

Drug Overdose Prevention Tackle Box

A Guide for Communities



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Suggested citation:

McCool R, McKee S, Clatos R, Quesinberry D, Bunn T. *Drug Overdose Prevention Tackle Box: A Guide for Communities*. Lexington, KY: Kentucky Injury Prevention and Research Center; 2020.

The Kentucky Injury Prevention and Research Center (KIPRC) is a partnership between the Kentucky Department for Public Health and the University of Kentucky's College of Public Health that combines academic investigation with practical public health initiatives.

This publication was supported by the Grant or Cooperative Agreement Number, NU17CE924971-02-01, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.



Drug Overdose Prevention Tackle Box User Evaluation Survey

Please complete and return this survey to help the Kentucky Injury Prevention and Research Center improve the Drug Overdose Prevention Tackle Box. Choose a response for each statement that most closely reflects your view. You may also complete this survey online at: https://uky.az1.qualtrics.com/jfe/form/SV_3t3tRY5tB3A03pX.

Part I – Program Selection, Implementation, and Evaluation

1. This section was well-organized.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. This section was easy to navigate.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. The amount of information presented and the degree of detail were appropriate.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. The information provided is helpful to me for informing drug overdose prevention interventions in my community.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part II – Program Directory

5. This section was well-organized.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. This section was easy to navigate.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. The amount of information provided for each program was appropriate.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. The list of programs was reasonably comprehensive.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. The information provided about program selection, implementation, and evaluation is helpful to me.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall

10. I would recommend the *Drug Overdose Prevention Tackle Box* to others working in drug overdose prevention.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. What did you find to be most useful about the *Drug Overdose Prevention Tackle Box*?

12. What could we do to improve the *Drug Overdose Prevention Tackle Box*?

13. Who would benefit from access to the *Drug Overdose Prevention Tackle Box*?

Please return this survey to:

Kentucky Injury Prevention and Research Center
Attn: OD2A Evaluation
333 Waller Avenue, Suite 209
Lexington, KY 40504-2915

If you have questions or suggestions or wish to talk with someone about the *Drug Overdose Prevention Tackle Box*, please fill in your contact information below.

Name: _____

Title and Organization: _____

Address: _____

Phone Number: _____

Email Address: _____

CONTENTS

PART I

Introduction: What Is the Drug Overdose Prevention Tackle Box?	1
Chapter 1: Complexities of the Current Drug Overdose Epidemic	3
Understanding and Talking About Substance Use as a Disease	5
Prevention, Harm Reduction, Treatment, and Recovery	7
Setting Matters: Urban Versus Rural Communities	11
Weaving a Net	11
Program Categories: What Do the Terms Mean?	15
Chapter 2: Selecting, Implementing, And Evaluating Programs	17
Considerations for Program Selection	17
Implementing Programs	18
Evaluating Programs	19
Data Sources	21
Additional Resources	22
Notes	25
Glossary	27

PART II

Introduction: Program Category Definitions	39
Program Descriptions	41

INTRODUCTION

WHAT IS THE DRUG OVERDOSE PREVENTION TACKLE BOX?

The individual and social impacts of the drug overdose epidemic have left many communities searching for effective ways to reduce substance misuse and drug overdoses. The complex nature of the problem will require widely accepted and evaluated intervention strategies for community leaders, public health officials, and health care providers.

Local, state, and federal agencies and nongovernmental organizations have responded to the lack of effective intervention strategies by producing toolkits that provide background information, an understanding of how to select and implement intervention projects or strategies, and recommendations for potential prevention strategies. Some toolkits are undoubtedly better or more comprehensive than others, but most toolkits provide useful information and guidance. In many ways, this document is a toolkit like any other. However, we prefer, based on the philosophy behind our work, to think of this document as a tackle box.

Tools are used to fix broken things and problems and to adjust things that aren't working properly. This may lead to an outdated and ultimately less useful view both of people who use substances and of communities with high rates of substance use. It is all too easy to think of individuals with substance use disorder (SUD) and communities with high rates of substance misuse as "broken" and to believe that if we can just find the proper tool for the job we can "fix" them.

This complex problem requires a multifaceted approach, especially at the community level. Multiple strategies and programs are required to target varying age groups—from teens and young adults through working-aged adults to seniors—and individuals with widely varying education and income levels.

This tackle box has a specific function: to help catch fish. While most of the items in a tackle box are designed to encourage fish to take the bait or lure offered to them, the information in this tackle box is designed to help Kentucky's communities encourage individuals to avoid inappropriate or illicit substance use if they are not already using substances and to seek treatment if they are already a substance user.

As the drug overdose epidemic is everchanging, we've designed this tackle box to expand as we discover promising and proven programs. We hope that communities will reach out to us about programs not already included in this publication that they are interested in implementing or have already launched.



CHAPTER 1

COMPLEXITIES OF THE CURRENT DRUG OVERDOSE EPIDEMIC

Many Kentuckians first became aware of substance use disorder as a serious problem when opioid overdose rates began to climb significantly in rural Kentucky in the early 2000s. The issue, however, is not a recent one. High rates of substance use and SUD were present, especially in the Appalachian region, much earlier.

As early as 1971, physicians in rural Kentucky noted high rates of substance use among their patients.¹ In many cases, the drugs involved were “nerve pills” — benzodiazepines such as Valium and Xanax — that relieve anxiety and produce a calming effect.² These medications can also relax tight muscles and produce a comfortable, drowsy feeling in the user. It isn’t surprising that they became very popular, especially among individuals who worked in physically demanding jobs.

Somewhat later, hydrocodone, a powerful opioid analgesic (pain reliever), began to be widely prescribed in Kentucky. Like the benzodiazepines, it rapidly became popular. Rising rates of hydrocodone prescribing led to concerns about the addictive potential of the drug.³

Concerns about diversion and misuse of hydrocodone created a ready-made market for a medication that could provide similar effects without the strong potential for abuse. In 1996, Purdue Pharma began marketing OxyContin as a less easily misused alternative to other opioid analgesics. While US Food and Drug Administration studies indicated that the drug was no more

effective than other opioids, a massive marketing campaign that included a systematic effort to minimize the drug’s perceived risk of addiction led to widespread use of the medication. Prescriptions for OxyContin skyrocketed from 316,000 nationwide in 1996 to more than 14 million in 2002.⁴ SUD rates likewise soared, and the issue reached national media prominence in 2001.⁵

The Kentucky All-Schedule Prescription Electronic Reporting (KASPER) system was developed in 1999 primarily to address the rapid increase in SUD cases associated with high rates of opioid prescribing and diversion in the state. Congress authorized funding for Operation UNITE, a program aimed at reducing unlawful narcotic use through enforcement, treatment, and prevention education. Operation UNITE was limited to 32 counties in eastern and southeastern Kentucky, regions where illicit substance use was higher than the state average.

The late 1990s and early 2000s saw methamphetamine use become much more prevalent, especially in rural portions of the state.⁶ The widespread adoption of less complex and hazardous production (“cooking”) techniques made the drug readily available, since it could be manufactured from easily accessed precursors. Methamphetamine garnered the majority of public and political attention related to substance misuse during the early 2000s; opioid use received less concern. The federal Combat Methamphetamine Epidemic Act (2005) and similar state laws reduced access to precursor chemicals, while other legislation (e.g., KRS 218A.1437,

enacted in 2002) added criminal penalties for possession of precursors. These efforts reduced the accessibility of methamphetamine, but it remained a commonly used drug, especially in rural communities.

In 2012, the Kentucky legislature passed HB 1, which imposed significant new restrictions on pain clinics, promoted the development of regulations for prescribing opioids, and required the use of KASPER by prescribers. The law reduced “doctor shopping” by more than 50%, resulted in the closure of numerous pain clinics, and imposed a mandate that more than tripled the number of prescribers who are required to access KASPER to review patients’ prior prescriptions before prescribing opioids.⁷ These changes, along with increased law enforcement focus on medication diversion and illegal prescribing practices, substantially reduced illicit access to prescription opioids.

Unfortunately, the reduction in the supply of prescription opioids did little to reduce either the number of individuals suffering from SUD or the overall availability of opioids. In urban areas, the relatively widespread availability of heroin at comparatively low prices led many individuals to transition from prescription opioids to heroin. While prescription opioid overdose deaths peaked in 2011 and then began a modest decline, heroin-related overdose deaths—negligible prior to 2008—increased rapidly.⁸ During this period, programs such as naloxone distribution and syringe exchanges began to be utilized to reduce the harm caused by substance use disorder.

Beginning around 2015, an alarming new trend became evident. Fatal heroin overdose rates leveled off and even declined slightly, but fatal overdoses due to the use of synthetic opioids, primarily fentanyl, and the number of overall fatal overdoses grew. By 2017, this growth had become explosive, with synthetic opioid overdoses more than doubling in the two

years from 2015 to 2017.⁸

Data from 2018 and 2019 indicate a reduction in overdose-related fatalities, but detailed data from these years are not yet available for analysis. This makes it impossible to determine whether the decline in fatalities is due to a reduction in overdose incidents or to increased success in preventing fatalities through overdose reversal with naloxone and improved post-overdose care.⁹

Perhaps the most concerning trend is the resurgence of methamphetamine use. Rural law enforcement agencies, the Kentucky State Police, and health care providers are all reporting significant increases in methamphetamine use.¹⁰ This trend is confirmed by public health data, which show a 35% increase in methamphetamine-related overdose fatalities between the first quarter of 2017 and the first quarter of 2018.¹¹ Unlike previous years, when most methamphetamine used in the Commonwealth was “cooked” locally, large amounts of the drug are now being illegally imported from sources outside the United States. The volume of illegally imported methamphetamine has made the drug readily available and comparatively cheap.

The resurgence in methamphetamine use is particularly concerning because there is no readily available, effective medical treatment to reverse the effects of a methamphetamine overdose. Naloxone, which is highly effective at reversing the effects of opioid overdose, has no effect on methamphetamine overdose. Additionally, individuals who are experiencing symptoms of methamphetamine overdose are often more active and potentially aggressive than those who are experiencing an opioid overdose. These factors are requiring public safety agencies, health care providers, and others to reevaluate and adapt their overdose response protocols.

Kentucky has experienced high rates of substance misuse, and related overdose

incidents, for decades. The mass marketing of prescription opioids in Appalachia in the late 1990s certainly exacerbated the situation, but that marketing campaign focused on the region in large part because of the already high rates of opioid and benzodiazepine prescribing there. A variety of economic, social, cultural, and individual factors are involved in the high rates of substance use and SUD in the Commonwealth. To understand our current epidemic of substance misuse and SUD, it is important to recognize that the issue goes beyond any single substance. As one treatment provider noted, “It isn’t a drug problem; it’s an addiction problem.” To effectively address this complex and longstanding issue, we will need to embrace efforts that do more than focus on a single area of the issue or a single substance. We will need to focus not only on individuals suffering from SUD but also on environmental, community, and systemic factors that impact substance use and the risk of overdose.

UNDERSTANDING AND TALKING ABOUT SUBSTANCE USE AS A DISEASE

Historically, individuals who misused substances such as alcohol or illicit drugs were often viewed as having a moral weakness or suffering from a lack of willpower. Treatment regimens for individuals with problematic substance use tended to focus on a detoxification process, where the individual suffered through the physical withdrawal symptoms associated with the substance they used, followed by a long-term period of individual and/or group counseling. Treatment plans varied in their details, but most depended upon educating the substance user about the harm that his or her substance use was creating for him/herself and others and then helping the person to develop and follow a plan for avoiding substance use through strength of will and changed personal habits.

Over the past few years, we have reached a new level of understanding about how various substances change human behavior and even our brain chemistry. This understanding has changed how we view, and respond to, substance use. Specifically, we now know that regular substance misuse over a period of time leads to changes in brain chemistry, thought patterns, and behaviors. Once those changes have occurred, they are difficult to reverse and attempts to do so often lead to physical illness and substantial discomfort.

These factors help to explain why traditional treatments often have low long-term success rates. Individuals with substance use disorder don’t necessarily have low willpower, weak moral standards, or a lack of understanding of the harm caused by their substance use. Instead, they have an altered brain chemistry that creates a strong physiological and psychological need for the substance. They aren’t using the substance to get high; they are using it to avoid becoming (and feeling) very ill.

Our growing understanding of the biochemical processes involved in problematic substance use has also led to a change in the terminology that we employ. In the past, the term “addiction” was typically used to describe a situation in which a person was physiologically or psychologically unable to stop consuming a chemical, drug, or substance, even when that chemical, drug, or substance was causing physical and/or psychological harm. The term “addict” was often used to describe a person who was suffering from addiction. “Addiction” is technically a value-neutral term, but it has acquired a great deal of secondary meaning in common use; saying that someone is suffering from addiction often leads others to think of a variety of images and stereotypical characteristics, most of which are negative. The term “addict” has become even more loaded with secondary meanings and is almost universally

perceived as a negative label.

Using these terms can lead to stigmatizing individuals who are chronic substance users. While there is no evidence that concern about social stigma leads any significant number of individuals to avoid initial substance use, studies have found that stigma can and does reduce access to treatment and create other barriers to recovery for individuals with SUD. In particular, referring to a person as an addict defines that person by his or her disease without recognition of the other aspects of his or her identity. The issues created by stigmatization have led to a preference for new, more descriptive, and less value-laden terminology.

The term “substance use” refers to the intentional consumption of drugs or alcohol and includes substances such as cigarettes, illicit or “street” drugs, prescription drugs, inhalants, and other chemicals that produce a physiological or psychological effect. When a person’s use of one or more substances leads to health issues or problems at work, school, or home, that person is said to have “substance use disorder,” or SUD. The term “substance abuse” is sometimes used interchangeably with “substance use disorder,” but the latter term is typically preferred by treatment and prevention specialists. When referring to someone whose use of a substance has become problematic, it is appropriate to refer to them as a person with substance use disorder rather than as an addict or drug user.

Our growing understanding of the biochemical aspects of SUD has also changed our understanding of substance use treatment. While earlier treatment plans often focused on detoxification followed by education and behavioral therapy, medication to treat substance use disorder is becoming increasingly utilized. This is especially true in opioid treatment programs, where medications such as methadone and buprenorphine (Suboxone) – either alone or in combination with behavioral therapy – can be

used to mitigate the effects of opioid withdrawal. Eliminating the painful, debilitating illness associated with opioid withdrawal can make it much easier for individuals suffering from opioid use disorder to stop or significantly reduce their substance use.

Some people and organizations have expressed concerns about viewing substance use disorder as a disease and/or about using medication to treat SUD. Some are concerned that treating SUD as a disease minimizes the importance of personal choice and absolves substance users of any responsibility for poor choices that may have led to their substance use.

We can and must educate individuals and encourage them to avoid making choices that may lead them to develop SUD. At the same time, we must acknowledge that SUD is not the only disease that can result from poor choices. Many other illnesses, including heart disease, stroke, adult-onset diabetes, and hypertension are strongly linked to personal choices that individuals make about their health, nutrition, and level of exercise, yet we recognize that those conditions are illnesses that are appropriately treated with medical care. The same is true for SUD. Stigmatizing those who suffer from SUD will not cause them to stop using substances; it will simply reduce their chance of recovery.

Concerns about the use of medication to treat SUD generally hinge on the idea that medication therapy is simply trading one substance for another and/or that individuals suffering from SUD often require extended periods of medication therapy. SUD is a complex, chronic disease, and we do not have a treatment that offers a rapid, simple recovery. Type 2 diabetes, which results from a physiological deficiency in the patient’s body, is a chronic, sometimes incurable illness that can require lifelong insulin use. With regular insulin use, however, a patient suffering from diabetes may lead a full and productive life. The same is true for individuals

suffering from SUD; they may require long-term medication therapy, but that therapy may enable them to lead a healthy and productive life.

Finally, it is important to realize that a drug overdose is not the same as substance use or SUD. SUD is best characterized as a complex, chronic disease with both physiological and psychological components, while drug overdose is categorized as an injury. Like any other poisoning, an overdose is an acute condition that occurs when a substance that can cause injury or death is taken into the body. Thus, substance use and SUD prevention can be seen as overdose prevention, but not all overdose prevention strategies are designed to prevent or reduce substance use.

The following article provides additional information about the importance of the language used to describe substance misuse and recovery: Substance use, recovery, and linguistics: The impact of word choice on explicit and implicit bias (www.ncbi.nlm.nih.gov/pubmed/29913324).

PREVENTION, HARM REDUCTION, TREATMENT, AND RECOVERY

There are multiple ways to reduce the individual and social impact of the substance use epidemic, but none of these approaches provides a comprehensive answer for substance use and SUD. These issues involve a complex interaction between individual and social factors. Specific strategies and programs can address aspects of the issue, but there is no single strategy or prevention program that addresses the entire issue effectively. Just as a fishnet is woven from many strands, effective interventions must be composed of numerous components that address a wide variety of factors related to substance use and SUD.

Primary prevention focuses on reducing the number of individuals who choose to begin using substances. Prevention programs focus on

educating individuals about the risks of substance use, reducing risk factors for substance use, and increasing protective factors.

Risk factors are characteristics within an individual or conditions within a family, school, or community that increase the likelihood that the individual will engage in substance use. Risk factors for substance use include living in poverty or facing financial insecurity, living in a household where others use substances, childhood trauma, drug availability in the community, substance use by friends and peers, untreated mental illness, social isolation, and others.

Protective factors are characteristics within an individual or within a family, school, or community that help the individual cope successfully with challenges and stressors in his or her life. When people can successfully resolve their problems and manage pre-existing risk factors, they are less likely to engage in substance misuse. Protective factors for substance use include strong, positive bonds with family members and friends, living in a stable and supportive home, having basic living needs met, economic security, not having experienced physical or psychological trauma, academic competency (for children and youth), faith or spirituality, and others. Primary prevention also includes strategies and programs designed to reduce inappropriate prescribing and dispensing of potentially addictive substances and the availability of illicit drugs. Primary prevention is appropriate for individuals and populations with little or no existing substance use.

Harm reduction aims to reduce the harms, such as overdose and the potential transmission of diseases, associated with substance use. When applied to substance use, harm reduction accepts that a continuing level of substance use (both licit and illicit) in society is present, focuses on reducing the adverse consequences that can result from substance use, and is aimed at reducing negative consequences

associated with drug use. Harm reduction strategies are appropriate for individuals who have already developed SUD and who have not yet begun treatment and can be an important bridge linking people to treatment and supporting their recovery efforts.

Treatment involves efforts to help individuals reduce or eliminate their substance use. There are many types of treatment for SUD. Most start with detoxification, which often includes medically managed withdrawal. The illness associated with withdrawal is accompanied by unpleasant symptoms and can be fatal in some cases, so it is common to manage the patient's symptoms through the use of medication during the detoxification process.

Once the withdrawal process is complete, the treatment program may include individual and/or group counseling, behavioral therapy, medication therapy, psychiatric care, or other types of treatment, either singly or in some combination. Treatment may be provided in a short- or long-term inpatient facility or through an out-patient program or provider. For more information about types of treatment for SUD, we recommend reading *Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition)* by the National Institute on Drug Abuse.

Recovery, in the context of SUD treatment, generally refers to an ongoing process that begins once initial treatment ends. Recovery focuses on helping the patient manage his or her disorder on a long-term basis. Recovery often includes processes such as reestablishing relationships with family members and friends or to build new friendships and a new support system in cases where going back to the person's

previous living situation would expose him or her to an unhealthy environment. Recovery may also include processes such as job training and employment assistance, continuing counseling or participation in peer support groups, continuing healthcare, housing assistance, and other services designed to minimize risk factors for substance use and to help the person develop protective factors such as coping skills and financial stability.

It is often helpful to look at a complex situation by using a model or diagram to help us consider ways to deal with it effectively. One of the most widely used models for injury prevention is the Had-

don Matrix. Developed by William Haddon in 1970, the matrix is a diagram of the relationships between the host (human), agent (pathogen or substance), and environmental factors involved in an injury. By understanding the attributes of each of these factors at various stages in the injury process, we can identify areas where we can intervene to prevent the injury, reduce its severity, or at least mitigate the harm caused by the injury. The matrix on page 10 illustrates some factors and prevention opportunities associated with substance use and drug overdose.

In addition to developing the matrix, Haddon developed 10 potential strategies for preventing or mitigating an injury that can be applied to prevent drug overdose, as outlined below. Becoming familiar with them can help you to evaluate potential programs and specific strategies that may help your community to determine how a given program may affect substance use and overdose risk.

Pre-Event

Prevent the existence of the substance.

It is very difficult to prevent the existence of

To link individuals with SUD to treatment facilities with available openings, visit www.FindHelpNowKY.org. For more information on FindHelpNowKY.org, see page 70.

dangerous substances, but some examples of this strategy include law enforcement efforts to stop the illegal cultivation of marijuana and legislative efforts to restrict access to the precursor chemicals required to manufacture methamphetamine.

Prevent the release of the substance.

This strategy involves limiting access to dangerous substances. It is most commonly seen in law enforcement programs that target drug trafficking, but strategies that promote proper prescribing and dispensing of prescription drugs as well as prescription drug take-back programs also fit within this overall strategy.

Separate the substance from the individual. Inpatient treatment programs, incarceration facilities, and post-treatment recovery housing all strive to provide drug-free facilities where individuals do not have access to dangerous substances.

Provide protection for the individual.

This strategy includes a vast number of programmatic strategies that focus on educating individuals about risks associated with substance use, risk factors for overdose, and strategies for avoiding substance misuse and/or overdose. It includes both primary prevention efforts focused on preventing substance use as well as harm reduction efforts that attempt to minimize the risk of overdose events for individuals with active substance use or SUD. This strategy can also include medical interventions such as the use of naltrexone to reduce the chance of relapse and overdose. Overall, the goal is to reduce individual risk factors and promote protective factors.

Event

Minimize the amount of substance

present. In the case of overdose prevention, this strategy is applicable to efforts to keep fentanyl, carfentanil, and other extremely powerful opioids from being mixed in with other illicit drugs so that individuals who use those substances are

able to more accurately predict the effects of the dose they are using. The goal is to reduce the potency of the substance to a somewhat safer level.

Control the pattern of release of the substance to minimize damage. This strategy is applicable mostly to secondary risk factors such as the spread of communicable diseases among those who use substances. Strategies such as needle exchange programs and health education can help control the self-administration of substances in ways that reduce the risk of contagion and lessen the negative health consequences of substance use.

Control the interaction between the substance and individual to minimize damage. The most obvious example of this strategy in action is the prompt administration of naloxone to an opioid overdose victim by bystanders or immediate responders. Naloxone mitigates the effects of the opioid on the victim in a way that greatly increases the victim's chance of survival.

Increase the resilience of the individual. Programs that educate individuals about the signs of opioid overdose, the need for an immediate response, and the process for self-care or care for others can reduce the likelihood of fatal overdose by helping those who use substances to prepare physically and mentally to effectively mitigate an overdose. Immediate bystander methods of care, such as provision of rescue breathing or cardiopulmonary resuscitation (CPR) and the administration of naloxone for opioid overdose, can also be considered ways to increase the individual's capacity to survive the overdose incident. But they depend upon other individuals to be part of the solution.

Post-Event

Provide a rapid treatment response for the individual. Rapid response by trained and equipped first responders—even by those who normally lack a medical role (e.g., law enforcement and firefighters)—and by citizen respond-

ers significantly increases the chances of survival for an overdose victim. Even in non-opioid overdoses, where naloxone is not effective, rapid access to supportive care such as airway maintenance and CPR can prove lifesaving to an individual suffering an overdose.

Provide treatment and rehabilitation for the individual. Treatment and rehabilitation are key to successfully reducing the burden of substance use and overdose events, both for individuals who use substance and for the community. Effective treatment programs include

more than just access to a treatment program or facility; they also incorporate active outreach to substance users, intake processes that minimize barriers (e.g., lack of transportation, costs, fear of separation from family, fear of suffering withdrawal symptoms, etc.), rehabilitation services such as job training and transitional recovery housing, and support for reintegrating the recovering individual into the community.

The Program Directory in Part II of this document contains a list of numerous programs and intervention strategies for addressing

Factors and prevention opportunities associated with substance use and drug overdose.

	Individual (Host)	Substance (Agent)	Environment
Pre-Event (Non-Use)	<ul style="list-style-type: none"> prevention education reduction of individual risk factors (e.g., untreated mental illness or pain) 	<ul style="list-style-type: none"> illicit drug access reduction (law enforcement) implementation of proper prescribing practices 	<ul style="list-style-type: none"> poverty reduction reduction of environmental stressors (e.g., crime, homelessness or poor-quality housing) economic security drug take-back programs
Pre-Event (Active Use)	<ul style="list-style-type: none"> naloxone distribution and use education safer use education 	<ul style="list-style-type: none"> targeted enforcement to reduce fentanyl and analogues in illicit drugs limitation of total morphine milligram equivalent of opioids prescribed to an individual patient 	<ul style="list-style-type: none"> availability of monitored substance use locations mutually supportive social relations among substance users
Event	<ul style="list-style-type: none"> encouragement of substance dose titration education of warning signs of imminent overdose 		<ul style="list-style-type: none"> prompt bystander care (including the administration of naloxone for opioid overdose)
Post-Event			<ul style="list-style-type: none"> rapid public safety response to overdose events

substance use and drug overdose in your community. Just as some fish prefer shiny spinners and others are most easily caught with live bait, different individuals and populations will likely benefit from differing programs. The programs we have listed, and others that are offered by other sources, are the lures in your tackle box — the specialized tools that allow you to target the specific needs of your community. Understanding how prevention strategies work at a broad level will help you to select and support effective programs and intervention strategies.

SETTING MATTERS: URBAN VERSUS RURAL COMMUNITIES

Some people perceive that substance misuse and overdose-related injuries and fatalities are primarily an urban issue, but this is not the case. Many urban communities do have high rates of substance misuse and overdose, but the same is true for many rural communities. While the issues are similar in both types of communities, some differences must be considered.

Urban communities face a number of specific risk factors such as high rates of social and income inequality, high poverty rates in specific sections of the community, easier and more diverse access to illicit drugs, limited links between individuals and the broader community, stressors associated with urban traffic and congestion, pollution, and frequent environmental changes. Urban communities also have positive, protective factors such as greater access to health care and mental health services, numerous opportunities for participation in social and athletic organizations, large law enforcement agencies capable of supporting substantial drug access reduction efforts, and rapid access to initial responder naloxone administration, emergency medical services (EMS), and hospital care for overdose patients.

Rural communities have some specific risk factors of their own, including geograph-

ic isolation, high rates of poverty, a lack of (or limited) access to health care and mental health services, increased availability of prescription opioids in some communities, limited law enforcement (with concurrently fewer resources for drug access reduction), a high percentage of the working population engaged in physically demanding occupations that increase the likelihood of acute or chronic pain, limited and/or delayed access to naloxone, EMS, and hospital care for overdose patients, and limited access to substance use prevention and treatment programs. Rural communities may also have some protective factors such as more limited access to illicit drugs, stronger bonds between individuals and their neighbors and community, and increased access to outdoor activities in the natural environment.

Studies have found that alcohol use, binge drinking, and methamphetamine use are all higher in rural youth and young adults than in their urban counterparts.^{12, 13} Opioid use is high in many rural areas, and the five states with the highest drug overdose fatality rates are predominantly rural, though urban areas also experience high rates of opioid use.¹⁴ Suburban communities typically have a mix of urban and suburban characteristics, but most tend more toward the urban profile.

Whether urban or rural, each community is unique. It is important to consider your community's setting and characteristics, resources, and unique cultural environment when selecting substance use and drug overdose prevention strategies. Programs designed for specific environments and resource levels may work less well, or not at all, in communities that are substantially different. A knowledgeable angler with a well-stocked tackle box can select the most appropriate equipment for the situation. We believe that the same is true for substance use and overdose prevention strategies.

WEAVING A NET

If you want to catch a few fish, a fishing pole with a single line is the tool of choice. If you need more fish, you can fish with several lines. If you want to catch different types of fish, you will usually need to employ a different type of lure on each line. To catch a large number of fish of several different types, however, the best way is to weave many lines together to make a net.

The same principle applies to preventing substance use and drug overdose. A single program can target a particular demographic group, but it is unlikely to be effective across a wide spectrum of age cohorts, socio-economic levels, and social groups. Most programs also target a specific aspect of the substance use situation (for example, teaching youth to avoid substance use altogether but not addressing overdose prevention among those who are already using substances).

Even in small communities, multiple programs are likely to be needed to address multiple aspects of substance use and overdose risk in the community. Different programs and approaches will be needed for different audiences. Multiple independent programs can be effective, but they will have a greater overall impact when they work together to address the prevention needs of the community. By sharing information and resources, and by helping to transition individuals smoothly between different programs as needed, the needs of different individuals at differing stages of the substance use continuum can be met. Providing comprehensive programs that range from primary prevention to harm reduction to treatment and rehabilitation offers individuals the best chance to avoid substance use or to recover from SUD.

To build an effective net, you need a network—a coalition of individuals and organizations that are providing or supporting prevention and treatment programs, local officials and policymakers, concerned citizens, members of

the business community, and everyone else who has a stake in addressing the issues of substance misuse and drug overdose in your community. Ideally, your coalition should include individuals who are using substances or who have recently recovered from SUD. They best understand the needs and concerns of others with SUD, and they are often the most effective link between those who want to help and those who need help.

Building and maintaining an effective coalition can be more complicated than many people expect. There are many books, classes, and programs that provide guidance on coalition building. Training and advice are also available from the Drug Overdose Technical Assistance Core (DOTAC) at the Kentucky Injury Prevention and Research Center. Providing detailed guidance in coalition building is beyond the scope of this tackle box. We will, however, list the key activities of an effective prevention coalition.

Build a Functioning Coalition

This process involves more than simply inviting people to a meeting; it involves identifying key leaders and stakeholders in your community, determining how each might be able to contribute to the coalition's efforts, and identifying the key decision-makers within potential partner organizations. Coalition development includes the following steps:

Secure support and involvement from community leadership. This can include the chief executive of your local government or institution, members of your city council or fiscal court, and other elected officials (e.g., your sheriff, coroner, jailer, constables, property valuation administrator, etc.). Others to involve include senior appointed officials (e.g., chiefs of public safety agencies, your local or regional public health director, and others), key members of the business community, representatives of organizations involved in substance use prevention

and treatment (e.g., local Agency for Substance Abuse Policy boards, Regional Prevention Centers, and private organizations), healthcare providers, and others with a stake in preventing or reducing substance use and drug overdose events in your community.

Establish a core group. Bring together key stakeholders to outline the goals and scope of your coalition. What will you do, and what geographical area will you serve? Consider leveraging an existing group, if one exists, when forming your coalition. This group may serve as an incubator for your coalition or even develop into the core group for your coalition. Your core group can help you develop a mission statement and initial plan, identify data sources (see page 21) and potential resources, and encourage others to join.

Identify a lead organization. In most cases, it is best for one organization to take the leadership role in the coalition-building process. We highly recommend two leads from different organizations. The lead role may change over time, and the coalition can be led by any organization. The purpose for having lead organizations is to ensure coordination for meetings and provide a consistent point of contact for coalition members. The lead organizations' role is administrative, not managerial; important decisions should be made by the coalition as a whole.

Develop a guidance document to provide structure for your coalition. Whether you call this document your bylaws, terms of reference, a memorandum of understanding, or something else really doesn't matter. What matters is that your coalition needs a written set of guidelines for how members are selected, how (and when) leaders will be chosen, when meetings will be held and how they will be conducted, and how decisions will be made. The guidance document will help ensure that your coalition is more than just an informal discussion group and resolve any disputes about the

coalition's role, responsibilities, and mission that may occur.

Focus on building positive working relationships. In too many communities, prevention efforts are hampered by competitive (rather than cooperative and collaborative) relationships, personal disagreements, and a lack of compromise. A net is only effective when it is strongly woven and doesn't have large holes. Prevention and treatment efforts are most effective when they are collaborative, interconnected, and work cooperatively to meet community needs.

Perform (or Update) a Community Assessment

Before you begin planning new programs and intervention activities, you need to clearly determine what your community's primary needs are and what programs are already addressing those needs. Your coalition should identify reliable sources for data about substance use and drug overdoses in your community. Data may be formal (e.g., reports and statistics from government agencies and health care organizations) or informal (e.g., the first-hand experiences of local emergency responders and healthcare providers). Once you have data available, your coalition should review it to determine what the most pressing needs are.

Your coalition should also perform, or update, a community assessment to identify existing programs that are already in operation as well as any laws and policies, processes, and practices that are in place to address the issue. When you identify existing programs, include information about the type of work done by each program, the group(s) that it serves, and its capacity. Identify any existing partnerships and working groups and invite them to join or collaborate with your coalition. Finally, include in your assessment an inventory of resources and expertise available to your coalition. Knowing what you already have will help you to determine what you still need.

Perform a Gap Analysis

A gap analysis is simply a review of what programs and interventions are needed, and those that are available, to identify any gaps. For example, a community might have a school-based substance use prevention program for children and teens, a needle exchange harm reduction program for substance users, and treatment available for those who are ready to accept it, but the community lacks any primary prevention programs for adults or a rapid response program for drug overdose events. By comparing existing programs and interventions to the needs you have identified, your coalition can identify groups that are not being adequately served and situations that are not being fully addressed.

Set Goals and Programmatic Priorities

In most cases, a coalition will not be able to immediately address all of the gaps that have been identified. Even if community needs do not exceed the available resources, the time required to select or develop and implement programs means that some will be implemented before others. Your overall priorities should be based on your community's needs, as identified during your analysis of substance use and overdose data for your community. To address those priorities, however, your coalition will need to set specific goals and decide which intervention programs should be developed first.

It is important to keep your goals specific and measurable. A goal to reduce the problem of drug overdoses in your community isn't really measurable, but a goal of reducing the number of drug overdose patients who require an emergency medical services response by 50% within three years is measurable. You should also choose goals that are attainable but that are not too easy to accomplish. Accomplishing easy goals may feel good, but it is unlikely to make a significant impact on substance use and drug overdose events in your community. On the

other hand, working toward an unrealistic and unattainable goal can soon sap the energy and motivation from your coalition members. The ideal goal is one that requires effort but that can also be achieved and will represent meaningful progress.

Select, Implement, and Evaluate Intervention Projects and Programs

Once you have identified groups and situations that need attention, you can select programs and intervention strategies that meet those needs. The Program Directory included in this tackle box offers a large number of options, and other program ideas are available from a wide variety of sources. Later sections will provide information about how to select, implement, and evaluate programs. The most important things to keep in mind are that you should select programs that match your community's needs and available resources and that have evidence to support their effectiveness. Once you have selected appropriate intervention programs, you should follow best practices in implementing those programs and evaluate them regularly to ensure that they are working effectively. Additional information about program implementation is provided in chapter 2.

When you select and implement strategies and programs, it is important to remember that they likely will change over time. The substance misuse and drug overdose epidemic is a result of many complex and interconnected social and cultural factors that will likely persist for decades, if not longer. This does not mean that we cannot make progress against the epidemic; it only means that progress will sometimes be slow and that it may take a generation or more to return substance use and overdose rates to their pre-epidemic levels.

Additionally, the demographic groups with higher rates of substance use and greater overdose risk will change over time and intervention strategies and specific programs will

need to evolve to reflect these changes in the ‘at-risk’ population.

Just as with fishing, patience is a key quality for those working to reduce substance use and drug overdoses.

PROGRAM CATEGORIES: WHAT DO THE TERMS MEAN?

It is important to choose substance use prevention and overdose prevention strategies that have the best available evidence to support them. Even the least complex strategies and prevention projects require a substantial investment of time, money, and other resources to implement. Choosing strategies that have been evaluated and found to be effective is the best way to ensure that limited resources are used as efficiently as possible. When selecting intervention strategies, it is important to understand the various levels of evidence of effectiveness.

Evidence-based strategies, practices, and programs are those that have been evaluated in a formal, rigorous way, using a strong research design, and found to be effective at achieving the goals for which they were designed.

You may sometimes see evidence-based strategies described as “supported” or “well-supported.” These terms refer to the strength of the research design used to evaluate the strategy. In general, the evidence that determined the efficacy of a “well-supported” strategy is likely to be somewhat stronger than the evidence for a “supported” strategy, but both have been evaluated and found to be effective.

Evidence-informed strategies, practices, and programs use the best available research and practice knowledge to guide program design and implementation, but they have not been evaluated sufficiently to be described as evidence-based. While they have not been fully evaluated, evidence-informed strategies are typically the best choice whenever an evidence-based strategy is not available.

Promising strategies are based on logical design and available evidence but may address areas of practice where the available evidence is limited or even nonexistent. This may be the case because they address a new area of practice where little research has been done or because they address complex issues where the existing research is inconsistent or ongoing. A lack of available evidence for a strategy does not mean that the strategy does not work; it may simply mean that the strategy has not yet been properly evaluated. If you choose a promising practice, carefully evaluate the strategy throughout the implementation process to ensure that it achieves the planned objectives.

Unsupported strategies are those that have been evaluated and did not show evidence of being effective. In some cases, the failure to find evidence of effectiveness may have been due to a poor research design or because the study sample size was too small. Unsupported programs may be worthy of additional research and evaluation, but we cannot recommend an unsupported strategy for use in a community setting.

Harmful strategies are those that have been evaluated and evidence was found that the program may actually have a negative effect. For example, a youth tobacco-use prevention program might have been found to increase the use of tobacco among teens who participated in the program. We strongly recommend that you do not implement strategies that have been found to be potentially harmful.

Additional information about the levels of effectiveness can be found in *A Guide to the Continuum of Evidence of Effectiveness*. This document, published by the National Center for Injury Prevention and Control, can be found online at www.cdc.gov/violenceprevention/pdf/understanding_evidence-a.pdf.

Understanding the evidence level available to support a particular strategy can help

you select the best programs to prevent substance use and drug overdoses in your community. When an evidence-based practice is available, we strongly recommend that it be selected.

In situations where there is no evidence-based program that addresses your specific needs, the selection of evidence-informed or promising practices should be the next choice.

CHAPTER 2

SELECTING, IMPLEMENTING, AND EVALUATING PROGRAMS

CONSIDERATIONS FOR PROGRAM SELECTION

In the best of all worlds, your gap analysis would reveal that there are no significant holes in the substance use prevention and harm reduction/overdose prevention programs in your community. Should that be the case, your coalition will need only to facilitate coordination and cooperation between the existing programs. Most coalitions, however, will identify a number of gaps in the prevention and harm reduction services available in their community. When gaps are found, the next step is to identify and select appropriate intervention programs to fill the gaps.

There are a variety of issues to consider when selecting specific intervention strategies and programs to implement in your community. We have already discussed the need to focus on evidence-based strategies whenever possible and to avoid harmful programs and those that have been evaluated and found to lack any evidence of effectiveness. In some cases, where an evidence-based or evidence-informed program is not available, you may need to use or create a program that hasn't yet been evaluated. In this case, you will need to develop and conduct a robust evaluation of your program, as described in the *Evaluating Programs* section on page 19.

The programs that you select should match your target audience. A prevention program that has been found to be effective for elementary-aged children might be

totally ineffective for teens. It might even be harmful, if the teens feel that they are being treated like young children. Additionally, choose programs that were designed for the purpose (e.g., primary prevention versus harm reduction) that you need to address.

Select programs that your local resources can support. Even the most effective program may fail if it cannot be implemented correctly. Some programs require extensive (and expensive) resources, such as facilities, specially trained staff, medications, etc. Others can be implemented with a much lower investment. SUD is a long-term, chronic condition, so it is important to look at the cost and effort required to maintain your prevention and harm reduction programs over the long term. Selecting the most effective programs that you can support is a wise choice, but it is important to avoid selecting programs that you are unlikely to be able to implement and sustain.

The programs that you select should be culturally appropriate for your community. Programs that reference urban situations and cultural norms are likely to be inappropriate for a rural community. If a large percentage of your community regularly participates in religious services, you may want to include faith-based programs in your selection. If your community includes a significant population that is linguistically or culturally distinct, you should ensure that you include programs that are appropriate for that population.

It is important to consider a mix of primary prevention, harm reduction, and

treatment and recovery programs. Dealing with community substance use issues can be likened to having a hole in your fishing boat. If there is a hole in your boat, you need to bail in order to keep the boat from sinking—but you also need to patch the hole and stop the water from coming into the boat so that you don't have to bail forever. Harm reduction programs are like bailing your boat; they address the immediate need to prevent a crisis by reducing overdose fatalities and the transmission of communicable disease. At the same time, it is important to try to reduce the number of new substance users through primary prevention and reduce the number of active users through treatment and recovery programs. By slowing the influx of new substance users and helping those who are already using substances to access effective treatment, we reduce the need to “bail the boat” in the future.

Finally, focus on programs that excite interest and elicit support from your coalition members. If you cannot gain support to implement and maintain a program, its other characteristics are meaningless. This doesn't mean that your coalition should select programs based only on their popularity; rather, it means that they should select programs that are based on the best available evidence, that are culturally appropriate, that can be supported by local resources, and that the coalition members feel motivated to implement and maintain. All of these factors are important to consider in the selection process.

The program selection process is not a one-time, “one-and-done” process. Instead, it will continue as the needs of your community change over time. In some cases, the success of a program may allow you to end that program; in other cases, a new need may be identified. Just as anglers often change lures when they go after different fish or when water conditions change, prevention coalitions often need to change their

programs to deal with changing circumstances. Even better, weave a net of interrelated programs to address the widest possible spectrum of risk factors and provide the best practical access to prevention and treatment.

IMPLEMENTING PROGRAMS

Once a coalition has selected one or more intervention programs, it will be faced with the task of implementing that program. In most cases, programs will be implemented by one organization or by a few organizations working in partnership while the rest of the coalition provides support when appropriate. Ideally, different coalition partners will implement different but coordinated programs so that each major prevention or harm reduction need in the community is met.

Some programs are highly formalized, with a very specific structure, a written implementation guide, and other resources. Most programs in this category have a specific name and were designed for a particular audience and situation (e.g., Too Good for Drugs, a school-based substance use prevention program developed by the Mendez Foundation, page 89). Following the requirements for a formalized program may not always be easy, but you will have clear guidance as to what those requirements are and how the program should be conducted.

Many programs are less formal. Programs ranging from the provision of free transportation to treatment to law enforcement traffic safety checkpoints have been found to be effective at addressing some aspect of substance use and/or drug overdose prevention or mitigating negative community impacts from these conditions, but the details of how these programs are conducted can vary from community to community. If written guidance and/or training is not available for a program, best practices often can be gleaned from other practitioners, conference presentations, online research, and other sources.

When formal guidance or a consensus on best practices exists for an intervention program, it is important to implement the program in accordance with the guidelines. This is known as program fidelity. A program that works effectively when implemented as designed may become less effective, or even ineffective, if it is changed significantly.

In some cases, you may need to develop or modify programs specifically for your community, for instance if there is no existing, evaluated program that meets your specific needs. If you must create a program, it is important to document the implementation process for your program. This will help others to carry on the program in the future and also will allow it to be replicated in other communities, if your evaluation shows that it is effective.

EVALUATING PROGRAMS

It is critical that substance use and drug overdose prevention programs be evaluated to determine whether they are working effectively. Linking specific programs to overall changes in substance use and/or overdose events can be difficult or impossible, but that should not prevent you from conducting program evaluations. In most cases, you can evaluate the program's processes and primary outcomes or effectiveness. The Centers for Disease Control and Prevention recognizes four common types of evaluation:

- Formative evaluation ensures that a program or program activity is feasible, appropriate, and acceptable before it is fully implemented. It is usually conducted when a new program or activity is being developed or when an existing one is being adapted or modified.
- Process/implementation evaluation determines whether program activities have been implemented as intended.
- Outcome/effectiveness evaluation measures

program effects in the target population by assessing the progress in the outcomes or outcome objectives that the program is to achieve.

- Impact evaluation assesses program effectiveness in achieving its ultimate goals.

(from Types of Evaluation, the Centers for Disease Control and Prevention, www.cdc.gov/std/Program/pupestd/Types%20of%20Evaluation.pdf)

Formative evaluation should be performed whenever you develop a prevention program unique to your community or make significant modifications to an existing program. If you choose to use an existing program with little or no modification, you should not need to engage in a structured formative evaluation process. You should, however, review whether implementing the program in your community is feasible, that it is appropriate for your needs and the target audience, and that it is acceptable to your organization, your partners, and all stakeholders.

Process evaluation focuses on assessing the various processes that are conducted as part of the program. For example, if you are evaluating an educational program, you might want to record and evaluate the number of educational sessions offered, the number of individuals who complete the training, and basic demographic information about the participants. If you are organizing a community-based transportation program to help those with SUD reach treatment programs, you might wish to evaluate the number of partner organizations that are supporting the program, the amount of resources contributed to the program, and the number of individuals transported to treatment sessions. Measuring the various process components will help you determine whether a program is reaching the intended audience, how well it is serving them, and whether it is cost-effective and sustainable.

Outcome evaluation measures the effectiveness of the program in reaching its intended objective(s). The outcome of an education program might be evaluated by administering pre- and post-session tests to participants and then measuring the level of change in their knowledge or expressed perceptions of risk. The outcome of a transportation program might be evaluated based upon the percentage of individuals in treatment who report that they have missed a treatment session within the past 30 days due to a lack of transportation, while a law enforcement program aimed at reducing the availability of illicit drugs might be evaluated based upon the number of successful prosecutions of individuals charged with trafficking in significant amounts of illicit drugs.

Impact evaluation can be very difficult for prevention programs because so many factors affect the level of substance use and the number of overdose events in a community. If you develop and implement a new prevention program, and data show a decline in overdose events in your community, was the decline due to the impact of your program, the impact of a different program operated by another organization, the combined impact of both programs — or some other factor(s) entirely? In many cases, the best that you can hope for is to show correlation between the demonstrated outcome(s) of your program and a decline in the targeted condition.

Whenever you decide to adopt or design a new program, part of the setup process should be to determine how you will evaluate the program. You should build data collection into the program so that you will have the data you need to evaluate the program.

It is important to understand that an evaluation should not be a threat to your programs and efforts. If an evaluation reveals an issue with a program, it is often possible to modify the program to resolve that issue. If a significant issue cannot be resolved by mod-

ifying the program, it is likely best to select a different program. When you've fished for a while without catching fish, it's sometimes best to change lures.

Evaluation Example 1: A local health department decides to adopt an existing, evidence-based substance use prevention program that provides prevention education to teens and young adults. After reviewing the program to ensure that it is practical to implement and appropriate for the community's needs and culture, the department offers educational sessions at various venues within the community. The department evaluates the implementation of the program by collecting information on the number of sessions conducted, the number of venues that agree to host the program, and the number of participants in program sessions. They evaluate the program's outcome by administering a pre-test to participants prior to providing them with prevention education and then administering a post-test following each session, to measure changes in participants' knowledge and expressed attitudes toward substance use.

Evaluation Example 2: A community coalition sees a need for a transportation program to help individuals who are in substance use treatment get to their treatment sessions. This is a new program, so the coalition conducts a formative evaluation. They meet with treatment providers and individuals in treatment to verify that there is a need and to determine what services are lacking, then they convene a meeting with a variety of local organizations to determine which groups can and will provide support for the program. Once they determine that the program is practical and will meet (or help meet) the existing need, they set up the program. They collect process measures such as the number of volunteer drivers and supporting organizations, the number of trips provided, and basic demographic data about the clients served. To

evaluate the program's outcome, every three months they survey individuals in treatment to determine what percentage missed a treatment appointment during the previous 30 days due to lack of transportation.

Evaluation Example 3: Three law enforcement agencies in a county consider creating a dedicated drug trafficking investigative unit to try to reduce the availability of illicit drugs in the county. After reviewing their proposed program for feasibility, they solicit information from agencies in other counties that have implemented similar programs to determine what they may be able to expect if they implement their program. Once the three law enforcement agencies determine that the program may be beneficial, they implement the program and track its activity through process measures such as the number of officer hours dedicated to the unit, the number of new drug trafficking investigations, the number of arrests for trafficking in significant amounts of illicit drugs, and the percentage of convictions obtained from those arrests. To evaluate the program's impact, they work through a local needle exchange program to informally survey clients about how difficult it is to obtain illicit drugs in the county.

The following evaluation resources are available from the CDC:

- Types of Evaluation: www.cdc.gov/std/Program/pupestd/Types%20of%20Evaluation.pdf
- Summary of the Framework for Program Evaluation: www.cdc.gov/eval/materials/frameworksummary.pdf

DATA SOURCES

Evaluating intervention programs and their impact on the community requires access to various types of data. Data about the number of overdose incidents that occurred in your community, the number of overdose victims

who required naloxone or who were transported to a hospital, the number of individuals who were cited or arrested for possession of illegal substances, and other data can all be useful in determining the impact of substance use and overdose incidents on your community, the population groups most at risk, trends in substance use and overdose events, and whether prevention programs are having an impact. Some sources of data, and types of data that may be available from each, are listed below.

The Kentucky Injury Prevention and Research Center (KIPRC) produces extensive reports that summarize overdose-related fatalities, hospitalizations, and emergency department visits. KIPRC also offers county profiles and customized reports for specific needs. www.mc.uky.edu/kiprc/publications-and-reports.html. For custom reports, send requests to: KIPRCrequests@uky.edu.

Hospitals can provide the number of patients treated in their emergency departments for overdoses and how many went on to be admitted. In many cases they may also be able to provide data about the type(s) of substances that caused the overdoses. While HIPAA regulations prevent them from releasing information that might be used to identify a specific overdose patient, hospitals may be able to provide generalized demographic data that will help you identify the groups most at risk of overdose in your community.

Public health departments often have data about the number of overdose events in their community. Those that operate syringe service programs and/or naloxone distribution programs may also have access to firsthand reports from active substance users that can help you develop and target prevention and harm reduction programs more effectively.

Emergency medical services (EMS) agencies can provide information about the number of patients they treated and/or trans-

ported for suspected overdoses. They may also be able to provide information about the substances involved and possibly demographic data, though EMS agencies are prohibited by HIPAA regulations from providing information that might be used to identify a specific overdose patient.

Law enforcement agencies, including city and county police, sheriff's offices, the Kentucky State Police, and regional drug task forces, can provide information about the substances commonly available in your community and the number of individuals cited or arrested for illegal drug possession or trafficking. Law enforcement agencies often respond to overdose events along with EMS personnel so law enforcement agencies may have information about the number of overdose events in the community. Law enforcement agencies are not covered by HIPAA so they may be able to provide demographic information that is not available from EMS or hospital sources.

First responders such as fire departments and rescue squads may be able to provide information about overdose events as well. What role if any these organizations play in overdose emergency response will depend upon how public safety services are structured in your community. Some of these organizations provide medical first response, or encounter overdose patients during responses to other incidents, while some rarely encounter overdose patients.

Public safety answering points, or dispatch centers, may be able to provide data about the number of reported overdose events and the agencies and resources dispatched to them.

Substance use treatment programs and recovery support groups can often provide information about common substances used in the community as well as the needs of people with SUD and individuals who are in treatment or recovery. Current substance users and individuals in recovery are often excellent sources

of data about substance use patterns in the community and what resources are needed. We strongly encourage the inclusion of current or former substance users in the development and implementation of substance use and overdose prevention programs.

ADDITIONAL RESOURCES

We have worked to stock our tackle box with useful intervention strategies and guidance, but we are certainly not the only source of valuable information regarding substance use and drug overdose prevention and treatment. The following resources provide a wealth of information and guidance, and we recommend them to your attention:

Opioid Overdose Epidemic Toolkit for Local Health Departments is a resource provided by the National Association of County and City Health Officials. It provides a wide array of program ideas, examples, and resources that may be helpful to local public health officials and prevention coalitions. www.naccho.org/programs/community-health/injury-and-violence/opioid-epidemic/local-health-departments-and-the-opioid-epidemic-a-toolkit#prevention

Rural Prevention and Treatment of Substance Use Disorders Toolkit by the Rural Health Information Hub (RHIhub). RHIhub is supported by the US Health Services and Resources Administration. www.ruralhealthinfo.org/toolkits/substance-abuse

2018 Drug Use Prevention Curriculum Resource Guide, a guide to school-based substance use prevention programs published by the Kentucky Office of Drug Control Policy. odcp.ky.gov/Reports/KY-ODCP%20Drug%20Prevention%20Program%20in%20the%20Schools%20Recommendation%20final%20%28ADA%29_asm.pdf

Begin Addressing Opioids in Your Workplace, a guide for employers from the National Safety Council. This toolkit includes sample policies, fact sheets, presentations, safety talks, posters, white papers, reports, videos, and other resources to help employers implement a workplace program on opioids. www.nsc.org/pages/prescription-drug-employer-kit

Opioids and the Workplace, from the Kentuckiana Health Collaborative, is another guide for employers. It focuses on supporting substance use prevention, treatment, and recovery. www.khcollaborative.org/wp-content/uploads/2019/04/Opioids-and-the-Workplace-Interactive-Version-1.0.pdf

The Rural Community Health Toolkit from RHIhub is not specific to substance use and overdose prevention, but it offers very good information about developing, implementing, and evaluating evidence-based programs in a rural setting. www.ruralhealthinfo.org/toolkits/rural-toolkit

The Recovery Research Institute of Massachusetts General Hospital has a variety of substance use disorder recovery resources available. www.recoveryanswers.org

The National Center on Substance Abuse and Child Welfare, operated by the US Substance Abuse and Mental Health Services Administration, is a national resource center providing information, expert consultation, training, and technical assistance to child welfare, dependency court, and substance abuse treatment professionals to improve safety, permanency, well-being, and recovery outcomes for children, parents, and families. www.ncsacw.samhsa.gov

Selecting Behavioral Health Prevention Programs: A Guide for Kentucky Schools Grades K–12, produced by the Kentucky Cabinet for Health and Family Services and Kentucky Regional Prevention Centers, includes process steps, information, and tools to help schools select the best programs to reduce substance use/misuse, mental health and violence issues. dbhdid.ky.gov/dbh/bhpp-resources.aspx

The Rural Youth Engagement Toolkit was created by the Community Anti-Drug Coalitions of America to address substance misuse in rural communities through the meaningful engagement and involvement of rural youth in the process. cadca.org/resources/rural-youth-engagement-toolkit

The Coalition Impact: Environmental Prevention Strategies, produced by the Community Anti-Drug Coalitions of America's National Community Anti-Drug Coalition Institute, provides an overview of the environmental strategies approach to community problem solving and includes examples of efforts where environmental strategies aimed at preventing and reducing community problems related to alcohol and other drugs were implemented. www.cadca.org/resources/coalition-impact-environmental-prevention-strategies



NOTES

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⁵Borger, Julian. Hillbilly heroin: the painkiller abuse wrecking lives in West Virginia. *The Guardian* (US Edition). June 24, 2019.

⁶Kentucky Drug Threat Assessment. National Drug Intelligence Center, US Department of Justice. July 2002.

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⁸Kentucky Opioid Summary. Bethesda, MD: National Institute on Drug Abuse. Revised March 2019.

⁹Kentucky Drug Overdose Mortality Dashboard – Kentucky State Drug Overdose Mortality Trend Charts. Lexington, KY: Kentucky Injury Prevention and Research Center, University of Kentucky. March 2020.

¹⁰Estep, Bill. 'Crystal meth by the pound.' Drug's rise in Kentucky leads to arrests, abuse. *Herald-Leader*. Nov. 27, 2018.

¹¹Kentucky Drug Overdose Fatality Surveillance System Quarterly Update, Q3/2018. Lexington, KY: Kentucky Injury Prevention and Research Center, University of Kentucky. Feb. 2019.

¹²Gale, JA, Lenardson, JD, Lambert, D, and Hartley, D. Adolescent alcohol use: Do risk and protective factors explain rural-urban differences? Working Paper #48. Portland, ME: Maine Rural Health Research Center. March 2012.

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GLOSSARY

This section is intended to help you become familiar with terms that you may encounter when working in the field of substance use and drug overdose prevention. Most of these definitions have been adapted from other sources, including the Addictionary® of the Recovery Research Institute (see www.recoveryanswers.org/addiction-ary).

Abstinence—absence of any substance use. Abstinence is most often interpreted as meaning complete abstinence, but there are a variety of types of abstinence, including:

- *Continuous abstinence*: not consuming the substance during a specified period of time;
- *Essentially abstinent*: not consuming more than a specified amount of the substance over a period of time;
- *Minimal abstinence*: achieving a minimal period (duration) of recovery during a period of time;
- *Point-in-time abstinence*: not consuming the substance at a single point in time (e.g., within the past 30 days);
- *Complete abstinence*: continuous abstinence from all alcohol and other substances on an ongoing basis;
- *Involuntary abstinence*: enforced abstinence due to hospitalization, incarceration, or other inability to access the substance.

Abuser—a stigmatizing term for a person who exhibits limited ability to control their substance use despite suffering

harmful effects from substance use; instead of using this term, use the term “substance user.”

Acceptance and Commitment Therapy (ACT)—a cognitive-behavioral approach used in the treatment of substance use disorders that is based on the concepts of acceptance, mindfulness, and personal values.

Acute care—immediate, short-term, medically managed or monitored care that typically lasts up to 31 days. Most substance use treatment programs (“rehab”) follow an acute care model. Because substance use disorder is a chronic illness, recovery often requires ongoing, continuing care beyond acute treatment episodes.

Addict—a stigmatizing term for a person who exhibits impaired control over engaging in substance use (or other reward-seeking behavior, such as gambling) despite suffering severe harms caused by the substance or activity. This term should no longer be used. Instead, use “person suffering from addiction” or “person with substance use disorder.”

Addiction—a complex condition; a brain disease that is manifested by compulsive substance use despite harmful consequence. The American Society of Addiction Medicine defines addiction as a primary, chronic, neurobiologic disease with genetic, psychosocial, and environmental factors influencing its development and manifestation. The term “addiction” remains a valid medical term, but many individuals and organizations prefer to use the term “substance use disorder” instead, to minimize

the risk of stigmatizing individuals who suffer from the disease.

Addiction counselor—a type of non-medically credentialed substance use disorder treatment provider. Counselors' titles, required level of education, and required level of training vary across jurisdictions. Addiction counselors encompass substance abuse counselors (SACs), certified alcohol and substance abuse counselors (CASACs), and certified alcohol and drug counselors (CADCs).

Addiction medicine physician—a physician who is board-certified in a specialty other than psychiatry who has undergone specialized training in addiction diagnosis, treatment, and management but who typically does not provide addiction-specific psychotherapy, although he or she may provide brief counseling.

Addiction psychiatrist—a physician who is board-certified as a psychiatrist with specialized training in addiction diagnosis, treatment, and management. Addiction psychiatrists can provide therapy, although most emphasize and prescribe medications and work in collaboration with social workers, psychologists, or counselors who provide psychotherapy.

Agonist—a substance that activates a receptor to produce a biological response. Most commonly misused substances activate receptors in the brain and cause the production of dopamine, a neurotransmitter (chemical) that activates the pleasure center of the brain. See *Antagonist*.

Al-Anon—a peer support organization for people who have been affected by a loved one's alcohol use disorder. Groups are based on the 12-step principles of Alcoholics Anonymous (AA), and meeting attendees share stories and build supportive networks to help one another cope with the difficulties of having a loved one experience an alcohol use disorder. The focus is placed more on changing oneself and one's patterns of interacting with the addicted loved one

rather than on trying to change the alcohol-addicted person's behavior directly.

Alcohol—a liquid that is, or contains, ethanol or ethyl alcohol. Alcohol acts as a depressant to the central nervous system, producing feelings of relaxation and pleasure, reduced inhibitions, motor impairment, memory loss, and slurred speech. At high doses, alcohol can cause breathing problems, coma, or death.

Alcoholic—a stigmatizing term for a person who exhibits impaired control over engaging in alcohol use despite suffering severe harms caused by alcohol use. While some individuals in alcohol-use recovery may insist on using this term for themselves or others who suffer from alcohol-use disorder, it is highly recommended that the term be avoided; instead, use "person suffering from alcohol use disorder" or "person who has a substance use disorder."

Alcoholics Anonymous (AA)—an international fellowship and peer support organization for individuals with problematic drinking or alcohol use disorder. Founded in 1935, AA is a nonprofessional, multiracial, apolitical organization that is open to all ages. It is the largest mutual-help organization, offering meetings in thousands of locations in North America and in most countries around the world.

Alcohol use disorder—A problematic pattern of alcohol consumption characterized by the compulsive use of alcohol, impaired control over alcohol intake, and a negative emotional state when not using alcohol.

Alcoholism—a stigmatizing term for alcohol use disorder. Avoid using this term; use "alcohol use disorder" instead.

Alternative peer groups (APGs)—recovery support services for adolescents and emerging adults with substance use disorder. APGs engage groups members in a community of other recovering adolescents in order to capitalize on the same desire for peer acceptance that is known to drive, in part, adolescent motivations

for substance use. APGs are grounded in the theory that, when centered around fun activities with peers, recovery will be perceived as more rewarding than substance use.

Analgesic—a drug that relieves pain.

Antagonist—a substance that interferes with or inhibits the physiological action of another substance. For example, naloxone is an opioid antagonist that temporarily blocks the effects of opioids on receptors in the brain. See *Agonist*.

Assertive linkage—a strategy designed to ensure that a patient or client reaches the next level of clinical care or becomes connected to a recovery support resource. This typically involves an in-person introduction directly to the next level of care or resource. For example, a recovery coach may take a patient to their first AA meeting and introduce them to other members. Also known as a “warm handoff.” Research has shown this process to be more effective than passive referral. See *Passive referral*.

Assessment—an ongoing process used to determine the medical, psychological, and social needs of individuals with substance-related conditions and problems. Biological assays (e.g., blood or urine samples) as well as clinical diagnostic interviewing and the completion of self-reporting measures are used to determine the absence or presence of a substance use disorder or other psychiatric conditions. The ultimate goal of assessment is to develop a fully informed and helpful treatment and recovery plan. See *Driving under the influence assessment*.

Barbiturate—a type of medication and class of compounds that are central nervous system depressants that cause sedation and sleep. These medications have been largely replaced by benzodiazepines, which are less toxic and have lower potential for overdose risk. Barbiturates (e.g., phenobarbital) are still sometimes used medically, however, as anticonvulsants.

Basic Text—the foundational text of the

Narcotics Anonymous (NA) organization. It outlines the 12 steps and 12 traditions that are at the core of the Narcotics Anonymous program and contains personal stories of active addiction and recovery.

Behavioral addiction—a form of addictive behavior that involves a compulsion to engage in a rewarding, non-drug-related behavior—sometimes called a natural reward—despite experiencing negative harmful consequences due to the compulsive behavior. Examples of behaviors that may become addictive for some individuals include sex, gambling, eating, shopping, and Internet use.

Behavioral health—the field of health care and prevention concerned with substance use and other mental health disorders.

Benzodiazepines (“benzos”)—a class of psychoactive drugs that act as minor tranquilizers, producing sedation, muscle relaxation, and sleep. These drugs are commonly used in the treatment of anxiety, convulsions, and alcohol withdrawal. They are also popular drugs of misuse.

The Big Book—the common nickname for the basic foundational text of Alcoholics Anonymous. It outlines the 12 steps that are at the core of the Alcoholics Anonymous program and also contains personal stories of alcohol addiction and recovery.

Binge drinking—excessive alcohol consumption within a short period of time.

Biological model of addiction—a conceptual understanding of addiction that focuses on the genetic and other biological predeterminants or risks for developing and/or maintaining a substance use disorder.

Buprenorphine—a semisynthetic opioid used to control moderate to severe pain and to treat opioid use disorder. Buprenorphine is administered by injection to control pain, is used in the form of a transdermal skin patch to control pain or treat opioid use disorder, and is

used alone or in combination with naloxone in the form of a dissolvable tablet to treat opioid use disorder. Brand names for buprenorphine include Bunavail, Buprenex, Butrans, Subutex, Suboxone, and Zubsolv.

Carfentanil—a synthetic opioid developed for use as a large-animal anesthetic that has been found in illicit drugs within the United States. Like other opioids, carfentanil produces central nervous system depression, and exposure can lead to respiratory arrest. Carfentanil has a quantitative potency approximately 10,000 times that of morphine and 100 times that of fentanyl. As little as one microgram of carfentanil can produce effects in humans.

Case management—a service that is provided to youth and adults to help them gain access to needed medical, behavioral health, housing, employment, social, educational, and other services important to meeting basic human needs.

Clean—a stigmatizing term that refers to a state of a person being abstinent from substances of misuse. It may also be used in describing urine test results that are not positive for substance use. The term is stigmatizing because of its pejorative connotation, with the opposite being “dirty.” Instead of using this term, use “not using substances” or “abstaining from substance use.”

Closed meeting—a 12-step program meeting that is available only to individuals who identify with having a substance use disorder or think that they may have a substance use disorder and who want to stop substance use. See *Open meeting*.

Cocaine—a stimulant that activates the reward centers of the brain to produce sensations of great happiness and energy, increased mental alertness, hypersensitivity to sight, sound, and touch, and sometimes irritability or anxiety. Physiologically, cocaine produces constricted blood vessels, dilated pupils, nausea,

tremors and muscle twitches, rapid and/or irregular heartbeat, and increased blood pressure and body temperature.

Codeine—an opioid synthetically produced for the treatment of mild to moderate pain that works by activating the reward centers of the brain to provide pain relief. Like all opioids, codeine may become addictive with repeated use.

Co-dependency—a potentially stigmatizing term for immoderate emotional or psychological reliance on a partner. Often used with regard to a partner requiring support due to an illness or disease (e.g., substance use disorder). The term tends to pathologize individuals’ care for a loved one suffering from substance use disorder and may increase their shame.

Coercion—the intimidation of a victim to compel the individual to act against his or her will by the use of psychological pressure, physical force, or threats.

Cognitive behavioral therapy—a type of talk therapy (psychotherapy) that involves working with a professional to increase the patient’s awareness of inaccurate or negative thinking and behavior and to help him or her learn to implement new coping strategies.

Cold turkey—slang term for the abrupt and complete cessation of intake of an addictive substance. The term stems from the appearance of goosebumps on the skin that is often observable in addicted individuals when physiologically withdrawing from a substance.

Community Reinforcement Approach (CRA)—a psychosocial, cognitive-behavioral intervention for individuals with alcohol and other substance use disorders that has been adapted for several populations, including adolescents (the Adolescent-Community Reinforcement Approach or A-CRA) and family members of individuals resistant or reluctant to enter treatment (Community Reinforcement and Family Training or CRAFT).

Comorbidity—the occurrence of two disorders or illnesses in the same person; also known as co-occurring conditions or sometimes as a dual diagnosis.

Compulsive behavior—performing an act persistently and repetitively, even in the absence of reward or pleasure. Compulsive behavior is often enacted to avoid or reduce the unpleasant experience of negative emotions or physical symptoms (e.g., anxiety, withdrawal from a substance).

Contingency management—a broad group of behavioral interventions that provide or withhold rewards and negative consequences quickly in response to at least one measurable behavior (e.g., substance use as measured by a drug test). It is based on the principle of operant conditioning—that behavior is shaped by its consequences—and is sometimes referred to as motivational incentives, the prize method, or the carrot and stick method.

Continuing care—ongoing care of patients suffering from chronic, incapacitating illness or disease. Because substance use disorder is a chronic illness, it requires continuing care and ongoing recovery management rather than acute care or treatment delivered in isolated episodes.

Co-occurring disorders—a situation in which both mental illness and substance use disorder exist simultaneously in the same patient. Personality disorder may also co-exist with psychiatric illness and/or substance use disorders. See *Comorbidity*.

Coping strategies—specific efforts, both behavioral and psychological, utilized to master, tolerate, reduce, or minimize the effects of stressful events.

Crack—a crystal form of cocaine varying in color from yellow to pale rose or white. Ingested by heating and then smoking, crack is the purest form in which illicit cocaine appears. See *Cocaine*.

Craving—a powerful psychological desire to consume a substance or engage in an activity; a symptom of the abnormal brain adaptations that result from addiction. The brain becomes accustomed to the presence of a substance and, when the substance is absent, produces a manifest psychological desire to obtain and consume it.

Cross-dependence—the ability of one substance to prevent the withdrawal symptoms of an individual's physical dependence on another substance.

Cross-tolerance—an individual's tolerance for one substance that results in their lessened response to another. This phenomenon typically occurs within the same class of substances (e.g., alcohol, benzodiazepines) but may also be observed across different classes of substances (e.g., alcohol, opioids).

Deaths of despair—deaths related to substance use and/or suicide.

Delirium tremens (DTs)—a severe form of alcohol withdrawal involving sudden and severe mental or nervous system changes resulting in varying degrees of mental confusion and hallucinations. Onset typically occurs 24 hours or longer following cessation of alcohol.

Denial—in a psychological sense, denial describes individuals who deny substance use problems. It is the tendency of individuals with substance use disorder to either disavow or distort variables associated with their substance use in spite of evidence to the contrary. It is a common misconception that all individuals with substance use disorder are “in denial.” In fact, individuals have various levels of awareness of their substance use problems and readiness to change behavior. Individuals may accurately recognize certain facts concerning their use, such as their number of arrests or how often they use a substance, while at the same time misperceiving the impact that their use has on the individuals around them, their relationships,

how they feel about themselves, or the implications of their substance use history.

Dependence—a state in which metabolic status and functioning is maintained through the sustained presence of a substance; manifested as a mental or physical disturbance or withdrawal upon the removal of the substance.

Depressant—a psychoactive substance that decreases levels of physiological or nervous system activity in the body. This results in decreasing alertness, attention, and energy through decreased heart rate, blood pressure, and respiration rates. Informally referred to as “downers”; examples include alcohol and benzodiazepines.

Designer drug—a synthetic analog of an illegal drug, devised to circumvent drug laws by making slight changes to chemical compounds. Drug laws typically prohibit specific chemical compounds, so changing the compound produces a new version of the drug that is not covered by the specific prohibition.

Deterrence—the use of punishment as a threat to deter people from committing offenses. Deterrence is the philosophical foundation for the imposition of criminal penalties on substance use.

Detoxification (“detox”)—a process designed to help someone during the process of physical withdrawal from a drug. Detox alone is not enough to treat SUD but is often the first step taken before entering other types of treatment. While it might take longer, detox usually lasts three to seven days. Medical detox usually takes place in a hospital or clinical setting and involves receiving medication and close supervision by physicians, nurses, or other trained healthcare professionals. Nonmedical detox is different in that no medication is administered during the detoxification process unless previously prescribed and verified.

Dialectical behavioral therapy (DBT)—a treatment for borderline personality disorder

that utilizes a skills-based approach to teach mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance. Though designed to treat borderline personality disorder, DBT is increasingly being used in the context of substance use disorder treatment.

Dirty—a pejorative, stigmatizing term for a person who is currently using a substance or for a urine test that is positive for substance use. Do not use this term; instead, use proper medical terminology such as “a person who is currently using substances” or “an individual with a positive test result for substance use.”

Disease model of addiction—a model that classifies addiction/substance use disorder as a disease. There are several “disease models,” but substance use disorder is widely considered to be a complex disease with biological, neurobiological, genetic, and environmental influences.

Dope sick—a stigmatizing slang term for the symptoms of opioid withdrawal. Instead of using this term, use “symptoms of opioid withdrawal” or “suffering from withdrawal.”

Driving under the influence (DUI)—a criminal offense that takes place when a person operates a vehicle while under the influence of a substance, including alcohol and legal and illicit drugs, and his or her judgment or reflexes are impaired by the substance.

Driving under the influence assessment—a process that is usually required for anyone who has been convicted of driving under the influence. A DUI assessment is completed by a licensed or certified professional. It is a structured set of questions to determine if a person may have an issue with alcohol or drugs. This assessment can last anywhere from one hour to three hours.

Driving under the influence education class—a class that is usually required of anyone who has received a DUI conviction and has lost his or her driver’s license. These classes are geared toward prevention of future DUIs and

mostly consist of video presentations, group discussions, and worksheets. The number of classes required is different for each person and is based on terms set forth by a judge or probation officer.

Drug—a term that can mean either a “medication” or a “nonmedically used psychoactive substance.” The term “drug” can be stigmatizing due to the ambiguity of the term; this ambiguity may create a barrier to accessing prescription (psychoactive) medications in cases where their use is medically appropriate. Instead, consider the use of “medication” for medically prescribed substances and “substance” for nonmedically prescribed psychoactive substances.

Drug abuse—a term sometimes used to describe an array of problems resulting from intensive use of psychoactive substances. While “drug abuse” has previously been used as a diagnostic label, it is now considered to be a stigmatizing term; use “substance use disorder” instead.

Drug class—a drug class is a group of substances that, while not identical, share certain similarities such as chemical structure, elicited effects, or intended usage. Examples include opioids, depressants, and stimulants.

Drug classification—a categorization of the medical and legal status of a substance. See *Schedule*.

Drug court—a specialized, problem-solving court that operates under a model in which the judiciary, prosecution, defense bar, probation, law enforcement, mental health, social service, and treatment communities work together to help nonviolent substance use offenders achieve recovery and become productive citizens. Drug courts typically emphasize treatment and rehabilitation, sometimes paired with restorative justice.

Drug dreams—reoccurring dreams that can arise during recovery from substance use

disorder and that concern depictions of substance use, often vivid in nature and frequently involving a relapse scenario. These dreams decrease in frequency with time in recovery from substance use disorder.

Drug policy—government laws, regulations, and guidelines on the control and regulation of substances considered dangerous, particularly those with addictive qualities. Policies can address both demand-side and supply-side considerations and include the attributable harm/hazard ratings of different substances (“scheduling”), criminal penalties for illegal sale, distribution, and use, as well as prevention, harm reduction, treatment, and recovery.

Dry drunk—a stigmatizing term that identifies individuals who no longer utilize alcohol but who continue to behave in dysfunctional ways (e.g., express rage/anger, intense fear, etc.) or who regress in personal growth or within their recovery program. Despite its stigmatizing effect, this term has been widely adopted within the Alcoholics Anonymous and peer support communities.

DSM-5—the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition, the 2013 update to the American Psychiatric Association’s classification and diagnostic tool. In the United States, the DSM-5 serves as a universal authority for psychiatric diagnosis.

Dual diagnosis—See *Comorbidity*.

DUI—see *Driving under the influence*.

Dysynergy—the tendency of one addiction to predispose an individual to another type or form of addiction.

Early recovery—the first year of remission from a substance use disorder.

Ecstasy—a synthetic substance with stimulant and hallucinogenic effects that produces feelings of increased energy, euphoria, and distorted sensory and time perception. Side effects can include nausea, muscle cramping, involuntary teeth clenching, blurred vision, chills,

and sweating. Also known as Molly, E, M&M, MDMA, XTC, Adam, and Essence.

Employee assistance program (EAP)—a voluntary, work-based intervention program offered by an employer to support employees in managing issues affecting mental and emotional well-being such as substance use, stress, grief, family problems, trauma, and psychological disorders. Services offered by EAPs vary, but most provide employees with free and confidential assessments, short-term counseling, referrals, and follow-up services.

Employment assistance—a program that provides assistance to individuals looking for meaningful employment. Employment assistance programs help individuals find and maintain competitive employment in community settings and assist with job searching, job development, and job support.

Enabling—potentially stigmatizing term for actions that involve removing or diminishing the naturally occurring negative consequences resulting from substance use, increasing the likelihood of disease progression. This term is potentially stigmatizing due to the inference of judgment and blame applied to an individual who typically is acting from concern for a loved one with substance use disorder.

Evidence-based practice—patient care informed through the integration of clinical expertise and the best available clinical evidence from systematic research.

Family residential treatment—a treatment program that requires the client to live on-site in a center that provides 24/7 care, with special accommodations for pregnant women or people with very young children. Treatment typically consists of many of the same methods as residential treatment and is generally of similar duration. Most family residential treatment centers allow women to bring their young children with them to treatment. See *Residential treatment*.

Fentanyl—a potent opioid, synthetical-

ly produced in laboratories, that activates the reward centers of the brain to produce sensations of euphoria and to provide pain relief. Side effects can include alterations in consciousness, sensations of heaviness, decreases in mental function, constipation, anxiety, changes in mood and appetite, nausea, dry mouth, intense itching, constricted pupils, and increased body temperature. Fentanyl is 50 to 100 times more potent than morphine; it is available in legal prescription form and in illegal, illicit forms.

Fidelity—the extent to which delivery of an intervention program adheres to the protocols and program model originally developed.

Full sustained remission—one year without experiencing symptoms (except craving) of substance use disorder. See *Craving*.

Housing assistance—a program that helps individuals find a safe and affordable place to live. Types of housing programs vary based on the client's income, desired location, and family size.

Gabapentin—an anticonvulsant medication that targets nerve pain to alleviate seizures. Side effects can include euphoria, dizziness, lack of coordination, temporary loss of memory (amnesia), insomnia, restlessness, agitation, anxiety, mania, depression, suicidal thoughts, and aggressive or violent behavior. Brand names include Neurontin, Gralise, and Horizant.

Gateway hypothesis—a hypothesis that postulates that use of a certain substance increases the risk for the subsequent use of more potent and addictive or harmful substances. For instance, marijuana is sometimes referred to as a “gateway drug” because its use has been shown to increase the risk for use of other substances. This does not mean that the use of marijuana will inevitably lead to the use of other substances; only that it is associated with an increased risk.

Hallucinogen—a substance that induces hallucinations (i.e., visions, sounds, smells,

tastes, or sensations). Common examples include LSD (“acid”) and psilocybin (“magic mushrooms”). Marijuana in high doses also can act as a hallucinogen.

Harm reduction—policies, programs, and practices that aim to reduce the harms associated with substance use. The defining feature of harm reduction is a focus on the prevention of harm, rather than on the prevention of substance use itself, with attention and focus on the individual’s active substance use. For example, a needle exchange program can reduce rates of transmission of hepatitis C, HIV, or other infectious diseases for individuals suffering from heroin use disorder.

Heroin—a substance made from the opium poppy plant that activates the reward centers of the brain to produce sensations of euphoria. Heroin can also produce alterations in consciousness, sensations of heaviness, decreases in mental function, nausea, dry mouth, intense itching, increased body temperature, coma, or death.

Hydrocodone—an analgesic opioid, semi-synthetically produced for the treatment of moderate to severe pain, that activates the reward centers of the brain to provide pain relief. Side effects can include constipation, nausea, vomiting, upset stomach, sleepiness, drowsiness, dizziness, blurred vision, itching, headache, dry mouth, sweating, changes in heart rate, and trouble breathing. Brand names include Lorcet, Lortab, and Vicodin.

Ibogaine—a naturally occurring psychoactive substance found in plants in the Apocynaceae family. Ibogaine is used for substance use disorder treatment in some countries, but it is not approved for use in the United States due to lack of proper testing with regard to toxicology. Both the safety and effectiveness of the substance are largely unknown.

Inhalant—a substance that produces chemical vapors that are inhaled to induce a

psychoactive or mind-altering effect.

Inpatient treatment—a substance abuse disorder treatment program where individuals are admitted to a hospital or facility and treated as patients by clinicians and healthcare providers. Inpatient treatment is often the preferred option for those looking to get away from their current temptations and focus completely on sobriety with no distractions. Inpatient is very similar to short-term residential treatment except that it usually takes place in a clinical or hospital setting.

Intensive outpatient program (IOP)—a structured outpatient treatment program where the individual receives services from 9 to 30 hours a week. IOPs teach individuals ways to stay drug/alcohol free in real-life situations, allowing them to continue working and living at home. It is often used to fill the gap between inpatient and outpatient treatment.

Open meeting—a 12-step program meeting that can be attended by anyone, including those who identify with a substance use disorder as well as those who do not. Open meetings are usually intended to educate the public and concerned significant others about the nature and scope of 12-step meetings. See *Closed meeting*.

Passive referral—an attempt by a clinician or service worker to connect a patient with substance use disorder to another service by referring the patient to the new service provider or resource without directly connecting the patient with that provider or resource. Studies have shown this process to be less effective than assertive linkage. See *Assertive linkage*.

Recurrence of use—when a person who formerly used a substance, and then stopped his or her substance use, begins to use the substance again. This term is preferable to relapse when describing this situation.

Recovery—a process of improved physical, psychological, and social well-being and

health after having suffered from a substance-related condition. Recovery can be defined several ways; some definitions, for example, mention the resolution of a substance use problem while others specify abstinence from substance use.

Recovery-friendly workplace — a place of employment with policies and procedures in place to destigmatize substance use disorder and support rather than penalize employees who are recovering from this disorder.

Relapse — a somewhat stigmatizing term that is effectively synonymous with, but less preferable to, “recurrence of use.”

Remission — disappearance of the signs and symptoms of a disease, either for a prolonged period or permanently. The Recovery Research Institute states that full remission for substance use disorder occurs at five years, the point at which the risk for resuming substance use is no greater than that of anyone else in the general population.

Schedule — in the United States, substances with known potential for misuse are classified into five groups known as ‘schedules.’ These five schedules determine the medical and legal status of a substance. The schedules are:

- *Schedule 1*: drugs with no currently accepted medical use and a high potential for abuse; examples include heroin, lysergic acid diethylamide (LSD), methaqualone (Quaalude), peyote, and marijuana.
- *Schedule 2*: drugs with a high potential for abuse, with use potentially leading to severe psychological or physical

dependence. Examples include cocaine, methamphetamine (meth), methadone, hydromorphone (Dilaudid), meperidine (Demerol), oxycodone (OxyContin), fentanyl, Dexedrine, Adderall, and Ritalin.

- *Schedule 3*: drugs with a moderate to low potential for physical and psychological dependence. Examples include codeine, ketamine, anabolic steroids, and testosterone.
- *Schedule 4*: drugs with a low potential for abuse and low risk of dependence. Some examples include Xanax, Soma, Darvon, Darvocet, Valium, Ativan, Talwin, Ambien, and tramadol.
- *Schedule 5*: drugs with lower potential for abuse than Schedule 4 and consisting of preparations containing limited quantities of certain narcotics. Examples include cough preparations with less than 200 milligrams of codeine per 100 milliliters (e.g., Robitussin AC), Lomotil, and Lyrica.

Suboxone — a brand name for buprenorphine. See *Buprenorphine*.

Substance use disorder (SUD) — a medical condition in which the use of one or more substances leads to a clinically significant impairment or distress; effectively synonymous with “drug use disorder.”

SUD — see *Substance use disorder*.

Zero Tolerance Under 21 DUI — a criminal offense that occurs when a person under the age of 21 has any but the most minimal amount of alcohol in their bloodstream while operating a vehicle.



Drug Overdose Prevention Tackle Box

Part II: Program Descriptions

Photo courtesy of Pete Camparoni



INTRODUCTION

PROGRAM CATEGORY DEFINITIONS

In the following drug overdose prevention program descriptions, each is categorized based on its level of evidence of effectiveness. While we defined and discussed those levels in chapter one of part one of the *Drug Overdose Prevention Tackle Box*, we've included the definitions again to refresh your memory.

Evidence-based strategies, practices, and programs are those that have been evaluated in a formal, rigorous way, using a strong research design, and found to be effective at achieving the goals for which they were designed.

Evidence-informed strategies, practices, and programs use the best available research and practice knowledge to guide program design and implementation, but they have not been evaluated sufficiently to be described as evidence-based. While they have not been fully evaluated, evidence-informed strategies are typically the best choice whenever an evidence-based strategy is not available.

Promising practices are based on logical design and available evidence but may address areas of practice where the available evidence is limited or even nonexistent. This may be the case because they address a new area of practice where little research has been done or because they address complex issues where the existing research is inconsistent or ongoing. A lack of available evidence for a strategy does not mean that the

strategy does not work; it may simply mean that the strategy has not yet been properly evaluated. If you choose a promising practice, carefully evaluate the strategy throughout the implementation process to ensure that it achieves the planned objectives.

Unsupported strategies are those that have been evaluated and did not show evidence of being effective. In some cases, the failure to find evidence of effectiveness may have been due to a poor research design or because the study sample size was too small. Unsupported programs may be worthy of additional research and evaluation, but we cannot recommend an unsupported strategy for use in a community setting.

Harmful strategies are those that have been evaluated and evidence was found that the program may actually have a negative effect. We strongly recommend that you do not implement strategies that have been found to be potentially harmful.

When an evidence-based strategy is available, we strongly recommend that it be selected. In situations where there is no evidence-based strategy that addresses your specific needs, the selection of evidence-informed or promising strategies should be the next choice. Promising practices may be selected, or created, when more strongly supported options are not available or do not fit the conditions and needs of your community.

Illicit Drug Access and Availability Reduction

Photo courtesy of the US Food and Drug Administration



Drug Disposal/Deactivation Bags

Topic Area: Illicit Drug Access and Availability Reduction

Category: Promising Practice

Description: Patients are provided with disposal bags at pharmacies where they fill opioid prescriptions and are encouraged to use the bags to dispose of any medication that remains when they no longer need pain relief. When warm water is added, chemicals in the bag neutralize the drugs (including opioids) in a nonreversible way.

Considerations: Drug deactivation bags are patented products that are currently available only from a single source, which likely affects cost. The effectiveness of the intervention depends both on a high percentage of pharmacies distributing drug disposal bags when filling opioid prescriptions and on a high percentage of patients using the bags to dispose of excess opioids. Many of the patients who receive large doses of opioids have very serious, chronic illnesses, so it may not be realistic to expect them to reliably use the bags to dispose of their unneeded medications. Other patients may deliberately choose to save unused opioids for future use or may simply fail to dispose of unneeded medications.

Evidence Source: This product was developed through a Small Business Innovation Research contract with the National Institute on Drug

Abuse. The President's Commission on Combating Drug Addiction and the Opioid Crisis stated, "The Commission encourages more hospitals/clinics and retail pharmacies to become year-round authorized collectors and to explore the use of drug deactivation bags" but did not specifically endorse the use of this product. We were not able to find a study showing effectiveness of drug disposal bags at reducing community-level access to opioids, but a Community Anti-Drug Coalitions of America case study, Maximizing Rx drug disposal efforts: lessons learned from four Florida coalitions (2016), found that 88.7% of individuals surveyed would use a drug disposal method that was safe for people and the environment if they could do so without leaving home.

Potential Evaluation Data Source: Local data: Process data collection from pharmacies on number of disposal bags distributed. Consider embedding a survey with the disposal bag to be completed by the patient anonymously and left with the pharmacy.



Drug Task Force/Drug Enforcement Unit

Topic Area: Illicit Drug Access and Availability Reduction

Category: Evidence-informed

Description: A drug task force is an organization where personnel from two or more law enforcement agencies (LEAs) work together to investigate illicit drug trafficking and to apprehend and prosecute traffickers. A drug enforcement unit has a similar mission but comprises officers from a single agency. Drug enforcement units are often found within larger LEAs, while task forces may contain a mix of officers from LEAs of different types and sizes. An advantage of both is that they consist of officers whose time and efforts are dedicated to reducing the availability of illicit drugs within their area of jurisdiction. Drug task forces offer additional advantages that typically include increased information sharing between the participating LEAs, a larger jurisdictional area, and sometimes an enhanced ability to draw upon specialized resources. Task forces may be organized in a variety of ways that range from semi-formal agreements between agencies with overlapping jurisdictional areas, where each venue contributes officers that remain identified with and supervised by their individual LEAs, to highly formalized agreements that create semi-autonomous task forces that operate much like independent LEAs, with limited direct control by the parent LEAs.

Considerations: Both drug task forces and drug enforcement units require a significant commitment of officer time and resources. Drug enforcement units may range from a single officer to dozens, while task forces may range from three or four officers to hundreds. Substantial additional investment in vehicles, equipment, and other resources is necessary. Finally, for task forces,

questions of legal authority, oversight, policies, focus areas, funding, and logistics must be addressed. LEAs interested in creating a task force should seek guidance from their agency's or government's legal counsel and may wish to request guidance from the Kentucky Attorney General. Interested LEAs should also strongly consider soliciting advice and assistance from existing task forces and their parent LEAs.

Evidence Source: The US Drug Enforcement Administration strongly supports the creation and employment of drug task forces, and drug enforcement units have been utilized by LEAs for at least a century. The empirical experience of LEA administrators clearly supports the value and effectiveness of these organizations. Research evidence is less consistent, perhaps because of the wide variation in task force/drug unit structure, mission, and resources. Two studies that examine the effectiveness of drug task forces are Jefferis, ES, Frank, J, Smith, BW, Novak, KJ, and Travis, LF, An examination of the productivity and perceived effectiveness of drug task forces (*Police Quarterly*, Sept. 1998); and Georgia Multi-Jurisdictional Task Force Process and Outcome Evaluation 2014 (Applied Research Services, Inc., submitted to the Georgia Criminal Justice Coordinating Council, Oct. 2014).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. Local data: process data from implementation in local task force or enforcement unit.

Home Medication Lockboxes

Topic Area: Illicit Drug Access and Availability Reduction

Category: Promising Practice

Description: Home medication lockboxes are secure storage containers for dangerous medications, including commonly misused medications such as prescription opioids and benzodiazepines. The 2011 National Survey on Drug Use and Health found that 70.8% of those who used a prescription medication nonmedically obtained the medication from a friend or relative, with or without their knowledge, while a 2013 study (Ross-Durow, PL, McCabe, SE, and Boyd, CJ, Adolescents' access to their own prescription medications in the home, *Journal of Adolescent Health*, Aug. 2013;53(2):260–264) found that almost 75% of adolescents who were prescribed pain, stimulant, anti-anxiety, or sedative medications had unsupervised access to their medication at home. The US Substance Abuse and Mental Health Services Administration notes that, “two-thirds of teens who misused pain relievers in the past year say that they got them from family and friends, including their home’s medicine cabinets, making it important to safeguard medicine in the home.” Using a home medication lockbox can prevent access to dangerous medication by unauthorized individuals.

Considerations: To be effective at reducing substance access on a community level, safe medication storage must be practiced by a substantial percentage of adults in the community. Implementing a community program to provide free or low-cost lockboxes will require staff or volunteer time. Cost has been identified in various studies as a significant factor in whether individuals will

utilize various drug disposal methods, and it is likely to have a similar impact on individuals' decisions about whether to use a home medication lockbox. Thus, a community-based program should expect to need funding to support the provision of free or low-cost lockboxes. Finally, lockboxes make medication access less convenient for the legitimate user, so awareness and marketing efforts designed to overcome patient resistance to inconvenience should be part of the program. Due to the resource requirements, communities considering promoting the use of home medication lockboxes may wish to focus on patients who are taking medications that are more likely to be misused (e.g., opioids, stimulants, sedatives, benzodiazepines), especially if they share a home with adolescents or have frequent visitors. It is important to remember that lockboxes are a preventive measure.

Evidence Source: The survey and study results listed in the Description section above indicate that many substance users, and perhaps especially youth, use substances that they have taken from an unsecured location. We were not able to find published studies, however, that evaluated the effectiveness of medication lockboxes as a generalized prevention strategy.

Potential Evaluation Data Sources: Statewide: manufacturer's sales data to Kentucky residents. Local: process surveys included in population-wide utility service mailings, such as electric or gas bills.

Hospice Patient Drug Pickup

Topic Area: Illicit Drug Access and Availability

Category: Evidence-Informed

Description: Patients in hospice programs and other end-of-life care programs are often suffering from particularly painful illnesses, and many of those patients are prescribed powerful analgesic (pain relieving) drugs. When a patient with opioid prescriptions who is in hospice care passes, safe disposal of the patient's unused opioids is, understandably, seldom an immediate concern for family members. Several people may have access to the medication before someone realizes the need to dispose of it safely. There have been cases where a deceased person's home was burgled by suspects looking for unused opioids.

Hospice patient drug pickup programs can be operated by the hospice itself or in partnership with a local EMS and/or law enforcement agency. When a patient in hospice care passes, the hospice program either sends a staff member to the patient's home to recover unused medications or contacts a public safety partner agency that does so. In order to assure legal entry to the home, access for drug pickup personnel should be included in the hospice care agreement signed by the patient or his/her medical representative. Once any unused medications have been recovered, they can be disposed of by the hospice organization at a prescription drug disposal site operated by a pharmacy or healthcare facility or deposited into a prescription medication dropbox (see the Prescription Medication Dropbox program page).

Considerations: A drug pickup program requires a commitment of personnel time, either by the

hospice organization alone or in cooperation with one or more public safety partners. It also requires the availability of a safe disposal system for the opioids recovered. Hospice patients and their family members and representatives need to be educated about how the program works and why it is important. All medications recovered should be properly documented. We recommend having two individuals perform medication pickup visits; this reduces the potential for diversion of medication and possible complaints lodged against pickup personnel. The ideal team may include a peace officer and an EMS provider. The officer provides security and an image of official authority, while the EMS provider is best able to recognize medications that may not be in their original containers and that may be mixed with other medications.

Evidence Source: Reduction of opportunities for prescription medication diversion is generally accepted as an evidence-based strategy for reducing substance use and overdose. In the study, Strategies for detecting, addressing, and preventing drug diversion in hospice and palliative care (*Journal of Pain and Symptom Management*, Feb. 2019;57(2):360), John G. Cagle advocates for effective drug disposal procedures for hospice patients.

Potential Evaluation Data Sources: State: process surveys of hospice patient families and of hospice facilities in state. Local: process surveys of hospice patient families and of hospice facilities.

NaloxBox

Topic Area: Illicit Drug Access and Availability Reduction

Category: Evidence-informed

Description: (See the *Naloxone Education and Distribution* program page in the Drug Overdose Intervention section for more information on naloxone.) This program involves making naloxone readily accessible by placing easy-to-administer naloxone nasal spray, along with a barrier mask for cardio-pulmonary resuscitation and simple instructions for the recognition and treatment of opioid overdose, in protective containers located in public places. The intent is to provide rapid access to overdose treatment resources by potential bystander caregivers in the same way that automated emergency defibrillators in public locations provide emergency cardiac care resources to bystander caregivers. The term NaloxBox is used by a nonprofit organization that sells purpose-built, moisture-resistant containers that include emergency care instructions for overdose patients and CPR barrier masks; naloxone must be obtained and placed in the kit by the individual or organization installing the kit. Similar kits can be constructed from local resources, such as gasket-sealed polycarbonate boxes available at many sporting goods or outdoor supply stores, naloxone administration instruction pamphlets printed by the Kentucky Department for Public Health, and CPR masks obtained from public safety supply vendors.

Considerations: Locations for public access naloxone boxes need to be chosen carefully to meet local needs. Possible locations include public arenas and event venues, lobbies of public buildings, shelters and service centers for homeless individuals and individuals recently released from

incarceration, and other locations where opioid use is likely. It is important that boxes be located so that they can easily be checked for use, as they will need to be checked daily or at least multiple times per week to ensure that used naloxone and masks have been replaced. Because people may come to depend upon having naloxone available at a known location, organizations installing public access naloxone boxes should be willing and able to support the costs to replace the naloxone and CPR masks as needed as well as the effort required to check and replenish the boxes.

Evidence Source: See the *Naloxone Education and Distribution* program page in the Drug Overdose Intervention section for evidence on the effectiveness of naloxone. While there is no reasonable debate about the effectiveness of naloxone in reversing opioid overdoses or the value of naloxone education and distribution programs, we were not able to identify any studies providing specific evidence for the efficacy of public-access naloxone boxes in reducing overdose fatalities. The value of readily available naloxone in public areas, especially those where overdoses seem likely to occur, seems self-evident, but the lack of published evaluations makes it impossible to assess the impact of this program.

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal opioid overdoses. Local data: process data from NaloxBox deployment efforts and local emergency medical services and law enforcement data on bystander administration of naloxone from NaloxBoxes.

Prescription Medication Dropbox

Topic Area: Illicit Drug Access and Availability Reduction

Category: Promising Practice

Description: Secure receptacles (boxes) for excess prescription medication are placed at convenient locations. Individuals who have unneeded controlled substances (e.g., opioids, benzodiazepines) that were prescribed to them can drop their excess medication into the box, where it will be held securely until it can be destroyed.

Considerations: The initial cost to set up a suitable medication receptacle is often \$2,000 to \$3,000, plus installation costs. The receptacle must be secured in such a way that it cannot be easily opened or removed by unauthorized persons. There is also a cost for a licensed, qualified medical waste disposal company to service the box regularly and remove and dispose of any collected medications. This monthly cost may run \$200 or more. Benefits include both the social value of removing commonly misused medication from circulation and the environmental benefit of properly disposing of all types of unwanted or excess prescription medication.

Location is an important consideration for dropboxes. Many communities prefer to locate them at a law enforcement agency for increased security, but surveys have found that many people are uncomfortable using boxes located at law enforcement agencies; survey respondents preferred to use a box located at a pharmacy, healthcare facility, or other public location not associated with law enforcement.

Evidence Source: The 2011 National Survey on Drug Use and Health found that 70.8% of those

who used a prescription medication nonmedically obtained the medication from a friend or relative, with or without their knowledge. A 2016 study (Kennedy-Hendricks, A, Gielen, A, and McDonald, E, Medication sharing, storage, and disposal practices for opioid medications among US adults, *JAMA Internal Medicine*, 2016;176:1027–1029) found that when they have leftover opioid medications, only 12.1% of US adults turn the medication in to a pharmacist, dropbox, or takeback program. Another 2016 study (Egan KL, Gregory, E, Sparks, M, Wolfson, M, From dispensed to disposed: evaluating the effectiveness of disposal programs through a comparison with prescription drug monitoring program data, *American Journal of Drug and Alcohol Abuse*, Oct. 2016, 1–9) found that takeback programs recover only about one-half of one percent of all controlled substances dispensed in the US but did not determine the percentage of potentially available (i.e., unused/excess) substances that are recovered through dropboxes. A 2015 examination of dropboxes in Appalachia (Gray, J, Hagemeyer, N, Brooks, B, Alamian, A, Prescription disposal practices: a 2-year ecological study of drug drop box donations in Appalachia, *American Journal of Public Health*, Sept. 2015;105(9):e89–e94) found that dropboxes can be effective.

Potential Evaluation Data Sources: State: DEA data on poundage of pharmaceutical waste collected in dropboxes. Local: process surveys of law enforcement agencies, healthcare facilities, and pharmacies on poundage of medications collected.

Traffic Safety Checkpoints

Topic Area: Illicit Drug Access and Availability Reduction

Category: Evidence-Based

Description: Traffic safety checkpoints are planned law enforcement events where officers set up a temporary traffic control zone on roadways and stop vehicles to enforce traffic laws. The primary purpose of the checkpoint is to reduce the danger posed by impaired drivers to the community. This goal is accomplished both by identifying and apprehending impaired drivers during checkpoint events and through the deterrent effect created when participating law enforcement agencies publicize their planned checkpoint program in the community.

Checkpoints are primarily intended to reduce the incidence of impaired driving, but they also provide an opportunity for law enforcement encounters with individuals in active substance use. These encounters can provide an opportunity to connect substance users with treatment, either voluntarily or through court-mandated referrals.

Considerations: Checkpoints must be conducted by law enforcement officers, though other public safety and community agencies may be involved in supporting roles. A small checkpoint requires four or more officers, while a large checkpoint can involve several dozen officers. Substantial planning is required to conduct a safe and effective checkpoint. A variety of resources (e.g., traffic cones, scene lighting for night events, temporary signs, and public safety vehicles) are needed. Checkpoints have been found to be legally permissible by both

the US Supreme Court and the Kentucky Supreme Court, but they constitute a limited infringement of individuals' Fourth Amendment rights; thus, the courts have established strict guidelines for how checkpoints must be conducted. Training in how to conduct traffic safety checkpoints is available from the Kentucky Injury Prevention and Research Center (www.mc.uky.edu/kiprc).

Evidence Source: Both CDC and the National Highway Traffic Safety Administration consider checkpoints to be evidence-based interventions for reducing impaired driving. Research studies include Elder, R, Shults, R, Sleet, D, et al., Effectiveness of sobriety checkpoints for reducing alcohol-involved crashes (*Traffic Injury Prevention*, 2002;3:266–274) and Erke, A, Goldenbeld, C, and Vaa, T, The effects of drink-driving checkpoints on crashes – a meta-analysis (*Accident Analysis and Prevention*, Sept. 2009;41(5)914–923). The effectiveness of checkpoints in reducing substance availability has not been formally studied but is supported by empirical evidence from checkpoint arrests and citations.

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatalities and injuries from alcohol- or drug-involved crashes. Local data: process data from checkpoints conducted and local law enforcement data on citations for alcohol- and drug-related crashes, arrests, and citations.



Reduction of Inappropriate Opioid Prescribing



Academic Detailing: Improving Prescriber Practices

Topic Area: Reduction of Inappropriate Opioid Prescribing

Category: Evidence-based

Description: Academic detailing is an educational outreach program for healthcare professionals who prescribe medications that adapts “pharmaceutical detailing” — the pharmaceutical industry’s practice of marketing their products through in-office meetings with healthcare workers — to provide prescribers with evidence-based, non-commercial medical content from academics and research centers. Specially trained clinical educators meet one-on-one with physicians, nurse practitioners, and physician assistants at their practice locations to discuss the most recent research data on a particular medical topic. Trained healthcare professionals serve as trainers and provide up-to-date information and discuss appropriate therapeutic choices and patient care practices. Rather than promote particular products, as pharmaceutical detailers do, the clinical educators working in academic detailing programs provide summaries of the evidence around a particular topic to help clinicians prescribe the safest, most effective medications and treatments for their patients. The information is compiled from research that is designed to compare the effectiveness, benefits, and potential harms of different medical treatment options. Australia, Canada, and several US states currently have academic detailing programs.

Considerations: The development of an academic detailing program requires both the involvement of a qualified organization (e.g., university, large hospital, health system, or large public health

agency) and a commitment of professional personnel and resources. In addition to the need for professional healthcare providers to serve as detailers, qualified personnel are required to develop the content for training presentations.

Evidence Source: Evidence of the effectiveness of academic detailing includes Avorn, J, and Soumerai, SB, Improving drug-therapy decisions through educational outreach (*New England Journal of Medicine*, June 1983;308(24):1457–1463); Chhina, HK, Bhole, VM, Goldsmith, C, Hall, W, Kaczorowski, J, and Lacaille, D, Effectiveness of academic detailing to optimize medication prescribing behavior of family physicians (*Journal of Pharmacy and Pharmaceutical Sciences*, 2013;16(4):511–529); and Baran, RW, DuChane, J, Parker, L, Cornwell, S, Franc, D, and Erwin, WG, Effectiveness of academic detailing in the managed care environment (*Journal of Managed Care and Specialty Pharmacy*, March 1996;2(2):148–157). These studies and others found that academic detailing was modestly effective.

Potential Evaluation Data Sources: Statewide data: qualitative surveys of physician and pharmacist controlled substance prescribers on academic detailing; quantitative data from Kentucky Department for Public Health academia detailing logs. Local data: survey of local healthcare and pharmacy providers.

Alternative Pain Management Practices

Topic Area: Reduction of Inappropriate Opioid Prescribing

Category: Evidence-Based

Description: The National Institute on Drug Abuse states that roughly 21% to 29% of patients who are prescribed opioids for chronic pain misuse them and that between 8% and 12% of those patients develop an opioid use disorder (OUD). While risk factors for developing OUD vary between individuals and most people who receive prescribed opioids do not develop OUD, risk can be reduced by minimizing the prescribing of opioids for the treatment of chronic pain. Alternative pain management practices (e.g., acupuncture, relaxation techniques, massage, spinal manipulation [chiropractic], meditation, physical therapy, and individualized exercise programs) can provide relief from chronic pain without the risk of developing OUD. Encouraging both patients and healthcare providers to implement alternative pain management practices can reduce the number of individuals exposed to opioids.

Considerations: The availability of alternative pain management practices is limited, especially in rural communities. While there is scientific evidence to support the effectiveness of many alternative practices, the results often vary signifi-

cantly among individuals, and patients – with the guidance of their physician or healthcare provider – may need to try several alternative treatments before finding one that is effective for them due to a variety of factors, including costs, time commitments, and healthcare insurance coverage concerns.

Evidence Source: Some alternative pain management practices have been studied in depth and found to be effective. Others have received little or no study or have not been found to be effective. An excellent summary of the evidence for the effectiveness of various alternative practices for specific medical conditions can be found at: nccih.nih.gov/health/pain/chronic.htm. The effectiveness of non-opioid therapies at reducing opioid exposure, and thus the chance of developing OUD, is self-evident.

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. KASPER Trend Reports or direct data request to the Office of Inspector General. Local data: process data from implementation.

Generation Rx

Topic Area: Reduction of Inappropriate Opioid Prescribing

Category: Promising Practice

Description: Generation Rx is an educational resource, founded by The Ohio State University College of Pharmacy, designed to help people of all ages learn about the potential dangers of misusing prescription medication. The program website (www.generationrx.org) provides educational toolkits for elementary-aged children, teens, young adults, middle-aged adults, and older adults. Educational toolkits for patients receiving healthcare and for workplace education are also available. The Generation Rx website also provides online educational games for children and young teens as well as online educational materials for older teens and adults (see generationrx.org/learn/learn-at-home). In addition, Generation Rx staff are available to conduct trainings and workshops, webinars, and online presentations and to develop custom educational materials for community- or organization-specific needs. Additional information is available via email from info@GenerationRx.org.

Considerations: Generation Rx is not a stand-alone substance use and overdose prevention program. It is a resource for free educational materi-

als that can be used for local programs as well as a source of online education about the risks of misusing prescription medications. Program staff also can provide presentations, technical assistance, and customized educational materials, but those services are not free. The program also focuses only on the misuse of prescription medication; it does not address the use of illicit substances such as marijuana, heroin, or methamphetamine. Generation Rx is perhaps best viewed as a potentially valuable component of a multi-faceted school-, organization-, or community-based prevention effort.

Evidence Source: Generation Rx materials are based upon current scientific understanding of pharmacology and substance use and misuse. The information presented in the program is accurate and truthful. Generation Rx has not, as of January 2020, been subject to any published, scientifically rigorous evaluation of its effectiveness.

Potential Evaluation Data Sources: Statewide Data: population-based survey data. Local: population-based survey data.

Project Lazarus Model

Topic Area: Reduction of Inappropriate Opioid Prescribing

Category: Promising Practice

Description: The Project Lazarus Model (PLM) is a community-based model for substance use prevention developed by a community coalition in Wilkes County, North Carolina. Following a significant decrease in the county's overdose mortality rate, the organization incorporated as a non-profit entity that provides training and technical assistance to communities and healthcare personnel who are engaged in substance use prevention efforts. The PLM focuses primarily on prescription drug misuse, though many of the principles and techniques it employs are also suitable for addressing illicit substance use.

The PLM is a public health model based on two core tenets: that overdoses are preventable and that communities are responsible for their own health. The model is illustrated through a wheel diagram. The hubs (essential core program components) are public awareness, coalition action, data analysis, and evaluation. The spokes (specific interventions) include community education, healthcare provider education, hospital emergency department policies, drug diversion control, pain patient support, harm reduction, and addiction treatment. Full details of the model can be found at www.projectlazarus.org/the-model. For additional details about the Project Lazarus organization, including resources for communities organizing substance use prevention efforts and a list of training and technical support available from the organization, visit www.projectlazarus.org.

Considerations: Implementing the PLM requires the development of a collaborative coalition that

includes public health and prevention professionals, healthcare and substance use treatment providers, public agencies, and private organizations. Once a functioning coalition has been organized, the coalition must evaluate local needs using local and state data, select evidence-based intervention projects (the "spokes" of the PLM wheel), and then implement and evaluate those interventions. The Kentucky Injury Prevention and Research Center can provide no-cost technical assistance and training to local substance use prevention coalitions upon request.

Evidence Source: According to Alexandridis, AA, Dasgupta, N, McCort, AD, Ringwalt, CL, Rosamond, WD, Chelminski, PR, Marshall, SW, in Associations between implementation of Project Lazarus and opioid analgesic dispensing and buprenorphine utilization in North Carolina, 2009–2014 (*Injury Epidemiology*, Jan. 21, 2019;6(1):2, doi.org/10.1186/s40621-018-0179-2), initial evidence indicates limited effectiveness of the PLM.

Potential Evaluation Data Sources: Statewide data: Kentucky Association of Counties survey data. Local data: survey of law enforcement, health department, and community coalition personnel.



Rx Awareness Campaign

Topic Area: Reduction of Inappropriate Opioid Prescribing

Category: Evidence-informed

Description: The Rx Awareness Campaign was developed by the Centers for Disease Control and Prevention to make Americans aware of the risks associated with prescription opioids. The campaign focuses on adults ages 25–54 who have taken opioids at least once for medical or non-medical (recreational) use, and it highlights the importance of reducing opioid abuse to prevent overdoses. The goals of the campaign are to: 1) increase awareness that opioids can be addictive and dangerous; and 2) increase the number of individuals who avoid using opioids nonmedically (recreationally) or who choose options other than opioids for safe and effective pain management.

The campaign incorporates first-person stories because of the demonstrated effectiveness of testimonials to communicate about complex and sensitive health issues. The core of the campaign is a series of videos that feature individuals who are either living in recovery from opioid use disorder or who are family members who lost someone to a prescription opioid overdose. Campaign materials also include radio, digital, newspaper, and billboard advertisements. These materials can be used by local and state organizations and substance use prevention coalitions to educate community members about prescription opioid risks and the availability of effective treatment for those suffering from substance use disorder. For more information about the Rx Awareness Campaign, see www.cdc.gov/rxawareness/.

Considerations: Campaign materials are free and are readily accessible to potential users through the CDC campaign website (see above). The primary issue that must be addressed by organi-

zations that want to conduct a campaign in their community is the need to purchase or secure the donation of a substantial amount of media (e.g., TV and radio commercial “spots,” newspaper advertisements, and billboard space). Even an occasional prevention message can be useful, but public awareness and social marketing campaigns such as the Rx Awareness Campaign work best when audience members receive multiple campaign messages from two or more different sources (e.g., TV and billboards).

Evidence Source: According to the CDC, “Success of the Rx Awareness campaign relies on partnership with state and local agencies and organizations across the country to share the messages and resources.” Beginning in September 2017, campaign ads ran for 14 weeks in Ohio, Kentucky, Massachusetts, and New Mexico. Messaging in additional states, funded through the CDC’s Prescription Drug Overdose: Prevention for States and Data-Driven Prevention Initiative programs, was also part of the campaign. The CDC evaluated the campaign and found evidence of effectiveness; a summary of the evaluation results can be found in the Rx Awareness Campaign overview, Addressing the Prescription Opioid Crisis. The overview is available online as a PDF document at www.cdc.gov/rxawareness/pdf/Overview-Rx-Awareness-Resources.pdf. A single evaluation, however, is not sufficient to definitively label this program as evidence-based.

Potential Evaluation Data Sources: Local data: pre- and post-campaign surveys of the local community.

Drug Overdose Intervention

Photo courtesy of Mark Cornelison | UKphoto



Drug Overdose Fatality Review/Rapid Assessment and Response

Topic Area: Drug Overdose Intervention

Category: Promising Practice

Description: Drug overdose fatality review (DOFR) and overdose rapid assessment and response (RAR) are two distinct but related programs designed to gather information about drug overdose incidents that can be used to drive intervention programs. DOFR involves the review of overdose fatalities by a multidisciplinary team that typically includes the coroner, law enforcement officers, health care professionals, emergency medical responders, substance use treatment providers, and former or current substance users.

A DOFR team reviews records and reports of overdoses, with the goal of identifying missed opportunities for prevention and gathering data to inform prevention policies and intervention strategies. DOFR teams may meet quarterly or monthly in larger areas. RAR involves the investigation of overdose incidents, and multi-overdose outbreaks in particular, as public health incidents, similar to an outbreak of an infectious disease.

RAR is conducted primarily by public health departments, though collaboration with other organizations is usually necessary. The biggest differences between DOFR and RAR are: 1) DOFR is performed by a multi-disciplinary team while RAR primarily involves a public health investigation and 2) DOFR is a slower, non-real-time review of fatalities while RAR is a near-real-time, rapid investigation. RAR investigations can provide many of the same benefits as DOFR, but the first goal of an RAR investigation usually is to develop information that can be used to interrupt a currently occurring overdose outbreak.

Considerations: Both DOFR and RAR involve substantial commitments of time from trained personnel. DOFR requires a panel of diverse professionals for a relatively short period of time on a periodic basis, while RAR often requires several days of effort by one or a few public health personnel on an intermittent basis. Public health departments generally have the authority to perform RAR under the existing laws related to the investigation and mitigation of threats to public health. DOFR generally requires specific laws that authorize one or more review teams, grant the team power to obtain relevant records and testimony, and provide confidentiality for records. As of January 2020, Kentucky does not have a DOFR law.

Evidence Source: The impact of DOFR and RAR programs has not been firmly established, but these tools show promise for understanding drug overdose. See Haas, E, Truong, C, et al., Local Overdose Fatality Review Team recommendations for overdose death prevention (*Health Promotion Practice*, July 2019:553–564) and Indiana Drug Overdose Fatality Review (Indiana University Richard M. Fairbanks School of Public Health, Oct. 2018).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. Process data from integrated emergency response team efforts, local 911 dispatch, local emergency medical services data, local law enforcement, and local hospital data.

Integrated Emergency Response to Overdose Events

Topic Area: Drug Overdose Intervention

Category: Evidence-Based

Description: An integrated emergency response to overdose events is an organized, systematic response by public safety agencies to a drug overdose event. An effective response includes immediate response by law enforcement (to secure the scene for other responders and provide immediate aid) and medical first responders as well as rapid response by emergency medical services. Other responders, such as facility or campus security officers and first aid teams, can and should be integrated in locations where they are available.

Response organizations and public safety dispatch centers should develop policies and protocols for overdose event response so that all responders are aware of their roles and are provided with necessary guidance to properly manage an overdose event. The focus of policies and protocols should be to: 1) get initial responders to the scene as rapidly as is practical; 2) provide naloxone and supportive care (e.g., cardio-pulmonary resuscitation) quickly to the patient(s); 3) secure the scene to protect responders and maintain privacy for patients; 4) provide for prompt patient transport to definitive medical care; and 5) maximize cooperation between agencies.

Emergency response programs can and should be linked to bystander care/public naloxone education and distribution programs and programs that quickly link overdose survivors to SUD treatment. A public education program about Kentucky's drug overdose Good Samaritan law (KRS 218A.133), which protects those on the scene

against being charged with possession if they call for help for an overdose, is an important supporting program for rapid emergency response.

Considerations: Effective response programs require a high degree of professional trust and cooperation between responders and response organizations. In many cases, they also require the integration of non-public safety responders (e.g., private security officers, corporate and campus first responders, etc.) with public safety responders. These needs can create tension and concern, especially for agencies that have not historically worked closely together. Building an effective, integrated response program can require revision of agency policies and protocols, increased information sharing, and changes in dispatch procedures. In some cases, it may also require changing "that's not my job" agency cultures. Strong leadership and commitment by the leaders of all key organizations are required to build an effective program.

Evidence Source: Individuals experiencing a drug overdose can suffer from respiratory and/or cardiac arrest. If these conditions coincide, death will occur unless emergency care is provided. Rapid emergency care for overdose is critical for patient survival.

Potential Evaluation Data Sources: Local data: process data from integrated emergency response team efforts, local 911 dispatch, local emergency medical services data, and local hospital data.

Naloxone Education and Distribution

Topic Area: Drug Overdose Intervention

Category: Evidence-Based

Description: Naloxone is a medication that acts to temporarily block the effects of opioids on the central nervous system. When administered quickly, it can reverse the effects of a life-threatening opioid overdose. Naloxone is often carried by emergency responders, but response times to 911 calls can be too long for a drug overdose victim who is in respiratory arrest. Members of the public can and should be taught to carry and use naloxone. The training needed to understand when and how to use naloxone can be conducted in as little as 15 minutes and can be conducted for public groups, at professional and fraternal meetings, during syringe exchange programs, in correctional facilities, and in a wide array of other settings. Ideally, participants in training programs should receive free naloxone when they complete the training program. For correctional facility inmates, trained individuals should receive naloxone when they are released.

Considerations: Naloxone is relatively expensive, so sources of funding for the medication itself must be identified. As of 2020, if local funding is not available, public health departments and law enforcement agencies can obtain naloxone from the Kentucky Pharmacists' Association. It is important for both program providers and individuals who complete naloxone training to be aware that naloxone has no effect on overdose caused by non-opioid drugs such as methamphetamine. Finally, it is important that trainees understand that naloxone only works for a limited time and that the person still requires emergency medical services.

Evidence Source: The US Surgeon General, CDC, and numerous other agencies endorse the widespread distribution and use of naloxone by members of the public to treat opioid overdose (see www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf). Studies supporting naloxone distribution include: Galea, S, Worthington, N, et al., Provision of naloxone to injection drug users as an overdose prevention strategy: early evidence from a pilot study in New York City (*Addictive Behaviors*, May 2006;31(5):907–912); Piper, TM, Stancliff, S, et al., Evaluation of a naloxone distribution and administration program in New York City (*Substance Use and Misuse*, July 2009;43(7):858–870); and Clark, AK, Wilder, CM, and Winstanley, EL, A systematic review of community opioid overdose prevention and naloxone distribution programs (*Journal of Addiction Medicine*, May/June 2014;8(3):153–163).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal opioid overdose data. Local data: process data from naloxone distribution efforts, local emergency medical services, and law enforcement data on bystander administration of naloxone. Consider embedding a survey with the naloxone to be completed and mailed back to the person or organization coordinating the local naloxone distribution program.

Overdose Prevention Messaging (e.g., Go Slow)

Topic Area: Drug Overdose Intervention (Prevention)

Category: Promising Practice

Description: One community harm reduction strategy is to develop and publicize messages that help reduce risk to drug users. The Go Slow campaign, developed by the Johns Hopkins Center for Communication Programs in cooperation with Bmore POWER, a Baltimore-based harm reduction advocacy group, and Mission Media, urges opioid users to reduce their risk of overdose from fentanyl by starting with a very small amount of the substance and waiting for at least 20 seconds for a potential negative reaction before using more. The campaign also encourages substance users to carry naloxone and to never use while alone. For more information about this campaign, see www.20secondssaves.org and ccp.jhu.edu/2018/07/30/reducing-overdose-deaths-baltimore.

Considerations: Harm reduction messages should be carefully formulated and tested with current or recently recovered substance users to ensure that the messages are appropriate for the target audience and accurately convey the desired intent. If you plan to use messages developed for use in another community, or for national use, you should still have substance users in recovery in your community evaluate those messages. Both culture and the social norms and language associated with substance use vary between commu-

nities, so messages that have been effective in one community may be less so, or even ineffective, in another. Finally, it is important to be aware that while awareness campaigns can increase individuals' knowledge related to the messaging subject, they may not be effective in motivating behavioral change.

Evidence Source: A meta-analysis of 72 studies related to the impact of media messaging on substance use (Derzon, JH, and Lipsey, MW, A meta-analysis of the effectiveness of mass-communication for changing substance-use knowledge, attitudes, and behavior in: *Mass Media and Drug prevention: Classic and Contemporary Theories and Research*, 2002) found that media campaigns had mixed and generally modest effects on substance use. We were not able to locate any studies that looked at the effectiveness of media messaging focused on harm reduction rather than on preventing substance use, but we anticipate that the effectiveness would be similar or slightly greater.

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. Local data: process data from implementation of the messaging campaign. Consider pre- and post-implementation community surveys.

Post-Overdose Follow-up Programs

Topic Area: Drug Overdose Intervention

Category: Evidence-Informed

Description: An individual who has suffered a nonfatal overdose is at increased risk of a subsequent, fatal overdose. Connecting overdose survivors to harm reduction services and substance use disorder treatment should be a very high priority. A post-overdose contact program affords opportunities to: provide the client (overdose survivor) with naloxone, naloxone use training, and overdose recognition and prevention education; connect the client to other harm reduction resources, such as syringe service programs (SSPs; see the *Syringe Service Program* page); and connect the client with a substance use treatment program if he or she is ready for treatment.

Contact teams are typically multi-disciplinary; a common team composition is a public health harm reduction worker or substance use peer support specialist and a peace officer. Some teams also include an emergency medical services provider. The public health/peer support representative is generally the primary service provider, while the peace officer helps to facilitate contact and the EMS provider, if present, helps to address any immediate health concerns that the client has.

Rapid response is important; the contact should occur after the client is medically stable and physically recovered from his or her initial overdose but no later than 72 hours post-overdose. It is recommended that law enforcement agencies partic-

ipating in an overdose follow-up program select officers who are compassionate and provide those officers training in both the process and the effects of addiction and in harm reduction efforts. It is recommended that officers wear civilian clothing and drive unmarked vehicles when participating in a follow-up contact.

Considerations: Post-overdose follow-up programs require a significant investment of personnel time by participating organizations. The personnel assigned to follow-up teams need to have flexible schedules or multiple teams need to be available; many follow-up visits may need to be made at night or on weekends. Prompt post-overdose contact is important; it may be impossible to locate the client if a team is not available until days after the initial overdose.

Evidence Source: Naloxone education and distribution are evidence-based, but there is less evidence to support post-overdose visits as a general harm reduction strategy. One available study (as of January 2020) is Bagley, SM, Schoenberger, SF, et al., A scoping review of post opioid-overdose interventions (*Preventive Medicine*, Nov. 2019).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. Local data: process data from implementation.

Substance Use Treatment and Recovery

Photo courtesy of Hudson Hintze/Unsplash



Emergency Department Screening and Intervention for Substance Use Disorder

Topic Area: Substance Use Treatment and Recovery

Category: Evidence-Based

Description: Individuals who suffer nonfatal overdoses are often treated in hospital emergency departments or freestanding emergency care centers. Some of those individuals are at a point where they are willing to consider enrolling in a treatment program for substance use disorder. If overdose patients are released without having been connected to a treatment program, they may be at elevated risk for a subsequent overdose.

While direct linkage to treatment is preferable, passive linkage—simply referring a patient to a treatment provider or making an appointment for them with a treatment provider—may be considered, although one study found that direct linkage is 30 times more successful than passive linkage. In active transition, treatment begins in the ED with buprenorphine (for opioid users) to mitigate withdrawal symptoms, then the patient is directly transferred to a medically supervised detoxification program or to medication for opioid use disorder treatment (see the *Medication for Opioid Use Disorder Treatment* program page).

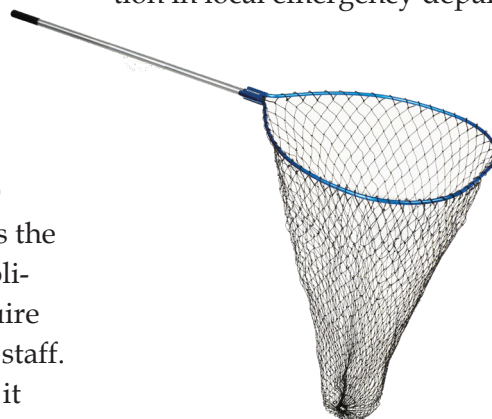
In some cases, the patient's initial counseling session takes place in the ED, prior to transfer to a treatment program. Some hospitals and health care systems operate bridge clinics where an emergency room patient is quickly linked to a treatment provider and/or medication for an opioid use disorder.

Considerations: The development of an ED screening and intervention program requires the availability of a provider and adoption of policies and practices in the ED. It may also require training of physicians, nurses, and other ED staff. In EDs where overdose cases are numerous, it

may require the addition of a staff member (e.g., a qualified peer support specialist or nursing technician) to handle treatment placement and transfer for overdose patients who elect to begin treatment.

Evidence Source: See www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/how-effective-drug-addiction-treatment for details regarding the effectiveness of treatment for substance use disorder. In their review of studies on the effectiveness of ED interventions, Kathryn Hawk and Gail D'Onofrio (*Addiction Science & Clinical Practice*, Aug. 2018;13) found that “compelling evidence exists specifically for ED interventions targeted for opioid use disorder.” Also see D'Onofrio, G, and Degutis, LC, Integrating Project ASSERT: a screening, intervention, and referral to treatment program for unhealthy alcohol and drug use into an urban emergency department (*Academic Emergency Medicine*, July 2010;17:903–911).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. Local data: process data from implementation in local emergency departments.



FindHelpNowKY.org Promotion

Topic Area: Substance Use Treatment and Recovery

Category: Evidence-Informed

Description: Many people suffering from substance use disorder have difficulty finding appropriate treatment and available treatment slots. [FindHelpNowKY.org](https://findhelpnowky.org) is a website that allows Kentuckians to find substance use treatment that meets their needs. Individuals can search for treatment for themselves or others such as family members, friends, or professional clients. They can search for treatment providers by the type of treatment provided (e.g., inpatient, residential, family residential, intensive outpatient, medication treatment, etc.), by the type of payment that the treatment provider will accept, and by location.

Unlike static lists of treatment providers, FindHelpNowKY.org provides near-real-time information about providers, including whether they are currently accepting new patients. Use of the website is growing steadily, but some substance users, health care providers, and others who support or assist substance users remain unaware of its existence. Promoting the website through media, during direct contact with substance users and/or care providers, and through outreach to healthcare and public safety professionals will increase awareness of this resource and help more substance users find and access treatment.

Considerations: The primary consideration for this program is determining how to best promote the use of FindHelpNowKY.org to substance users and to those who provide support, care, or services to them. Different methods and channels will be needed to reach substance users and their friends and family, emergency responders, and professionals such as healthcare and mental health providers. When promoting the website to substance users and their families, it is important to point out that the website does not collect any personally identifiable information.

Evidence Source: One article on the implementation and evaluation of FindHelpNowKy.org has been published to date: Bunn, T, Quesinberry, D, Jennings, T, Kizewski, A, Jackson, H, McKee, S, and Eustice, S, Timely linkage of individuals to substance use disorder treatment: development, implementation, and evaluation of FindHelpNowKY.org (*BMC Public Health*, Feb. 11, 2019;19(1):177, doi.org/10.1186/s12889-019-6499-5).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses and FindHelpNowKY.org website user statistics. Local data: process data from implementation of the messaging campaign. Consider pre- and post-implementation community surveys.

Medication for Opioid Use Disorder (MOUD) Treatment

Topic Area: Substance Use Treatment and Recovery

Category: Evidence-Based

Description: Medication for opioid use disorder (MOUD) treatment is the use of medications — primarily methadone, buprenorphine (Subutex, Suboxone) and naltrexone — to treat opioid use disorders. Methadone and buprenorphine prevent painful withdrawal symptoms and reduce the craving for opioids, while naltrexone blocks the euphoric and sedative effects produced by opioids. MOUD has been found to be highly effective at helping individuals achieve recovery from opioid use disorder. MOUD can substantially improve the chance of successful remission and recovery from opioid use disorder.

Considerations: The medications approved for the treatment of opioid use disorder are all prescription medications. They may only be prescribed by physicians (MDs/DOs) and nurse practitioners (APRNs) who have completed specific training as required by federal law. Because federal law requires methadone to be dispensed through specialized clinics separate from the rest of the health care system, access to methadone

treatment is limited in Kentucky. The number of buprenorphine patients that a physician or APRN may supervise at any particular time also is limited by federal law. MOUD is only appropriate for opioid use disorder; there are currently no medications approved to treat methamphetamine, benzodiazepine, or cocaine use disorders.

Evidence Source: There are many evaluations of MOUD, including Fullerton, CA, Kim, M, et al., Medication-assisted treatment with methadone: assessing the evidence (*Psychiatric Services*, Feb. 2014;65(2)146–157); Thomas, CP, Fullerton, CA, et al., Medication-assisted treatment with buprenorphine: assessing the evidence (*Psychiatric Services*, Feb. 2014;65(2)158–170); and Connery, HS, Medication-assisted treatment of opioid use disorder (*Harvard Review of Psychiatry*, March/April 2015;23(2):63–75).

Potential Evaluation Data Sources: KASPER Trend Reports or direct data request to the Office of Inspector General.

Peer Support Specialists

Topic Area: Substance Use Treatment and Recovery

Category: Evidence-Based

Description: According to the Substance Abuse and Mental Health Services Administration, “peer support workers are people who have been successful in the recovery process who help others experiencing similar situations. Through shared understanding, respect, and mutual empowerment, peer support workers help people become and stay engaged in the recovery process and reduce the likelihood of relapse. Peer support services can effectively extend the reach of treatment beyond the clinical setting into the everyday environment of those seeking a successful, sustained recovery process.”

Peer counselors help substance users in recovery by serving as advocates, sharing resources and building skills, helping develop a sense of community and relationships among individuals in recovery, and leading recovery groups. The role of the peer support specialist is not to replace clinical mental health care or medication treatment but to offer other aspects of care. In Kentucky, recognized peer support specialists must complete a 30-hour training program approved by the state Cabinet for Health and Family Services and pass a written examination. Once he or she completes initial training, a peer support specialist must work under the supervision of a licensed or certified professional (e.g., physician, psychiatrist, psychologist, APRN, certified social worker, licensed clinical counselor, etc.) and must complete at least six hours of continuing education per year.

Considerations: In Kentucky, peer support specialists cannot operate as independent substance abuse treatment providers or provide counseling services of the type normally provided by licensed substance abuse counselors or mental health professionals. Peer support specialists are well-suited as workers in community-based treatment and harm reduction programs but cannot provide services beyond those approved by the Kentucky Cabinet for Health and Family Services.

Evidence Source: Robust studies on the effectiveness of peer support services are limited, but evidence indicating the effectiveness of peer support specialists in the treatment of substance use disorder include Tracy, K, and Wallace, SP, Benefits of peer support groups in the treatment of addiction (*Substance Abuse and Rehabilitation*, Sept. 2016;7:143–154); Bassuk, EL, Hanson, J, et al., Peer-delivered recovery support services for addictions in the United States: a systematic review (*Journal of Substance Abuse Treatment*, April 2016;63:1–9); Gidugu, V, Rogers, ES, et al., Individual peer support: a qualitative study of mechanisms of its effectiveness (*Community Mental Health Journal*, 2015;51:445–452).

Potential Evaluation Data Sources: Website that identifies number of Kentucky-licensed peer support specialists working in the locale. Local data: agencies that employ peer support specialists.

Prenatal and Postnatal Assistance and Treatment for SUD

Topic Area: Substance Use Treatment and Recovery

Category: Evidence-Informed

Description: Prenatal programs are designed to help expectant mothers with substance use disorder prepare for childbirth and to provide them with SUD treatment. While programs vary, participants in a typical program (University of Kentucky Healthcare’s PATHways program, for example) participate in weekly sessions where they receive treatment for opioid use disorder and smoking cessation education as well as training on maternal-fetal bonding, soothing and swaddling an infant, breastfeeding, and expectations for a baby experiencing withdrawal. Health providers also address common psychosocial problems and other medical and psychiatric comorbidities, such as trauma. After birth, neonatologists ensure mother-baby pairs are engaging in healthy practices, such as early skin-to-skin bonding and breastfeeding rather than isolating from each other.

Because new mothers with SUD need continued support to maintain recovery and achieve positive outcomes, postnatal programs begin after childbirth. These programs, like the University of Kentucky Healthcare’s Beyond Birth, provide continuing support such as trauma-informed healthcare, case management, medication-assisted treatment (e.g., buprenorphine) for OUD, and peer support.

Considerations: Perinatal programs are typically delivered in or through a healthcare setting (e.g.,

a clinic or medical practice) and require an integrated team consisting of healthcare personnel and health educators. Postnatal programs may be delivered via a healthcare organization, by a public health department, or by a community services organization. In all cases, these programs require licensed health care professionals, trained and credentialed health educators, and other qualified staff members such as certified peer support specialists.

Evidence Source: UK Healthcare’s internal evaluation of the PATHways program included more than 250 women who received treatment over a multi-year period. Of those patients, 77% tested negative for all illicit drug use at the time of their admission for labor and delivery. The evaluation found a positive correlation between prenatal program participation and illicit drug use, with each one-session increase in participation equating to a 13% to 18% decrease in the likelihood of a positive drug urine test at delivery or at a follow-up appointment. Similar programs are currently being studied by the Patient-Centered Outcomes Research Institute.

Potential Evaluation Data Sources: Process data (clients served, sessions attended), drug urine test results, data on infants exhibiting neonatal abstinence syndrome, qualitative feedback from participants.

Topic Area: Substance Use Treatment and Recovery

Category: Evidence-Based

Description: Prime for Life® is a proprietary, trademarked prevention, intervention, and pretreatment program. It is an educational program typically conducted in a group or classroom setting. According to the program provider, Prevention Research Institute (PRI), Prime for Life is designed to change drinking and substance use behavior by changing beliefs, attitudes, risk perceptions, and motivations and to provide participants with knowledge of how to reduce their risk of alcohol- and drug-related problems throughout their lives. The program is delivered through local instructors who are trained and certified by PRI and who use educational materials sourced from PRI. In some areas, individuals convicted of driving under the influence of alcohol or drugs may be mandated to attend a Prime for Life course.

Considerations: Financial costs are associated with implementing the Prime for Life program. Instructor training and certification is \$895 (as of January 2020), plus the cost of associated travel. Participant materials (workbooks) are covered by an ongoing program fee. Continuing education programs for instructors do not have tuition

fees but likely will involve travel costs. As with most proprietary programs, local providers are required to use the program's designated content and materials and may not make changes to either.

Evidence Source: PRI states that, "Prime for Life was selected by the Substance Abuse and Mental Health Services Administration for inclusion in the National Registry of Evidence-based Programs and Practices (NREPP) in 2009. All the substance abuse intervention programs listed in the registry were scientifically evaluated and rated by independent reviewers as part of SAMHSA's mission of bringing evidence-based practices to service providers." The NREPP was discontinued in 2018 and has not yet been replaced by a similar program. A list of related publications and presentations can be found on the PRI website at www.primeforlife.org/Research/Evaluations/Publications_Presentations.

Potential Evaluation Data Sources: Local data: process data from the activities of the implementation of Prime for Life. Consider pre- and post-participation surveys.

Recovery Friendly Workplaces

Topic Area: Substance Use Treatment and Recovery

Category: Promising Practice

Description: Recovery friendly workplaces (RFWs) provide support and links to treatment for workers. Employers who create RFWs foster a supportive environment that encourages the success of their employees in recovery. Rather than taking punitive action against employees who test positive for illicit substances or who ask for substance use treatment, employers who offer RFWs provide links to treatment, insurance coverage for treatment, training for supervisors in how to assist employees in recovery, and other support options. Additional information can be found on New Hampshire's RFW website at www.recoveryfriendlyworkplace.com. Employees in recovery take an average of five fewer days of unscheduled leave per year than employees who are in active substance use and one less than non-substance using employees. Employees who receive effective treatment save employers an average of \$3,200 per year compared to employees with active substance use.

Considerations: Individual employers can develop RFW programs. Information and assistance is available to employers from the Kentucky Chamber of Commerce at www.kychamber.com/programs-services/Kentucky-Chamber-Workforce-Center/opioid-response-program-business). A more effective program can be created when numerous employers in a community develop

similar recovery friendly workplace programs. Local Chambers and other community organizations can promote the development of programs by employers and connect employers with resources available from the Kentucky Chamber of Commerce.

Evidence Source: In Integrating Substance Abuse Treatment and Vocational Services (2000, Treatment Improvement Protocol Series, no. 38, Rockville, MD: Center for Substance Abuse Treatment, HHS Publication No. 12-4216), the US Substance Abuse and Mental Health Services Administration notes that "Employment has been positively correlated with retention in treatment. By holding a job, a client establishes a legal source of income, structured use of time, and improved self-esteem, which in turn may reduce substance use and criminal activity." Bausch, R, Weber, G, and Wolkstein, E, Work as a critical component of recovery (Boonshoft School of Medicine, Wright State University, medicine.wright.edu/sites/medicine.wright.edu/files/page/attachments/word_work.doc) lists a number of valuable benefits of work on the substance use recovery process and cites additional sources.

Potential Evaluation Data Sources: Local data: employer surveys.

Harm Reduction



Jail-Based Education Programs

Topic Area: Harm Reduction

Category: Evidence-Based

Description: The National Institute for Drug Abuse stated, via drugabuse.gov, “while the exact rates of inmates with substance use disorders is difficult to measure, some research shows that an estimated 65% of the US prison population has an active SUD. Another 20% did not meet the official criteria for an SUD but were under the influence of drugs or alcohol at the time of their crime.”

Jail-based education programs (JEPs) are designed to serve justice-involved individuals by educating them about the risks of substance use and ways to prevent and reverse drug overdoses.

There is not a standard model for JEPs. The programs vary in content, duration, and approach among communities. Many JEPs provide initial screening for substance use, particularly opioid use, then provide training on the risk of drug overdose and drug overdose reversal as well as distribution of naloxone to individuals with opioid use disorders. Some JEPs also provide training to individuals who indicate their friends or relatives use opioids, even if the justice-involved individual is not the one with an opioid use disorder. JEPs typically provide clients with free naloxone when they are released from incarceration.

Some JEPs also provide longer-term substance use education and SUD treatment for justice-involved individuals. Other services provided by JEPs include referrals to SUD treatment upon release, connecting the individuals to community services such as housing, employment, and transportation to treatment as well as follow-up case management services to reintegrate into the community and begin and sustain recovery.

Considerations: JEPs require the cooperation of the correctional facility administration; without the approval of the facility administrator, outside personnel cannot gain access to the facility to conduct a JEP program. Other key stakeholders include the organization (often a private contractor) that provides health services to individuals incarcerated in the facility, the local public health department, and local elected officials. In Kentucky, the jailers who oversee the operation of local correctional facilities are elected officials. The RTI International publication *A Primer for Implementation of Overdose Education and Naloxone Distribution in Jails and Prisons* (August 31, 2019) provides extensive information about topics that must be considered when designing and implementing a JEP.

Evidence Source: Multiple peer-reviewed articles are listed in the reference section of the RTI International Primer (see above). This document is available online at no cost at opioidresponse-network.org/ResourceMaterials/Naloxone-Prison-Primer_v2.pdf.

Potential Evaluation Data Sources: Process data (clients served), pre- and post-tests of client knowledge, reports of overdose reversal/naloxone use, overdose data from public safety agencies and hospital emergency departments.

Syringe Service Program

Topic Area: Harm Reduction

Category: Evidence-Based

Description: Syringe service programs (SSPs), sometimes called syringe exchange programs, provide clean, sterile syringes (not just needles) to injecting substance users. This does not reduce the risk of harm caused by the substance itself, but it dramatically reduces the chance of infection—both at the injection site and systemically—that occurs when a needle is shared among two or more individuals who inject substances. SSPs are associated with an estimated 50% reduction in HIV and hepatitis C incidence, and they reduce the risk of outbreaks of HIV, hepatitis, and other infectious diseases among injecting substance users who participate in the program. SSPs also protect the public and first responders by facilitating the safe disposal of used needles and syringes. As part of their meetings with participants, SSP staff typically provide a link to other services, such as naloxone training and distribution, peer support specialists, substance use treatment, infectious disease testing, and other public health and community services.

Considerations: SSPs in Kentucky may only be operated by public health departments that have obtained the approval of their board of health, the fiscal court or other legislative body of the county

in which the program will be conducted, and the legislative body of any city in which the program will be conducted. The Cabinet for Health and Family Services provides guidelines for local health departments operating SSPs. A detailed guidebook is available from CHFS at chfs.ky.gov/agencies/dph/dehp/hab/Pages/kyseps.aspx. Substance users who participate in an SSP are several times more likely to choose treatment for substance use disorder than those who do not. It is important that SSPs provide not only syringes and disease prevention information but also links to treatment for those individuals who indicate an interest in receiving treatment for their disorder.

Evidence Source: SSPs are regarded as strongly evidence-based by the CDC (see cdc.gov/spp/). A listing of numerous studies supporting the benefits of SSPs is available from the CDC (see www.cdc.gov/spp/syringe-services-programs-factsheet.html).

Potential Evaluation Data Sources: Statewide data: from KIPRC, fatal and nonfatal drug overdoses. Local data: process data from the activities of the syringe exchange program.



Primary Prevention of Substance Use

Photo courtesy of NeONBRAND/Unsplash



All Stars

Topic Area: Primary Prevention of Substance Use

Category: Evidence-Informed

Description: All Stars is a proprietary series of prevention programs designed for students in grades four through 12. The goal of these programs is to delay the onset of risky behaviors among adolescents. Programs can be delivered in school classrooms or in a community setting. All Stars programs align with the National Health Education Standards, which makes them easier to incorporate into a health or wellness education curriculum. The programs include a parent component designed to promote interaction between the student and parent. The available All Stars programs include Character Education, Core, Booster, Plus, and Senior, which are designed for different age groups with the intent of providing continuing exposure to prevention programming throughout the adolescent period.

Considerations: As with most proprietary programs, costs are associated with All Stars. The developer states that All Stars-certified teacher training is “imperative” before teaching All Stars for the first time, to ensure that the program is presented as designed and because trained teachers have been found to use more engaging methods to present the material. The cost for the required teacher certification training was not available. Teacher manuals range from \$80 to \$100 per pro-

gram, while student materials range from \$3 to \$5 per student, depending upon the program. Staff time to deliver the program and classroom time in a school setting are also factors to consider.

Evidence Source: The programs were developed by an academic researcher and are based upon current scientific understanding of child and youth development and behavior. All Stars Core is listed on the National Registry of Effective Prevention Programs previously maintained by SAMHSA. Studies cited to support the All Stars programs include Shamblen, SR, and Derzon, JH, A preliminary study of the population-adjusted effectiveness of substance abuse prevention programming: towards making IOM program types comparable (*Journal of Primary Prevention*, March 2009;30(2):89–107); and Miller, T, and Hendrie, D, Substance abuse prevention dollars and cents: a cost-benefit analysis (2008, Rockville, MD: Substance Abuse and Mental Health Services Administration, Department of Health and Human Services publication number (SMA) 07-4298).

Potential Evaluation Data Sources: Statewide data: Behavioral Risk Factor Surveillance Survey on substance use. Local data: pre- and post-participation surveys.

Big Brothers/Big Sisters of America

Topic Area: Primary Prevention of Substance Use

Category: Promising Practice

Description: Big Brothers/Big Sisters of America (BBBS) is the nation's largest donor- and volunteer-supported mentoring network. BBBS arranges for monitored matches between adult volunteer mentors ("Bigs") and children ("Littles") aged five through 18. The organization works to develop relationships that have a positive effect on the lives of participating children and youth. BBBS offers both school-based and community-based mentoring programs as well as the Amachi Program, which is designed specifically for children with an incarcerated parent.

Considerations: There are regional BBBS organizations throughout Kentucky. Unlike many programs that require a critical number of individuals in a community to work, individual adults can choose to become a Big and, after vetting and approval, work with a child in his or her community. Having several Big/Little pairs in a community can provide opportunities for group activities, but such activities are not a key part of the mentoring process. The cost of participation is low for Bigs, and there is no specific cost for the community as a whole, though donations are needed to help fund the program. The primary limitation of BBBS, which is also the organization's greatest strength, is the need for one adult mentor for every participating child or youth.

Evidence Source: Grossman, JB, Tierney, JP, and Resch, N, in Making a difference: an impact study of Big Brothers/Big Sisters (1995, Philadelphia, PA: Public/Private Ventures), found that children who participated in a BBBS community-based mentoring program were less likely to start using drugs and alcohol or to hit someone and had improved school attendance and performance, improved attitudes toward completing schoolwork, and improved peer and family relationships. Positive relationships and strong, consistent disapproval of substance use by important others have been found to be a protective factor for substance use; through the BBBS program Bigs provide such relationships and disapproval of substance use for their Littles. BBBS has been identified as having positive effects in RAND: Programs that Work, from the Promising Practices Network on Children, Families and Communities, but the available evaluations focused primarily on short-term results. The long-term impact of BBBS is still being examined.

Potential Evaluation Data Sources: Local data: pre- and post-participation surveys.

The Blues Program

Topic Area: Primary Prevention of Substance Use

Category: Evidence-Based

Description: The Blues Program was developed by Blueprints for Healthy Youth Development (BHYD), a project within the Institute of Behavioral Science at the University of Colorado Boulder. The program is designed for high school-aged students. According to BHYD, “The Blues Program is a six-week group intervention focused on reducing negative cognitions and increasing engagement in pleasant activities in an effort to prevent the onset and persistence of depression in at-risk high school youth with depressive symptoms. The weekly sessions focus on building group rapport and increasing participant involvement in pleasant activities, learning and practicing cognitive restructuring techniques, and developing response plans to future life stressors. In-session exercises require participants to apply skills taught in the program. Home practice assignments are intended to reinforce the skills taught in the sessions and help participants learn how to apply these skills in their daily life.”

Mental illness, including depression, is a strong risk factor for substance use, so programs that have been shown to reduce mental illness may be effective at reducing risk for substance use. BHYD’s evaluation of the program (see below) found reduction in self-reported symptoms of depression and substance use for up to two years following participation in the program.

Considerations: The program is designed to be conducted by qualified professional staff, i.e.,

licensed or certified mental health therapists. Training to conduct the program is available only from a single source. BHYD states that, “Skype or on-site four- to six-hour training programs for groups of therapists (typically about \$1,000/day plus travel expenses) conducted by either Paul Rohde, PhD, or his colleagues, Eric Stice, PhD, or Heather Shaw, PhD, can be organized by contacting Dr. Rohde. Individual therapists or small groups of therapists can participate in one-day trainings with Dr. Rohde and/or Drs. Stice and Shaw at the Oregon Research Institute in Eugene, Oregon. Training consists of reading key outcome papers and the prevention intervention manual, discussing intervention rationale, modeling and role-play of all key intervention components, discussing process issues, and reviewing crisis response plans.” The estimated cost per participant of the one-day course is \$234 per individual.

Evidence Source: BHYD lists supporting evidence on its program fact sheet, which is available online at www.blueprintsprograms.org/programs/914999999/blues-program. Three studies, all published in the *Journal of Consulting and Clinical Psychology*, are cited.

Potential Evaluation Data Sources: Local data: process data from implementation and Kentucky Incentives for Prevention Student Survey.

Keep a Clear Mind

Topic Area: Primary Prevention of Substance Use

Category: Evidence-Based

Description: Keep a Clear Mind (KACM) is a substance abuse prevention program available from the Center for Evidence-Based Programming, a private company that markets prevention curricula and materials licensed from the University of Arkansas. KACM is focused on elementary school students in grades four through six. The program provides students with four activity books—one per week over a four-week period. Students take the books home and complete the program with their parents. If a student shows their teacher that their parent(s) have signed an activity book, the student receives an incentive (e.g., bumper sticker, bookmark, key chain, bracelet). After the four-week activity book period, five parent newsletters are sent home with students over the following five to 10 weeks.

Considerations: KACM is a proprietary program that requires a set of consumable materials for each student. Material sets are less than \$5 per student, although the addition of more incentives (e.g., student T-shirts) can significantly increase

the cost. There is no required program-specific training or certification for teachers who present the program to their classes. A short implementation guide is available without cost.

Evidence Source: Published studies have found positive results from the KACM program, including Jowers, K, and Bradshaw, C, Taking school-based substance abuse prevention to scale: district-wide implementation of Keep a Clear Mind (*Journal of Alcohol and Drug Education*, Jan. 2007;51(30):73–91); Young, M, Kersten, C, and Werch, C, Evaluation of a parent-child drug education program (*Journal of Drug Education*, March 1996;26(1):57–68); and Werch, CE, Young, M, et al., Effects of a take-home drug prevention program on drug-related communication and beliefs of parents and children (*Journal of School Health*, Oct. 1991; 61(8):346–350).

Potential Evaluation Data Sources: Local data: pre- and post-participation surveys.

Planet Youth

Topic Area: Primary Prevention of Substance Use

Category: Evidence-Based

Description: Planet Youth is a substance use prevention program designed for adolescents. The program was developed in the 1990s by social scientists at the Icelandic Center for Social Research and Analysis. Planet Youth is based on the Icelandic Prevention Model, which in turn is derived from classic theories of social deviance. The central point of this theory is that most individuals are capable of deviant acts but that those acts only become common patterns of behavior under certain environmental and social conditions. Rather than focusing on the choices of adolescents as individuals, Planet Youth focuses on creating a social environment where positive choices become the norm and opportunities for deviant behavior are reduced.

The program operates according to five guiding principles:

- apply a primary prevention approach that is designed to enhance the social environment;
- emphasize community action and embrace public schools as the natural hub of neighborhood and area efforts to support child and adolescent health, learning, and life success;
- engage and empower community members to make practical decisions using local, high-quality, accessible data and diagnostics;
- integrate researchers, policymakers, practitioners, and community members into a

unified team dedicated to solving complex, real-world problems; and

- match the scope of the solution to the scope of the problem, including emphasizing long-term intervention and efforts to marshal adequate community resources.

For more details about Planet Youth, see www.planetyouth.org. Implementation details can be found at planetyouth.org/the-method/step-by-step/.

Considerations: The program requires large-scale cooperation and collaboration between numerous community partners including schools, youth programs and youth athletic leagues, parents, community organizations, governmental agencies, and others. Significant resources are needed to organize and implement activity programs for adolescents.

Evidence Source: Evaluation results are summarized in Kristjansson, AL, Mann, MJ, et al., Development and guiding principles of the Icelandic model for preventing adolescent substance use (*Health Promotion Practice*, 2020;21(1):62–69).

Potential Evaluation Data Sources: Local data: Process data from implementation and Kentucky Incentives for Prevention Student Survey.

Project Towards No Drug Abuse

Topic Area: Primary Prevention of Substance Use

Category: Evidence-Informed

Description: Project Towards No Drug Abuse (TND) is a substance use prevention program that targets high school-age (14- to 19-year-old) youth. The program was developed by Dr. Steve Sussman at the Institute for Health Promotion and Disease Prevention Research at the University of Southern California and is an interactive classroom-based program that focuses on three factors that have been shown to predict the use of tobacco, alcohol, and other substances: motivation (i.e., students' beliefs, attitudes, expectations, and desires regarding drug use), skills (such as effective communication, self-control, and coping skills), and decision-making.

The program includes 12 classroom-based sessions, each of which lasts approximately 45 minutes. It is designed to be implemented over a four-week period, with three sessions per week, but it can be delivered in a twice-per-week, six-week format. While the program is designed for delivery in a school classroom by a certified teacher or health educator, it has been adapted for use in community settings where trained instructors are available.

Considerations: The program requires the active participation of high school teachers and administrators and a total of approximately nine hours of classroom time in addition to preparation time for

teachers. Required materials include a teacher's manual for each teacher and a student workbook for each student. The program designers are clear that to be effective, all content in the curriculum must be taught and teachers must use the instructional methods listed in the teacher's manual. Pre-implementation teacher training, which costs approximately \$2,000 per teacher, plus the cost of travel for the trainer, is strongly recommended but not required. For more information, contact the USC Institute for Health Promotion and Disease Prevention Research at (800) 400-8461.

Evidence Source: Project TND was the subject of seven research trials with over 8,600 students that found the program to be effective, though the studies primarily focused on short-term impact. The program appears to work for diverse student populations. For additional information on this evaluation, see tnd.usc.edu/?page_id=38. Studies published in 2014 called into question some of the methods used to evaluate Project TND, while other papers sought to rebut the criticism. Project TND is unquestionably evidence-informed, and some agencies such as the US Office of Juvenile Justice and Health Canada have classified Project TND as evidence-based.

Potential Evaluation Data Sources: Local data: pre- and post-participation surveys.

Too Good for Drugs

Topic Area: Primary Prevention

Category: Evidence-Based

Description: Too Good for Drugs (TGFD) is an education-based prevention program designed to be delivered in school classrooms from kindergarten through high school. The program focuses on the development of social and emotional skills to empower children and youth to make healthy choices, build positive relationships, develop self-efficacy, communicate effectively, and resist peer pressure and influence. The program goal is to mitigate risk factors and to increase protective factors associated with the use of alcohol, tobacco, and other substances.

TGFD is designed to teach five social and emotional learning skills that research has shown contribute to healthy development and academic success: setting reachable goals, making responsible decisions, bonding with others who are pro-social, identifying and managing emotions, and communicating effectively. The program also addresses other topics such as managing mistakes and disappointment, understanding peer influence and resisting peer pressure, safe use of medication, and the negative effects of alcohol, nicotine, and other substances.

The program content is presented in a series of 30- to 45-minute lessons. These lessons are designed to be integrated into a school's curriculum. The program material also includes strategies and methods to build and reinforce connections between the school and families.

Considerations: TGFD is a proprietary program with costs for user training and program materials. The program requires a curriculum kit for each grade at each school; larger schools may need more than one kit per grade. Curriculum kits cost from \$250 to \$300 each. Expansion kits, which add additional content, are available for most grade levels at additional cost. The program also requires consumable student workbooks that cost approximately \$2 each. Training programs for teachers and trainers, which are recommended but not mandated, cost \$350 to \$550 plus the cost of associated travel.

Evidence Source: The most recent evaluation report (2013) for TGFD is available online at cdn.shopify.com/s/files/1/2015/4727/files/TGFD_Middle_Study_2013_March.pdf. The evaluation, which included 49 middle schools and used a stratified randomized treatment-control group design, found a substantive, short-term, positive impact on high-risk students. The positive effect was attenuated by time but was still present for high-risk students six months after completion of the program.

Potential Evaluation Data Sources: Process data (e.g., number of classrooms and students served) and pre- and post-participation student surveys of substance use risk and protective factors.

Truth and Consequences: The Choice Is Yours

Topic Area: Primary Prevention of Substance Use

Category: Evidence-Informed

Description: Truth and Consequences: The Choice Is Yours (TaC) is a program offered by the University of Kentucky Cooperative Extension Service. According to the Extension Service, TaC is “an enrichment activity designed to show students the impact of getting involved with illicit and legal substances. It is suggested that communities focus on one grade level (e.g., freshman high school students). Based upon the format of the 4-H Reality Store, students role-play scenarios including possession of prescription drugs; driving under the influence; sniffing; possession of alcohol, drug paraphernalia, or illegal drugs; trafficking; and stealing drugs; etc.

Depending on the scenario, students visit appropriate officials and/or agencies to experience the consequences of their behavior. Parents are encouraged to participate with their children. When parents are unable to participate, Kentucky Extension Homemakers Association members or community volunteers assume the role of parents to the youth and accompany them as they visit the law enforcement agencies, judges, school officials, hospital, and coroner. The program is based on the idea that if young people understand the potential consequences of a choice to use substances, they will choose to not use them.

Considerations: To host a TaC program, a community must contact their local County Extension Agent for Family and Consumer Sciences or County Extension Agent for 4-H/Youth Development. There is no specific cost for the program,

but it requires a significant amount of organization and cooperation from various local agencies, organizations, and officials, so communities should begin planning several months in advance if they wish to host a program.

Evidence Source: TaC has not been subjected to formal, scientifically rigorous evaluation. In general, programs that focus primarily on educating teens and young adults about the risks associated with substance use or deviant behavior have been found to have limited effectiveness (see Paglia, A, and Room, R, Preventing substance use problems among youth: a literature review and recommendations, *Journal of Primary Prevention*, Fall 1999;20(1):3–50), in part because youth make decisions differently than adults (see www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/The-Teen-Brain-Behavior-Problem-Solving-and-Decision-Making-095).

Other studies have found modest effectiveness for education-based prevention programs. Given the lack of a formal evaluation and the varied results for similar programs in the literature, we believe that TaC is best classified as evidence-informed.

Potential Evaluation Data Sources: Local data: pre- and post-participation surveys.

