A Primary Care Approach to Substance Misuse
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Substance misuse is common among patients in primary care settings. Although it has a substantial health impact, physicians report low levels of preparedness to identify and assist patients with substance use disorders. An effective approach to office-based treatment includes a coherent framework for identifying and managing substance use disorders and specific strategies to promote behavior change. Brief validated screening tools allow rapid and efficient identification of problematic drug use, including prescription medication misuse. After a positive screening, a brief assessment should be performed to stratify patients into three categories: hazardous use, substance abuse, or substance dependence. Patients with hazardous use benefit from brief counseling by a physician. For patients with substance abuse, brief counseling is also indicated, with the addition of more intensive ongoing follow-up and reevaluation. In patients with substance dependence, best practices include a combination of counseling, referral to specialty treatment, and pharmacotherapy (e.g., drug tapering, naltrexone, buprenorphine, methadone). Comorbid mental illness and intimate partner violence are common in patients with substance use disorders. The use of a motivational rather than a confrontational communication style during screening, counseling, and treatment is important to improve patient outcomes. (Am Fam Physician. 2013;88(2):113-121. Copyright © 2013 American Academy of Family Physicians.)

Illicit substance use is common in the general population and among persons presenting for primary care. Forty-seven percent of 12th graders report that they have used an illicit drug in the past year,1 and 22.5 million persons older than 12 years meet criteria for substance abuse or dependence.2 The consequences of illicit substance use include increased morbidity and mortality, loss of productivity, and increased health care costs.3

The most significant recent trend in illicit substance use has been a dramatic increase in the misuse of prescription medications, particularly opioids. Emergency department visits involving misuse or abuse of prescription medications increased 98.4% between 2004 and 2009,4 with corresponding dramatic increases in new users, entry into drug treatment, and overdose deaths related to prescription medications.5,6

Physicians may feel inadequately prepared to meet the needs of these patients. In the largest study on how primary care physicians address substance use disorders, less than 20% described themselves as very prepared to identify alcoholism or illegal drug use, and more than 50% of patients with substance use disorders said their primary care physician did nothing to address their substance abuse.7

There is increasing recognition of the similarities between substance use disorders and other common chronic illnesses such as hypertension and diabetes mellitus.8 Like those illnesses, substance use disorders can be identified early when there have been fewer sequelae and when less intensive treatments can be successful. The purpose of this article is to provide the primary care physician with a practical framework for the management of substance use disorders other than alcohol and nicotine dependence (Figure 1).

Screening
The U.S. Preventive Services Task Force recommends screening all patients for alcohol misuse,9 but has determined that there is currently insufficient evidence to recommend screening for other substance use disorders.10 Despite the lack of evidence that screening for substance use disorders improves outcomes, universal screening may be justified based on the high prevalence and morbidity of substance use and proven effectiveness of
treatment. Two brief validated screening tools are presented in Table 1. The Drug Abuse Screening Test-10 is a self-report instrument that accurately identifies substance abuse and dependence. Experienced physicians may prefer to use a less structured interview to assess the role and impact of substance use and to elicit diagnostic criteria. Routine urine drug testing is not recommended, but can be used to support a suspected diagnosis, assess for polysubstance use, and monitor treatment response.

Assessment

In patients with positive screening results, substance use should be stratified into hazardous use, substance abuse, or substance dependence. For most substances, even infrequent use is considered hazardous because of potential health consequences, the risk of dependence, and the risk of legal repercussions. However, not all substance use is equally hazardous. Evidence suggests that the use of heroin, methamphetamine, and crack cocaine is associated with an intrinsically high risk of harm to self and others. In contrast, the use of ecstasy and marijuana seems to have intrinsically lower (but not negligible) risk of harm, but can still represent a risky choice in the context of young age, genetic predisposition to dependence, unstable social circumstances, heavy use, or impaired coping mechanisms. Physician judgment is important in determining the appropriate intervention or advice regarding hazardous substance use.

Counseling

Brief counseling is indicated for patients with hazardous substance use or substance abuse. Patients with substance dependence require more intensive treatment.

HAZARDOUS USE

Patients with hazardous substance use may benefit from brief counseling by a physician. Counseling using a motivational interviewing approach in the clinical setting has been shown to decrease the quantity and frequency of drug and alcohol use. During counseling, the physician elicits the patient’s

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**Table 1. Screening Tools for Substance Use Disorders**

| Single-question screen | "How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?"
| Drug Abuse Screening Test-10 | 1. Have you used drugs other than those required for medical reasons?
2. Do you use more than one drug at a time?
3. Are you always able to stop using drugs when you want to?
4. Have you ever had blackouts or flashbacks as a result of drug use?
5. Do you ever feel bad or guilty about your drug use?
6. Does your spouse (or parents) ever complain about your involvement with drugs?
7. Have you neglected your family because of your use of drugs?
8. Have you engaged in illegal activities to obtain drugs?
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding)?

*S—Sensitivity for substance use disorder = 90% to 100%; specificity = 74%.
†—Scoring: give one point for each "yes" answer, except question 3, which is one point for "no." 0 points = low risk; 1 to 3 points = moderate risk, monitor and reassess patient; more than 3 points = substance abuse or dependence. Sensitivity for substance use disorder = 90% to 100%; specificity = 77%.

Information from references 11 through 13.

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**Assessment and Treatment of Substance Misuse**

- **Substance misuse screening**
  - Negative: Reinforce healthy behavior
  - Positive: Assess substance use and comorbidities

- **Hazardous use**
  - Brief counseling
  - Ongoing assessment
  - Close follow-up
  - If abuse continues, refer for treatment

- **Substance abuse**
  - Brief counseling and negotiate a plan
  - Consider pharmacotherapy
  - Ongoing assessment and support

- **Substance dependence**
  - Brief counseling and referral for treatment
  - Close follow-up
  - If abuse continues, refer for treatment

**Figure 1. Algorithm for management of substance misuse in primary care.**
For patients with substance abuse, experts generally recommend advising abstinence. For patients who are not committed to abstinence, it is useful to provide a variety of options for change, and harm reduction is an appropriate goal. Harm reduction strategies reduce the negative health consequences of substance use. Common examples include providing clean needles to persons who continue to inject drugs, and not driving while intoxicated. Developing a plan for change is an opportunity for physician-patient collaboration and trust building. If a patient with substance abuse agrees to cut back or quit but is unable to do so, this may indicate a substance dependence disorder.

SUBSTANCE DEPENDENCE

Substance dependence is a chronic relapsing and remitting illness, and patients require a longitudinal, chronic care approach that can include pharmacotherapy, referral to specialty treatment, mutual help meetings, and ongoing counseling and care coordination.

Brief counseling can help an ambivalent patient with substance dependence to enter a treatment program, engage with mutual help meetings, or agree to a trial of pharmacotherapy. Because of the severity of substance

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Table 2. Diagnostic Criteria for Substance Abuse and Dependence

<table>
<thead>
<tr>
<th>Criteria for substance abuse</th>
<th>A. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recurrent substance use resulting in a 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; neglect of children or household)</td>
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<tr>
<td>2. Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)</td>
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<tr>
<td>3. Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct)</td>
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<tr>
<td>4. Continued substance use despite having 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, physical fights)</td>
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<tr>
<td>B. The symptoms have never met the criteria for substance dependence for this class of substance.</td>
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<thead>
<tr>
<th>Criteria for substance dependence</th>
<th>A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring any time in the same 12-month period:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tolerance, as defined by either of the following:</td>
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<tr>
<td>a. A need for markedly increased amounts of the substance to achieve intoxication or the desired effect</td>
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<tr>
<td>b. Markedly diminished effect with continued use of the same amount of the substance</td>
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<tr>
<td>2. Withdrawal, as manifested by either of the following:</td>
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<tr>
<td>a. The characteristic withdrawal syndrome for the substance (refer to criteria A and B of the criteria sets for withdrawal from the specific substances)</td>
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<tr>
<td>b. The same (or closely related) substance is taken to relieve or avoid withdrawal symptoms</td>
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<td>3. The substance is often taken in larger amounts or over a longer period than intended</td>
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<td>4. There is a persistent desire or unsuccessful efforts to cut down or control substance use</td>
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<tr>
<td>5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects</td>
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<tr>
<td>6. Important social, occupational, or recreational activities are given up or reduced because of substance use</td>
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<tr>
<td>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)</td>
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dependence disorders and the importance of family support in the recovery process, physicians should engage family members in the treatment plan when appropriate and with the patient’s consent. Treatment programs that involve families have improved rates of retention and abstinence.

Pharmacotherapy

Pharmacologic treatments are available for managing acute withdrawal, reducing or eliminating use, and preventing relapse for a variety of substances, including tobacco, alcohol, benzodiazepines, and opioids. Physicians should not restrict the use of pharmacotherapy only to patients whose goal is abstinence. Reductions in the amount or frequency of drug and alcohol use have important health correlates. For example, even small reductions in alcohol consumption translate into substantial decreases in the risks of cancer, hypertension, and other conditions.

Three drugs are approved by the U.S. Food and Drug Administration (FDA) for the treatment of opioid dependence. Buprenorphine and naltrexone (Revia) can be prescribed from office-based practices and clinics. Treatment with methadone is restricted to federally regulated narcotic treatment programs.

**OPiOD AGONISTS: BUPRENORPHINE AND METHADONE**

Buprenorphine is a partial agonist of mu opioid receptors. Formulations approved by the FDA for the treatment of opioid dependence include sublingual buprenorphine and sublingual buprenorphine/naloxone tablets or strips (Suboxone). The naloxone component is poorly absorbed via the sublingual route and is present only to prevent misuse of the medication by crushing and injecting the combined product. Because of this safety feature, buprenorphine/naloxone is the preferred formulation.

Brief treatment periods with rapid medication tapers (medical withdrawal) are associated with high rates of relapse; therefore, longer-term or maintenance treatment is generally indicated for patients with opioid dependence. Treatment with buprenorphine

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**Table 3. Motivational Interviewing Principles for Physicians**

<table>
<thead>
<tr>
<th>Principle/Technique</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>Resist the righting reflex</td>
<td>Physicians want patients to change or correct unhealthy behaviors. Telling them to do so is a natural reflex, but it can generate resistance in patients. Instead, help them generate their own argument for healthy changes.</td>
</tr>
<tr>
<td>Understand the patient’s motivations</td>
<td>Patients are more likely to change for reasons that they value highly. By eliciting these reasons, physicians can be more effective.</td>
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<tr>
<td>Listen to the patient</td>
<td>Physicians need to listen to patients to elicit the best path to behavior change.</td>
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<tr>
<td>Empower the patient</td>
<td>Physicians can help patients take an active role in their health care and support self-efficacy.</td>
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<tr>
<td>Elicit-provide-elicit</td>
<td>A nonconfrontational approach to advice or information giving that allows the patient to express his or her feelings about change and assists the physician in assessing readiness for change.</td>
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<tr>
<td>Decision analysis (“pros and cons”)</td>
<td>Physicians can help patients make changes by articulating the advantages and disadvantages of the changes.</td>
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<tr>
<td>Reflections</td>
<td>Physicians can identify statements that the patient makes in support of change and reflect them back to the patient, highlighting the patient’s reasons for change.</td>
</tr>
<tr>
<td>Affirmations</td>
<td>Most patients with substance abuse and dependence feel guilt and shame about their drug use, and may lack confidence that they can make changes. Physicians can promote self-efficacy with honest and meaningful affirmations.</td>
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NA = Narcotics Anonymous.

Information from reference 19.
<table>
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<th>Less effective approach</th>
<th>More effective approach</th>
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<tbody>
<tr>
<td>Physician: “You need to stop using cocaine. It’s damaging your heart.”</td>
<td>Physician: “How does it feel when you hear that cocaine may be causing your chest pain?”</td>
</tr>
<tr>
<td>Patient: “I don’t think it’s the cocaine. My friends use cocaine too, and they don’t have heart problems.”</td>
<td>Patient: “I don’t know what to think about it, but it’s got me thinking.”</td>
</tr>
<tr>
<td>Physician: “Now that you are pregnant, you need to stop abusing pain pills for your developing baby.”</td>
<td>Physician: “Is there anything about your use of pain pills that you are concerned about?”</td>
</tr>
<tr>
<td>Patient: “I’ll do the best I can.”</td>
<td>Patient: “Yes, my husband told me he would leave me if I started taking pain pills again.”</td>
</tr>
<tr>
<td>Physician: “I’m going to refer you to a special program for people with addiction to pain pills.”</td>
<td>Physician: “We talked a little about some possible treatment options, but I’m interested in hearing what you think would work for you.”</td>
</tr>
<tr>
<td>Patient: “I told you already, drug treatment isn’t for me.”</td>
<td>Patient: “I won’t go to drug treatment, but if there is a medicine I could take that would help me stop, I would do that. Also I used to go to NA, and that seemed to help.”</td>
</tr>
<tr>
<td>Patient: “I almost didn’t come in to see you. I just can’t stop using cocaine.”</td>
<td>Physician: “I almost didn’t come in to see you. I just can’t stop using cocaine.”</td>
</tr>
<tr>
<td>Physician: “Did you go to the NA meetings and see a therapist like we discussed?”</td>
<td>Physician: “Quitting cocaine is difficult for most people, and I’ve been impressed by how hard you have worked to cut back.”</td>
</tr>
</tbody>
</table>
| Physician: “Using cocaine can cause heart attacks. You are putting yourself at risk each time you use, and you need to stop.” | **Elicit knowledge and opinions:**  
Patient: “What do you know about how cocaine affects your health?”  
Patient: “Well, some people get holes in their noses, but I don’t use that much, so I don’t think it’s affecting me.” |
| **Provide tailored information and advice:**  
Physician: “Quitting cocaine is difficult for most people, and I’ve been impressed by how hard you have worked to cut back.”  
Patient: “I’m glad you haven’t used enough to have that problem. You might be surprised to know that even small amounts of cocaine increase your risk of heart attack, stroke, and high blood pressure. Sometimes people have heart attacks from using cocaine just one time.” |
| **Elicit response and feelings:**  
Physician: “How does that new information strike you?”  
Patient: “I don’t know. I guess it might be more dangerous than I thought.” |  
**Physician: “Don’t you see that your cocaine use is hurting your whole family?”**  
Patient: “What do you know about my family?” |
| Physician: “What do you like about using cocaine?”  
Patient: “It lets me forget all the things that are bothering me, and it gives me energy to get things done.”  
Physician: “And what do you not like about cocaine use? What makes you think about stopping?”  
Patient: “I don’t want my kids to see me high, and it’s definitely starting to get in the way of work. I’ll have to stop someday or it will be hard to keep this job.” |
| Patient: “I don’t want to be using cocaine when I’m 80. That would be crazy.”  
Physician: “So why don’t you stop?”  
Patient: “I’m just not ready yet, OK?” |  
Patient: “I don’t want to be using cocaine when I’m 80. That would be crazy.”  
Physician: “You want to stop using cocaine someday.”  
Patient: “Yes, I do. I guess the question is when.” |
| Patient: “I can’t believe I relapsed again. It’s so frustrating.”  
Physician: “You’ve just got to get up and try again.” |  
Patient: “I can’t believe I relapsed again. It’s so frustrating.”  
Physician: “You’re frustrated, but the fact that you came back to talk about it tells me that you’re determined. You’ve quit before, and I’m confident you can do it again.” |
is safe and effective, and many patients can manage the induction period on their own at home.

Physicians who wish to prescribe buprenorphine for treatment of opioid dependence are required to complete eight hours of training and to obtain a waiver from the Center for Substance Abuse Treatment and Drug Enforcement Administration. Complete information is available at http://buprenorphine.samhsa.gov, and support is available from the Physicians’ Clinical Support System—Buprenorphine at http://www.pcssb.org. Buprenorphine treatment of opioid dependence has been described previously in American Family Physician (http://www.aafp.org/afp/2006/0501/p1573.html).

Some patients are not candidates for office-based treatment of opioid dependence, and should be referred to a narcotic treatment program where they can receive methadone pharmacotherapy and counseling services. Methadone maintenance therapy reduces opioid abuse and associated harms. Common indications for referral include comorbid chronic pain that requires opioid therapy, co-occurring alcohol or benzodiazepine abuse, an uncontrolled or unstable psychiatric disorder, or if treatment in the office setting has been ineffective.

**OPIOID ANTAGONIST: NALTREXONE**

Naltrexone is an antagonist of mu opioid receptors and can block the effects of opioid agonists. This can prevent the impulsive use of opioids in patients receiving naltrexone, and can provide time for the patient to consider the consequences of relapse and to seek support. Naltrexone is available as a 50-mg tablet taken daily or, alternatively, 100 mg on Mondays and Wednesdays, and 150 mg on Fridays. A 380-mg monthly injection (Vivitrol) is in widespread use for treatment of alcohol dependence, and was recently approved by the FDA for treatment of opioid dependence.

Naltrexone has been shown to be helpful in maintaining abstinence from opioids in motivated populations, such as health care professionals who cannot or do not wish to take continuous opioid agonist therapy. However, it has had limited success in other groups. Naltrexone has been associated with hepatic injury at supratherapeutic doses; therefore, liver function tests at baseline and every three to six months are recommended. Naltrexone cannot be used in patients in whom opioids are required for pain control, because it will block pain relief from opioid agonists and cause precipitated withdrawal in patients who are currently taking opioids. Patients who discontinue treatment are at increased risk of opioid overdose and death resulting from decreased opioid tolerance.

**BENZODIAZEPINE DEPENDENCE**

Physicians may attempt a slow taper (usually over months) of benzodiazepines in selected patients with dependence and in whom a reliable history can be obtained about the amount being taken. Patients should be motivated and adherent, and should not have a history of withdrawal seizures or other medical comorbidities. Other patients should generally be referred to a specialist, if possible. Risks of tapering benzodiazepines include increased anxiety and depression symptoms, seizures, and altered mental status.

**STIMULANT DEPENDENCE**

Despite continued research efforts and several potential candidate medications, no pharmacologic treatment for stimulant dependence can be recommended for use in the primary care setting. Behavioral therapies have demonstrated effectiveness in the treatment of stimulant dependence.

**Referral**

Referral for specialty addiction treatment is recommended for patients with substance dependence disorders. However, primary care physicians with appropriate experience, training, and support can provide some or all of these services. Access to substance abuse treatment is variable, and decisions about where to refer patients must take into account local resources and patient characteristics. Table 4 provides a list of resources for the most commonly available treatment options. Physicians can develop consultation relationships with treatment centers and specialists in their communities to help them determine the appropriate level of care for patients and to facilitate referrals. Patients in specialty addiction treatment benefit from close primary care coordination, particularly regarding prescriptions for controlled substances or other psychoactive medications. Referral for psychiatric or pain management consultation may also be appropriate based on the presentation and response to treatment.

**Comorbidities**

**MENTAL HEALTH**

Anxiety disorders, depression, bipolar disorder, posttraumatic stress disorder, and dependent and antisocial personality disorders are more common in patients with substance use disorders (particularly substance depen-
The presence of a substance use disorder suggests the need for mental health screening. Mental health disorders can be primary or secondary (substance induced). Primary disorders generally precede the onset of substance misuse, and symptoms are present during periods of abstinence. Primary comorbid mental health disorders can be treated with standard psychological and pharmacologic therapies.

**INTIMATE PARTNER VIOLENCE**

Men and women who misuse illicit drugs are at increased risk of being victims and perpetrators of intimate partner violence. Because rates of intimate partner violence exceed 50% in patients with drug use disorders in some settings, it is recommended that physicians screen all patients who present with substance use disorders for intimate partner violence.

Although management of intimate partner violence is beyond the scope of this article, perpetration and victimization appear to be decreased by treatment of alcohol use disorders, suggesting that substance abuse treatment may be an effective intervention.

**Follow-up**

Although there are no established guidelines, it is reasonable to follow up with patients within four to six weeks.
weeks after identifying risky drug use or a substance use disorder. Because the severity and intensity of drug use may evolve, regular reassessment is indicated. In early recovery, patients are at an increased risk of relapse, and physicians can offer support and reinforce healthy behaviors. Relapse can be a source of shame and guilt for patients. Physicians can help by ensuring that their office is a safe and blame-free place for patients with drug problems, and by adopting a nonjudgmental and welcoming attitude toward patients in the event of relapse.

Data Sources: A PubMed search was completed in Clinical Queries using the key terms SBIRT, substance abuse, screening, buprenorphine, brief intervention, motivational interviewing, treatment, dual diagnosis, intimate partner violence, methadone, hazardous use, risky use, drug abuse, screening tool, and naltrexone. The search included meta-analyses, randomized controlled trials, clinical trials, and reviews. Also searched were the Cochrane database, Essential Evidence Plus, the National Guideline Clearinghouse database, the Drug Abuse Warning Network database, and the Substance Abuse and Mental Health Services Administration’s National Survey on Drug Use and Health. Search dates: January 16, 2011; March 23, 2011; and June 20, 2011.

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