

Vol. 4, No. 3 2010

Treating Substance Abuse in Children and Youth



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Struggling with substances



Review

Successful treatments: Do they exist?



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Addressing parental depression

When a parent suffers from depression, children are often significantly affected. In our Fall 2010 issue, we examine the research on interventions to help these young people and their families.



Feature

Engaging youth with concurrent problems



Letters

Do children benefit if parents are treated?

About the Children's Health Policy Centre

As an interdisciplinary research group in the Faculty of Health Sciences at Simon Fraser University, we aim to connect research and policy to improve children's social and emotional well-being, or *children's mental health*. We advocate the following public health strategy for children's mental health: addressing the determinants of health; preventing disorders in children at risk; promoting effective treatments for children with disorders; and monitoring outcomes for all children. To learn more about our work, please see www.childhealthpolicy.sfu.ca



**Children's
Health Policy
Centre**
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About the Quarterly

In each issue of the *Quarterly*, we try to capture the “best available” research evidence on interventions relevant to a specific topic in children’s mental health. In doing so, we use systematic methods adapted from the [Cochrane Collaboration](#). However, because the quality of evidence varies by topic, we retain flexibility in setting our acceptance criteria to ensure we are able to provide helpful information for policy-makers and practitioners. As well, we always provide details on the strengths and weaknesses of the research evidence.

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We hope you enjoy this issue. We welcome your letters and suggestions for future topics. Please email them to chpc_quarterly@sfu.ca or write to the Children’s Health Policy Centre, Attn: Daphne Gray-Grant, Faculty of Health Sciences, Simon Fraser University, Room 2435, 515 West Hastings St., Vancouver, British Columbia V6B 5K3 Telephone (778) 782-7772



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Quarterly

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How to Cite the Quarterly

We encourage you to share the *Quarterly* with others and we welcome its use as a reference (for example, in preparing educational materials for parents or community groups). Please cite this issue as follows:

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Overview

Struggling with substances

Mary had seen her 16-year-old daughter, Joanne, struggle with mood swings since hitting puberty. By the time Joanne was in Grade 11... [s]he had started to stay out later at night and over the past month had disappeared for days at a time... Mary knew that Joanne was drinking and suspected that she was also using drugs... A neighbour suggested that [Mary] call the local family resource centre and try to get Joanne in to see a counselor. The resource centre provided some informative brochures, but no concrete ideas about what to do. Joanne refused to go to a counseling appointment her mother had made for her, and after the fight that ensued, she left home. Mary... is beside herself with worry about her young daughter.¹



■ Adolescence is a particularly vulnerable time for brain development when substances are used to excess.

Most young people try substances, typically alcohol, at some point during their adolescence.² However, few go on to experience serious mental disorders such as substance abuse or dependence (described in [Appendix A](#)). In fact, one rigorous epidemiological study found that only 1.4% of children ages 9 to 17 met diagnostic criteria for substance abuse at any given time.³ Slightly higher rates were documented in another rigorous study that assessed both abuse and dependence. In this study, 2.4% of children ages 9 to 16 were found to have one of these disorders at any given time.⁴ Notably, rates increased considerably with age, with nearly 8% of 16-year-olds meeting criteria for either abuse or dependence.⁴ However, it is important to recognize that for most young people, substance use does not escalate to either abuse or dependence.

Among young people diagnosed with either substance abuse or dependence (collectively referred to as substance use disorders, or SUDs), researchers have uncovered some typical patterns of use. For example, the earlier a young person uses, the greater the likelihood of an SUD developing.⁵ One study found that among youth with SUDs, substance use began, on average, six years before their diagnosis.⁶ As well, early-onset SUDs are typically more severe and last longer than those that develop later.⁷ These patterns, as well as the finding that up to 50% of SUDs begin in adolescence, have led researchers to view these disorders as having their developmental origins in childhood.⁷

The challenges that substances cause

When used in excess, psychoactive substances can have a markedly negative impact on brain development during adolescence. Most brain effects are substance specific, in that each substance interacts uniquely with

different neuro-receptor systems. However, there are also negative outcomes common to all psychoactive substances.

All psychoactive substances adversely affect the areas of the brain that meet essential needs such as seeking food and avoiding danger. This causes the brain to react as if the introduced substance were biologically essential.⁸ Repeated exposure to the substance then leads to more intense perceptions of needing the substance.⁸ As well, people, places and objects that are associated with using then become triggers for future use, making it more difficult to stop using. Adolescence is a particularly vulnerable time for brain development when substances are used to excess.

Changes in brain functioning are not the only challenges faced by youth with SUDs. A substantial proportion of illnesses, injuries and deaths among young people in wealthy nations are attributable to the misuse of alcohol and other substances.⁹ These devastating outcomes are often related to motor vehicle accidents, high-risk sexual behaviours, suicide and violence.¹⁰ Youth with SUDs also frequently experience school difficulties, which then negatively affect their life chances longer term.¹¹ Many of these highly concerning outcomes can be avoided, however, when substance abuse is prevented or detected and treated early. (See our [previous issue](#) for information on effective SUD prevention programs.)

Many young people face multiple burdens

Strikingly, most youth with SUDs experience other mental disorders. A recent systematic review of 15 epidemiological surveys found that approximately 60% of youth with SUDs experienced additional, concurrent mental disorders.¹² According to this review, youth with SUDs were nearly five times more likely to have concurrent disorders than other youth.¹² As Table 1 illustrates, nearly half of youth with SUDs also experienced conduct disorders, while nearly 20% experienced depression or anxiety and 12% experienced attention-deficit/hyperactivity disorder (ADHD).¹² This means that *most* young people with SUDs experience multiple burdens related not only to their substance use but also to these additional mental disorders.

Researchers have learned important information about the onset of SUDs and mental disorders by tracking children over their development. One longitudinal survey found that the first symptoms of other mental disorders often started well *before* youth began using any substances.⁶ For example, symptoms of conduct disorder typically began three to four years before youth started using substances.⁶ Similar findings have been reported for anxiety and ADHD, where symptoms started approximately five and seven years (respectively) before substance use began. In contrast, depression typically started one year after the first use of alcohol.⁶

Table 1:
Rates of concurrent disorders among youth with SUDs¹²

Concurrent Disorders	Median Prevalence
Conduct disorder/ Oppositional defiant disorder	46%
Depression	19%
Anxiety disorders	17%
Attention-deficit/ hyperactivity disorder	12%

Why is there so much overlap between substance abuse and other mental disorders? Researchers offer a variety of explanations. Some cite the *common factor model*, which identifies the many shared risk factors that can predispose youth to multiple disorders — such as poor parental supervision, socio-economic disadvantage, and availability of alcohol and drugs in the home.¹³ Others refer to the *social stress model*, which suggests that young people use substances as a way of coping with stressors.¹³

Why targeting alcohol makes sense

Preventing SUDs is preferable to waiting to address the consequences after problems are entrenched. Public policies can play an important role in not only preventing SUDs but also reducing the adverse outcomes when prevention is not possible.

The World Health Organization recommends targeting substances based on their proportional harm.⁸ Because alcohol is a prominent contributor to disease and disability worldwide,⁸ public policies have a great potential to reduce harm when this particular substance is targeted. For example, there is strong evidence suggesting that higher taxes on drinks with higher alcohol content can reduce harmful alcohol use in young people.⁹

Other policies that may reduce harm include increasing the age when young people may purchase alcohol and enforcing such restrictions; limiting the number of alcohol outlets and restricting their hours and days of sales; and having graduated driver licensing programs.⁹

Identifying then intervening

When prevention is unsuccessful and when a young person's functioning is adversely affected by substance use, a clinical assessment is warranted. A comprehensive assessment should start with a detailed history — age of onset and patterns of use, along with the triggers and consequences of use.¹⁴ Because stigma and possible legal repercussions can understandably cause some young people to be reluctant to disclose details, parents, caregivers and teachers are often important sources of corroborating information.¹⁴

Beyond the history, referral to a physician for a physical examination and laboratory investigations may be in order, for example, if possible secondary physical problems are suspected. Following a comprehensive assessment, a formal diagnosis of *substance abuse* or *substance dependence* (see [Appendix A](#)) is then made by a qualified mental health care provider only if a young person's functioning is also significantly impaired.¹⁵ If a young person is diagnosed as having an SUD, effective treatment options are needed. In the [Review](#) article that follows, we evaluate the evidence on five different interventions for youth substance abuse. 🖐️

“Because alcohol is a prominent contributor to disease and disability worldwide, public policies have a great potential to reduce harm when this particular substance is targeted.”

Successful treatments: Do they exist?

Treatments provided to youth with substance use disorders (SUDs) vary dramatically in technique and theoretical orientation. But do outcomes also differ? To answer this question, we examined evidence from a recent high-quality systematic review of community-based interventions for adolescent substance abuse. (Our criteria for selecting this review are described in [Appendix B](#).)

Researchers Becker and Curry¹⁶ limited their review to outpatient treatments, given that more than 80% of youth receive this type of intervention. Thirty-one randomized controlled trials (RCTs) met their inclusion criteria. These RCTs were conducted in diverse settings in North America, Europe and Asia. Interventions included many different types of therapies, including *cognitive-behavioural therapy (CBT)*, *family therapy*, *group therapy* and *motivational interventions* (each described in Table 2).

Comparison conditions ranged considerably in intensity — from no-intervention controls¹⁷ to minimal intervention controls (e.g., informational pamphlets)¹⁸ to other active treatments.¹⁹ Adolescents participating in the studies were also highly diverse, ranging from homeless American youth¹⁷ to Thai high-school students.²⁰ As well, many youth had concurrent disorders, including conduct disorder,¹⁹ depression,²¹ attention-deficit/hyperactivity disorder²² and posttraumatic stress disorder.²³

Becker and Curry evaluated the methodological quality of all 31 RCTs based on 14 criteria, from trial design to data analyses. They reported detailed findings on the 16 RCTs deemed to be methodologically strongest.



■ The review provided valuable information about many commonly used interventions, including the especially promising findings for CBT and ecological family therapy.

Table 2: Assessed therapies for youth substance disorders

Therapy	Description
Cognitive-behavioural therapy	Modifying thought processes, beliefs, behaviours & environmental reinforcers/triggers associated with substance use
Ecological family therapy	Using individualized strategies to target substance use in the context of multiple systems involved (includes <i>multidimensional family therapy</i> , <i>multisystemic therapy</i> , <i>ecological-based family therapy</i> & <i>family support network</i>)
Functional family therapy	Integrating principles of family systems (e.g., restructuring problematic family interactions) & family behavioural approaches (e.g., using operant & social learning) (includes <i>functional family therapy</i> & <i>Purdue brief family therapy</i>)
Group therapy	Providing information about alcohol & other drugs, exploring perceived benefits & consequences of substance use, & practising skills needed to reduce substance use
Motivational intervention	Increasing motivation to reduce substance use in one or two targeted sessions

Learning from the strongest studies

The review authors concluded that only *CBT*, *ecological family therapy* and *motivational interventions* led to superior outcomes in two (or more) of the methodologically stronger studies. *CBT* was supported by the greatest proportion of these stronger studies (described in four RCTs, two delivering *CBT* individually and two delivering it in groups). In contrast, (non-*CBT*) *group therapy*, which typically served as the comparison condition to other interventions, yielded poorer outcomes. Detailed results are described in Table 3, including outcomes for therapies that were combined. In addition, intriguing findings from a study comparing *CBT* and *family behavioural therapy* are highlighted in the sidebar.

Limitations in the research

While this systematic review provided valuable information about the effects of commonly used therapies, it was not without limitations. The authors' standard for classifying a treatment as being "superior" only required outcomes showing "immediate treatment superiority" (which was not specifically defined). This resulted in a *motivational intervention* being categorized as superior despite its failure to produce statistically significant differences in any of the six substance use measures at final follow-up.¹⁷

Treating substance and behaviour problems

A group of researchers set out to test the relative effectiveness of a form of *cognitive therapy* and *family behaviour therapy* among 56 youth with both substance use and conduct disorders.¹⁹ The individually delivered *cognitive therapy* taught youth a problem-solving technique relevant to their current challenges. Participants assigned to *family behaviour therapy* learned behavioural contracting, communication skills and strategies to help youth avoid exposure to risky situations. Both therapies were delivered in 15 sessions over six months.

The researchers found that both treatments were equally effective in reducing drug use and delinquency, including number of arrests. As well, mood and school and employment outcomes also improved with both treatments. Although participation was randomized, the possibility of the benefits being due to factors other than the treatments could not be excluded because a control group was not used. However, previous evaluations of both these treatments have found them to be superior to supportive counselling, providing some evidence of treatment-specific effects. Overall, these data suggest that youth experiencing both substance misuse and behaviour difficulties may benefit from either *cognitive therapy* or *family behaviour therapy*.

Table 3: Outcomes by therapy type

Therapy	Outcomes* (number of studies)
Cognitive-behavioural therapy (CBT)	<ul style="list-style-type: none"> • Superior to <i>group interactional therapy</i> & treatment as usual (any sought by youth) (2) • Comparable to <i>group psychoeducation therapy</i> & <i>behavioural family therapy</i> (2)
CBT + Functional family therapy (FFT)	<ul style="list-style-type: none"> • Comparable to <i>ecological family therapy</i>, <i>community reinforcement approaches</i>, <i>group therapy</i> & <i>FFT</i> (1)
CBT + Motivational intervention	<ul style="list-style-type: none"> • Comparable to <i>ecological family therapy</i>, <i>community reinforcement approaches</i>, <i>group therapy</i>, <i>CBT</i> plus <i>FFT</i> & <i>FFT</i> alone (3)
Ecological family therapy	<ul style="list-style-type: none"> • Superior to typical services at a shelter, juvenile court services & <i>group therapy</i> (3) • Comparable to typical community treatment & integrated <i>CBT</i> plus <i>motivation enhancement therapy</i> (3)
Group therapy	<ul style="list-style-type: none"> • Inferior to <i>CBT</i>, <i>family systems therapy</i>, <i>ecological family therapy</i> & <i>motivational intervention</i> (5) • Comparable to <i>CBT</i> (1)
Motivational intervention	<ul style="list-style-type: none"> • Superior to psychoeducational intervention & no treatment (control group) (3) • Comparable to providing informational materials (1)

* Because results are listed by therapy type and many studies directly compared two therapies, the number of outcomes reported exceeds the number of studies included in the review.

As well, it appears that the review authors classified treatments as superior so long as one substance use measure was statistically significant — regardless of how many others were not. For example, another *motivational intervention* was classified as superior to a brief psychoeducational intervention even though only one of four substance use outcomes was statistically significant.²⁰ Despite its limitations, the review provided valuable information about many commonly used interventions, including the especially promising findings for *CBT* and *ecological family therapy*.

Encouraging results for cognitive-behavioural therapy

The review authors identified *CBT* as a form of treatment particularly supported by rigorous evaluations. Youth who participated in *CBT* had reduced substance use, on at least one measure, by the final follow-up assessment in all four assessed studies. However, given that two trials produced only time effects (i.e., intervention outcomes were not significantly different than comparison outcomes and there was no true control group), the evidence supporting *CBT* in treating adolescent substance abuse is still modest in quality and quantity.

Some evaluations of *CBT* also provided important information on its effectiveness for youth experiencing concurrent mental disorders. For example, one study found that *CBT* also improved other mental health symptoms.²³ Given the high rates of concurrent disorders in youth with SUDs, interventions that can produce positive outcomes for both substance use and other mental disorders are greatly needed. Despite these promising results, because the *CBT* evaluations were conducted with relatively small samples of American youth, replication studies in Canadian settings are warranted.

While treatment modality (such as *CBT*) obviously plays a critical role, other factors also affect outcomes. Positive results have been associated with, for example, treating youth for longer periods, providing additional services during treatment (such as recreation and health care), and ensuring social support from (non-using) parents and peers.¹⁴ 🖐️

“ Given the high rates of concurrent disorders in youth with SUDs, interventions that can produce positive outcomes for both substance use and other mental disorders are greatly needed. ”

Engaging youth with concurrent problems

Registered psychologist Rosalind Catchpole sees a special subset of youth. The young people — ages 12 to 24 — she consults with not only have a substance abuse problem, they also have another mental health condition. It might be anxiety, depression, conduct disorder or even psychosis, but it happens *along with* the substance abuse. Like her colleagues at the Provincial Youth Concurrent Disorders Program, based at BC Children’s Hospital in Vancouver, Catchpole works with young people who carry a double burden.

Which comes first? Sometimes it’s the substance use disorder. At other times it’s the mental health problem. And on yet still other occasions, both issues develop at the same time.

What makes treatment particularly challenging is that substance use can mask mental health problems or even mimic mental health symptoms. “Substance use and mental health problems play off each other very closely,” says Catchpole, “so you have to have a concurrent focus where you’re trying to understand what’s going on for a youth.”

Catchpole and her colleagues believe that a good assessment is the first step. “We really take a biopsychosocial approach. As well as looking at the individual characteristics of the youth, we also find out how things are going at home, at school — what’s helping and what’s not. The other thing we recognize is that people are at different points of willingness to change. One of our core philosophies is to increase *readiness* and *confidence* to change.” Program staff achieve this through a therapeutic technique known as motivational interviewing.

Exploring a model for change

One of the cornerstones of the Provincial Youth Concurrent Disorders Program is a “stages of change” model. This model suggests that when youth are considering any kind of change in their lives, they move through different phases. At first, for example, an alcohol- or cannabis-dependent youth might not think they truly have a problem. Later they may be *preparing* to change but not yet be fully ready to do so. The model also suggests that change isn’t necessarily linear — people may go back and forth between wanting and not wanting change.

According to Catchpole, the Concurrent Disorders Program works to match the treatment to the youth’s own goals. “If the



■ “One of our core philosophies is to increase *readiness* and *confidence* to change.”

—Rosalind Catchpole,
Registered psychologist

Getting help in BC

Anyone concerned about substance abuse in a young person should contact the family physician. In an emergency, go to the nearest emergency room or call BC211’s 24-hour hotline (sponsored by a variety of government departments, including the Ministry of Health Services and the United Way). Simply dial 211. Child and Youth Mental Health at BC’s Ministry of Children and Family Development also provide services throughout the province for all children and youth concerned about mental health problems, including substance abuse (please see http://www.mcf.gov.bc.ca/mental_health/help.htm for the nearest location).

person doesn't see there's a problem with their substance use, your goal isn't necessarily to get them to stop that day," she says. "Saying 'Stop drinking — it's bad for your health' doesn't usually get a very good response. But it can be helpful to say: 'Would it be okay for us to take a look at how your drug use and your depression might be getting in the way of achieving your goals?'"

The program uses a range of treatments, including individual and group *cognitive-behavioural therapy*, *supportive therapy* for parents, and *family therapy*. "There's no one clinical picture we deal with," Catchpole says. "It all depends on the youth. Sometimes we start with the mental health issue and sometimes with the substance use — at other times, we address both."

The heart of the matter is truly understanding what's going on with the adolescent. "It might be that a youth who is drinking is quite socially anxious," Catchpole says, "so we look at the function of that drinking — both positive and negative." She explains that research on anxiety shows that avoiding a feared situation generally increases anxiety. As a result, drinking to reduce social anxiety may actually make the cycle worse. But the youth may not recognize that.

"Substances can become a way to cope with upsetting or uncomfortable feelings," Catchpole says. "So we ask people: 'What are the thoughts you're having in the situation? Are they realistic?' We teach relaxation, self-care and grounding exercises so that we can give people other tools to manage difficult situations or feelings."

Working to reduce harm

Even when youth aren't interested in reducing their use of substances, Catchpole's group sees treatment as an opportunity to explain how and why the substances might not be helping them. "It really is about where the youth is at, where might we might make some gains," she says. "We have the goal of reducing harm. Ideally, people will stop using substances, but we also look practically at whether there are any incremental gains we can make. Our goal of engagement is important. We believe we can help people move along. We're dealing with every mental health problem and many substances. There's a heck of a lot of individuality." 🖐️

A higher high? The potency of cannabis over the past 35 years

Claims of dramatic increases in cannabis potency have recently grabbed newspaper headlines and peppered political speeches. While such assertions clearly garner public interest, the question remains — is the potency of cannabis really increasing?

A group of researchers tried to answer this question by conducting a systematic review. They uncovered nine relevant international studies that analyzed cannabis samples obtained between 1975 and 2007.²⁴

Samples from some countries showed increased potency. For example, levels of delta-9-tetrahydrocannabinol (THC) — the compound in cannabis with the strongest psychoactive effect — rose from 2% to 8.5% between 1980 and 2006 in the United States.

However, this pattern was not consistently found in other countries. For example, the potency of cannabis samples from New Zealand did not increase between 1976 and 1996. As well, researchers discovered enormous variation in the potency of samples taken within a given country within the same year. For example, THC levels ranged from 0.2% to 17% within a single year in the United Kingdom.

These data suggest that variations in potency may fluctuate more from year to year than over a number of years. The review authors concluded that claims of twenty- to thirtyfold increases in cannabis potency were not empirically supported.

Do children benefit if parents are treated?

To the Editors:

I found your issue on substance abuse prevention especially interesting given my work with high-risk youth. I have witnessed countless parents discouraging their children from using substances while they themselves struggle with dependency issues. If parents are able to stop abusing alcohol and drugs by participating in effective treatments, is their children's risk for negative outcomes reduced?

Rajwant Chohan
Port Coquitlam, BC

A team of researchers recently set out to determine whether treating substance-abusing parents improved children's lives. The team found that when pregnant women participated in treatment, their infants benefited in multiple ways, including having increased gestational ages and birth weights as well as better achievement of developmental milestones.²⁵

However, the impact on child maltreatment was less clear. While some of the studies reviewed did find that treating parents led to reduced risk of maltreatment, one study discovered an increased risk of renewed reports to child protection services. This counterintuitive consequence may have been due to parents experiencing greater surveillance of their parenting practices after initiating treatment.²⁵

Less is known about the impact of treating parental substance abuse on children's emotional and behavioural outcomes. Two small studies — both with methodological limitations — found that children had reduced emotional and behavioural problems when parents were treated.²⁵ In contrast, one trial of a methadone treatment program found improvements in parenting skills and reductions in family conflict, but no change in children's substance abuse or delinquency outcomes.²⁵ However, some of the children were very young, so outcomes could not be fully assessed without longer-term follow-up. Based on these findings, the review authors concluded that relatively little is known about whether treating parental substance abuse substantially alters children's outcomes.²⁵

Although the existing research may not have shown conclusively that treating parental substance abuse improves children's outcomes, continuing to expose a child to a substance-abusing parent is clearly detrimental. When parents abuse substances, their children are at significant risk for experiencing additional adversities such as maltreatment and poverty as well as negative outcomes such as behavioural and emotional problems.²⁵ Consequently, when parental substance abuse is discovered, protecting children is always paramount. 🖐



We welcome your questions

If you have a question relating to children's mental health, please email it to chpc_quarterly@sfu.ca or write to the Children's Health Policy Centre, Attn: Daphne Gray-Grant, Faculty of Health Sciences, Simon Fraser University, Room 2435, 515 West Hastings St., Vancouver, BC V6B 5K3.

Features of substance use disorders (SUDs) in children and youth

The following description is adapted from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* of the American Psychiatric Association.¹⁵

For a diagnosis of *substance abuse*, a child or youth must display at least one of the following symptoms within a 12-month period:

Recurrent substance use:

- Resulting in failure to fulfill major obligation at school, home or work
- Placing him/herself in physically hazardous situations
- Leading to legal problems
- Causing or worsening social or interpersonal problems

For a diagnosis of *substance dependence*, the more serious of the two SUDs, a child or youth must display at least three of the following symptoms within a 12-month period:

- Tolerance
- Withdrawal
- Substance use for longer periods or in larger amounts than was intended
- Persistent desire or unsuccessful efforts to reduce or control use
- Substantial time spent obtaining substances, using substances or recovering from substance use
- Reduction/elimination of important social, recreational or work activities because of substance use
- Continued substance use despite knowledge of physical or psychological problems caused or worsened by use 🖐

Research methods

To find the highest-quality research, we used systematic methods adapted from the *Cochrane Collaboration*.²⁶ Since our scoping of the literature generated 248 potentially relevant recent publications, for expediency we limited our search to systematic reviews published in peer-reviewed scientific journals.

To identify high-quality systematic reviews, we first applied the following search strategy:

Sources	<ul style="list-style-type: none"> • Medline, PsycINFO, Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects & The Campbell Collaboration Library of Systematic Reviews
Search Terms	<ul style="list-style-type: none"> • Substance-related disorders, substance abuse, drug abuse, drug addiction, addiction or drug abuse and prevention,* treatment or intervention
Limits	<ul style="list-style-type: none"> • English-language articles published from 2004 through March 2010 • Child participants (ages 0 to 18 years) • Reviews, systematic reviews or meta-analyses

* Because this search was conducted for both this current issue and the previous one on preventing substance abuse, prevention was included as a search term. However, only reviews relevant to treatment were considered for this issue.

Using this approach, 27 reviews were identified and retrieved. Next we applied the following criteria in assessing the reviews:

For the review articles

- Clear descriptions of methods, inclusion and exclusion criteria, sources (including database names) and search years
- Clear assessment of methodological quality of the individual studies

For the individual studies reported within review articles

- Interventions specifically aimed at treating substance use
- Random assignment of participants to intervention and control/ comparison groups at study outset
- Documentation of methods used to address attrition (e.g., intention-to-treat analyses)
- Outcomes assessed included substance use
- Levels of statistical significance reported for substance use outcomes

One team member assessed each retrieved review. A short list was prepared of the best reviews, for assessment by a second team member. The team then reached consensus on selecting the accepted review (which was the only one meeting all criteria). 🖐

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BC government staff can access original articles from [BC's Health and Human Services Library](#).

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