

Opioids

Overview

Prevalence The abuse of opioids—such as heroin and various prescription drugs commonly prescribed for pain (e.g., oxycodone, hydrocodone, and fentanyl)—has rapidly gained attention across the United States as a public health crisis. Youth may be exposed to opioids in a variety of ways, including but not limited to infants born to mothers who took opioids during pregnancy; children mistakenly consuming opioids (perhaps thinking they are candy); teenagers taking opioids from an illicit street supply; or, more commonly, teenagers being given opiates for free by a friend or relative.^{1,2} Even appropriate opioid use among adolescents and young adults to treat pain may slightly increase their risk of later opioid misuse.³

The Centers for Disease Control and Prevention (CDC) have identified opioid abuse as an epidemic, noting that opioids impact and affect all communities and age groups.⁴ Between 1997 and 2012, 13,052 children were hospitalized for poisonings caused by oxycodone, Percocet (a combination of acetaminophen and oxycodone), codeine, and other prescription opioids.⁵ Every 25 minutes, an infant is born suffering from opioid withdrawal, and an estimated 21,732 infants were born in 2012 with neonatal abstinence syndrome (NAS), a drug withdrawal syndrome.⁶ According to data from 2014, approximately 28,000 adolescents had used heroin within the past year, 16,000 were current heroin users, and 18,000 had a heroin use disorder.⁷ At the same time, relatively few data are available about the effects of opiates on the U.S. population at large, including their longitudinal effects on toddlers, children, youth, and their families.

The environmental risk factors often associated with opioid exposure include the following:⁸

- Chronic poverty
- Poor nutrition
- Inadequate or no prenatal health care
- Sexually transmitted diseases, including exposure to the human immunodeficiency virus (HIV)
- Domestic violence
- Child abuse or neglect
- Alcohol and other drug abuse within the family (including one or both parents or guardians and the extended family)
- Homelessness, transient or inadequate living arrangements, or substandard housing
- Unemployment
- A history of incarceration
- Low educational achievement
- Poor parenting skills
- Discrimination based on race, gender, or culture

Characteristics A toddler or preschool-aged child who has been exposed to opiates may experience one or more of the following symptoms:^{9,10,11}

- Mental and motor deficits
- Cognitive delays
- Hyperactivity
- Impulsivity
- Attention deficit disorder (ADD)
- Behavior disorders
- Aggressiveness
- Less social responsivity or poor social engagement
- Failure to thrive (socially)
- Short stature

Potential symptoms in school-aged children include the following:^{12,13}

- Impaired verbal performance, reading, and arithmetic skills
- Poor mental and motor development
- Memory and perception problems
- Attention deficit hyperactivity disorder (ADHD), which is characterized by the following:
 - Weak “executive functioning”
 - Problems with planning, organizing time and materials, shifting from one situation to another, and learning from past mistakes
- Developmental delays
- Speech problems, including challenges in producing speech sounds correctly or fluently or difficulty with voice or resonance
- Language disorders, including trouble understanding others (receptive language) or sharing thoughts, ideas, and feelings (expressive language)
- Impaired self-regulation
- School absence, school failure, and other behavioral problems
- Depressed respiration or hypoxia
- Reduced decision-making abilities and behavior regulation
- Poor response to stressful situations
- Poorly developed sense of confidence or efficacy in task performance
- Depressive disorder
- Substance use disorder

Prevention

Regardless of exposure and the extent of the effects posed on the child, it is important to remember that living in a family with drug abusers is, in itself, a significant risk factor. A child whose parents (or other direct family members) abuse drugs often lives in a chaotic environment. Stabilization of the home environment is essential for improving outcomes for children and their families. In addition, it is important to share information about the dangers of drugs with children at every age and stage to prevent drug abuse.¹⁴

Joining a community antidrug coalition, such as by working with the [Community Anti-Drug Coalitions of America \(CADCA\)](#), is a way to create safe, healthy, and drug-free communities. CADCA also offers free online prevention courses, which are listed in the Resources section.

Interventions for Parents, Schools, and Programs

The following tables describe interventions that can improve outcomes for infants and toddlers (Table 1) plus older children and youth (Tables 2–4) who are affected by opioid exposure. Some of the interventions are suggested practices that can be performed by a parent or a teacher; others are specific programs that may be most appropriately carried out by a therapist, a school psychologist, or another practitioner. These tables present the name of each intervention or category of interventions, a brief description of the intervention, and examples of specific actions associated with the intervention. They also include quality indicators, which describe the changes in outcomes that can be expected when the intervention is implemented successfully, and sources for additional information on the intervention.

Table 1. Interventions for Infants and Toddlers

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
Perinatal and Neonatal NAS Interventions	Include practices to intervene beginning at birth, such as neonatal handling and enrichment of the postnatal environment.	<ul style="list-style-type: none"> • Allow the child to breastfeed (recommended in cases where the mother is receiving medication-assisted treatment and has no contraindications, such as a positive HIV status). • Engage in regular skin-to-skin contact with newborns. • Engage regularly in hugging and sharing close moments with the child. • Give special attention to safe sleep practices (e.g., placing the infant on his or her back and removing toys, blankets, and pillows from the crib). • Provide frequent, on-demand feedings. • Provide a low stimulation environment that is dark and quiet. • Swaddle the infant to inhibit self-stimulation. 	<ul style="list-style-type: none"> • Infants have reduced instances of complications associated with NAS, including mortality, severe infection/sepsis, nosocomial infection/sepsis, hypothermia, severe illness, and respiratory tract disease. • Infants suffer reduced stress. • Infants have increased weight, height, and head circumference. 	<ul style="list-style-type: none"> • Neonatal Drug Withdrawal¹⁵ • Effects of Breast Milk on the Severity and Outcome of Neonatal Abstinence Syndrome Among Infants of Drug Dependent Mothers¹⁶ • Maternal and Neonatal Factors Impacting Response to Methadone Therapy in Infants Treated for Neonatal Abstinence Syndrome¹⁷ • Breastfeeding Rates and the Relationship Between Breastfeeding and Neonatal Abstinence Syndrome in Women Maintained on Buprenorphine During Pregnancy¹⁸ • Neonatal Abstinence Syndrome • Kangaroo Mother Care to Reduce Morbidity and Mortality in Low Birthweight Infants
Pharmacologic Therapy	Provides a drug-based intervention, often soon after birth, to protect against NAS, which appears in infants following prenatal exposure to opioids. If left untreated, symptoms can include severe vomiting, diarrhea, or excessive weight loss.	Medications: methadone, buprenorphine, or morphine sulfate	Children and youth impacted by NAS experience reduced mortality and increased weight, height, and head circumference.	<ul style="list-style-type: none"> • Neonatal Drug Withdrawal¹⁹ • Licit and Illicit Drug Use During Pregnancy: Maternal, Neonatal, and Early Childhood Consequences

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
Play Therapy*	Using a language and approach that children can understand, play therapy uses the idea of “symbolic play” to release emotions and displace unconscious ideas.	<ul style="list-style-type: none"> • Three categories of toys are used: <ul style="list-style-type: none"> - Real-life toys (e.g., dollhouses, matchbox cars, and toy kitchens) - Aggressive toys (e.g., plastic armor, superhero action figures, and nerf guns) - Creative expression toys (e.g., building blocks, clay, and crayons) • Opportunities for interpretation are offered in the midst of play. 	<ul style="list-style-type: none"> • Children become more responsible for behaviors and develop more successful management strategies. • Children develop new and creative solutions to problems. • Children develop respect and acceptance of self and others. • Children learn to experience and express emotion. • Children cultivate empathy and respect for the thoughts and feelings of others. • Children learn new social skills and relational skills with family. • Children develop self-efficacy. 	Play Therapy: Considerations and Applications for the Practitioner ²⁰
Treatment Programs for Substance-Addicted Mothers	These programs assist parents with addressing drug addiction problems and may include specialized interventions for families referred to the child welfare or child protection systems.	<ul style="list-style-type: none"> • Improve the household environment by addressing alcohol-related issues. • Enhance the relationship between parent(s) and child. • Connect parents with other community resources, as needed. 	<ul style="list-style-type: none"> • Environmental outcomes are improved for children. • Families have stronger engagement. • Families have contacts with treatment providers that are more frequent. • Families have access to an informal support network of drug treatment, health care and housing providers, friends, relatives, and others that ensures the well-being of the child and family. 	<ul style="list-style-type: none"> • Community Reinforcement and Family Training (CRAFT) • Family Dependency Treatment Courts • Nar-Anon Family Groups • Opioid Abuse, Dependence, and Addiction in Pregnancy • Sobriety Treatment and Recovery Teams (START)

* Play Therapy is an intervention that applies to infants, toddlers, children, and youth, so it is included in Tables 1 and 3.

Table 2. Academic Interventions for Children and Youth

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
ADHD Interventions*	These interventions teach youth to control behaviors associated with ADHD, such as hyperactivity, impulsiveness, and inattention. They may be implemented with or without medication.	<ul style="list-style-type: none"> • Use checklists. • Use a planner. • Set time limits. • Use a rewards chart. • Use the child’s name in a question or in the material being covered. • Randomly pick reciters so that attention cannot be timed. • Use a soft voice to give direction. • Alternate physical and mental activities. 	<ul style="list-style-type: none"> • Children are able to keep track of homework and projects and complete them on time. • Children are motivated to accomplish tasks. • Children have improved grades and attendance. 	<ul style="list-style-type: none"> • Behavioral Treatments for Kids With ADHD • Suggested Classroom Interventions for Children With ADD & Learning Disabilities
Attention Process Training	This training focuses on attention, nonverbal reasoning, and generalization problems to help improve cognitive functioning and, subsequently, learning.	<ul style="list-style-type: none"> • Emphasize repetition. • Say the student’s name and make eye contact when speaking to retain engagement. 	<ul style="list-style-type: none"> • Youth are able to engage more deeply and for longer periods in instruction. • Deeper engagement translates to improved academic performance. 	Children’s Mental Health Disorder Fact Sheet for the Classroom
Language and Literacy Interventions	These interventions assist with the mastery of literacy and language skills, including oral language; phonological awareness; spelling; and, later, fluency and comprehension.	<p><i>For young children:</i></p> <ul style="list-style-type: none"> • Regularly incorporate reading and interaction with text and language into the day. • Use consistency and repetition, repeating the way a particular skill is taught from the first time to increase the likelihood of a lasting effect. <p><i>For older students:</i></p> <ul style="list-style-type: none"> • Avoid asking “why” questions. • Ask concrete who, what, where, and when questions. 	Students gain skills in literacy and language consistent with their peers who are not impacted by opioid exposure.	Language to Literacy Program

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
Mathematics Interventions	These interventions address the diminished visual-spatial and executive function skills that youth impacted by opioid exposure often lack, which are needed to support mathematical comprehension.	<ul style="list-style-type: none"> • Implement specialized one-on-one mathematics instruction. • Recognize that youth may become frustrated in trying to master mathematical skills. • Ask students to explain their thinking as they work through a problem. • Offer incentives for partially correct responses or finishing work, even in the absence of a completely correct answer. 	<ul style="list-style-type: none"> • Students demonstrate improved skills needed to do mathematics, including spatial and executive reasoning. • Students are able to translate these skills into improved academic performance in mathematics. 	Math Interactive Learning Experience Program
Speech and Language Services	These services diagnose and treat speech, language, social communication, cognitive communication, and swallowing disorders.	<ul style="list-style-type: none"> • Directive interventions use modeling and prompting techniques to elicit targeted language structures. • Naturalistic interventions involve arranging materials in an environment in a way that is designed to elicit targeted responses. 	<ul style="list-style-type: none"> • Youth show improvement in the ability to understand thoughts, ideas, and feelings. • Youth can articulate using intelligible speech so that everyone understands each other. • Youth demonstrate increased ability to independently problem-solve. • Improved language skills translate to achievement of preliteracy and school readiness skills. 	<ul style="list-style-type: none"> • American Speech-Language-Hearing Association • Intervention Methods for Young Children With Communication Disorders • Outcomes, Benefits, and Drawbacks of Speech Therapy

* Although behavioral in nature, these interventions are designed to help students benefit from the academic setting.

Table 3. Behavior Interventions for Children and Youth

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
Attachment, Regulation and Competency (ARC) Framework	Targeted to youth and families who have experienced multiple or prolonged traumatic stress, the ARC framework identifies three core domains (attachment, regulation, and competency) that are frequently impacted among youth who have been traumatized and which are relevant to future resiliency.	<ul style="list-style-type: none"> • Attachment Domain. Targets a child's caregiving system to build a safe attachment system. • Self-regulation Domain. Targets a child's ability to identify, modulate, and express his or her internal experiences. • Competency Domain. Focuses on a child's ability to acquire the foundational skills for ongoing development. 	<ul style="list-style-type: none"> • Children and youth experience a reduction in child posttraumatic stress symptoms and general mental health symptoms, as well as increased adaptive and social skills. • Children and youth demonstrate reduced distress and improved functional behaviors. • Systems report reduced use of restraints in programs and improved permanency rates in foster care. 	Treatment of Complex Trauma in Young Children: Developmental and Cultural Considerations in Application of the ARC Intervention Model

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
Cognitive Behavioral Therapy	A school-based group or individual intervention that may or may not include parents. These therapies address posttraumatic stress disorder (PTSD), depression, and behavioral problems and help improve functioning, grades and attendance, peer and parent support, and coping skills.	<ul style="list-style-type: none"> • Use cognitive-behavioral techniques, such as psychoeducation, relaxation, social problem solving, cognitive restructuring, and exposure. • Instruct students to recognize and stop negative patterns of thinking and behavior. • Help students be aware of the stressors, situations, and feelings that lead to substance use and teach them to avoid them or respond differently when they occur. 	<ul style="list-style-type: none"> • Students demonstrate reduced PTSD, depression, and behavioral problems. • Improved behavior translates to improved functioning, grades, and attendance. 	<ul style="list-style-type: none"> • Cognitive Behavioral Intervention for Trauma in Schools (CBITS) • The National Child Traumatic Stress Network • Responding to Students With PTSD in Schools • Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)
Parent and Child Therapy	Empirically validated and evidence-based approaches that focus on improving the child-caregiver relationship.	Focuses on safety, affect regulation, improving the child-caregiver relationship, normalization of the trauma-related response, and joint construction of a trauma narrative, all with the goal of returning the child to a normal developmental trajectory.	<ul style="list-style-type: none"> • Children demonstrate fewer child trauma symptoms. • Children show improved developmental functioning. • Caregiver documents decreased trauma symptoms in children. • Children are able to address conduct-disordered behavior. • Caregiver reports an improved parent-child relationship. • Children's behavior posttreatment is improved. 	<ul style="list-style-type: none"> • Child Parent Psychotherapy • What Is Parent-Child Interaction Therapy (PCIT)?
Play Therapy*	Using a language and approach that children can understand, play therapy uses the idea of “symbolic play” to release emotions and displace unconscious ideas.	<ul style="list-style-type: none"> • Three categories of toys are used: <ul style="list-style-type: none"> - Real-life toys (e.g., dollhouses, matchbox cars, and toy kitchens) - Aggressive toys (e.g., plastic armor, superhero action figures, and nerf guns) - Creative expression toys (e.g., building blocks, clay, and crayons) • Opportunities for interpretation are offered in the midst of play. 	<ul style="list-style-type: none"> • Children and youth become more responsible for behaviors and develop more successful management strategies. • Children and youth develop new and creative solutions to problems. • Children and youth develop respect and acceptance of self and others. • Children and youth learn to experience and express emotion. • Children and youth cultivate empathy and respect for the thoughts and feelings of others. • Children and youth learn new social skills and relational skills with family. • Children and youth develop self-efficacy. 	Play Therapy: Considerations and Applications for the Practitioner ²¹

* Play Therapy is an intervention that applies to infants, toddlers, children, and youth, so it is included in Tables 1 and 3.

Table 4. Substance Abuse Interventions for Children and Youth

Intervention Name	Description	Example(s)	Quality Indicator(s)	More Information
Individual Counseling	Focuses on reducing or stopping substance use; skill building; adherence to a recovery plan; and setting goals for social, family, and professional and educational outcomes. Group counseling often is used as a complement to provide social reinforcement.	<ul style="list-style-type: none"> • Provide incentives to reinforce positive behaviors, such as remaining abstinent from substance use. • Help build motivation and commit to specific plans to engage in treatment and seek recovery. 	<ul style="list-style-type: none"> • Youth demonstrate sustained abstinence from opioid use. • Youth are able to meet desired growth outcomes (educational, professional, and social). 	<ul style="list-style-type: none"> • Narcotics Anonymous World Services • Treatments for Substance Use Disorders (SAMSHA)
Recovery High Schools	Offer schools specifically designed for students recovering from substance abuse issues. These schools are typically part of another school or a set of alternative school programs within the public school system.	<ul style="list-style-type: none"> • Separate recovery school students from other students by means of scheduling and physical barriers. • Allow adolescents newly in recovery to be surrounded by a peer group supportive of recovery efforts and attitudes. • Serve as an adjunct to formal substance abuse treatment, with students often referred by treatment providers and enrolled in concurrent treatment for other mental health problems. 	<ul style="list-style-type: none"> • Youth address substance abuse issues. • Youth have higher grades and rates of school attendance. • Youth have reduced likelihood of relapse. 	<ul style="list-style-type: none"> • Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide • Recovery High Schools: A Descriptive Study of School Programs and Students
Screening, Brief Intervention, and Referral to Treatment (SBIRT)	An approach to the delivery of early intervention and treatment to people with substance use disorders and those at risk of developing these disorders.	<ul style="list-style-type: none"> • Quickly screen to assess the severity of substance use and identify the appropriate level of treatment. • Conduct brief intervention focused on increasing insight and awareness regarding substance use and motivation toward behavioral change. • Refer youth to treatment that provides more extensive treatment and specialty care, as needed. 	<ul style="list-style-type: none"> • Youth have a changed view of substance use. • Youth demonstrate decreased incidence of drug use. • Youth have improved overall health and wellness. 	<ul style="list-style-type: none"> • Screening, Brief Intervention and Referral to Treatment (SBIRT) in Behavioral Healthcare • What Is SBIRT and Why Use It?
State Wraparound Services	For posttreatment individuals in recovery, this intervention provides services to adolescents and adults for up to nine months after the successful completion of a treatment program.	Address education, legal, financial, social, childcare, and other supports.	<ul style="list-style-type: none"> • Youth have improved quality of life. • Youth demonstrate reduced likelihood of relapse. 	Combatting the Heroin and Opioid Crisis

Resources

[The American Association of Poison Control Centers \(AAPCC\)](#) supports the nation's 55 poison centers in their efforts to prevent and treat poison exposures. Poison centers offer free, confidential medical advice 24 hours per day, 7 days per week through the Poison Help line. This service provides a primary resource for poisoning information and helps reduce costly hospital visits through in-home treatment. AAPCC's website offers information about [safe medicine disposal](#) and [information about opioids](#).

[Chasing the Dragon: The Life of an Opiate Addict Documentary](#): The Federal Bureau of Investigation (FBI) released this film with the intent to raise awareness of opioid addiction and educate students and young adults about the dangers of opioids.

CADCA offers free online opioid abuse prevention courses:

- [Medicine Safety: Drug Disposal and Storage](#) identifies the ongoing problem of the overuse of prescription and over-the-counter painkillers, and strategies for keeping families and communities safe.
- [Addressing the Pills to Heroin Epidemic](#): This series consists of three modules, including a primer on prescription drug abuse and heroin use, a review of opioid-specific strategies and best practices for coalitions, and an in-depth overview of Medication-Assisted Treatment (MAT).
- The [Prevent Rx Abuse: A CADCA Toolkit](#) contains facts, strategies, and tools to reduce teen prescription medicine abuse in communities. The toolkit is designed to help formulate, modify, and implement prevention and intervention strategies.

[Family Checkup: Positive Parenting Prevents Drug Abuse](#): This webpage by the [National Institute on Drug Abuse \(NIDA\)](#) helps parents assess whether their children are at risk for substance abuse. The guide helps parents determine which approaches to use when parenting, whether that approach is supportive and will help their child avoid drug abuse, and gives numerous examples—both textual and video—of recommended practices to communicate effectively with children. Topics covered include communication, encouragement, negotiation, setting limits, and supervision.

In response to the problem of opioid abuse in American Indian communities, the [Indian Country Training Institute](#) has produced various resources to prevent youth opioid addiction. Although these approaches are targeted to Native American communities, other communities also may find the content beneficial.

- [Indian County Webinar: Community Approaches to Fighting Drug Use and Abuse](#)
- [Drug Endangered Children: Identification and Intervention](#)
- [Tribal Problem Solving Strategies to Address Prescription Drug Abuse](#)
- [Prescription Drug Abuse and Diversion](#)

The [Medication Safety Program](#), housed in the Division of Healthcare Quality Promotion (DHQP), leads the CDC's national adverse drug events (ADEs) surveillance activities and seeks to translate population-based surveillance data into evidence-based policies and targeted, innovative, and collaborative interventions. The program's website includes fact sheets, a guide for preventing ADEs in children, a resource library, and other resources to prevent drug events.

[Medicines in My Home](#): The Food and Drug Administration (FDA) created a presentation for parents and educators to discuss over-the-counter medicines with children and how to use over-the-counter medicine labels.

[Mind Over Matter: The Brain's Response to Prescription Drugs](#): This magazine for children and youth explores the effects of prescription drugs. It is best for youth ages 10 and up.

[National Center on Safe and Supportive Learning Environments](#): Funded by the U.S. Department of Education's [Office of Safe and Healthy Students](#), this agency seeks to improve school conditions for learning through measurement and program implementation so that all students have the opportunity to realize academic success in safe and supportive environments.

NIDA's mission is to "advance science on the causes and consequences of drug use and addiction and to apply that knowledge to improve individual and public health." Consequently, NIDA's website offers comprehensive tools and resources for all individuals, including patients, families, parents, educators, children, and teens.

- [NIDA for Teachers](#): This site is for teachers and practitioners working with middle and high school students to disseminate information about drugs. It includes resources such as fact sheets, lesson plans, and free publications that can be ordered to share.
- [NIDA for Parents](#): Includes information about drugs to talk with your kids about, how to talk to your kids about drugs, and treatment options.
- [Principles of Drug Addiction Treatment: A Research-Based Guide](#): This guide gives more information about the pharmacologic treatments available for opioid addiction and the behavioral treatments to be combined with them. It includes 13 steps for family and practitioners to successfully treat individuals with opioid addictions.

The [Partnership for Drug-Free Kids](#) provides resources and information to help parents address substance use and addiction in children.

- The [Medicine Abuse Project](#) was launched to prevent teens from abusing prescription drugs and provide intervention and treatment resources for those who already are abusing drugs. The website offers resources to begin discussions with children and youth about the dangers of opioid abuse, as well as advice on safeguarding and the proper disposal of unused medications.
- [Parent Toolkit: How to Connect With Your Kids](#): The Partnership for Drug-Free Kids offers this collection of resources to help parents relate and talk to their children. Although the website's intent is to reduce drug abuse, the skills addressed in the toolkit are lifelong skills to help parents build relationships with their children and broach any topic.
- [Six Parenting Practices](#): This tip sheet for parents is designed to reduce the chances of a child using drugs.

[Police and Communities Together \(PACT\) 360](#) is a program created to enhance the ability of local law enforcement to communicate and interact with engaged community members, especially parents, through research-based, multimedia community education presentations. The presentations are designed to mobilize communities and empower and educate parents and teens about the dangers of drugs and alcohol in today's ever-changing substance abuse landscape.

[Substance Abuse and Mental Health Services Administration \(SAMHSA\)](#): SAMHSA is the agency within the U.S. Department of Health and Human Services (HHS) that leads public health efforts to advance behavioral health in the United States. SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities. This website provides links to SAMHSA-sponsored information and resources. SAMHSA also provides tip sheets, research findings, guidance, and news updates regarding the [opioid epidemic](#).

Endnotes

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