.</li> <li>7. Developmental and military history.</li> <li>8. Current medical status and medical history, including risk for HIV or hepatitis C.</li> <li>9. Mental status and physical examinations.</li> <li>10. Patient’s perspective on current problems and treatment goals or preferences.</li> </ol> <p><b>Develop Integrated Summary and Initial Treatment Plan</b></p> <ol style="list-style-type: none"> <li>1. Consolidate and interpret the information obtained during the assessment process in a narrative form.</li> <li>2. Include a diagnostic formulation.</li> <li>3. Review comprehensive assessment and integrated summary, including past treatment response.</li> <li>4. Incorporate an interdisciplinary perspective in presenting treatment recommendations.</li> <li>5. Involve the patient in prioritizing problems to be addressed in the initial treatment plan.</li> <li>6. Review the patient’s motivational level and goals and match the patient needs with available programming (see Treatment Plan and Expected Outcomes, below).</li> <li>7. Identify treatment options and discuss them with the patient.</li> </ol> <p><b>Treatment Plan and Expected Outcomes</b></p> <p>Rehabilitation with optimal goals</p> <ul style="list-style-type: none"> <li>• Complete and sustained remission of all substance use disorders</li> <li>• Resolution of, or significant improvement in, all coexisting biopsychosocial problems and health-related quality of life</li> </ul> <p>Rehabilitation with intermediate goals</p> <ul style="list-style-type: none"> <li>• Short- to intermediate-term remission of substance use disorders or partial remission of substance use disorders for a specified period of time</li> <li>• Resolution or improvement of at least some coexisting problems and health-related quality of life</li> </ul> <p><b>Is Rehabilitation an Acceptable Mode of Treatment to the Patient?</b></p> <p><b>For DoD Active Duty, a Referral Is Required. For Refusal, Contact Command to Discuss Administrative and Clinical Options</b></p> <ol style="list-style-type: none"> <li>1. When acceptable to the patient, a specialty care rehabilitation plan is generally indicated.</li> <li>2. Care management is likely to be a more acceptable and effective alternative when one of the following applies: <ul style="list-style-type: none"> <li>• The patient refuses referral to rehabilitation, but continues to seek some services, especially medical and/or psychiatric services.</li> <li>• The patient has serious co-morbidity that precludes participation in available rehabilitation programs.</li> <li>• The patient has been engaged repeatedly in rehabilitation treatment with minimal progress toward optimal or intermediate rehabilitation goals.</li> </ul> </li> <li>3. Regarding DoD active duty patients: <ul style="list-style-type: none"> <li>• DoD active duty refusing rehabilitation—contact command to discuss command directed treatment so consideration can be given to either (a) order the patient to comply, (b) invoke administrative options (e.g., administrative separation from service), or (c) do nothing. This is the commander’s decision, with input from the medical staff.</li> </ul> </li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>



**Table 5. Summary of Studies Related to Psychosocial Clinical Practices Found to Be Effective (continued)**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
<p>Clinical practice guideline</p>	<p><b>Provide Motivational Intervention, Renegotiate Treatment Plan</b></p> <ol style="list-style-type: none"> <li>1. Establish treatment goals in the context of a negotiation between the treatment provider and the patient.</li> <li>2. Review with the patient results of previous efforts at self-change and formal treatment, including reasons for treatment dropout.</li> <li>3. Use motivational enhancement techniques reflecting the FRAMES model. <ul style="list-style-type: none"> <li>• Feedback: Provide personalized feedback based on patient report of alcohol-related harm.</li> <li>• Responsibility: Emphasize patient responsibility and freedom of choice for changing behavior.</li> <li>• Advice: Provide clear and direct advice about the importance of change and availability of help.</li> <li>• Menu: Acknowledge and discuss alternative strategies for change.</li> <li>• Empathy: Maintain a patient-centered approach and accurately reflect patient statements and feelings.</li> <li>• Self-Efficacy: Emphasize the role of patient self-efficacy in their ability to make needed change and convey optimism in their potential to be successful.</li> </ul> </li> <li>4. Use empathic and non-judgmental (versus confrontational) therapist style.</li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Use empathic and non-judgmental (versus confrontational) therapist style (Hser, 1995; Miller et al., 1993; Najavits &amp; Weiss, 1994) (I, A)</li> </ol> <p><b>Determine Appropriate Initial Intensity Level of Treatment</b></p> <p>No standard dose or modality of treatment has been found to be uniformly sufficient for recovery. The initial intensity of treatment should:</p> <ol style="list-style-type: none"> <li>1. Complement recovery support in the patient's community (e.g., Alcoholics Anonymous) and/or facilitate development of community support.</li> <li>2. Coordinate with intervention(s) for other biopsychosocial problems. Increasing the intensity of addiction-focused treatments may not improve outcomes as effectively as addressing identified concurrent problems.</li> <li>3. Provide care in the least restrictive setting necessary for safety and effectiveness.</li> <li>4. Focus on promoting initial engagement and maintaining retention over time. This includes attention to appropriate housing and access to treatment, as addressed in Annotation I.</li> <li>5. Consider multiple treatment contacts per week (including medication dispensing) for severely dependent patients in early recovery.</li> <li>6. For DoD active duty, command or operational concerns may be taken into consideration.</li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Complement recovery support in the patient's community (e.g., Alcoholics Anonymous) and/or facilitate development of community support (Finney &amp; Moos, 1998) (II-2, A).</li> <li>2. Addressing identified concurrent problems improves outcomes (Kraft et al., 1997; McLellan et al., 1998; Avants et al., 1999) (I, A).</li> <li>3. Individualize treatment in terms of intensity, setting, duration, and modality (Finney &amp; Moos, 1998; IOM, 1990) (III, A).</li> <li>4. Promote initial treatment engagement and retention (Cris-Cristoph &amp; Siqueland, 1996; Finney &amp; Moos, 1998; Gerstein &amp; Harwood, 1990; Onken et al., 1997) (II-2, A).</li> </ol> <p><b>Ensure Appropriate Housing and Access to Treatment</b></p> <p>The term "housing" is used generically as the residence of a patient while receiving treatment. It can involve the same setting within which treatment takes place or it can refer to a variety of living situations with varying degrees of supervision that are separate from the location of treatment services. Refer to Table 2 in Module R of the guideline for suggestions on housing options based on specific indications.</p> <p><b>Negotiate Specific Rehabilitation Goals with the Patient</b></p> <p>Specify the planned treatment regimen and promote patient adherence.</p> <ol style="list-style-type: none"> <li>1. Negotiate treatment goals that specifically identify and address relapse risks.</li> <li>2. Review with the patient results of previous efforts at self-change and formal treatment experience, including reasons for treatment dropout.</li> <li>3. Use empathic and non-judgmental (versus confrontational) therapist style.</li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>

**Table 5. Summary of Studies Related to Psychosocial Clinical Practices Found to Be Effective (continued)**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
Clinical practice guideline	<p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Negotiate specific rehabilitation goals with the patient (Heinssen et al., 1995; Miller, 1995; Miller &amp; Rollnick, 1991; Sanchez-Craig &amp; Lei, 1986; Sobell et al., 1992; Stark, 1992) (<i>II-1, A</i>).</li> <li>2. Review previous treatment and efforts at self-change with patient (Stark, 1992) (<i>III, B</i>).</li> <li>3. Use empathic and non-judgmental (versus confrontational) therapist style (Hser, 1995; Miller et al., 1993; Najavits &amp; Weiss, 1994) (<i>I, A</i>).</li> </ol> <p><b>Initiate Addiction-Focused Psychosocial Therapy</b></p> <p>Initiate addiction-focused psychosocial treatment that will help the patient establish early remission and prevent relapse to substance use.</p> <ol style="list-style-type: none"> <li>1. Indicate to the patient and significant others that treatment is more effective than no treatment.</li> <li>2. Respect patient preference for the initial psychosocial intervention approach, since no single intervention has emerged as the treatment of choice.</li> <li>3. Consider addiction-focused psychosocial interventions with the most consistent empirical support, several of which have been developed into published treatment manuals: <ul style="list-style-type: none"> <li>• Behavioral marital therapy</li> <li>• Cognitive-behavioral coping skills training</li> <li>• Community reinforcement and other contingency-based approaches</li> <li>• Individual and group drug counseling</li> <li>• Motivational enhancement</li> <li>• Twelve-Step facilitation training</li> </ul> </li> <li>4. Emphasize that the most consistent predictor of successful outcome is retention in formal treatment or community support.</li> <li>5. Promote active involvement in Twelve-Step programs (e.g., Alcoholics Anonymous and Narcotics Anonymous) that have been helpful to many and are widely available.</li> <li>6. Use effective strategies for referral to mutual help programs in the community, addressing patient preferences and prior experiences. <ul style="list-style-type: none"> <li>• Ask whether the patient has ever attended a self-help meeting.</li> <li>• Explore the patient's attitude and concerns about attending meetings.</li> <li>• Discuss the possible benefits.</li> <li>• Describe the range of meetings that are available.</li> <li>• Refer the patient to a specific meeting, at a specific time, date, and location.</li> <li>• Follow-up regarding meeting attendance and experience.</li> </ul> </li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Indicate to the patient that treatment is effective (Gerstein &amp; Harwood, 1990; IOM, 1990) (<i>I, A</i>).</li> <li>2. Respect patient preference for the initial psychosocial intervention approach (Carroll &amp; Schottenfeld, 1997; Crits-Cristoph &amp; Siqueland, 1996; Finney &amp; Moos, 1998) (<i>I, A</i>).</li> <li>3. Consider behavioral marital therapy. (Stanton &amp; Shadish, 1997; O'Farrell, 1993) (<i>I, A</i>).</li> <li>4. Consider cognitive-behavioral coping skills training (Beck et al., 1993; Carroll, 1998; Kadden et al., 1992; Monti et al., 1989) (<i>I, A</i>).</li> <li>5. Consider community reinforcement and other contingency-based approaches (Budney &amp; Higgins, 1998; Meyers &amp; Smith, 1995; Silverman et al., 1996) (<i>I, A</i>).</li> <li>6. Consider individual and group drug counseling. (Mercer &amp; Woody, 1999) (<i>I, A</i>).</li> <li>7. Consider motivational enhancement. (Miller et al., 1992) (<i>I, A</i>).</li> <li>8. Consider Twelve-Step facilitation training (Nowinski et al., 1992; Ouimette et al., 1997; Tonigan et al., 1996) (<i>I, A</i>).</li> <li>9. Emphasize retention in formal treatment or community support (Finney &amp; Moos, 1998; Simpson, 1997) (<i>I, A</i>).</li> <li>10. Promote active involvement in Twelve-Step programs. (Humphreys, 1999) (<i>II-2, A</i>).</li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>

**Table 5. Summary of Studies Related to Psychosocial Clinical Practices Found to Be Effective (continued)**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
Clinical practice guideline	<p><b>Initiate/Continue Treatment of Coexisting Problems (e.g., Medical, Psychiatric, Family, Vocational, and/or Legal) and Other Compulsive Behavior (e.g., Gambling or Spending)</b>            Provide comprehensive individualized treatment that will improve clinical outcome and functional status.</p> <ol style="list-style-type: none"> <li>1. Prioritize and address other coexisting biopsychosocial problems with services targeted to these areas, rather than increasing drug and alcohol counseling alone.</li> <li>2. Treat concurrent psychiatric disorders consistent with VHA/DoD clinical practice guidelines (e.g., those for treating patients with Major Depressive Disorder or Psychoses) including concurrent pharmacotherapy.</li> <li>3. Provide multiple services in the most accessible setting to promote engagement and coordination of care.</li> <li>4. Monitor and address deferred problems and emerging needs through ongoing treatment plan updates.</li> <li>5. Coordinate care with other providers.</li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Treat concurrent psychiatric disorders, including concurrent pharmacotherapy. (Mason et al., 1996; Nunes et al., 1995; Nunes et al., 1998; USDHHS, 1994) (<i>I, A</i>).</li> <li>2. Target specific services to address other coexisting biopsychosocial problems. (McLellan et al., 1993, 1994, 1998) (<i>I, A</i>).</li> </ol> <p><b>Is Patient Nicotine Dependent?</b>            Identify patients with nicotine dependence for which cessation treatment may be effective.</p> <ol style="list-style-type: none"> <li>1. Nearly all daily nicotine users are nicotine dependent (See Module A, Annotation E, for the DSM-IV dependence criteria [305.1]).</li> <li>2. Offer and recommend smoking cessation treatment to every patient who is dependent on nicotine. Use the VHA/DoD Clinical Practice Guideline To Promote Tobacco Use Cessation in the Primary Care Setting.</li> <li>3. Identification and treatment of co-morbid nicotine dependence may improve recovery rates of other substance abuse orders.</li> </ol> <p><b>Is Addiction-Focused Pharmacotherapy Indicated?</b>            Consider appropriateness of addiction-focused pharmacotherapy for all patients.</p> <ol style="list-style-type: none"> <li>1. Consider addiction-focused pharmacotherapy for opioid dependence and/or alcohol dependence as part of a comprehensive treatment plan including addiction-focused psychosocial treatment and pharmacotherapy for co-existing psychiatric conditions.</li> <li>2. Evaluate indications for pharmacotherapy in all patients with opioid and alcohol dependence. (See Tables 3 and 4 of Module R in the original guideline document for information on indications for use of naltrexone, disulfiram, and opioid agonists.)</li> </ol> <p>Please refer to Module P: Addiction-Focused Pharmacotherapy of the original guideline document for, contraindications and regimen guidelines for naltrexone, disulfiram and opioid agonists.</p>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>

**Table 5. Summary of Studies Related to Psychosocial Clinical Practices Found to Be Effective (continued)**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
<p>Clinical practice guideline</p>	<p><b>Provide Periodic Reassessment of Problems, Goals, and Response to Psychosocial Treatment and Pharmacotherapy</b></p> <p>Periodically reassess response to treatment, change in treatment goals, or other indications for change in the treatment plan.</p> <ol style="list-style-type: none"> <li>1. Reassess and document clinical response throughout the course of treatment: <ul style="list-style-type: none"> <li>• Daily in the acute inpatient setting, including reevaluation of the continued need for that level of care.</li> <li>• At least weekly in the residential setting, including reevaluation of the continued need for that level of care.</li> <li>• In the outpatient setting: within the first 10 to 14 days for a new episode of care; after the first 90 days of continuing care; and at least annually for long-term care.</li> </ul> </li> <li>2. For patients receiving pharmacotherapy with disulfiram or naltrexone, transaminase levels should be reassessed monthly for the first 3 months and then every 3 months thereafter (see Module P, Annotation J in the original guideline document).</li> <li>3. Modify treatment plans individually based on changes in a patient's clinical and psychosocial condition rather than imposing uniform treatment plans.</li> <li>4. Indications to change treatment intensity or provide adjunctive treatments may include: <ul style="list-style-type: none"> <li>• Relapse based on self-report or urine toxicology</li> <li>• Increased risk of relapse (e.g., craving or personal loss)</li> <li>• Emergence or exacerbation of comorbid medical and psychiatric conditions</li> <li>• Suboptimal response to medication</li> <li>• Emergence of medication side effects</li> </ul> </li> <li>5. Discuss relapse as a signal to re-evaluate the treatment plan rather than evidence that the patient cannot succeed or was not sufficiently motivated.</li> <li>6. Target services to identified problems (e.g., psychiatric, medical, family/social, legal, vocational, and housing) that increase the risk of relapse, rather than increasing drug and alcohol counseling alone.</li> <li>7. Consider care management for patients with persistently sub-optimal response, rather than routinely intensifying rehabilitation or discharging (See Module C: Care Management).</li> <li>8. Consider reduced treatment intensity or discontinuing some treatment components based on: <ul style="list-style-type: none"> <li>• Full, sustained remission</li> <li>• Greater involvement in community support</li> <li>• Improvements in other associated problem areas</li> </ul> </li> <li>9. Coordinate follow-up with the patient's primary medical or behavioral health provider during transitions to less intensive levels of care in order to reinforce progress and improve monitoring of relapse risks.</li> </ol> <p><b>Recommendations</b></p> <ol style="list-style-type: none"> <li>1. Modify treatment plans based on changes in a patient's clinical and psychosocial condition (ASAM, 1996) (III, A).</li> <li>2. Discuss relapse as a signal to reevaluate the treatment plan (Miller &amp; Rollnick, 1991; Marlatt &amp; Gordon, 1985) (II, A).</li> <li>3. Target services to identified problems that increase the risk of relapse (McLellan et al., 1997) (I, A).</li> </ol> <p><b>Create Recovery Plan</b></p> <p>Maximize the patient's chances for achieving his/her rehabilitation goals by summarizing, simplifying, and solidifying key recovery ingredients. Summarize on paper "the basic things I need to do to meet my rehabilitation goals," including the following:</p> <ol style="list-style-type: none"> <li>1. Information on treatment appointments and mutual help meetings to attend.</li> <li>2. Recognizing relapse warning signs and triggers and appropriate coping responses.</li> <li>3. Maintaining contact with recovery support network.</li> </ol> <p>As part of discharge instructions, provide this to the patient to facilitate compliance with aftercare plans.</p>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>

**Table 5. Summary of Studies Related to Psychosocial Clinical Practices Found to Be Effective (continued)**

TOPIC	CONSENSUS STATEMENTS/INTERVENTIONS	CITATION
<p>Clinical practice guideline</p>	<p><b>Discontinue Treatment in Specialty Care; Arrange for Transition to Primary Care</b>                      Provide appropriate continuity of care to follow up with primary medical or behavioral healthcare provider.                      Discuss the impact of changes in substance use on other medical and psychiatric conditions and identify relapse risks for future monitoring.                      Arrange for continued monitoring of substance use and co-morbid conditions either in addiction specialty care or by the patient's primary medical or behavioral healthcare provider.</p> <ol style="list-style-type: none"> <li>1. Schedule primary care follow-up within 90 days to reinforce recovery progress during the post-discharge period of highest risk for relapse.</li> <li>2. Encourage patients to re-contact addiction-focused treatment providers for additional help as needed in preventing or promptly interrupting relapse.</li> <li>3. For DoD active duty patients, addiction-focused treatment follow-up may be mandated for a period of 6 to 12 months from the time of initial referral (this may be referred to as "aftercare" in the DoD community).</li> </ol> <p><b>Follow-up in Primary Care</b>                      Assure continuity of care with primary provider and promote abstinence or reduced use.                      Communicate the follow-up plan to the primary provider, including:</p> <ol style="list-style-type: none"> <li>1. Monitor signs of use and ask the patient about specific quantity and frequency of use.</li> <li>2. Monitor other biological indicators that may improve with abstinence (e.g., transaminase levels or hypertension).</li> <li>3. Assess adherence to recovery plan.</li> <li>4. Coordinate continued addiction-focused pharmacotherapy, if indicated.</li> <li>5. Provide motivational support.</li> <li>6. Discuss other areas of concern in the patient's life that may be prognostic indicators.</li> <li>7. Encourage abstinence or reduced use that is consistent with patient's motivation and agreement.</li> </ol>	<p>Management of Substance Use Disorders Working Group. <i>Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders</i>. Washington, DC: VHA/DoD; 2001.</p>

**Table 6. Summary of Studies Related to Psychosocial Clinical Practices Shown to Be Ineffective**

TOPIC	MAIN RESULTS	CONCLUSIONS	CITATION
<p><b>Psychosocial treatment programmes for people with both severe mental illness and substance misuse</b></p>	<p>Six relevant studies, four of which were small, were identified. In general, the quality of design and reporting was not high. Clinically important outcomes such as relapse of severe mental illness, violence to others, patient or carer satisfaction, social functioning, and employment were not reported.</p> <p>There is no clear evidence supporting an advantage of any type of substance misuse programme for those with serious mental illness over the value of standard care. No one programme is clearly superior to another.</p>	<p>The problems posed by substance misuse in the context of severe mental illness will not go away. The current momentum for integrated programmes is not based on good evidence. Implementation of new specialist substance misuse services for those with serious mental illnesses should be within the context of simple, well-designed controlled clinical trials.</p>	<p>Jeffery DP, Ley A, McLaren S, et al. Psychosocial treatment programmes for people with both severe mental illness and substance misuse. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>
<p><b>Onsite mental health workers in primary care</b></p>	<p>Thirty-eight studies were included involving more than 460 PCPs and more than 3,880 patients. There was some evidence that “replacement” model mental health workers (MHWs) achieved significant short-term reductions in PCP psychotropic prescribing and mental health referral, but the effects were not reliable. Consultation rates were also reduced, but with even less evidence of a consistent effect. There were no indirect effects in prescribing behaviour on the wider population and no consistent pattern to the impact on referrals. “Indirect” effects on PCP consultation rates were not assessed.</p> <p>There was some evidence that “consultation-liaison” model MHWs had a direct effect on PCP prescribing behaviour when used as part of complex, multifaceted interventions. Few studies examined the “indirect” effects of such interventions, and those that did failed to provide evidence that “direct” effects were generalisable to the wider population or endured once the “consultation-liaison” intervention was removed.</p>	<p>This review does not support the hypothesis that adding MHWs to primary care provider organisations in “replacement” models causes a significant or enduring change in PCP behaviour. “Consultation-liaison” interventions may cause changes in psychotropic prescribing, but these seem short-term and limited to patients under the direct care of the MHW. Longer-term studies are needed to assess the degree to which demonstrated effects endure over time.</p>	<p>Bower P, Sibbald B. Onsite mental health workers in primary care. <i>Cochrane Database of Systematic Reviews</i>. 2, 2004.</p>

**Table 7. Motivational Interviewing: Three Kinds of Behavior Change Interventions\***

	<b>BRIEF ADVICE (BA)</b>	<b>BEHAVIOR CHANGE COUNSELING (BCC)</b>	<b>MOTIVATIONAL INTERVIEWING</b>
<b>CONTEXT</b>			
Session Time	5 to 15 minutes	5 to 30 minutes	30 to 60 minutes
Setting	Mostly opportunistic	Opportunistic or help-seeking	Mostly help-seeking
<b>GOALS</b>	<ul style="list-style-type: none"> <li>• Demonstrate respect</li> <li>• Communicate risk</li> <li>• Provide information</li> <li>• Initiate thinking about change in problem behavior</li> </ul>	BA goals, plus: <ul style="list-style-type: none"> <li>• Establish rapport</li> <li>• Identify client goals</li> <li>• Exchange information</li> <li>• Choose strategies based on client readiness</li> <li>• Build motivation for change</li> </ul>	BA and BCC goals, plus: <ul style="list-style-type: none"> <li>• Develop relationship</li> <li>• Resolve ambivalence</li> <li>• Develop discrepancy</li> <li>• Elicit commitment to change</li> </ul>
<b>STYLE</b>			
Practitioner-recipient	Active expert – passive recipient	Counselor – active participant	Leading partner – partner
Confrontational or challenging style	Sometimes	Seldom	Never
Empathic style	Sometimes	Usually	Always
Information	Provided	Exchanged	Exchanged to develop discrepancy
<b>SKILLS†</b>			
• Ask open-ended questions	●●	●●	●●●
• Affirmations	●●	●●	●●●
• Summaries	●	●●●	●●●
• Ask permission	●●	●●●	●●●
• Encourage recipient choice and responsibility in decision making	●●	●●●	●●●
• Provide advice	●●●	●●	●
• Reflective listening statements	●	●●	●●●
• Directive use of reflective listening	●	●	●●●
• Variation in depth of reflections	●	●●	●●●
• Elicit change talk	●	●●	●●●
• Roll with resistance	●	●●●	●●●
• Help client articulate deeply held values	●	●	●●●

\*Miller and Rollnick, 2002, 274.

†Skills range from nonessential (1 ● dot) to essential (3 ●●● dots) using a 3-point scale (1, 2, and 3 dots).



**Table 8. Persons with Active Substance Use Presenting in Primary Care**

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**Obtain History, Physical Examination, Laboratory Tests, Mental Status Examination (MSE), and Medication (Including Over-the-Counter [OTC])**

1. Interview the patient and other collateral informants, where appropriate, about medical history and use of prescription and non-prescription medications before initiating extensive diagnostic testing.
2. Note any history of recent head trauma.
3. Order laboratory tests selectively, aiming to detect potential medical causes for the presenting symptoms where indicated by:
  - a. Specific symptoms found on the medical review of systems
  - b. Evidence of unusual symptom profiles
  - c. History of atypical illness course
4. Screen for cognitive status, particularly in the elderly patient:
  - a. Consider a standardized instrument such as Folstein's Mini-Mental State Examination (MMSE), using age and education-adjusted cut-off scores
  - b. History of atypical illness course
5. For the Department of Defense (DoD) patients the commanding officer can be an excellent source of collateral data.

**Is Patient Medically or Psychiatrically Unstable or Acutely Intoxicated?**

**Delirium**

Delirium can be identified through the following:

1. Disturbance of consciousness (e.g., reduced clarity of awareness of the environment with reduced ability to focus, sustain, or shift attention).
2. A change in cognition (such as memory deficit, disorientation, or language disturbance) or the development of a perceptual disturbance that is not accounted for by a preexisting, established, or evolving dementia.
3. The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.
4. There is evidence from the history, physical examination, or laboratory findings that:
  - Illness is characterized by an atypical course
  - Disturbances are caused by the direct physiological consequences of a general medical condition
  - Symptoms developed during substance intoxication or medication use are etiologically related to the disturbance
  - Symptoms are developed during or following a withdrawal syndrome
  - Delirium has more than one etiology (e.g., a general medical condition plus intoxication or a medication side effect)

**Risk of harm to self or others**

1. If suicidal ideation is present, the imminent risk increases with one or more of the following risk factors:
  - Prior suicide attempt and lethality of prior acts
  - Level of intent and formulation of plan
  - Greater preoccupation (e.g., frequency, intensity, and duration of thoughts)
  - Availability of lethal means for suicide (e.g., firearms or pills)
  - Family history of completed suicide
  - Presence of active mental illness (e.g., severe depression or psychosis)
  - Presence of substance abuse
  - Current negative life events (e.g., loss in personal relationship)
  - Feelings of hopelessness or helplessness

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.

**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

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2. Consider the patient's history of violent acts as an increased risk for violence toward self or others.
3. Offer mental health counseling to patients with evidence of suicidal, assaultive, or homicidal ideation.
4. Arrange voluntary or involuntary emergency psychiatric treatment and possibly hospitalization for patients with definite intent to harm self or others, particularly those with a plan and the available means.

**Serious psychiatric instability**

1. Obtain immediate mental health consultation if other psychiatric symptoms (e.g., acute psychosis) significantly interfere with further assessment and require immediate psychiatric treatment before continuing assessment.

**Acute intoxication**

1. The most common signs and symptoms involve disturbances of perception, wakefulness, attention, thinking, judgment, psychomotor behavior, and interpersonal behavior.
2. Patients should be medically observed at least until blood levels are decreasing and the clinical presentation is improving.
3. Highly tolerant individuals may not show signs of intoxication. For example, patients may appear "sober" even at blood alcohol levels (BAL) well above the legal limit (e.g., 80 or 100).

**Recommendations**

1. Assess imminent risk for suicide (U.S. Preventive Services Task Force [USPSTF], 1996) (*II-2, A*).
2. Note increased risk for violence (Hasting & Hamberger, 1997; Thienhaus & Piasecki, 1998) (*III, A*).
3. Offer counseling to a patient at risk (Hirschfield & Russell, 1997; USPSTF, 1996) (*III, A*).
4. Arrange emergency treatment or possible hospitalization (American Psychiatric Association [APA], 1993; U.S. Department of Health and Human Services [USDHHS], 1993, 1995; USPSTF, 1996; Veterans Administration [VA] Task Force) (*III, A*).

**Provide Appropriate Care To Stabilize or Consult; Follow Legal Mandates; For DoD Active Duty: Keep Commanding Officer Informed**

1. Implement suicide or high-risk protocols, as needed.
2. Review local policies and procedures with regard to threats to self or others. These policies reflect local and state laws and the opinion of the Veterans Administration District Council and the U.S. Department of Defense (DoD). Primary care, mental health, and administrative staff must be familiar with these policies and procedures.
3. For DoD active duty: Follow service specific mandates, as a mental health/emergency referral is likely mandated.

**Does Patient Exhibit:**

**Hazardous Substance Abuse?**

**Abuse of Dependence?**

**Risk of Relapse?**

Interview the patient and consider use of the following:

1. Brief self-report screening instruments (see Section II of this annotation).
2. Reports from responsible others.
3. Laboratory tests (for corroboration only and not for routine screening)-e.g., blood or breath alcohol levels, breath carbon monoxide for smoking, urine toxicology, elevated carbohydrate deficient transferrin, increased mean corpuscular volume (MCV), or gamma glutamic transferase (GGT). Laboratory tests are not recommended for screening of asymptomatic persons.

**Screening for hazardous substance use**

1. The clinician should identify patients who are currently using substances at hazardous levels whether or not they meet diagnostic criteria for substance abuse or dependence.

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.

**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

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***Hazardous alcohol use***

Screen current users for hazardous alcohol use at the initial clinic visit or at least annually.

1. Screening for hazardous alcohol use should consider both the volume (e.g., total drinks per week) and pattern of use (e.g., frequency of heavy drinking episodes).
  - Average weekly or daily quantity is most strongly related to chronic health risks
  - Frequency of heavy drinking is most strongly related to acute health risks and psychosocial risks
2. Patients are at increased risk of medical morbidity and dependence if they report drinking more than the gender specific hazardous use threshold (see Table 1 titled “Hazardous Alcohol Use Screening” in the original guideline document).

***Other hazardous substance use***

1. Screen all patients for nicotine usage. Utilize the National Guideline Clearinghouse (NGC) summary of the VHA/DoD Clinical Practice Guideline Tobacco Use Cessation in the Primary Care Setting.
2. Determination of hazardous use for other drugs (where criteria for abuse or dependence are not met) is not well studied. There are no unequivocal quantity or frequency risk thresholds for hazardous use of psychoactive drugs. Any use may impair judgment or performance and involves some degree of risk. However, regular use of any intoxicant (e.g., daily or several days per week) suggests at the least a high risk for abuse or dependence. Some drugs, such as cocaine and heroin, are potentially toxic even with occasional use. Individuals using intoxicants such as cannabis, amphetamines, heroin, or cocaine should be cautioned about the health risks associated with such use and urged to discontinue use. For Department of Defense active duty: follow service specific mandates, as a mental health/emergency referral is likely mandated.
3. Long-term use of prescribed opioids, anxiolytics, or hypnotics does not in itself constitute hazardous use, abuse, or dependence. However, use of these medications must be carefully considered in each case. Refer to Module S: Stabilization (Annotation F) in the original guideline document for a discussion about prescribing opioids for chronic pain. Many of the same considerations are relevant to long-term prescription of anxiolytics and hypnotics. Clear indications of problematic use include frequent early requests for refills, escalating demands for dose increases beyond that justified by the medical condition, attempts to obtain prescriptions from multiple providers, episodes of intoxication, or use of medications with intoxicants such as alcohol or illicit drugs. When in doubt about whether use is hazardous or abusive, consult a specialist in the management of the underlying disorder (e.g., pain, insomnia, or anxiety) or addiction medicine.

**Screening for substance abuse or dependence**

***Alcohol abuse or dependence***

Consider a screen positive for alcohol abuse or dependence, if a patient:

1. Scores eight or more on the Alcohol Use Disorders Identification Test (AUDIT) (see Appendix A-1 in the original guideline document).

***or***

2. Endorses two or more of the four items reflected in the acronym CAGE (see Appendix A-1 of the original guideline document):
  1. Have you ever felt you should cut down on your drinking?
  2. Have people annoyed you by criticizing your drinking?
  3. Have you ever felt bad or guilty about your drinking?
  4. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye opener)?

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.

**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

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***Other substance abuse or dependence***

1. Screening for other drug use may be appropriate in some clinical settings (e.g., adolescent or AIDS clinics), but has not been recommended as routine by the USPSTF.
2. The Drug Abuse/Dependence Screener is a 3-item screen with excellent preliminary validity in community populations (see Appendix A-1 in the original guideline document). It may be useful in primary care settings when the provider identifies an indication for screening.
3. The Two-Item Conjoint Screen (TICS) has been used in primary care to identify patients with current alcohol or other drug problems.
4. The Drug Abuse Screening Test (DAST) is a 28-item (or abbreviated 10-item version) instrument to identify adverse consequences of substance abuse, but it has not been well studied in primary care settings.

***DSM-IV criteria for substance abuse***

1. A maladaptive pattern of substance abuse leading to clinically significant impairment or distress, as manifested by one or more of the following, occurring within a 12-month period:
  - Recurrent substance use resulting in failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions or expulsions from school; or neglect of children or household).
  - Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine).
  - Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct).
  - Continued substance use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication or physical fights).
2. These symptoms must never have met the criteria for substance dependence for this class of substance.

***Assessment of substance dependence***

1. Conduct clinical assessment to see if the patient meets the DSM-IV diagnostic criteria for substance dependence (see original guideline document for diagnosis codes).
2. Diagnostic criteria required for substance dependence involves more than evidence of physiological dependence.
3. Consider whether the person is dependent on multiple substances.

***DSM-IV criteria for substance dependence***

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by *three or more of the following seven criteria, occurring at any time in the same 12-month period*:

1. Tolerance, as defined by either of the following:
  - A need for markedly increased amounts of the substance to achieve intoxication or desired effect
  - Markedly diminished effect with continued use of the same amount of the substance
2. Withdrawal, as defined by either of the following:
  - The characteristic withdrawal syndrome for the substance (refer to DSM-IV for further details)
  - The same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
3. The substance is often taken in larger amounts or over a longer period than was intended
4. There is a persistent desire or there are unsuccessful efforts to cut down or control substance use.
5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances to see one), use the substance (e.g., chain smoking), or recover from its effects.
6. Important social, occupational, or recreational activities are given up or reduced because of substance use.

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.

**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression or continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

Dependence exists on a continuum of severity: remission requires a period of at least 30 days without meeting full diagnostic criteria and is specified as Early (first 12 months) or Sustained (beyond 12 months) and Partial (some continued criteria met) versus Full (no criteria met).

#### **Screening for risk of relapse**

A relapse is defined as any discrete violation of a self imposed rule or set of rules governing the ability to either stay completely free of drug use or maintain a preset goal of reduced drug usage. Variables that may place an individual at increased risk for relapse include the following:

1. Negative/unpleasant emotional states (e.g., anger, frustration, depression, boredom, or anxiety)
2. Interpersonal conflict
3. Social pressure to engage in drug usage (may be direct or indirect)
4. Negative physical states (e.g., chronic or acute pain or substance withdrawal)
5. Testing personal control over the use of the substance
6. Responsivity to substance cues (e.g., cravings or urges)

A simple and brief patient inquiry will often suffice, such as “Have you had any ‘close calls’ with drinking or other drug use?”

#### **Recommendations**

1. Use of labs (Anton et al., 1995) (*II-2, A*)
2. Screening of asymptomatic patients (USPSTF, 1996) (*II-2, D*)
3. Annual screening of hazardous use (USPSTF, 1996; USDHHS, 1995) (*III, B*)
4. Consider volume and use (Hawks, 1994; Room et al., 1995; Hasin et al., 1996; Midanik et al., 1996) (*II-2, A*)
5. Use of Alcohol Use Disorders Screening Test (AUDIT) score (Saunders et al., 1993) (*II-1, A*)
6. Use of Alcohol abuse/dependence screening instrument (CAGE) score (Mayfield et al., 1974) (*II-2, A*)
7. Routine screening for other drug abuse or dependence (USPSTF, 1996) (*III, D*)
8. Use of Drug Abuse/Dependence Screener (Schorling & Buchsbaum, 1997) (*III, C*)
9. Use of Two-Item Conjoint Screen (TICS) score (Brown et al., 1997) (*II-3, B*)
10. Use of Drug abuse/Dependence Screener (DAST) score (Skinner, 1982) (*III, C*)

#### **Initiate Concurrent Physiological Stabilization, If Required**

Indications for stabilization include intoxication or risk of withdrawal:

1. Intoxication:
  - The most common signs and symptoms involve disturbances of perception, wakefulness, attention, thinking, judgment, psychomotor behavior, and interpersonal behavior.
  - Patients should be medically observed at least until the blood alcohol level is decreasing and clinical presentation is improving.
  - Highly tolerant individuals may not show signs of intoxication. For example, patients may appear “sober” even at blood alcohol levels well above the legal limit (e.g., 80 or 100 mg percent).
2. Consider withdrawal risk from each substance for patients using multiple substances. Table 2, Module A in the original guideline document summarizes signs and symptoms of intoxication from alcohol and sedative-hypnotics, cocaine or amphetamine, opiates. The original guideline document also presents a detailed discussion on symptoms of withdrawal from opioid, sedative-hypnotics or alcohol. These signs and symptoms are also presented in Module S Stabilization, Annotation E, of this summary.

**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

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**Recommendations**

1. Consider using standardized assessment of withdrawal symptoms (Sullivan et al., 1989; Gossop, 1990; Zilm & Sellers, 1978) (*II-2, A*)

**Summarize and Educate the Patient About the Problem**

Present assessment information to the patient in a way that motivates ongoing cooperation with the provider and supports subsequent decisions about referral or brief intervention.

1. Discuss the patient's current use of alcohol and other drugs and address any potential problem areas (e.g., recent initiation of use, increase in use, or relationship to presenting medical concerns).
2. Inform the patient about relevant potential age- and gender-related problems, such as:
  - Abusive drinking or other drug use in the young adult
  - Alcohol and other drug use during pregnancy
  - Medication misuse or heavy drinking in the older adult
3. Convey openness to discuss any future concerns that may arise and encourage the patient to discuss them with you.
  - Emphasize appropriate concern and encourage the patient to address the problem.
  - Motivate the patient to seek additional treatment when indicated.

**Is Specialty Referral Indicated or Mandated?**

Determine, along with the patient, the most appropriate treatment approach.

1. When acceptable to the patient, a specialty care rehabilitation plan is generally indicated.
2. Care management is likely to be a more acceptable and effective alternative when one of the following applies:
  - The patient refuses referral to rehabilitation but continues to seek some services, especially medical and/or psychiatric services.
  - The patient has serious co-morbidity that precludes participation in available rehabilitation programs.
  - The patient has been engaged repeatedly in rehabilitation treatment with minimal progress toward optimal or intermediate rehabilitation goals.
3. Regarding DoD active duty patients:
  - Referral to addictions specialty care for assessment is required for all active duty patients involved in an incident involving/suspected to involve substances (see Appendix A-2 of the original guideline document).
  - Should such patients refuse referral, the commanding officer must be notified so consideration can be given to either (a) order the patient to comply, (b) invoke administrative options (administrative separation from service, etc.), or (c) do nothing. This is the commander's decision, with input from the medical staff.

Review the clinical assessment and note past treatment response, motivational level and patient goals in order to match patient needs and available programming.

**Recommendations**

1. Referral to specialty care (Gerstein & Harwood, 1990; Institute of Medicine [IOM], 1990) (*I, A*).
2. Consider care management for medically ill alcoholics (Willenbring et al., 1995; Willenbring et al., 1999) (*I, B*).
3. Consider care management for combined serious psychiatric disorders and substance use disorders, where participation in rehabilitation programs is precluded (Drake & Mueser, 2000; Osher & Drake, 1996; USDHHS, 1994) (*II-1, B*).
4. Match patient's motivational level and needs with available programming (American Society of Addiction Medicine [ASAM], 1996) (*III, A*).

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.



**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

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**Does Patient Agree To Referral or Is Referral Mandated?**

Negotiate and set specific rehabilitation goals with the patient:

1. Establish treatment goals in the context of a negotiation between the treatment provider and the patient.
2. Review with the patient results of previous efforts at self-change and formal treatment experience, including reasons for treatment dropout.
3. Use motivational enhancement techniques, when appropriate.
4. Consider bringing the addiction specialist into your office to assist with referral decisions.
5. Regarding DoD active duty:
  - Referral to addictions specialty care for assessment is required for all active duty patients involved in an incident involving/suspected to involve substances (see Appendix A-2 in the original guideline document).
  - Should such patients refuse referral, notify the commanding officer so consideration can be given to either (a) order the patient to comply, (b) invoke administrative options (e.g., administrative separation from service), or (c) do nothing. This is the commander's decision, with input from the medical staff.

**Recommendations**

1. Establish treatment goals through negotiation (Heinssen et al., 1995; Miller, 1995; Miller & Rollnick, 1991; Sanchez-Craig & Lei, 1986; Sobell et al., 1992; Stark, 1992) (*II-I, A*).
2. Review prior treatment experience (Stark, 1992) (*III, B*).

**Refer to Specialty Care With Attention to Engagement Barriers**

1. Address and remove barriers to treatment. If resources are not present or readily available refer to social work services for assistance.
2. Accessible transportation, appropriate for individual needs, is necessary for patient participation in treatment and follow-through on plans. Resources to meet basic needs for food, clothing, and personal care should also be allocated. Patient assessment and referral requires a thorough understanding of needs, present resources, preferences, expectations and perceptions, and eligibilities, as well as community resources and regulations.

**Provide Brief Intervention**

A brief intervention may be accomplished in the following general sequence:

1. Give feedback about screening results, relating the risks of negative health effects to the patient's presenting health concerns.
2. Inform the patient about safe consumption limits and offer advice about change.
3. Offer to involve family members in this process to educate them and solicit their input (consent is required).
4. Assess patient's degree of readiness for change (e.g., "How willing are you to consider reducing your use at this time?").
5. Negotiate goals and strategies for change.
6. Schedule an initial follow-up appointment in two to four weeks.
7. Monitor changes at follow-up visits by asking patient about use, health effects, and barriers to change.
8. If patient declines referral to specialty evaluation or treatment, continue to encourage reduction or cessation of use and reconsider referral to specialized treatment at subsequent visits.

**Recommendations**

1. Provide feedback for screening results (Samet et al., 1996; USDHHS, 1995, 1997) (*I, A*).
2. Address consumption limits and advise about change (Bien et al., 1993; Fleming et al., 1997; Poikolainen, 1999; Wilk et al., 1997) (*I, A*).
3. Assess readiness for change (Adams et al., 1998; Miller & Rollnick, 1991) (*I, A*).

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.



**Table 8. Persons with Active Substance Use Presenting in Primary Care (continued)**

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**Follow-up Primary Care**

Maintain a vigilant review of alcohol and other drug use by multiple modes of assessment, ranging from careful observation by provider during medical appointments to the use of biological measures. Promote abstinence or reduction, as indicated, and offer supportive verbal encouragements.

1. Look for spontaneous signs of use and ask the patient about their specific use and frequency of that use.
2. When possible, discuss other areas of concern in the patient's life since these constitute collateral assessment and prognostic indicators.
3. Use biological assessments concurrently with the ongoing dialogue including the breathalyzer, urine toxicology, and blood alcohol level.
4. Encourage abstinence or reduced use, consistent with the patient's motivation and agreement.

**Educate About Substance Use, Associated Problems, and Prevention of Relapse**

1. Discuss the patient's current use of alcohol and other drugs and address any potential problem areas, such as recent initiation of use, increase in use, and use to cope with stress.
2. Inform patient about potential age- and gender-related problems, such as:
  - Abusive drinking or other drug use in the young adult
  - Alcohol and other drug use during pregnancy
  - Medication misuse or heavy drinking in the older adult
3. Convey openness to discuss any future concerns that may arise and encourage the patient to discuss them with you.
4. Periodically inquire about alcohol and drug use at future visits.

**Recommendations**

Future monitoring of substance use (Bradley et al., 1993; USDHHS, 1995) (*III, B*)

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Source: Management of Substance Use Disorders Working Group, *Veterans Health Administration/Department of Defense Clinical Practice Guideline for the Management of Substance Use Disorders*. Washington, DC: VHA/DoD; 2001. Available at [www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3196](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3196). Last accessed July 28, 2005.

**Table 9. Phases of Treatment Model**

PHASE	THERAPEUTIC ACTIVITIES	EXPECTED OUTCOMES
<p><b>Phase 1: Intensive Stabilization</b></p>	<ul style="list-style-type: none"> <li>• Initiate optimum dosage of methadone</li> <li>• Identify any acute medical problems</li> <li>• Develop treatment plan</li> <li>• Initiate therapeutic relationship</li> <li>• Introduce self-help philosophy of recovery</li> <li>• Involve significant others in treatment plan</li> </ul>	<p><b>Primary Goal:</b> Functional stabilization</p> <ul style="list-style-type: none"> <li>• Medical compliance with methadone regimen, other prescribed medications, and medical referrals</li> <li>• Completion of multidisciplinary assessment of the patient’s biopsychosocial status and needs</li> <li>• Compliance with recommended counseling activities</li> <li>• Consecutive negative urine tests over a period of at least 30 days for all drugs, as well as negative breath tests for alcohol</li> </ul>
<p><b>Phase 2: Commitment</b></p>	<ul style="list-style-type: none"> <li>• Instill hope for a better future</li> <li>• Develop personal goals</li> <li>• Identify biological, psychological, and sociological factors that predispose him or her to drug addiction</li> <li>• Identify specific triggers that precipitate relapse to drug use or other self-destructive behavior</li> </ul>	<p><b>Primary Goal:</b> Patient commitment in the process of treatment and rehabilitation</p> <ul style="list-style-type: none"> <li>• Revised written commitment (treatment plan) to the scope of treatment goals</li> <li>• Regular attendance and engagement in group and individual counseling sessions</li> <li>• Consecutive negative urine tests over a period of at least 90 additional days for all drugs, as well as negative breath tests for alcohol</li> <li>• Documentation of affiliation with primary care physician or clinic</li> <li>• Documentation of employment or enrollment in vocational or educational program as recommended in treatment plan</li> </ul>
<p><b>Phase 3: Rehabilitation</b></p>	<ul style="list-style-type: none"> <li>• Develop basic skills for functioning in society</li> <li>• Initiate individual counseling</li> </ul>	<p><b>Primary Goal:</b> Achieve biopsychosocial balance and stability in the primary areas of adult functioning</p> <ul style="list-style-type: none"> <li>• Discontinuation of all drug use for at least one year (which could include abstinent time accrued from prior phases)</li> <li>• Discontinuation of problematic alcohol use</li> <li>• Presence of stable living conditions in a non-drug-using environment</li> <li>• Stable, productive activity with regard to employment, homemaking, or educational training along with adequate financial resources to sustain this activity</li> <li>• Significant non-drug-using support system of friends or family without major conflicts</li> <li>• Discontinuation of all illegal activities or harmful behavior, such as violent behavior or high-risk sexual behavior</li> <li>• Stability of mental health and mood with adequate behavioral and cognitive coping skills to deal with life stress</li> <li>• Absence of severe or acute medical problems</li> <li>• Non-drug-involved enjoyment in leisure time or recreational activities without excessive idle time</li> <li>• Involvement in meaningful and spiritual activities, such as 12-Step fellowship, support groups, religion or meditation</li> </ul>

Source: Hoffman JA, Moolchan ET, The phases-of-treatment model for methadone maintenance: implementation and evaluation, *Journal of Psychoactive Drugs*, 1994;26(2):181-197.

**Table 9. Phases of Treatment Model (continued)**

PHASE	THERAPEUTIC ACTIVITIES	EXPECTED OUTCOMES
<b>Decision Point – Once stabilization is reached in several areas of functioning, the patient and treatment team decide to remain on a stable dose of methadone or taper from methadone.</b>		
<b>Phase 4A: Medical Maintenance</b>	<ul style="list-style-type: none"> <li>• Evaluate and institute take-home privileges</li> <li>• Continue individual counseling</li> <li>• Monthly random urine tests</li> <li>• Quarterly medical assessments</li> </ul>	<p><b>Primary Goal:</b> Achieve social integration while maintaining personal balance and physiological stability</p> <ul style="list-style-type: none"> <li>• Continued absence of all drug use</li> <li>• Continued absence of problematic alcohol use</li> <li>• Continued stable living conditions in a non-drug-using environment</li> <li>• Continued absence of all illegal activities or harmful behavior, such as violent behavior or high-risk sexual behavior</li> <li>• Demonstrated ability to utilize behavioral and cognitive coping skills to appropriately deal with personal crises and life challenges as they arise</li> <li>• Overall satisfaction with quality of life and emotional well-being</li> </ul>
<b>Phase 4B: Methadone Tapering</b>	<ul style="list-style-type: none"> <li>• Monitor abstinence</li> <li>• Continue relapse prevention training</li> <li>• Encourage development of a support group</li> <li>• Maintain involvement in self-help recovery groups</li> </ul>	<p><b>Primary Goal:</b> Taper off methadone without relapsing to drug use or other self-destructive behavior</p> <ul style="list-style-type: none"> <li>• Compliance with recommended therapeutic activities</li> <li>• Negative urine tests for all drugs, as well as negative breath tests for alcohol</li> <li>• Documented participation in support group activities</li> <li>• Continued stability according to rehabilitation criteria in all major life areas</li> <li>• Completion of methadone tapering</li> </ul>
<b>Phase 4C: Reinforcement</b>	<ul style="list-style-type: none"> <li>• Initiate aftercare plan</li> <li>• Review and practice coping skills</li> </ul>	<p><b>Primary Goal:</b> Reinforce relapse prevention and coping skills necessary to maintain a balanced and stable lifestyle</p> <ul style="list-style-type: none"> <li>• Development of a comprehensive aftercare or continuing care plan</li> <li>• Negative urine tests for all drugs</li> <li>• Continued absence of problematic alcohol use</li> <li>• Documented participation in self-help activities</li> <li>• Continued stability according to rehabilitation criteria in major life areas</li> <li>• Overall satisfaction with quality of life and emotional well-being</li> </ul>
<b>Phase T: Transitional</b>	<ul style="list-style-type: none"> <li>• Maintain contact with patient to determine next course of action (reentering program or discharge)</li> </ul>	<p><b>Primary Goal:</b> Support patients who are temporarily absent from the clinic with approved excuses, during short-term detoxification, or patients who repeatedly test positive for opiates and other drugs but express a desire to continue treatment</p> <ul style="list-style-type: none"> <li>• Reassessment for continuing treatment</li> <li>• Initiation of a clinical discharge</li> </ul>

Source: Hoffman JA, Moolchan ET, The phases-of-treatment model for methadone maintenance: implementation and evaluation, *Journal of Psychoactive Drugs*, 1994;26(2):181-197.

**Table 10. Core Competencies in Substance Abuse Education for Physicians and Nurses**

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**Core Competencies in Substance Abuse Education for Physicians**

Level I: All physicians with clinical contact should:

1. Be able to perform age, gender, and culturally appropriate substance abuse screening;
2. Be able to provide brief interventions to patients with substance abuse disorders (SUD);
3. Be able to use effective methods of counseling patients to help prevent SUD;
4. Be able to refer patients with SUD to treatment settings that provide pharmacotherapy for relapse prevention;
5. Recognize and treat or refer comorbid medical and psychiatric conditions in patients with SUD;
6. Be able to refer patients with SUD to appropriate treatment and supportive services;
7. Be aware of the legal and ethical issues around physician impairment for SUD and of resources for referring potential impaired colleagues, including employee assistance programs, hospital-based committees, state physician health programs, and licensure boards; and
8. Identify the legal and ethical issues involved in the care of patients with SUD.

Level II: All physicians coordinating care for patients with SUD in addition should:

1. Use effective methods to assess patients with SUD; and
2. Provide pharmacologic withdrawal to patients with SUD.

Level III: All physicians providing specialty services to patients with SUD in addition should:

1. Provide pharmacotherapy for relapse prevention in patients with SUD; and
2. Provide or refer for psychosocial counseling for relapse prevention in patients with SUD.

**Core Competencies in Substance Abuse Education for Registered Nurses**

Undergraduate Nurses

1. Education of all clients about the drugs of abuse and implications of use for health;
2. Awareness of personal attitudes and values about alcohol and other drug use;
3. Assessment of signs and symptoms of abuse and dependence, as well as the disease concept;
4. Screening for SUD and evaluation of their severity;
5. Nursing care of acute illness states precipitated by alcohol, tobacco, and other drug use;
6. Knowledge of treatment modalities;
7. Health promotion and health maintenance strategies for the prevention of drug use;
8. Participation in drug-related research through problem identification and data collection;
9. Formulation of nursing diagnoses of states of health and illness related to substance use and dependence;
10. Derivation of nursing strategies from nursing diagnoses;
11. Demonstrated understanding of ethical and legal issues, including impaired nursing practice; and
12. Awareness of one's personal use of alcohol and drugs, as well as patterns of use by clients, peers, and coworkers.

Graduate Nursing Students in all Specialties

All master's degree-prepared or certified advanced practice nurses should be able to:

1. Apply selected research-based interventions with individuals, families, and groups for the prevention and detection of addictive disorders;
2. Identify appropriate strategies to assess and measure an individual's responses to the abuse of, or addiction to, alcohol and other drugs;
3. Identify appropriate strategies to assess and measure an individual's responses to the abuse of, or addiction to, alcohol and other drugs;
4. Develop appropriate research-based interventions for the management of clinical responses in individuals and families to the abuse of and addiction to alcohol and other drugs;
5. Apply selected research-based nursing interventions appropriate to the management of clinical problems of abuse and addiction to alcohol and other drugs;
6. Evaluate the effectiveness of research-based nursing interventions with individuals and families appropriate to the management of abuse and addiction to alcohol and other drugs;
7. Engage in interdisciplinary assessment, treatment, and evaluation of persons with acute and chronic addictive conditions; and
8. Influence the development and implementation of healthcare policy as it relates to alcohol and other drug use.

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Source: Association for Medical Education and Research in Substance Abuse, Strategic plan for interdisciplinary faculty development: arming the nation's health professional workforce for a new approach to substance use disorders, Haack MR, Adger H, eds., *Substance Abuse*. 2002;23(3):213, 256-257.

**Table 11. Core Competencies for Clinicians in the 21st Century**

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**Provide patient-centered care**

- Identify, respect, and care about patients' differences, values, preferences, and expressed needs; relieve pain and suffering; coordinate continuous care; listen to, clearly inform, communicate with, and educate patients; share decision making and management; and continuously advocate disease prevention, wellness, and promotion of healthy lifestyles, including a focus on population health.

**Work in interdisciplinary teams**

- Cooperate, collaborate, communicate, and integrate care in teams to assure that care is continuous and reliable.

**Employ evidence-based practice**

- Integrate best research with clinical expertise and patient values for optimum care, and participate in learning and research activities to the extent feasible.

**Apply quality improvement**

- Identify errors and hazards in care; understand and implement basic safety design principles, such as standardization and simplification; continually understand and measure quality of care in terms of structure, process, and outcomes in relation to patient and community needs; and design and test interventions to change processes and systems of care, with the objective of improving quality.

**Utilize informatics**

- Communicate, manage knowledge, mitigate error, and support decision making using information technology.

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Source: Committee on Health Professions Education Summit, Institute of Medicine (IOM), *Health Professions Education: A Bridge to Quality*. Greiner AC, Knebel E, eds., Washington, DC: National Academies Press; 2003, 2.









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