Prevention and Reduction of Opioid Misuse in Massachusetts

Guidance Document

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Massachusetts Technical Assistance Partnership for Prevention (MassTAPP). MassTAPP is a program of Education Development Center, Inc. (EDC) in partnership with Bay State Community Services and Partnership for Youth and is funded by the by Massachusetts Department of Public Health, Bureau of Substance Abuse Services.

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Education Development Center, Inc., Bay State Community Services, and Partnership for Youth, located in Waltham, Quincy, and Greenfield, Mass., respectively, form the Massachusetts Technical Assistance Partnership for Prevention, or MassTAPP. We are funded by the Mass. Department of Public Health's Bureau of Substance Abuse Services (BSAS) to provide technical assistance (TA), build capacity, and offer resources to communities across the Commonwealth who are seeking to reduce the abuse of alcohol and other drugs. Working as one statewide team, our TA providers will be matched with each community that is home to one or more BSAS-funded programs. Each community will benefit from an ongoing relationship with a core TA provider, and through this provider will have access to the expertise of both the entire TA team and our consultant pool.

Our TA services include the following:

- *Individualized TA:* Each BSAS-funded program will be matched with a TA provider who will be the main point of contact for all TA requests. Each TA will be in touch with coalition coordinators by phone or e-mail weekly and will provide one-to-one, in-person tailored TA each month. TAs are well-versed in the Strategic Prevention Framework process. They will access past site visit reports and other documentation to provide a seamless transition to MassTAPP's TA services.
- *Expert consultants for in-depth, focused work:* MassTAPP will access and deploy members of our consultant pool to best meet the specific TA needs of each BSAS-funded community. Our consultant pool comprises professionals with a wide range of expertise and deep knowledge of specific regions and communities across the Commonwealth.
- *Online learning events:* Webinars and other distance-learning events will be developed to share information and research and to bring together communities (both BSAS- and non-BSAS-funded) with similar concerns. Our webinars are designed to be useful and engaging, with plenty of opportunity for participation.
- *In-person networking events:* Meetings may be regional or topical; trainings will be developed to address the needs of both BSAS- and non-BSAS-funded communities and coalitions around supporting their substance abuse prevention work.
- *Peer-to-peer learning:* TAs will facilitate the sharing of information, both within regions and across the state, among communities and peers (BSAS- and non-BSAS-funded) with issues in common, and will help communities form mentoring relationships.
- *Website and monthly e-blast:* Our website will serve as a "go to" place for resources and distance-learning opportunities related to substance abuse prevention strategies in Massachusetts. A monthly "e-blast" of upcoming events, recent news, and highlights of excellent new resources will go out to our mailing list of BSAS- and non-BSAS-funded communities and programs.

For further information, contact Lauren Gilman, Project Director, at 617-618-2308 or lgilman@edc.org, or visit MassTAPP.edc.org.

Introduction

Opioid misuse—defined here as use of an illegal opioid (e.g., heroin) and/or misuse of a prescription drug that contains an opioid—is a major preventable cause of overdose and death in Massachusetts. Many cities and towns in the Commonwealth are struggling to address opioid misuse and its related consequences, such as illegal sales, overdoses, excessive use of emergency care, and the increased need for costly addiction treatment services.

Opioid misuse is a complex issue that affects diverse groups—from a middle-aged woman who becomes addicted to an opioid pain reliever originally prescribed for a sports injury to a young person who is using illegal opioids to get high. Some people may begin by misusing opioid prescription pills and eventually progress to heroin use. However, evidence suggests that simply restricting access to opioid medications could lead to increased use of heroin—a more dangerous and illegal drug.

This guidance document is a resource for municipalities, individuals, organizations, community coalitions, and other groups who are implementing efforts to prevent and/or reduce opioid misuse in Massachusetts, including those whose efforts are funded by the Massachusetts Department of Public Health (MDPH) Bureau of Substance Abuse Services (BSAS), and more specifically, grantees of the Massachusetts Opioid Abuse Prevention Collaborative (see sidebar).

Massachusetts Opioid Abuse Prevention Collaborative

The Massachusetts Opioid Abuse Prevention Collaborative (MOAPC) grant program is part of a comprehensive approach to substance abuse prevention in Massachusetts. Its aim is to implement local policy, practice, systems, and environmental change for three key purposes:

- To prevent the misuse and abuse of opioids (including first use)
- To prevent and reduce unintentional deaths and nonfatal hospital events associated with opioid poisonings
- To increase both the number and the capacity of municipalities across the Commonwealth addressing these issues by providing support for groups who are entering into long-term agreements to share resources and coordinate activities

MOAPC emphasizes the integration of SAMHSA's Strategic Prevention Framework model into overall prevention systems to ensure a consistent data-driven planning process across the Commonwealth, focused on implementing effective and sustainable strategies and interventions. The leading municipalities must work in partnership with neighboring municipalities, thereby forming a cluster.

Through the MOAPC grant, BSAS is awarding a total of $1.8M annually to 18 lead municipalities, currently covering more than 90 municipalities across the Commonwealth. This is a three-year grant with two two-year renewal options, making it possible for grantees to be funded to implement and sustain this work until 2020.

See Appendix 1 for more about MOAPC, Appendices 2–6 for specific guidance tailored to the needs of MOAPC grantees, and Appendix 7 for a list of grantees.

The first part of this guide defines opioid misuse and provides national and state data on the extent of the problem. The sections that follow provide guidance on the use of the Strategic Prevention Framework, a model for implementing and evaluating evidence-based, culturally

appropriate, sustainable substance abuse prevention strategies. Developed by the Substance Abuse and Mental Health Services Administration (SAMHSA), the Strategic Prevention Framework is used by BSAS grantees and other communities nationwide to implement interventions addressing substance abuse.

Opioid misuse prevention strategies may target various populations. For example:

- Strategies aimed at preventing first use of heroin may target a broad population, such as all high school students. This is consistent with the *universal* approach to prevention (O'Connell, Boat, & Warner, 2009), whose goal is to reach the entire population.
- Strategies may seek to reduce opioid-related overdoses by targeting a specific group identified as being at risk for opioid misuse, such as teens with behavioral issues in a school setting. This is referred to as a *selected* approach to prevention, targeted to at-risk subgroups of the general population.
- Particular strategies may be used to address opioid misuse among individuals who have been hospitalized for an opioid overdose. This approach, known as *indicated,* targets high-risk individuals.

This guide addresses all three approaches. It illustrates an array of prevention strategies along a spectrum that begins with health promotion and moves from prevention of use to prevention of overdose. It also demonstrates the need for different strategies as the target group shifts, from an entire population to those at risk of using to those already using opioids. Prevention is needed at each level and must be tailored to the needs, resources, and culturally shaped contexts of each community.

Opioid misuse is a complex problem that requires comprehensive, coordinated, evidence-based solutions. This guide is intended to help communities in Massachusetts develop and implement effective, culturally competent strategies that will have a measurable, sustained effect in preventing and reducing opioid misuse and its devastating consequences.

Opioid Misuse

Opioid misuse includes use of the illegal drug heroin and misuse of opioid prescription medications. Opioid misuse affects diverse groups of people in the Commonwealth and across the nation.

What are opioids?

The term *opioid* designates a class of drugs that includes the following (see Table 1):

- Natural opiates obtained from the opium poppy plant
- Semi-synthetic opioids synthesized or derived from a natural opiate
- Opioids manufactured synthetically to have a chemical structure similar to that of an opiate

Thus, *opioid* is a broad term that encompasses both natural opiates and chemicals synthesized to resemble an opiate.

What is opioid misuse?

This guide uses the term *opioid misuse* to encompass the use of illegal opioid drugs (e.g., heroin) and the misuse of prescription opioid medications (e.g., OxyContin).

In Massachusetts, the nonmedical use of prescription drugs is defined as "the use of a prescription drug without a prescription from a physician or simply for the experience or feeling the drugs caused" (SAMHSA, 2011, p. 2). However, the misuse of prescription drugs may be defined in different ways.

Table 1. Types of Opioids and Examples

Class	Drug name	Brand names
Natural opiates Alkaloids in the opium poppy plant	Morphine	AVINza Kadian MS-Contin Ora-morph
	Codeine	
	Thebaine (also called paramorphine)	
Semi-synthetic opioids Created from natural opiates	Hydrocodone	Lortab and Vicodin (with acetominophen)
	Hydromorphone	Dilaudid Exalgo
	Oxycodone	OxyContin Roxicodone Percocet and Tylox (with acetaminophen) Percodan (with aspirin)
	Oxymorphone	Opana
	Diacetylmorphine (heroin)	
	Buprenorphine	Butrans
Fully synthetic opioids Chemically made	Fentanyl	Duragesic Fentora Onsolis
	Meperidine	Demerol
	Methadone	Diskets Dolophine Methadose
	Tramadol	ConZip Rybix ODT Ryzolt Ultram

Misuse, abuse, or nonmedical use of prescription drugs includes the following:

- Taking a medication without a prescription (whether purchased illegally from drug dealers or stolen from a friend or family member's medicine cabinet)
- Taking a prescribed medication in a way that differs from the doctor's instructions (e.g., taking a higher dose than prescribed; crushing or otherwise tampering with the medication to increase its effect)
- Taking a prescribed medication for a purpose other than what the drug was prescribed for, usually to elicit a particular experience or feeling (National Institute on Drug Abuse [NIDA], 2012; SAMHSA, 2012c)
- *Double doctoring* (also commonly referred to as "doctor shopping" or "multiple provider episodes")—obtaining a prescription from more than one doctor without telling the prescribing doctor about other prescriptions received in the past 30 days

Using prescription medication in any of these ways is considered misuse even if it does not lead to harmful consequences (Hertz & Knight, 2006). Federal laws regulate the possession and distribution of all opioids. Use of prescription opioids is legal when prescribed by a licensed medical practitioner and used by the person to whom the opioids are prescribed. Penalties for the illegal possession and distribution of prescription opioids include fines, imprisonment, or both.

What are the effects of opioids?

Opioids are depressants that slow down the central nervous system. These chemicals attach to specific receptors in the brain, spinal cord, and gastrointestinal tract and block the transmission of pain messages. Other effects may include drowsiness, mental confusion, nausea, and constipation (NIDA, 2011). At high levels, opioids reduce consciousness and decrease breathing (respiratory depression), which could lead to overdose and death.

As opioids affect brain regions involved in reward, some people may experience euphoria during use. In fact, most opioid prescription drugs are used to treat pain. Other opioid medications may be used to control coughs and diarrhea.

Most of these drugs are in the form of pills. People who misuse opioids sometimes crush the pills into powder and snort or inject the drug, causing it to enter the

Dependence vs. addiction

Physical dependence occurs because of normal adaptations to chronic exposure to a drug. Dependence is often accompanied by tolerance, or the need to take higher doses of a medication to get the same effect.

Addiction is when a drug becomes central to a person's thoughts, emotions, and activities, and he or she feels a craving or compulsion to continue using the drug. It may or may not include physical dependence.

Someone who is physically dependent on an opioid will experience **withdrawal symptoms** when use of the drug is abruptly reduced or stopped. These symptoms can include restlessness, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes with goosebumps, and involuntary leg movements. The symptoms can be mild or severe, depending on the drug, and can usually be managed medically by using a slow drug taper.

Adapted from NIDA (2011).

bloodstream and brain very quickly. This may increase the risk of addiction (see sidebar on previous page) and overdose.

Who is at risk of opioid misuse?

Opioid misuse affects men and women of different ages, race/ethnicity, socioeconomic status, and other characteristics. Different pathways may lead to opioid misuse. In some cases, a person who is prescribed an opioid painkiller for an injury may become addicted and begin to misuse the drug. Others may start using opioids and other drugs to become high or intoxicated. And some users may move from prescription opioid pills to heroin, depending on factors such as price and availability (see sidebar).

Findings from a recent study suggest that efforts to make a prescription opioid more tamper-resistant, thereby making it harder to inhale or inject, could increase the use of heroin (Cicero, Ellis, & Surratt, 2012). This highlights the importance of implementing *primary prevention activities* (strategies to prevent the misuse of opioids) in conjunction with harm-reduction strategies aimed at preventing and reducing unintentional deaths and nonfatal hospital events associated with opioid poisonings. Injecting heroin is particularly dangerous because it can lead to transmission of infectious diseases, such as HIV and hepatitis.

From prescribed opioids to heroin

The following excerpts from a recent story in *USA Today* (Leger, 2013) highlight the connection between use of heroin and prescription opioids.

The trend to heroin bore out in Mark Publicker's 24-bed detox ward at Mercy Hospital Recovery Center in Portland, where as many as half the patients are addicted to opiates. Publicker saw a startling change six to eight months ago as patients, who once favored oxycodone, reported intravenous heroin as their opiate of choice . . .

"As bad as oxycodone is, heroin is worse," Publicker said. "It's worse because here in Maine, it's injected. We're talking about a novice population of drug injectors who are not educated about needle use. . . . We're talking 18-, 19-, 20-, 21-year-olds," he said.

One young patient who entered treatment in February started using painkillers properly prescribed after ankle surgery but became addicted within a year . . . About 18 months ago, she switched to IV heroin and shared needles with her boyfriend.

. . . In Charlotte, many of the opiate addicts in the Carolinas clinic got their start with powerful painkillers prescribed after surgery or a broken bone . . . As doctors cut off their prescriptions and the black market supply withered, they turned to cheaper, easier-to-find heroin. . . . "A lot of dealers, if you buy nine balloons, they give you one free," [said the substance abuse services director]. *"You can call or text a dealer, and they'll deliver."*

What is an opioid overdose?

An overdose occurs when the body has more drugs in its system than it can handle, leading to a potentially life-threatening condition. During an opioid overdose, the person may become unresponsive to stimulation and/or have difficulty breathing. His or her lips and fingers may turn blue from lack of oxygen. The lack of oxygen eventually affects other vital organs, including the heart and brain, which may lead to unconsciousness, coma, and death.

Lack of oxygen is the greatest risk during an opioid overdose. Fortunately, death from overdose is rarely instantaneous. Most deaths from a heroin overdose have been estimated to occur from one to three hours after injection (Sporer, 1999). There is usually time to intervene before the person dies. Furthermore, not all overdoses are fatal. Without any intervention, some people who overdose may become unresponsive and breathing may slow, but the person may still take in enough oxygen to survive.

Although overdoses are relatively rare, they sometimes cluster together by time and location, often referred to as "spates" of overdoses. See Appendix 8 for more on responding to opioid overdose spates.

What affects the risk of an overdose?

Opioids differ both in strength and in how long they remain active in a person's body. Several factors may affect the risk of an overdose, including the following:

- **Type of formulation:** Prescription opioids come in short-acting and long-acting formulations. For example, oral methadone usually stays in the body for more than 24 hours and can contribute to overdose risk over a long period of time, whereas intravenous fentanyl only stays in the body for a few minutes.
- **Tampering:** Tampering with an opioid medication can change the effects of a long-acting, less potent drug. For example, if an extended-release tablet is crushed, the medication becomes fast-acting and more potent.
- **Delivery method:** The faster the opioid is delivered, the more intense the high and the greater the risk of an overdose. Rapid delivery methods include injection, which delivers opioid to the brain faster than sniffing, and smoking. However, no delivery method completely protects an opioid user from overdose.
- **Co-ingestion (or concomitant use):** Opioid misuse may be combined with the use of other legal and illegal drugs, such as alcohol and benzodiazepines ("benzos")—sedative drugs commonly used to treat anxiety, sold under brand names such as Xanax and Valium. Combining opioids with other drugs could increase the risk of an overdose.
- **Tolerance:** Opioid users who develop a tolerance to the feeling that the drug creates may begin to take larger doses, thereby increasing the risk of an overdose. Individuals who previously developed a high tolerance but have been off the drug for some time (e.g., while in prison or in treatment) may be at an increased risk of an overdose because they make take a higher dose than their bodies can currently tolerate.

- **Purity:** As heroin is an illegal drug, its production is not regulated. Quality and purity may vary, which could increase the risk of an overdose.

What are the consequences of opioid misuse?

Opioid misuse is linked to many short- and long-term consequences, including the following (Center for the Application of Prevention Technologies [CAPT], 2012a):

- **Increased risk of overdose, injury, and death**
- **Short- and long-term health problems:** Side effects from opioid use may range from mild symptoms to severe reactions, including death. Abruptly reducing or ending use can lead to withdrawal symptoms. Long-term use may lead to hormonal and immune system effects, physiological dependence, increased sensitivity to pain, and an increase in physical disability related to subsequent medical conditions (Manchikanti & Singh, 2008).
- **Psychiatric conditions:** Opioid use is associated with an increased risk of developing psychiatric and other medical conditions, including depression, anxiety, attention deficit hyperactivity disorder, and mania (Hernandez & Nelson, 2010; Strassels, 2009).
- **Cognitive changes:** Findings from a small study that used Magnetic Resonance Imaging suggest that prescription opioid dependence may be associated with structural and functional changes to the brain (Upadhyay et al., 2010). The brain regions affected included those involved in the regulation of affect and impulse control, and in reward and motivation functions.

The misuse of opioids is also associated with other consequences, including problems related to the illegal sale of opioids (e.g., opioid-related crimes and arrests) and in overburdening the health care system with issues related to opioid-related hospitalizations and treatment.

National context

Use of opioids

According to 2013 NSDUH estimates:

- 681,000 persons (0.3%) age 12 or older used heroin in the past year
- Approximately 11.1 million persons (4.2%) age 12 or older used pain relievers nonmedically in the past year (SAMHSA, 2014b)

Estimates from the 2013 National Survey on Drug Use and Health (NSDUH) indicate that about 681,000 persons age 12 or older used heroin in the past year. This constitutes an 83 percent increase from 2007, when only 373,000 individuals reported past-year use (SAMHSA, 2014b). The misuse of opioid prescription drugs is much more common; NSDUH data from 2013 indicate that about 11.1 million persons age 12 or older nationwide used pain relievers nonmedically in the past year. It's worth noting that this is a statistically significant decrease from 2012, when close to 12.5 million reported past-year use (SAMHSA, 2014b). Among this group, more than 1.4 million people age 12 or older (0.5 percent) reported past-year nonmedical use of the drug OxyContin (SAMHSA, 2014b).

Opioid pain relievers (also known as opioid analgesics) are among the most common drugs taken by adults ages 20–59 (Warner, Chen, Makuc, Anderson, & Minino, 2011). Sales of these drugs quadrupled between 1999 and 2010 (Morbidity and Mortality Weekly Report [MMWR], 2011). The amount of opioid pain relievers prescribed in 2010 was estimated to be enough to medicate every American adult with a standard pain treatment dose of 5 mg of hydrocodone (e.g., Vicodin) taken every 6 hours for 45 days (Manchikanti et al., 2012).

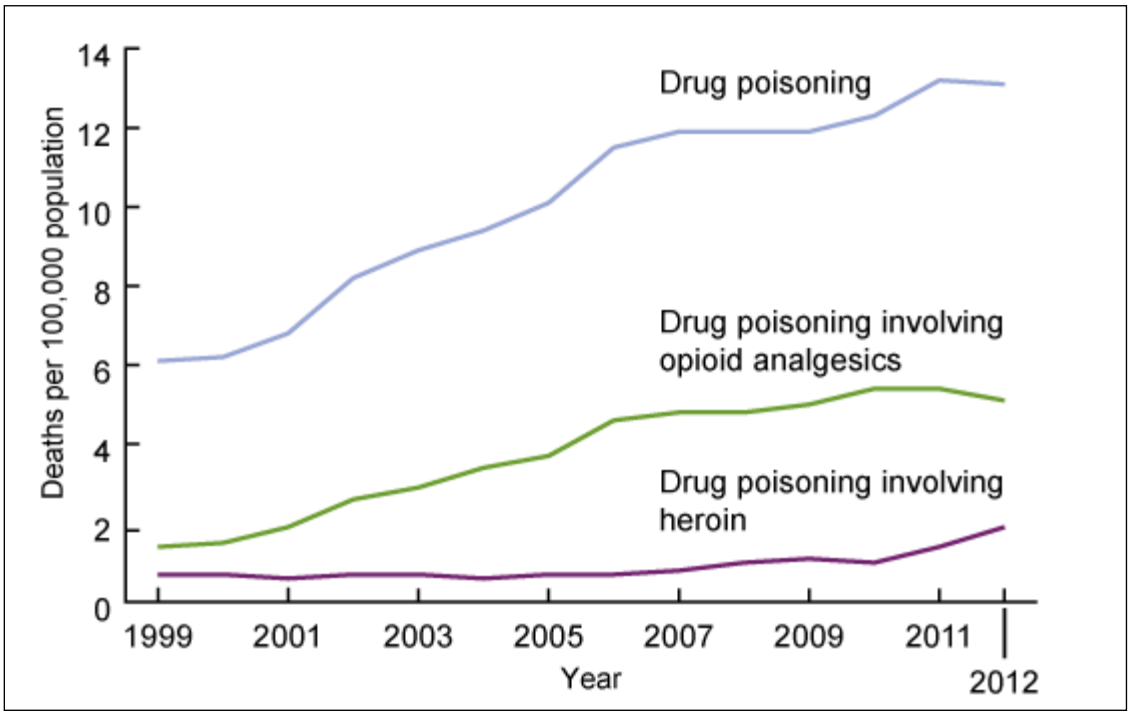
Hospitalization

Data from SAMHSA's Drug Abuse Warning Network (DAWN) indicate that in 2011, opioid pain relievers were involved in 420,040 drug-related visits to the Emergency Department (ED), compared with 258,482 visits linked to heroin (SAMHSA Center for Behavioral Health Statistics and Quality [CBHSQ], 2013). A review that also used data from DAWN found that the highest number of ED visits for nonmedical use of prescription drugs in 2004–2008 was due to the opioid prescription drugs oxycodone, hydrocodone, and methadone (MMWR, 2010). This pattern was also true of the 2011 DAWN data, with 175,229 of the roughly 420,000 ED visits associated with oxycodone products, 97,183 with hydrocodone products, and 75,693 with methadone (SAMHSA CBHSQ, 2013).

Deaths

The number of overdose deaths in the United States increased every year from 1999 (16,849 cases) to 2012 (41,502 cases). In 2012, 39 percent of overdose deaths were attributable to opioid analgesics (16,007), and 14 percent were attributable to heroin (5,925) (National Center for Health Statistics, 2014). Between 2011 and 2012, the age-adjusted rates for overdose death involving opioid analgesics decreased by 5 percent, from 5.4 per 100,000 to 5.1 per 100,000—the first decline since 1999. In contrast, the age-adjusted rate of overdose deaths involving heroin increased 35 percent between 2011 (1.4 per 100,000) and 2012 (1.9 per 100,000)—the highest rate since 1999 (Warner, Hedegaard, & Chen, 2014).

Age-Adjusted Drug-Poisoning Death Rates: United States 1999–2012[1]



Massachusetts context

Use of opioids

State-level estimates of heroin use are often difficult to obtain because few surveys include present findings specific to heroin. Some national surveys may collect data on heroin users but then don't provide results separately by state.

Data on the use of opioids by high school and middle school students are available from the Massachusetts Youth Health Survey (YHS) conducted by MDPH. (See Appendix 9 for the YHS questions related to opioid use.) According to the 2013 YHS (see Table 2), approximately 13 percent of Massachusetts high school students report nonmedical use of prescription drugs (which include opioid drugs) in their lifetime, 5.5 percent report nonmedical lifetime use of narcotics, and 0.9 percent report having used heroin in their lifetime (Massachusetts Department of Elementary and Secondary Education [MDESE] & MDPH, 2014). Middle school students are less likely than high school students to use these substances: 3.9 percent report nonmedical use of a prescription drug in their lifetime, 1.3 percent report lifetime use of narcotics, and 0.9 percent report lifetime use of heroin.

[1] Source: Warner, Hedegaard, & Chen (2014).

Table 2. Percentage of Massachusetts High School and Middle School Students Reporting Lifetime Use of Opioid Drugs[2]		
Drug	High School	Middle School
	Lifetime Use	Lifetime Use
Any prescription drug (including non-opioid drugs) without a prescription	13.4%	3.9%
Narcotics (defined as Methadone, Opium, Morphine, Codeine, Oxycontin, Percodan, Demerol, Percocet, Ultram, and Vicodin) without a prescription	5.5%	1.3%
Heroin	0.8%	0.9%

Estimates of the misuse of prescription opioids in Massachusetts are also available from the NSDUH survey. According to the 2012 and 2013 NDSUH, about 3.7 percent of persons age 12 or older in Massachusetts report using pain relievers nonmedically in the past year (SAMHSA, 2014a). Misuse of pain relievers was most common among young adults ages 18–25 (8.5 percent) compared to those ages 12–17 (4.1 percent) and those age 26 or older (2.8 percent).

Considering that the rate of fatal overdoses in Massachusetts has increased significantly in the past 15 years (see graph below), prevention strategies that target all opioids (heroin as well as prescription opioids) are particularly important at this point in time.

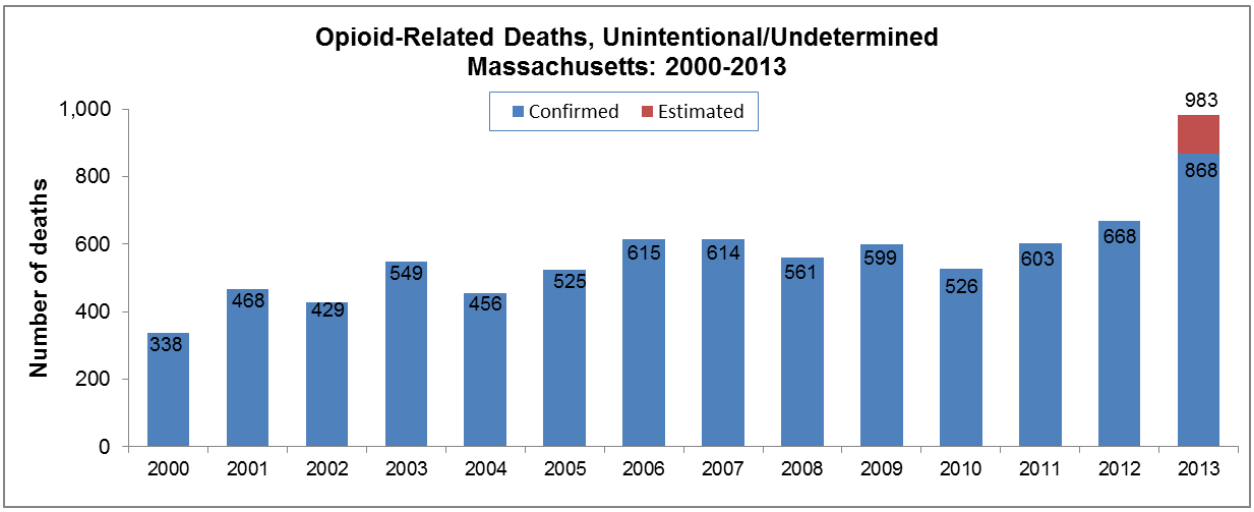
Hospitalizations

Estimates from MDPH's Injury Surveillance Program indicate that in 2009 there were 36,039 nonfatal cases of opioid-related abuse, dependence, poisonings, and overdoses in Massachusetts (MDPH, 2011). From 1997 to 2007, the rates of opioid-related inpatient hospital discharges increased from 151.3 to 279.3 per 100,000 (MDPH, 2009). In July 2006 through June 2007, there were 18,015 nonfatal opioid-related hospital discharges among Massachusetts residents. Total charges for inpatient hospitalizations associated with opioid dependence, abuse, and/or overdose exceeded $239 million from June 2006 through July 2007.

Deaths

From 2000 to 2012, the number of unintentional opioid-related poisoning deaths (including those with undetermined intent) increased from 338 to 668 (MDPH, 2014). The number of confirmed cases of unintentional opioid-related poisoning deaths through December 18, 2014, was 868—a 30 percent increase over 2013. It is estimated that the final number for 2013 will be 983 cases—a 47 percent increase over 2013 (MDPH, 2014).

[2] Source: MDESE & MDPH (2014).



Appendix 10 includes a listing of opioid-related fatal overdoses and acute care hospital events associated with nonfatal opioid poisoning among Massachusetts residents from 2010 to 2012 (a three-year average). An average of 4,495 opioid-related events were reported per year. The cities with the greatest number of events were Boston (553 events), Worcester (196), New Bedford (152), Fall River (149), and Quincy (125).

Massachusetts Overdose Prevention Strategy

The state of Massachusetts is implementing a comprehensive opioid overdose prevention strategy that is driven by three overarching goals (MDPH, 2012):

- Goal 1: Reduce the incidence of fatal and nonfatal overdose, and prevent overdoses from occurring
    - Expand community-based prevention programs
    - Increase the number of drug users who access and remain in treatment
    - Assist drug users and those who serve them in reducing their risk of overdose and increasing their awareness of overdose and its consequences
    - Increase the timeliness and specificity of overdose data
- Goal 2: Improve the management of overdose if it occurs
    - Enhance efforts of drug users, families, providers, first responders, and others to identify and manage an overdose
    - Diminish real or perceived barriers to contacting emergency services in the event of an overdose
    - Continue to increase the knowledge base of proven overdose management strategies
- Goal 3: Reduce the amount of misused, abused, and diverted prescription opioids

- Educate prescribers on safe opioid prescribing practices and develop better mechanisms for opioid dispensing[3]
- Educate patients and consumers on safe storage and disposal of prescription medications and potential consequences of misuse or abuse of prescription opioids Expand the State's ability to monitor and track prescription opioids

As a part of this strategy, MDPH is implementing several programs:

- **Overdose prevention materials:** BSAS has developed a set of educational materials about opioid overdose prevention, which are distributed free of charge within Massachusetts. The materials are available from the Massachusetts Health Promotion Clearinghouse (www.maclearinghouse.org).
- **Office-Based Opiate Treatment Programs (OBOT):** With funding from BSAS, health care centers across the state are conducting OBOT programs, which provide detoxification and maintenance treatment to opioid-addicted individuals in an office-based setting, usually a physician's office. Patients receive prescriptions for buprenorphine (Suboxone®), which they fill at local pharmacies and self-administer on a daily basis. The programs also offer integrated medical and addiction care.
- **SPHERE training:** BSAS partnered with the Statewide Partnership for HIV Education in Recovery Environments (SPHERE), an HIV/AIDS capacity-building project, to provide opioid overdose prevention training and technical assistance to health and human services providers in the Commonwealth. SPHERE maintains an online opioid overdose prevention page (www.hcsm.org/sphere/ODPrevention/index.htm).
- **Narcan distribution pilot:** This program provides overdose education and intra-nasal naloxone (marketed as Narcan) distribution in various community-based settings. Program sites train potential bystanders on how to recognize signs of an overdose, take the recommended actions, and administer intra-nasal naloxone. Between December 2007 and September 2011, these sites trained more than 10,000 potential bystanders and documented more than 1,100 opioid overdose reversals (MDPH, 2012). For more on this program, and a list of Massachusetts pharmacies with standing orders, see Appendix 11.
- **ED SBIRT:** Research has shown that up to 60 percent of U.S. trauma center patients test positive for one or more intoxicants. Screening and Brief Intervention and Referral to Treatment in Emergency Departments (ED SBIRT) takes advantage of teachable moments when people can often make a clear connection between their unhealthy use and their need for emergency treatment. ED SBIRT uses a survey of patients' health and safety needs as the basis for detecting substance misuse. Since August 2007, Health Promotion Advocates have implemented the ED SBIRT model in seven hospital EDs in Massachusetts.[4]

[3] See, for example, SCOPE of Pain (https://www.scopeofpain.com/), online continuing education focused on safe and competent opioid prescribing.

[4] Note: The project has screened more than 38,530 patients, 10,627 of whom received a brief intervention on site, 8,047 of whom received a referral for further assessment or treatment. On October 17, 2011, the model we use in Massachusetts—the Boston Medical Center and BU School of Public Health BNI ART Institute's Project ASSERT ED SBIRT model—was included in SAMHSA's National Registry of Evidence-based Practice Programs (http://nrepp.samhsa.gov/ViewIntervention.aspx?id=222). More information about the ED SBIRT program can be

See Appendix 12 for an overview of the *Opioid Overdose Response Strategies in Massachusetts, April 2014*, and Appendix 13 for a directory of opioid programs in Massachusetts. More information on MDPH's prevention efforts is available on the department's website (http://www.mass.gov/eohhs/gov/departments/dph/programs/substance-abuse/prevention/opioid-overdose-prevention.html).

Other Massachusetts-Based Resources

- **Learn to Cope:** Founded in 2004 by Joanne Peterson, a parent whose son became addicted to opiates (today he is in long-term recovery), this peer-to-peer support group based in Randolph, Mass., has grown to include more than 3,000 members registered nationally. There are 16 chapters in Massachusetts and a chapter in Rhode Island. While the cornerstone of Learn to Cope remains the weekly support meetings, the nonprofit has become a national model for addiction treatment and prevention programming. Visit the Learn to Cope website (http://www.learn2cope.org/) to find out more about the group and where and when Learn to Support group meetings (http://www.learn2cope.org/join-us.php) are taking place.
- **MASBIRT:** The Massachusetts Screening, Brief Intervention, Referral, and Treatment (MASBIRT) program was established in 2006 by BSAS with a federal grant from SAMSHA. It is the largest of several SBIRT programs across the Commonwealth. Administered by BSAS, in partnership with the Boston Medical Center, MASBIRT's overarching goal is to integrate screening for unhealthy or harmful alcohol and substance use into all primary care, inpatient, and emergency care settings and to provide feedback and brief counseling to those who are identified. Patients who screen positive for abuse or dependence (generally 3–5 percent of those screened) are offered a referral to treatment. More information is available on the MASBIRT website (http://www.masbirt.org/).

found on the MDPH website (www.mass.gov/dph/bsas); click on "Prevention Information" and then click on "Screening, Brief Intervention and Referral to Treatment."

The Strategic Prevention Framework

SAMHSA's Strategic Prevention Framework (SPF) is a model that guides the selection, implementation, and evaluation of evidence-based, culturally appropriate, sustainable interventions addressing substance abuse. The model has five components:

1. Assessment of needs and resources
2. Capacity building
3. Development of a strategic plan
4. Implementation of effective prevention programs, policies, and practices
5. Monitoring and evaluation of outcomes

Strategic Prevention Framework Components

Although presented here as a list of sequential steps, the SPF model is a circular process; there is substantial overlap among the five components. For example, assessing and addressing capacity needs, listed as Steps 1 and 2, must take place throughout the SPF process. Similarly, plans for evaluation (Step 5) should begin immediately and continue after intervention activities end. Issues related to sustainability and cultural competence (listed at the center of the figure) must be addressed throughout each of the five steps.

Note: Cultural competence, which is discussed in detail later in this document, requires attention to both cultural and linguistic competence. The cultural competence component of the SPF model encompasses both concepts.

The sections that follow provide general guidance on how to use the SPF model to implement interventions addressing opioid misuse. Communities in Massachusetts conducting these efforts with substance abuse prevention grants from BSAS are required to incorporate the SPF model into their plans. These grantees include both community coalitions that target specific cities or towns, and community clusters that target a larger geographic area.

Assessing your cultural competence

The assessment stage may be a good time to find out how your group is currently functioning in regard to cultural competence. The following questions can help you assess your group's strengths and weaknesses (Hernández, 2009):

- Does your community assessment include information about the major cultural groups in your community?
- Do members of diverse group(s) assist in the analysis and interpretation of your data?
- Does your organization or coalition engage all sectors of the community in community-wide prevention efforts?
- Are all groups adequately represented or "at the table"?
- Do your organizational plans incorporate cultural competence concepts?

Other organizations and groups may also find the SPF model useful in designing, implementing, and evaluating interventions addressing opioid misuse or other types of substance abuse. To address the needs of both audiences, this document uses general terms (e.g., your group, your target area) rather than terms specific to a specific grant program (e.g., coalition, cluster).

More information and resources for using the SPF model are available from the Massachusetts Technical Assistance Partnership for Prevention (MassTAPP), which supports communities across the Commonwealth in addressing substance abuse prevention. MassTAPP (http://masstapp.edc.org) offers technical assistance, capacity building, and resources to BSAS-funded grantees and others across the state. Information specific to MOAPC grantees is provided in Appendices 1–6.

A few definitions

This document uses several terms that are common to substance abuse prevention grants funded by BSAS and SAMHSA:

- **Community readiness:** The community's level of awareness of, interest in, and ability and willingness to support substance abuse prevention initiatives. More broadly, this connotes readiness for changes in community knowledge, attitudes, motives, policies, and actions.
- **Consequences:** The social, economic, and health problems associated with substance abuse (e.g., illnesses, drug overdose deaths, crime, and car crashes or suicides related to alcohol or other drugs).
- **Consumption patterns:** The way in which people drink, smoke, and use drugs. Consumption includes overall consumption, acute or heavy consumption, consumption in risky situations (e.g., drinking and driving), and consumption by high-risk groups (e.g., youth, college students, and pregnant women).
- **Intervening variables:** Factors that have been identified through research as being strongly related to and influencing the occurrence and magnitude of substance use and related risk behaviors and their subsequent consequences. These variables, which include risk and protective factors, guide the selection of prevention strategies.

Adapted from SAMHSA (2009).

Step 1: Assessment

The first step in the SPF model is to systematically gather and analyze local data related to the substance abuse problem—in this case, opioid misuse. These data will help you better understand the issues related to opioid misuse in your community and identify appropriate strategies for addressing them.

Purpose of assessment

The purpose of the assessment process is to collect data that will help you do the following:

- Identify the nature and extent of the opioid misuse problem in different groups, including those defined by age, gender, race/ethnicity, or other demographic characteristics
- Identify the geographic areas where the problem is greatest
- Define one or more target populations (e.g., middle school youth, young adults, active users, people at high risk of overdose)
- Identify intervening variables (factors linked to opioid misuse in your community)
- Determine your community's perception of the problem

- Determine whether your community or organization is ready to address the problem and what additional resources may be needed

The data gathered in the assessment stage will also serve as a baseline for program monitoring and evaluation, as will be described in Step 5 of the SPF.

The assessment process includes five tasks:

1. Collecting data to assess needs
2. Identifying intervening variables
3. Assessing readiness and resources
4. Analyzing the assessment data
5. Developing your problem statement(s)

Each task is described in greater detail below.

Task 1: Collect data to assess needs

Local data can help you better understand the problem of opioid misuse in your community. Both quantitative (e.g., numbers, statistics) and qualitative (e.g., beliefs, attitudes, and values of stakeholders) data are useful to the assessment process (see sidebar).

Quantitative data. Several types of quantitative data may help you better understand the extent of opioid misuse in your community and related consequences. These data may also help you identify the areas and groups most affected by the problem.

Data on consumption. Consumption (use) patterns describe opioid misuse in terms of the frequency or amount used. For example:

- Number of youth ages 12–17 reporting current (within the past 30 days) misuse of prescription opioids
- Number of adults ages 18 and older reporting use of heroin in the past year
- Number of prescriptions for opioid pain relievers in a given year

Quantitative vs. qualitative data

Quantitative data are usually reported numerically—often as counts or percentages. An example is the percentage of teens who report using heroin during the last 30 days.

In addition to self-reported survey data, quantitative data can be mined from archival data sources, such as police reports, census data, and death certificate data.

Qualitative data are usually reported in words. Sources of qualitative data include key stakeholder interviews, focus groups, case studies, and observation.

For example, these data might include findings from focus groups with individuals who misuse opioids suggesting that these people are disconnected from formal health and social service support systems.

These types of data may be collected by national or state surveys, such as MYHS and the Massachusetts Youth Risk Behavior Survey. However, local data may not be as readily available. As a result, you may need to supplement these sources by collecting data from your

local target area. Whenever possible, to standardize data collection and allow for comparisons across different areas, you should use the same questions and wording as used in the national and state surveys. Questions related to opioid misuse from the 2013 MYHS are provided in Appendix 9.

Data on consequences. Opioid misuse is associated with many problems, including physical and mental health conditions, increased health care use, and increased risk of overdose and death.

Data related to consequences can help you better understand the opioid misuse issue in your community. These consequences include any social, economic, or health problem that results from opioid misuse, such as:

- ED visits involving the use of heroin or prescription opioids
- Opioid-related hospital discharges
- Deaths from opioid overdose
- Opioid-related arrests

Sample data sources

The following data sources may help you assess your community's needs and resources:

- Interviews and/or focus groups (e.g., with active users or health care providers)
- Records from public meetings or forums
- Public health statistics (e.g., self-reported survey data, death certificates indicating an opioid overdose as the cause of death)
- Law enforcement data (e.g., opioid-related drug arrests or drug trafficking)
- Department of Justice data (e.g., outcomes of criminal cases related to opioid misuse)
- Public safety data (e.g., data from the fire department on emergency medical services for opioid overdose)
- Hospital data (e.g., discharge codes for opioid-related poisonings)

You may have to compile this information locally from different sources (e.g., the police department, hospitals). Appendix 14 provides information on how to obtain data on fatal and nonfatal opioid poisoning using International Classification of Disease codes. Information on opioid misuse compiled by BSAS, such as the lists of opioid-related nonfatal events provided in Appendix 10, is available from the MDPH website (http://www.mass.gov/eohhs/gov/departments/dph/programs/substance-abuse/prevention/opioid-overdose-prevention.html).

Qualitative data. Qualitative data may help you gain a deeper understanding of the opioid misuse problem in your community by obtaining insight into the beliefs, attitudes, and values of various stakeholders. Common methods for obtaining qualitative data include key stakeholder interviews and focus groups.

Key stakeholder interviews. Key stakeholders are people who are knowledgeable about opioid misuse and/or have an interest or stake in efforts to address the problem. These individuals can help you better understand opioid misuse and identify options for addressing the problem. Key stakeholders may include the following:

- People who are misusing opioids
- Municipal government officials (e.g., department heads, city council members)

- Substance abuse prevention and treatment providers
- Medical staff from local/regional hospitals, community health centers, health care systems, insurers, dental offices, and pharmacies
- Law enforcement and first responder personnel
- Representatives from the faith community
- Social service agency personnel
- School nurses and school counselors
- Parents

The interviews use scripted, open-ended questions to obtain detailed responses about a specific topic. Information on how to conduct interviews with key stakeholders, including a sample interview guide, is provided in Appendix 15.

Note: Engaging key stakeholders in all aspects of the assessment process will promote sustainability by securing their buy-in and laying the foundation for ongoing participation and support. It will also be important to share the findings from the assessment process with key stakeholders and other community members. The better they understand the baseline issues, the more they will appreciate—and want to sustain—your opioid misuse prevention and reduction efforts.

Focus groups. Focus groups are a series of planned discussions that examine the perceptions of a particular group (e.g., adults who are currently using heroin, parents, law enforcement personnel). The format encourages group members to interact with each other and reflect on each other's statements. A moderator leads the discussion, using a list of opened-ended questions and probes. Each focus group typically includes 8 to 10 persons who are similar in regard to the issue of interest. Three to five focus groups are typically used per demographic (e.g., youth who use heroin). Transcripts are reviewed to identify recurring themes. See Appendix 16 for information on how to conduct focus groups.

Cultural competence. In collecting qualitative data, it is important to use methods that are culturally competent and appropriate. For example, when developing your interview or focus group guide, carefully review all questions to make sure they will not be perceived as too personal or inappropriate. Consider any translation needs, and make sure that the interviewers or group facilitators reflect the composition of the group being interviewed.

Task 2: Identify intervening variables

Intervening variables (defined in the sidebar on page 27) are factors that have been identified through research as helping to explain substance abuse—in this case, opioid misuse. They include risk factors that have been shown by research to predict opioid misuse, and protective factors that exert a positive influence or buffer against the negative influence of risks. These risk and protective factors can be found at different levels, such as individual, peer, family, and community.

Findings from a literature review of risk and protective factors for the nonmedical use of opioids, conducted by the Center for the Application of Prevention Technologies (CAPT) under a contract with SAMHSA, are provided in, *Preventing Prescription Drug Misuse: Understanding Who Is at Risk:* http://www.samhsa.gov/capt/tools-learning-resources/preventing-prescription-drug-misuse-understanding-who-risk

An annotated bibliography addressing risk and protective factors for unintentional fatal and nonfatal opioid overdose—originally designed for Massachusetts Collaborative for Action, Leadership, and Learning (MassCALL2) grantees and updated by the Northeast CAPT— is included in Appendix 17.

Risk and protective factors can be measured using both quantitative and qualitative data. After identifying and prioritizing the risk and protective factors in your community, you will select prevention strategies for addressing them, which is described in Step 3 of the SPF.

Task 3: Assess community readiness and resources

This task involves assessing your community's readiness to address the opioid misuse problem and the existing resources that may be dedicated to this purpose. This assessment will help you identify the most appropriate and feasible opioid misuse prevention and reduction strategies to implement in your community.

Assessing community readiness. An assessment will help you determine your community's level of awareness of, interest in, and ability and willingness to support substance abuse prevention initiatives.

Note: Readiness assessments should reflect principles of cultural competence by involving representatives from across sectors in planning and data collection and by collecting information in ways that are appropriate and respectful.

Assessing resources. In addition to assessing your community's readiness to address opioid misuse, you will also need to identify existing resources. The resource assessment will help you identify potential resource gaps, build support for prevention activities, and ensure a realistic match between identified needs and available resources.

When people hear the word *resources*, they often think of staff, financial support, and a sound organizational structure. However, resources may also include the following:

- Existing community efforts to address the prevention and reduction of substance abuse
- Community awareness of those efforts
- Specialized knowledge of prevention research, theory, and practice
- Practical experience working with particular populations
- Knowledge of the ways that local politics and policies help or hinder prevention efforts

It is important to focus your assessment on relevant resources (i.e., resources related to your priority problem). A well-planned and focused assessment will produce far more valuable

information than one that casts too wide a net. At the same time, keep in mind that useful and accessible resources may also be found outside the substance abuse prevention system, including among the many organizations in your community that promote public health.

Task 4: Analyze the data

Once you have completed the first three steps, you will need to analyze your assessment data. By identifying the types (e.g., use of heroin, misuse of prescription opioids) and the extent of opioid misuse, and the populations and areas most affected, you can better understand the actual problem in your community.

Analyzing quantitative data. Examine the quantitative data you have collected to see if specific groups of people or other factors stand out. For example, are most heroin users young men? What proportion of overdoses in the community are nonfatal versus fatal? What specific substances are being used (e.g., heroin, prescription opioids) when overdoses occur?

Examining trend data may suggest factors that influence opioid misuse and/or intervening variables. For example, if there was a sharp rise in opiate overdoses in the past year, what happened or what changed that may explain this? Did your community see an influx of an at-risk population? Was there an increase in heroin purity levels? Did any critical services accessed by the target population close or experience budget cuts?

Examine local data in relation to state data to determine if there may be something unique or unusual about the community associated with opioid misuse or its intervening variables. Is there something different about the problem in your community? Does the difference point to an intervening variable that may be important, or perhaps to a strategy to consider later in the process?

Analyzing qualitative data. The first step when analyzing qualitative data (e.g., key stakeholder interviews, focus groups, open-ended survey questions) is to read and reread the materials and identify the different themes that emerge for each question. To increase confidence in the process, it is best to have two or more people do this independently. The themes generated by each coder are then compared with one another. If the themes identified by each coder differ, the coders need to reconcile their views and reach consensus. Record and report comments for each theme (verbatim responses or quotes may be preferred) and count the number of respondents who mentioned each theme. This is a primary indicator of its importance to participants.

Comparing the data. Compare quantitative data with qualitative data or vice-versa to see if they reinforce one another or raise new questions. For example, if the police chief tells you that the number of opioid overdoses has been unchanged for the past five years or more, but state and/or local hospital, ED, and death data show that overdoses have increased, what is the source of the discrepancy?

Analyzing the data you collected during the assessment process will help you answer the question: “Why is opioid misuse happening *here*?” Asking this question may help you select strategies that get to the unique root causes of opioid misuse in your community.

Task 5: Develop your problem statement(s)

Developing a clear problem statement will help you focus on where to build capacity and how to measure outcomes and plan for sustainability. Interventions without a clearly articulated problem statement may lose steam over time, or not know whether they have made a difference. Communities should use their data about consumption, consequences, readiness, and resources to frame their problem statement in specific terms.

Some communities find that they need to develop more than one problem statement. For example, you may need to develop a problem statement that addresses an issue related to consumption (use) and one that addresses an issue related to consequences (e.g., overdoses, deaths).

A good problem statement will meet each of the following criteria:

- Identify one issue or problem at a time
- Avoid blame (e.g., say, "Young people do not have enough positive activities" rather than, "The kids here have nothing to do and are troublemakers")
- Avoid naming specific solutions (e.g., say, "Young people in our neighborhood are getting into trouble during after-school hours" rather than "We don't have a youth center")
- Identify outcomes that are specific enough to be measurable
- Reflect community concerns as heard during the assessment process

When you develop your problem statement, be sure to describe what actually exists that is problematic, rather than what is lacking. For example, a problem statement that reads "Hospital staff lack training on how to address opioid overdoses" assumes that addressing this lack by offering training alone will solve the problem. In reality, there may be many factors—such as lack of awareness among prescribing providers regarding opioid overdose risk factors, and inadequate availability of post-overdose care—that also contribute to the problem. Defining a problem simply as a lack of something will narrow your planning focus and direct energy and resources to strategies that are not likely to be sufficient on their own, while other important factors are missed.

Keeping the focus on the priority behaviors, consequences, and/or underlying intervening variables at this stage in the planning process will help you select a comprehensive array of strategies that will be more effective in addressing the problems you have identified.

Sample problem statements

Here are two examples of good problem statements that identify one issue at a time:

1. Too many (2.6 percent) of high school students are currently using opiate-based prescription drugs that were not prescribed for them.
2. Too many young adults (ages 18–25) in our town have died from an opioid overdose (20 over the past three years).

Step 2: Capacity building

Capacity building involves improving your group's ability to prevent and/or reduce opioid misuse in your community. *Capacity* includes all the human, technical, organizational, and

financial resources you will need in order to implement and evaluate your intervention in a culturally competent and sustainable way.

Key components of capacity building include the following (SAMHSA CAPT, n.d.):

- Increasing the availability of fiscal, human, organizational, and other resources
- Raising awareness of the opioid misuse problem and the readiness of stakeholders to address the issue
- Developing or strengthening relationships with partners and/or identifying new opportunities for collaboration

Your capacity affects how (and how effectively) your group goes about every aspect of its work. Different elements of capacity become more important during different points in the SPF cycle. Your capacity needs may change as work progresses, goals are accomplished, and priorities shift or expand.

It is important to continually examine your capacity and make sure you have the resources required at each stage. For example, during Step 1 your group may need to assess your cultural competence and build its capacity to integrate or infuse cultural competence into the assessment process so that participants in planning meetings, focus groups, and other assessment activities experience a safe and supportive environment (see sidebar on page 16). During Step 3, you may need to focus on learning how to implement an inclusive and collaborative strategic planning process.

Capacity building through organizational development

Part of capacity building is paying attention to the organizational infrastructure needed to plan, implement, evaluate, and sustain your intervention. Five factors are key to both organizational infrastructure development and sustainability (Johnson, Hays, Hayden, & Daley, 2004):

- Creating and strengthening administrative structures and formal linkages among all organizations and systems involved
- Encouraging champion and leadership roles by multiple champions across organizations and systems, and making sure that these roles are distributed across different ethnic, racial, socioeconomic, and other community subpopulations
- Making plans to ensure that adequate funding, staffing, technical assistance, and materials will be in place as needed
- Developing administrative policies and procedures that support your prevention strategies and send a clear message about the desirability of and expectations for sustaining efforts
- Building and maintaining community and practitioner expertise in several areas, such as effective prevention, needs assessment, logic model construction, selection and implementation of evidence-based programs, fidelity and adaptation, evaluation, and cultural competence

Capacity building throughout the SPF

At each step of the SPF, it is important to document and track required assets and needs. This information will assist you in developing concrete plans for building your group's capacity and tracking the implementation of your plans. For example, after completing the assessment of needs, readiness, and resources in Step 1, your group might do the following:

- Review the quantitative and qualitative data collected
- Identify assets and resources available for preventing and reducing opioid misuse in your target area
- Identify capacity needs
- If necessary, conduct additional assessments to further define your capacity needs

Next, your group should develop a capacity-building plan for addressing each identified need, building on the assets and resources you identified earlier in the process.

Increasing capacity through cultural competence

Increasing the cultural competence of your organization or coalition involves looking at your current practices, and considering whether your written guidelines or policies reflect a culturally competent perspective.

Here are some questions for assessing your coalition's strengths and weaknesses in this area (Community Anti-Drug Coalitions of America & National Coalition Institute [CADCA & NCI], 2010a):

- **Membership:** How well does your group reflect the communities you serve? To increase the breadth of your representation, should you add members, or forge partnerships with organizations that have stronger capacity for working with certain diverse groups?
- **Resources:** Do your members or partners need additional training or resources in order to serve all parts of your community equitably? For example, do you need to build capacity in order to translate program materials into another language?
- **Barriers:** What is getting in your group's way as you work to connect with and serve diverse communities? Avoid rehashing past mistakes, but don't shy away from looking at problems that exist, and be willing to change.
- **Leadership:** Has your group publicly endorsed cultural competence and inclusivity? Does it need more leadership in this area, perhaps from a partner with more expertise?

Completing the Capacity-Building Worksheet

The Capacity Building Worksheet (see Appendix 18 for the template) is a tool that can help you identify the issue or area of needed growth, how this capacity need will be addressed, the person(s) responsible, the timeline for addressing this need, and the measure of success. The following is an example of a completed worksheet addressing a capacity need related to Step 1 of the SPF.

Sample Capacity Building Worksheet for Step 1 of the SPF

SPF Step 1: Assessment	Issue/Area of Growth:	We need to have a representative from Prevention, Inc., participate in the needs assessment process, since they work with one of the populations at risk for opioid misuse in our community and could give us important input.
	How the Capacity Need Will Be Addressed:	We will meet with Betty Leader, the director of Prevention, Inc., to discuss the project and identify ways in which Prevention, Inc., might participate. Betty Leader and/or other staff will also be invited to future project meetings.
	Person(s) Responsible:	Jane Smith will contact Betty to set up a meeting. Other members who will attend include J. Jones and A. Black from our group, both of whom already work with Jane on other projects. A technical assistance provider from MassTAPP will also attend.
	Timeline:	Jane will contact Betty by July 9 and schedule the meeting for the week of July 14.
	Measure of Success:	Betty or another representative from Prevention, Inc., becomes an active participant in our needs assessment process.

You may want to fill out a similar worksheet for each capacity need you identify as you carry out each step in the SPF model. Remember to also keep in mind needs related to cultural and linguistic competence and sustainability.

Step 3: Strategic planning

In this step, you will use the information obtained via your needs assessment to develop a strategic plan for addressing opioid misuse in your community. In this stage, you will do the following:

- Identify the intervening variables most relevant to and present within your community
- Select strategies that address your specific problem statement and show evidence of effectiveness for the populations you are trying to reach
- Define your desired outcomes
- Identify the resources needed for implementation
- Create a logic model that spells out the connections between the identified problem(s), intervening variables, strategies, and desired outcomes
- Create an action plan that outlines how you will implement your chosen strategies (an action plan template is provided in Appendix 20)

Each step in this process is described in more detail below. A strategic plan template is provided in Appendix 20.

Prioritizing intervening variables

As noted in Step 1, intervening variables are factors identified in the literature as being related to opioid misuse, including risk and protective factors in your community. Identifying these factors and prioritizing among them is a critical part of the SPF planning process. While different criteria can be used to prioritize these variables, communities often use two in particular when making this decision: *importance*, the extent to which various intervening variables impact the problem in question, and *changeability*, how easy it may be to change the intervening variable. You may want to select intervening variables that are high in both.

When prioritizing intervening variables, it is also important to look at opioid misuse in a comprehensive way and consider the potential consequences of addressing one risk or protective factor versus another. For example, as noted in the Introduction, there is some evidence that reducing access to prescription opioids without reducing the demand for these drugs could increase the use of heroin. For each intervening variable you are considering, think about the potential for unintended consequences and ways to anticipate and address these issues.

Importance. When examining the data you have collected, ask yourself how important a particular factor is in addressing opioid misuse in your community. For example, if you identified youth misuse of prescription opioids as a problem and the data show that youth are more likely to obtain these drugs from peers (social access) than from parents (via unlocked medicine cabinets in their homes), then social access would be considered high in importance, whereas access through parents would be considered low.

When weighing the importance of intervening variables, consider the following:

- Does the intervening variable impact other behavioral health issues? For example, poor parental monitoring may be a risk factor for not only opioid misuse but also other behaviors, such as alcohol use and early sexual activity. Therefore, focusing on this risk factor may impact more than one issue.
- Do the intervening variables directly impact the specific developmental stage of those experiencing the problem? For example, if the identified problem is the misuse of opioids among 18–25 year olds, the risk factor of parental monitoring would be less important than it would be among 12–17 year olds.

Changeability. When assessing the changeability of a factor, you may want to consider the following:

Examples of intervening variables

The following are examples of factors that could help explain the opioid misuse problem in a community:

- Adolescents have easy access to opioid pain relievers that are prescribed for their parents and available in their homes
- Adolescents do not perceive the use of opioid prescription drugs as potentially harmful
- Heroin users who have an overdose fail to receive prompt treatment because bystanders are afraid of involving the police
- Former users have a low tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment, and other periods of non-use of opioids

What factors help explain opioid misuse and its consequences in *your* community? Which ones are most important, and which ones are you most likely to be able to change?

- Whether the community has the *capacity*—the readiness and resources—to change a particular intervening variable
- Whether a suitable evidence-based intervention exists
- Whether change can be brought about in a reasonable time frame (i.e., changing some intervening variables may take too long to be a practical solution)

If the community has ample resources and sufficient readiness to address this intervening variable, if a suitable evidence-based intervention exists, and if change can occur within a reasonable time frame, then the factor would be considered high in changeability. If there are not adequate resources or the community is not ready to address the intervening variable, the changeability of the factor may be low.

Another factor you may want to consider is *time lapse*, or the amount of time between opioid misuse and its consequences. A short time lapse may make it easier for you to show a relationship between your activities and improved outcomes.

Selecting evidence-based interventions

In developing a plan to address opioid misuse in your community, it is important to identify and select strategies that have been shown to be effective, are a good fit for your community, and are likely to promote sustained change.

Evidence of effectiveness. Few studies have examined the effectiveness of interventions focused specifically on opioid misuse. As a result, traditional guidance about strategy selection (e.g., selecting interventions from Federal registries of evidence-based interventions) may be difficult to follow.

Literature reviews and best practice summaries may help you identify strategies that have been evaluated and that may be a good fit for your community. For example:

- A literature review summarizing the evidence in support of various strategies and interventions for addressing the nonmedical use of opioid drugs (CAPT, 2012c) is provided in *Preventing Prescription Drug Misuse: Programs and Strategies: http://www.samhsa.gov/capt/tools-learning-resources/preventing-prescription-drug-misuse-programs-strategies*
- Appendix 21 summarizes best practices from MassCALL2 grantees, regarding strategies for reducing unintentional fatal and nonfatal opioid overdoses.

Possible strategies to prevent or reduce opioid misuse and its consequences

- A communication campaign to increase youth perception of risk regarding opioid use
- Training of parents of eighth grade students on how to clearly communicate disapproval of opioid use
- Education of clinicians and pharmacists
- Prescription drug monitoring programs
- Prescription drug take-back programs
- Good Samaritan laws that promote prompt treatment of individuals having an overdose
- Training of potential bystanders, including active users and family members, on how to respond to an opioid overdose
- Improved access to naloxone distribution programs
- Expansion of Screening, Brief Intervention, and Referral to Treatment (SBIRT) programs to all EDs
- Intervention with former users who may be at high risk for an overdose (e.g., inmates or persons recently discharged from treatment)

These and other resources (e.g., other literature reviews, published studies, unpublished evaluation findings) may help you identify the strategies with the greatest potential to affect the intervening variables you identified as a priority.

For each strategy you consider:

- Review the research evidence that describes how the strategy is related to your selected intervening variable(s)
- Based on this evidence, present a rationale describing how the strategy addresses the intervening variable(s)

As described later in this section, this process will help you develop a logic model that shows how your selected strategies will lead to improvements in outcomes related to opioid misuse.

Conceptual fit. Think about how relevant the strategy is to your community and how it is logically connected to your intervening variable(s) and desired outcomes. To determine conceptual fit, consider the following questions:

- How has the strategy been tested with the identified target population? If it has not, how can it be applied to the target population?
- How will implementing this strategy in your local community help you achieve your anticipated outcomes?

Practical fit. Consider the practical fit of each strategy, or your current ability to effectively implement the selected strategy, given your community's readiness, population, and general local circumstances. Consider the following:

- Resources (e.g., cost, staffing, access to target population)
- Organizational or coalition climate (e.g., how the strategy fits with existing prevention or reduction efforts, the organization's willingness to accept new programs, buy-in of key leaders)
- Community climate (e.g., the community's attitude toward the strategy, buy-in of key leaders)
- Sustainability of the strategy (e.g., community ownership, renewable financial support, community champions)

Three types of outcomes

- A **short-term** outcome is the change in the target group that received your strategy
- An **intermediate** outcome is the change in the intervening variable
- A **long-term** outcome is the ultimate impact of the strategy on the issue identified in your problem statement

Potential impact. When selecting strategies, it is important to consider their comprehensiveness and potential for long-term impact. While strategies that are more narrow in focus (e.g., educating parents or health care providers) may be simpler to implement, approaches aimed at changing policies, systems, and environments (e.g., prescription drug monitoring programs, system-wide changes in how EDs treat opioid overdose) may be more likely to promote sustained improvement in outcomes.

Establishing outcomes for each strategy

For each selected strategy, you will need to establish measurable outcomes. To do so, identify the intervening variable(s) being addressed, indicate the strategy, and list anticipated short-term, intermediate, and long-term outcomes. For example:

- **Intervening variables:** Poor parental monitoring and supervision of children, lack of clear parental disapproval of substance use
- **Strategy:** Communication campaign aimed at reaching 90 percent of parents of eighth grade students with information on the importance of communicating the harms of opioid misuse to their children
- **Outcomes:**

- *Short-term:* Parents of eighth grade students believe opioid misuse is harmful
- *Intermediate:* Parents of eighth-graders clearly communicate disapproval of opioid misuse to their children
- *Long-term:* Decreased rates of opioid misuse among eighth grade youth

Identifying resources for implementation

Specify all resources needed to implement each selected strategy and measure the related outcomes. Consider the following:

- Human resources (e.g., staffing, partnerships, volunteers, coalition membership)
- Skills (e.g., data collection and analysis, prevention and intervention knowledge and skills)
- Fiscal resources (e.g., monetary, in-kind)
- Material resources (e.g., space, equipment)
- Existing resource gaps that will limit your ability to effectively implement the selected strategy or strategies

Developing a logic model

A logic model is a chart that describes how your effort or initiative is supposed to work and explains why your intervention is a good solution to the problem at hand. Effective logic models depict the activities that will bring about change and the results you expect to see in your community. A logic model keeps program planners moving in the same direction by providing a common language and point of reference.

Logic models may be used for various purposes and can feature different elements—for example, logic models used in evaluation often list inputs, activities, outputs, and outcomes. In the context of the SPF, a logic model generally includes the following categories:

- Local problem statement, related to either consumption (use) or consequences (e.g., overdoses, deaths)
- Intervening variable(s)
- Strategies (should be evidenced-based and include measurable outputs—e.g., number of advertisements placed, sessions conducted, persons trained)
- Target group
- Expected outcomes (short-term, intermediate, and long-term)

Using the information gathered in Steps 1 and 2, develop a community-level logic model that links local problems, related intervening variables, evidence-based strategies, and anticipated outcomes. Two examples of how you might begin a logic model are provided below.

The first example depicts a strategy for addressing consumption—the high misuse of opioid prescription pain relievers by youth in 10th grade—by conducting a social norms campaign that targets 10th-graders:

Local problem: (Consumption) High misuse of opioid prescription pain relievers by youth in 10th grade						
Strategy #	**Intervening Variables**	**Strategy**	**Target Group**	**Outcomes:**		
				Short-Term	***Intermediate***	***Long-Term***
1	Community norms favor drug use; 10th grade students misperceive peer disapproval of prescription opioid misuse	Deliver a peer-developed social norms campaign to 10th-graders at West School	10th-graders at West School	Increased knowledge among 10th-graders of peer disapproval of prescription opioid misuse	Decrease in community norms favorable to drug use; decrease in 10th-graders' misperceptions regarding peer disapproval of use	Decreased rates of opioid misuse among 10th-graders

The second example shows a strategy for addressing a consequence of opioid misuse:

Local problem: (Consequence) High rates of fatal overdoses among young adults ages 18–25						
Strategy #	**Intervening Variables**	**Strategy**	**Target Group**	**Outcomes:**		
				Short-Term	***Intermediate***	***Long-Term***
1	Bystanders fail to call 911 during an overdose due to fear of arrest	Education on newly passed Good Samaritan Law	18–25-year-old active users, newly released inmates, people leaving treatment	Increased knowledge of Good Samaritan Law among potential bystanders	Increased number of calls to 911 during overdose emergencies	Fewer overdose deaths among young adults ages 18–25

Your logic model may include several strategies for addressing each identified problem related to opioid misuse and its consequences. Each strategy would be added in a separate row.

A logic model template is provided in Appendix 6.

Developing an action plan

An action plan is the detailed sequence of steps that must be taken for a strategy to succeed. It is one component of your larger strategic plan:

- What you are trying to accomplish
- Who is responsible
- The timeline for completion
- How you will measure success

Your action plan should be comprehensive, logical, and data-driven; it should include your community-level logic model, plans for addressing identified resource and readiness gaps, and how you have and will address issues of cultural competence and sustainability. (See Appendix 19 for an action plan template.)

Keep in mind that good planning requires a group process. Whether decisions are made within a formal coalition or among a more informal group of partners, they cannot represent the thoughts and ideas of just one person; they must reflect the ideas and input of individuals from across community sectors.

Things to consider when developing an action plan

- Have a clear objective
- Start with what you will do *now*
- Clearly define the steps you will take
- Identify the end point for each step
- Arrange the steps in logical, chronological order, and include the date by which you will start each step
- Think about the types of problems you might encounter at each step
- Review your progress

Action plan and cultural competence. To increase your group's cultural competence, you'll need to be open to modifying your planning and thinking processes to reflect the preferences of the target population(s). For example, some American Indian and Alaska Native communities prefer planning processes that are circular, such as using a Mind Map to brainstorm rather than a linear list or table. Faith-based organizations may believe that action-oriented plans should be tempered by other forms of spiritual guidance about the best way to move forward. Listening to and incorporating different viewpoints will help you develop a plan that is culturally competent and shows respect for participants' values, and is therefore more likely to succeed (CADCA & NCI, 2010b).

As noted by the Community Anti-Drug Coalitions of America, members of your organization or coalition may come to the table with different levels of understanding regarding substance abuse and how to plan, implement, and evaluate interventions. Some may not be familiar with logic models or may not understand how a formal logic model may differ from their usual approaches. Ideally, you will not start work on a logic model until all coalition members understand and are comfortable with the process. Several training sessions may be needed to get everyone to the same baseline of understanding, thereby promoting fruitful discourse and consensus building.

Increasing cultural competence. Cultural competence should be visibly interwoven throughout your intervention. To increase your group's cultural competence, you will need to develop a plan:

- Your plan should include measurable goals and objectives with concrete timelines. For example, you might develop an outreach goal of contacting 30 different community organizations within six months, with the ultimate goal of recruiting 12 new partners.

- Your plan should ensure that you are involving representatives from all sectors of the community in your prevention efforts. For example, if the aim of your logic model is to reduce the use of heroin among young adults, outline the steps your group will take to include young adults from diverse backgrounds as full participants in your efforts, rather than solely as the target of your activities.
- Your plan should indicate who is responsible for the proposed action steps, and outline some of the potential resources needed.

It's important to review the cultural competence plan on a regular basis.

Note: The cultural competence planning process may identify several areas of discord among members of your organization or coalition. This is actually a good opportunity to address these differences early on, thereby preventing them from resurfacing later and derailing your work.

Developing an evaluation plan

It is a common misperception that evaluation starts only at the end of a project. Though evaluation is the focus of the last step of the SPF, it should be considered at each phase of the SPF. Ongoing monitoring and evaluation are essential to determine if your desired outcomes are achieved and to assess the effectiveness and impact of your intervention and the quality of service delivery. Data collection for evaluation purposes should be built into the project design and should be part of your strategic plan. Your evaluation will ultimately affect the sustainability of your intervention.

You will need to make plans to collect baseline information before your intervention is started and to track outcomes over time by collecting quantitative and qualitative data. In addition, you should have a plan for securing and maintaining the commitment of community members, agencies, and other strategic partners who will be involved in the evaluation. By fostering relationships among all the partners involved, it is more likely that they will be inclined to provide political support, cooperation, volunteers, and other resources on a long-term, ongoing basis. Your evaluation plan will also monitor how well your group (e.g., coalition, cluster) is functioning and identify areas for improvement.

Step 4: Implementation

In the implementation phase, you will focus on carrying out the various components of the action plan, and identifying and overcoming any potential barriers. You will assess your capacity to carry out the implementation plan, determine what training or other assistance is needed, and decide how to engage additional community partners who have the necessary expertise.

In this phase, the role of your organization or coalition will shift from planning to oversight, mutual accountability, and monitoring of the implementation process. You must make sure that the plan is implemented with fidelity, allowing for adaptations only when necessary. It is especially important to integrate the principles of cultural competence into the implementation phase, so that the intervention is accessible to and effective with the identified target population.

At this point, it is important to make sure that all partners understand the identified goals and selected strategies, as well as their own specific contributions. All members should agree with the goals and strategies and understand how the activities to be implemented will lead to the desired outcomes.

Capacity building for the implementation phase

Assess your group's capacity to implement the selected strategies by answering three questions:

- What capacity is required to implement these strategies?
- Does your group (e.g., organization, coalition, cluster) have that capacity?
- If not, how will you improve your capacity?

These types of questions should be addressed in your strategic plan.

Partners who are involved in the assessment and planning processes may find that they lack the skills needed to carry out one or more of the selected strategies. A plan to improve capacity may include involving additional community partners who already have appropriately trained staff, hiring staff with the necessary expertise, or providing training opportunities for staff and members who will be involved in implementing the intervention. When seeking community partners, keep in mind the principles of cultural competence; ensuring diversity among your partners and developing links with community institutions are good strategies for supporting cultural competence (CADCA & NCI, 2010b).

Everyone involved in the effort should understand their roles in implementing the identified strategies. All too often, the tasks of implementation are handed over to a few staff members, while others sit back and expect to hear about how the work is going, without being directly involved. Staff may be able to fill a number of important roles, including preparing meeting minutes, compiling reports, coordinating meetings, facilitating communication with partners, maintaining accurate records for funding and reporting requirements, and assisting with planning, problem solving, and information management. However, with all these roles to fill, staff cannot also be expected to implement all the selected strategies by themselves.

You may consider forming small committees that will each focus on a specific strategy. In doing so, remember to support cultural competence by ensuring diversity in your leadership. Providing additional leadership opportunities can also be an integral way to promote sustainability, as the more invested your partners become, the more likely they will be to support your group's activities in the long term.

Some members may be willing to become program "champions," who speak about and promote the strategies in the community. In addition, members can leverage resources for change in the community through their professional and personal spheres of influence. For example, a member might serve as a liaison to help implement an inter-organizational prevention effort, bringing together organizations to which he or she has connections.

Addressing fidelity and adaptation

Fidelity is the degree to which an intervention is implemented as its original developer intended. Interventions that are implemented with fidelity are more likely to replicate the results from the original implementation of the intervention than are those that make substantial adaptations. Training on how to implement the intervention, especially if it's available from the program developer, will increase your ability to implement with fidelity.

Although ensuring fidelity is an important concern, at times it may be necessary to adapt the intervention to better fit your local circumstances. You may find, for example, that you are working with a target population that is in some way different from the population that was originally evaluated, or that some intervention elements must be adjusted due to budget, time, or staffing restraints. In these cases, it may be necessary to adapt the intervention to meet your needs. Balancing fidelity and adaptation can be tricky, since any time you change a strategy or intervention, you may compromise the outcomes. Even so, implementing an intervention that requires some adaptation may be more efficient, effective, and cost-effective than designing a new intervention.

Cultural adaptation

Cultural adaptation refers to program changes that are culturally sensitive and tailored to a particular group's traditional worldviews. Effective cultural adaptation is especially important when it comes to implementation.

Too often, people equate cultural adaptation with translation, but it is much more than that. Effective cultural adaptation considers the values, attitudes, beliefs, and experiences of the target audience. It depends on strong linkages to cultural leaders and access to culturally competent staff.

Here are some general guidelines for adapting an intervention:

- Select strategies with the best initial fit to your local needs and conditions. This will reduce the likelihood that you will need to make adaptations later.
- Select strategies with the largest *effect size*—the magnitude of a strategy's impact. For example, policy change generally has a larger effect size than classroom-based programs. The smaller a strategy's effect size, the more careful you need to be about changing anything, since you don't want to inadvertently compromise any good that you are doing. In general, adaptations to strategies with large effect sizes are less likely to affect relevant outcomes.
- Implement the strategy as written, if possible, before making adaptations, since you may find that it works well without having to make changes.
- When implementing evidence-based interventions, consult with the intervention developer, when possible, before making adaptations. The developer may be able to tell you how the program has been adapted in the past and how well these adaptations have worked. If the developer is not available, work with an implementation science expert or your evaluator.
- Retain the core components, since there is a greater likelihood of effectiveness when an intervention includes these components. If you aren't sure which elements are core, refer to the intervention's logic model, if it is available, or consult the program developer or your evaluator for assistance.

- Stick to evidence-based principles. Strategies that adhere to these principles are more likely to be effective, so it is important that adaptations are consistent with the science.
- Change your coalition's capacity before you adapt an intervention. While it may be easier to change the intervention, changing local capacity to deliver it as it was designed is a safer choice.

Monitoring the implementation plan

In addition to carrying out the activities in your implementation plan, your group will need to document the process and describe any changes you make to your original plan along the way. A complete description of how your intervention was implemented helps provide information on fidelity of the implementation; this is part of the process evaluation described in Step 5 of the SPF. Information to document may include participant demographics, recruitment methods, actual attendance, planned and implemented adaptations, cultural issues and how they were addressed, indications of unmet needs, and any other issues that arise (e.g., lack of organizational capacity, community resistance).

Generally, within three to six months of beginning a new strategy or activity, your staff or an appropriate committee should develop a systematic way to review your logic model and strategic plan in order to accomplish the following:

- Document intervention components that work well
- Identify where improvements need to be made
- Provide feedback so that strategies may be implemented more effectively
- Make timely adjustments in activities and strategies to better address identified problems
- Assess whether enough resources have been leveraged and where you might find more
- Engage key stakeholders (e.g., community members, providers, staff) so they feel a sense of responsibility and pride in helping to ensure that the goals and objectives of the coalition are met and that the opioid misuse problem in the community is reduced

One way to do this is to create a fidelity checklist, if one is not already available from the intervention developers. List all the activities in your action plan and put a check box next to each activity. Check off each activity as you complete it and document the following:

- Activities that were not implemented in the order suggested by developers
- Activities you tried that did not work
- New activities you created to take the place of ones that did not work

At the end of this process, you will have a good record of what you did and did not implement, the challenges you faced, and how you overcame each challenge.

Sustainability planning

The implementation of strategies to bring about significant community change rarely takes place in a short time frame. As you build capacity to bring about change, you should be aware of the

need to generate resources to sustain your strategies, beyond the expense of carrying out an intervention.

Sustaining your work includes both institutionalizing strategies and finding additional financial support for them—both of which should be planned for by the time you begin to implement activities. It is important to form a working group of staff and coalition partners to focus on sustainability planning, since getting key stakeholders involved from the beginning can inspire them to become advocates for your work and champions for sustaining your activities.

Institutionalizing your work is a long-term process that requires finding ways to make the policies, practices, and procedures you have established become successfully rooted in the community. This includes existing systems and frameworks relevant to your work, which can be stepping stones to eventual policy changes. This can also help extend the length of time you have to work on the issues, since it may take years to build a comprehensive solution. Partnerships are key in finding ways to integrate your work into existing departments within a municipality or into other organizations. To do this, it is important to invest in capacity, teach people how to assess needs, build resources, and effectively plan and implement prevention interventions to create the systems necessary to support these activities going forward.

Planning for financial stability involves figuring out strategies and action steps to obtain and grow the diverse resources—human, financial, material, and technological—needed to sustain your efforts over time. Additional resources may include finding in-kind support, recruiting and sustaining a volunteer staff, obtaining commitments for shared resources from other organizations, or persuading another organization to take on a project begun by your group.

Step 5: Evaluation

Evaluation is the systematic collection and analysis of information about intervention activities, characteristics, and outcomes. Evaluation activities help groups describe what they plan to do, monitor what they are doing, and identify needed improvements. Results can be used to assist in sustainability planning, including determining what efforts are going well and should be sustained, and showing sponsors that resources are being used wisely.

Purpose of evaluation

Information gathered through an evaluation has five functions (CADCA & NCI, 2009):

- **Improvement:** This is the most important function of an evaluation—improving the efficiency and effectiveness of your chosen strategies and how they are implemented.
- **Coordination:** The evaluation process assesses the functioning of your group, allowing partners to know what each other is doing, how this work fits with their own actions and goals, and what opportunities exist for working together in the future.
- **Accountability:** Are the identified outcomes being reached? A good evaluation allows your group to describe its contribution to important population-level change.

- **Celebration:** This function is all too often ignored. The path to reducing drug use at the community level is not easy, so a stated aim of any evaluation process should be to collect information that allows your group to celebrate its accomplishments.
- **Sustainability:** A thorough evaluation can help you provide important information to the community and various funders, which promotes the sustainability of both your group and its strategies.

Program evaluations often are conducted in response to a grant or other funding requirement. As a result, reporting may be structured only to address the requirement rather than to provide a functional flow of information among partners and supporters. To accomplish the five functions of evaluation, you need a more comprehensive and well-rounded evaluation process in which you provide the needed information to the appropriate stakeholders so that they make better choices (improvement), work more closely with your partners (coordination), demonstrate that commitments have been met (accountability), honor your team's work (celebration), and show community leaders why they should remain invested in the coalition process (sustainability).

Engaging stakeholders

Evaluation cannot be done in isolation. Almost everything done in community health and development work involves partnerships—alliances among different organizations, board members, those affected by the problem, and others who each bring unique perspectives. When stakeholders are not appropriately involved, evaluation findings are likely to be ignored, criticized, or resisted. However, if they are included in the process, people are likely to feel a good deal of ownership for the evaluation plan and results. They will probably want to develop it, defend it, and make sure that the evaluation really works. Therefore, any serious effort to evaluate a program must consider the viewpoints of the partners who will be involved in planning and delivering activities, your target audience(s), and the primary users of the evaluation data.

Engaging stakeholders who represent and reflect the populations you hope to reach greatly increases the chance that evaluation efforts will be successful. Stakeholder involvement helps to ensure that the evaluation design, including the

Cultural competence in evaluation

Culture can influence many elements of the evaluation process, including data collection, implementation of the evaluation plan, and interpretation of results. Tools used to collect data (e.g., surveys, interviews) need to be sensitive to differences in culture—both in terms of the language used and the concepts being measured.

When selecting evaluation methods and designing evaluation instruments, you should consider the cultural contexts of the communities in which the intervention will be conducted. Here are some guiding questions to consider:

- Are data collection methods relevant and culturally sensitive to the population being evaluated?
- Have you considered how different methods may or may not work in various cultures?
- Have you explored how different groups prefer to share information (e.g., orally, in writing, one on one, in groups, through the arts)?
- Do the instruments consider potential language barriers that may inhibit some people from understanding the evaluation questions?
- Do the instruments consider the cultural context of the respondents?

methods and instruments used, is consistent with the cultural norms of the people you serve. Stakeholders can also influence how or even whether evaluation results are used.

All partners in your opioid prevention or reduction efforts should be involved in developing and implementing your evaluation plan. To facilitate this process, you may consider forming a Data Committee focused on evaluation. The committee would work in collaboration with an evaluator to collect the data, analyze results, and share findings with partners, the community, the media, and others. Having more people trained in data collection and analysis and able to spread the word about the group's successes contributes to sustainability.

A strong evaluation system can provide monthly data about activities and accomplishments that can be used for planning and better coordination among partners. In addition, sharing evaluation data can give the group a needed boost during the long process of facilitating changes in community programs, policies, or practices.

Implementing the evaluation plan

Your evaluation plan should address questions related to both process (i.e., program operations, implementation, and service delivery) and outcomes (the ultimate impact of your intervention).

Process evaluation. A *process evaluation* monitors and measures your activities and operations. It addresses such issues as consistency between your activities and goals, whether activities reached the appropriate target audience(s), the effectiveness of your management, use of program resources, and how your group functioned.

Process evaluation questions may include the following:

- Were you able to involve the members and sectors of the community that you intended to at each step of the way? In what ways were they involved?
- Did you conduct an assessment of the situation in the way you planned? Did it give you the information you needed?
- How successful was your group in selecting and implementing appropriate strategies? Were these the "right" strategies, given the intervening variables you identified?
- Were staff and/or volunteers the right people for the jobs, and were they oriented and trained before they started?
- Was your outreach successful in engaging those from the groups you intended to engage? Were you able to recruit the number and type of participants needed?
- Did you structure the program as planned? Did you use the methods you intended? Did you arrange the amount and intensity of services, other activities, or conditions as intended?
- Did you conduct the evaluation as planned?
- Did you complete or start each element in the time you planned for it? Did you complete key milestones or accomplishments as planned?

Outcome evaluation. An *outcome evaluation* looks at the intervention's effect on the environmental conditions, events, or behaviors it aimed to change (whether to increase, decrease,

or sustain). Usually, an intervention seeks to influence one or more particular behaviors or conditions (e.g., risk or protective factors), assuming that this will then lead to a longer-term change, such as a decrease in the use of a particular drug among youth. You may have followed your plan completely and still had no impact on the conditions you were targeting, or you may have ended up making multiple changes and still reached your desired outcomes. The process evaluation will tell how closely your plan was followed, and the outcome evaluation will show whether your strategy made the changes or results you had intended.

An outcome evaluation can be done in various ways:

- The "gold standard" involves two groups that are similar at baseline. One group is assigned to receive the intervention and the other group serves as the control group. After the intervention, the outcomes among the intervention group are compared with the outcomes among the control group. Ideally, data should continue to be collected after the intervention ends in order to estimate effects over time.
- If it is not possible to include a control group (e.g., due to financial constraints), you can evaluate just the intervention group, collecting data at several points before, during, and after the intervention (e.g., at 3-, 6-, and/or 12-month intervals). This design allows the evaluator to analyze any trends before the intervention and project what would have happened without the intervention, so that the projection may be compared to the actual trend after the intervention. This type of impact evaluation is less conclusive than one using a control group comparison because it does not allow you to rule out other possible explanations for any changes you may find. However, having some supporting evidence is better than not having any.

If the intervention produced the outcomes you intended, then it achieved its goals. However, it is still important to consider how you could make the intervention even better and more effective. For instance:

- Can you expand or strengthen parts of the intervention that worked particularly well?
- Are there evidence-based methods or best practices out there that could make your work even more effective?
- Would targeting more or different behaviors or intervening variables lead to greater success?
- How can you reach people who dropped out early or who didn't really benefit from your work?
- How can you improve your outreach? Are there marginalized or other groups you are not reaching?
- Can you add services—either directly aimed at intervention outcomes or related services such as transportation—that would improve results for participants?
- Can you improve the efficiency of your process, saving time and/or money without compromising your effectiveness or sacrificing important elements of your intervention?

Good interventions are dynamic; they keep changing and experimenting, always reaching for something better.

Evaluation and sustainability

Evaluation plays a central role in sustaining your group's work. Evaluation enables you to take key pieces of data and analyze and organize them so you have accurate, usable information. This process facilitates the development of the best plan possible for the community and allows your group to accurately share its story and results with key stakeholders. It also can help you track and understand community trends that may have an impact on your group's ability to sustain its work.

A good evaluation monitors progress and provides regular feedback so that your strategic plan can be adjusted and improved. Your group may implement a variety of activities aimed at changing community systems and environments. By tracking information related to these activities and their effectiveness, as well as stakeholder feedback, community changes, and substance abuse outcomes, you can build a regular feedback loop for monitoring your progress and results. With this information, you can quickly see which strategies and activities have a greater impact than others, determine areas of overlap, and find ways to improve your group's functioning. Using information from the evaluation, your group can adjust its strategic plan and continuously improve its ability not only to sustain its work, but also to achieve community-wide reductions in opioid misuse and its consequences.

Sharing your evaluation results can stimulate support from funders, community leaders, and others in the community. The best way to ensure the use of your data is to communicate your findings in ways that meet the needs of your various stakeholders. Consider the following:

- **Presentation:** Think about how your findings are reported, including layout, readability, and user-friendliness, and who will present the information.
- **Timing:** If a report is needed for the legislative session but is not ready in time, the chances of the data being used drop dramatically.
- **Relevance:** If the evaluation design is logically linked to the purpose and outcomes of the project, the findings are far more likely to be put to use.
- **Quality:** This will influence whether your findings are taken seriously.
- **Post-evaluation technical assistance:** Questions of interpretation will arise over time, and people will be more likely to use the results if they can get their questions answered after the findings have been reported.

Evaluations are always read within a particular political context or climate. Some evaluation results will get used because of political support, while others may not be widely promoted due to political pressure. Other factors, such as the size of your organization or program, may matter as well. Sometimes larger programs get more press; sometimes targeted programs do.

It is also important to consider competing information: Do results from similar programs confirm or conflict with your results? What other topics may be competing for attention? It is helpful to develop a plan for disseminating your evaluation findings, taking these types of questions into consideration.

Cultural competence

Cultural competence must be considered at each step of the SPF model. As noted earlier, this component of the model addresses both cultural and linguistic competence. Each SPF step discussed in this document includes information on ways to address cultural and linguistic competence. This section defines the two terms and provides information regarding the enhanced National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care (National CLAS Standards), released in April 2013 by the HHS Office on Minority Health.

What is cultural competence?

Cultural competence is the ability of an individual or organization to interact effectively with people from different cultures (SAMHSA CAPT, n.d.). Developing cultural competence is an evolving, dynamic process that takes time and occurs along a continuum (SAMHSA CAPT, n.d.).

For your efforts to prevent or reduce opioid misuse to be effective, you must understand the cultural context of your target community and have the required skills and resources for working within this context. Although some people may think of culture in terms of race or ethnicity, there are many other elements to consider, such as age, educational level, socioeconomic status, gender identity, language(s), and cognitive and physical abilities and limitations (Office of Minority Health, 2013b). You must be respectful of and responsive to the health beliefs, practices, and cultural and linguistic needs of the diverse population groups in your target community. This means learning more about the community; drawing on community-based values, traditions, and customs; and working with persons from the community to plan, implement, and evaluate your strategies.

Why cultural and linguistic competence matter: Two examples

Cultural and linguistic competence helps to ensure that the needs of all community members are identified and addressed, thereby contributing to the effectiveness of your strategies. Consider the following examples:

1. A community group wants to educate parents of high school students regarding the risks of prescription medications in the home. As Spanish is the primary language of many parents, the group asks a teacher to translate the take-home flyer. However, the teacher's translation does not use vocabulary and idioms that match the parents' ethnicity. The flyer is revised based on input from a small group of parents, thereby increasing its clarity and usefulness to the school's Spanish-speaking families.
2. To reduce opioid overdoses, a community group is using outreach workers to deliver messages to friends, family members, and individuals who are misusing opioids. At first, the group hires workers who are not members of the user community, but they don't connect well with the people they are trying to educate. The group then recruits members of the user community who are in recovery, and trains them to deliver outreach education. This strategy has much greater success.

What is linguistic competence?

Linguistic competence involves more than having bilingual staff. The National Center for Cultural Competence defines linguistic

competence as follows (Goode & Jones, 2009, p. 1):

> *The capacity of an organization and its personnel to communicate effectively, and convey information in a manner that is easily understood by diverse audiences including persons of limited English proficiency, those who have low literacy skills or are not literate, individuals with disabilities, and those who are deaf or hard of hearing. Linguistic competency requires organizational and provider capacity to respond effectively to the health and mental health literacy needs of populations served. The organization must have policy, structures, practices, procedures, and dedicated resources to support this capacity.*

As noted in this definition, linguistic competence includes addressing the communication needs of various groups, including low-literacy groups and people with disabilities. You might consider some or all of the following approaches:

- Hiring bilingual/bicultural or multilingual/multicultural staff
- Providing foreign language interpretation services
- Printing materials in easy-to-read, low-literacy, picture, and symbol formats
- Offering sign language interpretation services
- Using TTY and other assistive technology devices
- Offering materials in alternative formats (e.g., audiotape, Braille, enlarged print)
- Adapting how you share information with individuals who experience cognitive disabilities
- Translating legally binding documents (e.g., consent forms, confidentiality and patient rights statements), signage, health education materials, public awareness materials and campaigns
- Using media targeted to particular ethnic groups and in languages other than English (e.g., television, radio, Internet, newspapers, periodicals)

Guiding values and principles for language access

The National Center for Cultural Competence (n.d.) identifies the following guiding values and principles for language access:

- Services and supports are delivered in the preferred language and/or mode of delivery of the population served
- Written materials are translated, adapted, and/or provided in alternative formats based on the needs and preferences of the populations served
- Interpretation and translation services comply with all relevant Federal, state, and local mandates governing language access
- Consumers are engaged in evaluation of language access and other communication services to ensure for quality and satisfaction

National CLAS Standards

These standards are a comprehensive series of guidelines that inform, guide, and facilitate practices related to culturally and linguistically appropriate health services (Office of Minority Health, 2013b). Originally developed by the HHS Office of Minority Health (OMH) in 2000, the standards were updated in 2013 after a public comment period, a systematic literature review, and input from a National Project Advisory Committee.

The standards have been updated and expanded to address the importance of cultural and linguistic competence at every point of contact throughout the health care and health services continuum. Table 5 highlights some of the main differences between the 2000 and 2013 National CLAS Standards (Office of Minority Health, 2013a).

Table 5. Differences Between 2000 and 2013 National CLAS Standards

Expanded Standards	2000 National CLAS Standards	2013 National CLAS Standards
Culture	Defined in terms of racial, ethnic, and linguistic groups	Defined in terms of racial, ethnic, and linguistic groups, as well as geographical, religious, and spiritual, biological, and sociological characteristics
Audience	Health care organizations	Health and health care organizations
Health	Definition of health was implicit	Explicit definition of health includes physical, mental, social, and spiritual well-being
Recipients	Patients and consumers	Individual and groups

The 15 standards are organized into one Principal Standard and three themes (see Table 6). Resources for implementing the National CLAS Standards are available from OMH's Think Cultural Health website (www.ThinkCulturalHealth.hhs.gov).

Table 6. 2013 National CLAS Standards	
Principal Standard	1. Provide effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs.
Governance, Leadership, and Workforce	2. Advance and sustain organizational governance and leadership that promotes CLAS and health equity through policy, practices, and allocated resources. 3. Recruit, promote, and support a culturally and linguistically diverse governance, leadership, and workforce that are responsive to the population in the service area. 4. Educate and train governance, leadership, and workforce in culturally and linguistically appropriate policies and practices on an ongoing basis.
Communication and Language Assistance	5. Offer language assistance to individuals who have limited English proficiency and/or other communication needs, at no cost to them, to facilitate timely access to all health care and services. 6. Inform all individuals of the availability of language assistance services clearly and in their preferred language, verbally and in writing. 7. Ensure the competence of individuals providing language assistance, recognizing that the use of untrained individuals and/or minors as interpreters should be avoided. 8. Provide easy-to-understand print and multimedia materials and signage in the languages commonly used by the populations in the service area.
Engagement, Continual Improvement, and Accountability	9. Establish culturally and linguistically appropriate goals, policies, and management accountability, and infuse them throughout the organization's planning and operations. 10. Conduct ongoing assessments of the organization's CLAS-related activities, and integrate CLAS-related measures into measurement and continuous quality improvement activities. 11. Collect and maintain accurate and reliable demographic data to monitor and evaluate the impact of CLAS on health equity and outcomes and to inform service delivery. 12. Conduct regular assessments of community health assets and needs and use the results to plan and implement services that respond to the cultural and linguistic diversity of populations in the service area. 13. Partner with the community to design, implement, and evaluate policies, practices, and services to ensure cultural and linguistic appropriateness. 14. Create conflict and grievance resolution processes that are culturally and linguistically appropriate to identify, prevent, and resolve conflicts or complaints. 15. Communicate the organization's progress in implementing and sustaining CLAS to all stakeholders, constituents, and the general public.

Sustainability

Sustainability is often thought of as the ability to find another source of funding after an initial grant ends. But sustainability is not only about sustaining funds; it is also about sustaining the gains you have made in addressing a health problem—in this case, preventing or reducing opioid misuse. It means constantly building on your efforts by retaining and improving strategies that are shown to be effective in achieving your identified outcomes, and discontinuing or modifying those that do not seem to be working as well.

Sustainability does not mean that an intervention must continue as originally designed or must be implemented by the same people as before. Rather, findings from your evaluation should be used for continual, ongoing improvement. As you learn more about what works and does not work in your community, you may find it useful to bring in new partners and implement new strategies.

Planning for sustainability requires that you consider the many factors that will ensure the success of your efforts over time, for example, forming a stable prevention infrastructure, ensuring the availability of training systems, and developing a strong base of community support.

Tips for increasing sustainability include the following (SAMHSA CAPT, n.d.):

- **Think about sustainability from the beginning:** Building support, showing results, and, ultimately, obtaining continued funding all take time. It is critical to think about who needs to be at the table from the beginning.
- **Build ownership among stakeholders:** The more invested stakeholders become, the more likely they will be to support prevention activities for the long term. Involve them early on and find meaningful ways to keep them involved. Stakeholders who are involved in the assessment process are more likely to support the strategies used to address the identified problems and support this work over time.
- **Track and share outcomes:** A well-designed and well-executed evaluation will help you improve your efforts and show evidence of the effectiveness of your strategies. Share your outcomes with community members so that they can become champions of your efforts.
- **Identify program champions** who are willing to speak about and promote your prevention efforts.
- **Invest in capacity**—at both the individual and the systems levels. Teach people how to assess needs, build resources, effectively plan and implement effective strategies, and create the systems necessary to support these activities over time.
- **Identify diverse resources**, including human, financial, material, and technological. Be sure to identify and tap as many of these as possible.

More information and resources on sustainability, as well as on all other components of the SPF model, are available from MassTAPP (http://masstapp.edc.org).

References

Center for the Application of Prevention Technologies. (2012a). *Consequences of opioid use*. Unpublished manuscript. Developed under contract with the Substance Abuse and Mental Health Services Administration. Reference # HHSS277200800004C.

Center for the Application of Prevention Technologies. (2012b). *Risk and protective factors associated with non-medical use of opioids: Literature review (2006–2011).* Unpublished manuscript. Developed under contract with the Substance Abuse and Mental Health Services Administration. Reference # HHSS277200800004C.

Center for the Application of Prevention Technologies. (2012c). *Strategies/interventions for reducing non-medical use of opioids: Literature review (2006–2011).* Unpublished manuscript. Developed under contract with the Substance Abuse and Mental Health Services Administration. Reference # HHSS277200800004C.

Centers for Disease Control and Prevention. (2012, October). Prescription drug abuse and overdose: Public health perspective. *Balancing pain management and prescription opioid abuse.* Retrieved from http://www.cdc.gov/primarycare/materials/opoidabuse/

Cicero, T. J., Ellis, M. S., & Surratt, H. L. (2012). Effect of abuse-deterrent formulation of OxyContin. *New England Journal of Medicine, 367*(2), 187–189. doi: 10.1056/NEJMc1204141

Community Anti-Drug Coalitions of America, & National Coalition Institute. (2009). *Evaluation primer: Setting the context for a community anti-drug coalition evaluation.* Retrieved from www.cadca.org/files/resources/Evaluation-Primer-2011.pdf

Community Anti-Drug Coalitions of America, & National Coalition Institute. (2010a). *Assessment primer: Analyzing the community, identifying problems and setting goals.* Retrieved from http://www.cadca.org/files/resources/Assessment-Primer-2010.pdf

Community Anti-Drug Coalitions of America, & National Coalition Institute. (2010b). *Cultural competence primer: Incorporating cultural competence into your comprehensive plan.* Retrieved from www.cadca.org/files/resources/CulturalCompetence-09-2010.pdf

Goode, T. D., & Jones, W. (2009). *Linguistic competence.* Retrieved from http://nccc.georgetown.edu/documents/Definition%20of%20Linguistic%20Competence.pdf

Hernández, E. (2009). *Cultural competency for anti-drug coalitions.* Retrieved from http://glfhc.org/nc4hcwp/wp-content/uploads/2009/09/Cultural-Competency-for-Anti-Drug-Coalitions.pdf

Hernandez, S. H., & Nelson, L. S. (2010). Prescription drug abuse: Insight into the epidemic. [Review]. *Clinical Pharmacology and Therapeutics, 88*(3), 307–317. doi: 10.1038/clpt.2010.154

Hertz, J. A., & Knight, J. R. (2006). Prescription drug misuse: A growing national problem. *Adolescent Medicine Clinics, 17*(3), 751–769. doi: 10.1016/j.admecli.2006.06.009

Johnson, K., Hays, C., Hayden, C., & Daley, C. (2004). Building capacity and sustainability prevention innovations: A sustainability planning model. *Evaluation and Program Planning, 27*, 135–149.

Jones, C. M., Mack, K. A., & Paulozzi, L. J. (2013). Pharmaceutical overdose deaths, United States, 2010. *JAMA, 309*(7), 657–659. doi: 10.1001/jama.2013.272

Leger, D. L. (2013, April 25). OxyContin: A gateway to heroin for upper-income addicts. *USA Today*. Retrieved from http://www.usatoday.com/story/news/nation/2013/04/15/heroin-crackdown-oxycodone-hydrocodone/1963123/

Manchikanti, L., Abdi, S., Atluri, S., Balog, C. C., Benyamin, R. M., Boswell, M. V., . . . & Wargo, B. W. (2012). American Society of Interventional Pain Physicians (ASIPP) guidelines for responsible opioid prescribing in chronic non-cancer pain: Part I—Evidence assessment. *Pain Physician, 15*(3 Suppl), S1–S65.

Manchikanti, L., & Singh, A. (2008). Therapeutic opioids: A ten-year perspective on the complexities and complications of the escalating use, abuse, and nonmedical use of opioids. *Pain Physician, 11*(2 Suppl), S63––S88.

Massachusetts Department of Public Health. (2009, September). *Opioids: Trends and current status in Massachusetts.* Retrieved from http://media.masslive.com/breakingnews/other/opioidtrends2009.pdf

Massachusetts Department of Public Health. (2011). *Nonfatal opioid-related cases by city/town, MA residents, FY2009.* Retrieved from http://www.mass.gov/eohhs/docs/dph/injury-surveillance/opioid-nf-related-cases-town-fy09.pdf

Massachusetts Department of Public Health. (2012, January). *Opioid overdose prevention strategies in Massachusetts.* Retrieved from http://www.mass.gov/eohhs/docs/dph/substance-abuse/opioid-overdose-prevention-strategies.pdf

Massachusetts Department of Public Health. (2014, December). *Data Brief: Fatal opioid-related overdoses among MA residents.* Retrieved from http://www.mass.gov/eohhs/docs/dph/injury-surveillance/overdose/fatal-opioid-related-overdoses-ma.pdf

Massachusetts Department of Elementary and Secondary Education, and Massachusetts Department of Public Health. (2014, May). *Health and Risk Behaviors of Massachusetts Youth 2013.* Retrieved from http://www.mass.gov/dph/hsp

Morbidity and Mortality Weekly Report. (2010). Emergency department visits involving nonmedical use of selected prescription drugs—United States, 2004–2008. *Morbidity and Mortality Weekly Report, 59*(23), 705–709.

Morbidity and Mortality Weekly Report. (2011). Vital signs: overdoses of prescription opioid pain relievers—United States, 1999–2008. *Morbidity and Mortality Weekly Report, 60*(43), 1487–1492.

National Center for Cultural Competence. (n.d.). *Conceptual frameworks/models, guiding values and principles.* Retrieved from http://nccc.georgetown.edu/foundations/frameworks.html

National Center for Health Statistics. (2014). *Current multiple cause of death data, 1999–2013.* CDC WONDER [Database]. Retrieved from http://wonder.cdc.gov/mcd.html

National Institute on Drug Abuse. (2011). *Prescription drugs: Abuse and addiction. Opioids.* Retrieved from http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids

National Institute on Drug Abuse. (2012). *DrugFacts: Prescription and over-the-counter medications.* Retrieved from http://www.drugabuse.gov/publications/drugfacts/prescription-over-counter-medications

O'Connell, M., Boat, T., & Warner, K. (Eds.). (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. Washington, DC: National Research Council and Institute of Medicine, The National Academies Press.

Office of Minority Health. (2013a). *National CLAS standards: Fact sheet.* Retrieved from https://www.thinkculturalhealth.hhs.gov/pdfs/NationalCLASStandardsFactSheet.pdf

Office of Minority Health. (2013b, April). *National standards for CLAS in health and health care: A blueprint for advancing and sustaining CLAS policy and practice.* Retrieved from https://www.thinkculturalhealth.hhs.gov/pdfs/EnhancedCLASStandardsBlueprint.pdf

Sporer, K. A. (1999). Acute heroin overdose. *Annals of Internal Medicine, 130*(7), 584–590.

Strassels, S. A. (2009). Economic burden of prescription opioid misuse and abuse. [Review]. *Journal of Managed Care Pharmacy, 15*(7), 556–562.

Substance Abuse and Mental Health Services Administration. (2009). *Strategic Prevention Framework State Incentive Grant (SPF SIG): Cohort III/IV Cross-Site Evaluation Community Level Instrument (CLI). Part I: Community Partner Activities. October 2009.* Retrieved from http://www.samhsa.gov/grants/CSAP.../CLIPartIDissemination101909.doc

Substance Abuse and Mental Health Services Administration. (2012a, July 2). Highlights of the 2010 Drug Abuse Warning Network (DAWN) findings on drug-related Emergency Department vsits. *The DAWN Report*.

Substance Abuse and Mental Health Services Administration. (2012b). *Results from the 2011 National Survey on Drug Use and Health: Detailed tables.* Retrieved from http://www.samhsa.gov/data/NSDUH/2011SummNatFindDetTables/NSDUH-DetTabsPDFWHTML2011/2k11DetailedTabs/Web/HTML/NSDUH-DetTabsSect1peTabs1to46-2011.htm#Tab1.1A

Substance Abuse and Mental Health Services Administration. (2012c). *Results from the 2011 National Survey on Drug Use and Health: Summary of national findings.* Retrieved from http://www.samhsa.gov/data/NSDUH/2k11Results/NSDUHresults2011.htm

Substance Abuse and Mental Health Services Administration. (2013, January). *The NSDUH Report: State estimates of nonmedical use of prescription pain relievers.* Retrieved from http://www.samhsa.gov/data/2k12/NSDUH115/sr115-nonmedical-use-pain-relievers.htm

Substance Abuse and Mental Health Services Administration. (2014a). *National Survey on Drug Use and Health: Comparison of 2011–2012 and 2012–2013 Model-Based Prevalence Estimates (50 States and the District of Columbia).* Rockville, MD: Author.

Substance Abuse and Mental Health Services Administration. (2014b). *Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings.* NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Author.

Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies. (n.d.). *Strategic Prevention Framework.* Retrieved from http://captus.samhsa.gov/prevention-practice/strategic-prevention-framework

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013, February 22). *The DAWN Report: Highlights of the 2011 Drug Abuse Warning Network. Findings on Drug-Related Emergency Department Visits.* Rockville, MD: Author.

Upadhyay, J., Maleki, N., Potter, J., Elman, I., Rudrauf, D., Knudsen, J., . . . & Borsook, D. (2010). Alterations in brain structure and functional connectivity in prescription opioid-dependent patients. *Brain, 133*(Pt 7), 2098–2114. doi: 10.1093/brain/awq138

Warner, M., Chen, L. H., Makuc, D. M., Anderson, R. N., & Minino, A. M. (2011). Drug poisoning deaths in the United States, 1980–2008. *NCHS Data Brief* (81), 1–8.

Warner, M., Hedegaard, H., & Chen, L.-H. (2014). *Trends in Drug-Poisoning Deaths Involving Opioid Analgesics and Heroin: United States, 1999–2012.* National Center for Health Statistics Health E-Stats. Retrieved from http://www.cdc.gov/nchs/data/hestat/drug_poisoning/drug_poisoning.htm

Appendices

Appendix 1: What Is MOAPC?

Massachusetts Opioid Abuse Prevention Collaborative (MOAPC)

The Massachusetts Department of Public Health, Bureau of Substance Abuse Services (BSAS), has awarded 18 communities, covering more than 90 municipalities, a total of $1.8 million in grant funding annually to address opioid misuse, abuse, and overdose across the Commonwealth. This is a three-year grant, with options to renew, making it possible for grantees to be funded until 2020. Funds were disseminated through a statewide competitive bid process (see Appendix 7 for the complete list of funded grantees). This initiative is called the Massachusetts Opioid Abuse Prevention Collaborative (MOAPC).

The purpose of the MOAPC funding is to implement local policy, practice, systems, and environmental change to achieve the following objectives:

- Prevent the misuse and abuse of opioids (including first use)
- Prevent or reduce unintentional deaths and nonfatal hospital events associated with opioid poisonings
- Increase both the number and the capacity of municipalities across the Commonwealth who are addressing these issues

This initiative is part of a comprehensive approach to substance abuse prevention, which includes a three-year grant (the Strategic Prevention Framework–Partnership For Success II grant) from the Substance Abuse and Mental Health Services Administration (SAMHSA) to prevent prescription drug misuse and abuse among persons ages 12–25 in high-need Massachusetts communities. BSAS also continues to fund municipalities across the state to implement strategies to reduce underage drinking.

The misuse and abuse of opioids (a category of drugs that includes both prescription pain relievers and heroin) is a major preventable cause of overdose and death in Massachusetts. Cities and towns throughout the state are suffering the consequences of what former Governor Deval Patrick declared a public health crisis. From 2000 to 2012, fatal opioid overdoses increased 90 percent in Massachusetts, according to the Department of Public Health.[5] The toll of opioid abuse is hard to quantify; families and entire communities suffer when loved ones, coworkers, and neighbors struggle with addiction. The consequences on the health care and criminal justice systems are tremendous, while school and workplace disruptions are placing more burdens on staff and employers. This pervasive and destructive problem requires a multi-fold approach in order to reduce the toll.

Prevention of opioid misuse and abuse is critical to the health and well-being of the Commonwealth. One key component of prevention is to increase understanding among youth, parents, and prescribers of the potential for the misuse and abuse of pain medication, while raising awareness of the frequent progression from prescription drug abuse to heroin use. The stigma of addiction also needs to be addressed, because shame and secrecy discourage users from seeking care and treatment. Preventing drug overdoses must also be a priority so that individuals struggling with addiction are able to receive treatment. All MOAPC grantees work with community leaders to make policy and practice changes that

[5] Massachusetts Department of Public Health. (April 2014). *Fatal Opioid-related Overdoses among MA Residents, 2000–2013*. Injury Surveillance Program, Bureau of Health Information, Statistics, Research, and Evaluation. Boston, MA: Author.

can sustain these vital efforts. While the scope of the opioid problem is immense, MOAPC coalitions aim to make a significant impact by reducing deaths through preventing overdoses, addressing stigma, and

implementing effective education and environmental prevention strategies in the communities most affected by opioid use.

BSAS began funding the grantees in July 2013. Grants were awarded to a mix of large municipalities (e.g., Boston), clusters of cities or towns, and existing Public Health Districts/Alliances. The MOAPC-funded communities are required to use a federally approved public health approach, SAMHSA's Strategic Prevention Framework (SPF), which consists of five steps (Assessment, Capacity Building, Planning, Implementation, and Evaluation), toward achieving their goals. This process ensures that grantees appropriately understand and define the problem in their community and address it in collaboration with a strong coalition made up of civic and community leaders and concerned residents. The SPF steps are guided by the principles of cultural competence and are designed to help communities build the infrastructure necessary for effective and sustainable prevention. When selecting strategies, grantees work closely with BSAS to ensure that their approach is based on evidence, is appropriate for their community, and contributes to some form of practice or policy change in order to ensure that the impact is long-lasting and sustainable regardless of future grant funding.

Some strategies currently being implemented include the following:

- Social marketing campaigns to address misconceptions around prescription drug misuse
- Providing education on the proper storage and disposal of prescription drugs
- Encouraging Prescription Monitoring Program enrollment by health care providers
- Parent outreach and education
- Intervening with people being released from prison and detox to prevent overdose after a period of abstinence
- Focus on overdose reversals through the distribution of Naloxone, also known as Narcan
- Increasing use of emergency services (calling 911) during an overdose
- Working with and training physicians, nurse practitioners, dentists, and pharmacists on safe prescribing habits
- Implementation of substance use/abuse Screening, Brief Intervention, and Referral to Treatment (SBIRT) in hospitals, schools, community health centers, and other locations

Presently, 18 grants have been awarded to more than 100 cities and towns across the state. See Appendix 7 for a complete list of municipalities awarded funding.

All MOAPC grantees' programs are being carefully evaluated and have shown significant progress in their first year of funding. As MOAPC expands to more communities, the evidence and lessons learned will be shared among sites to ensure success in addressing this serious public health epidemic.

For more information about the MOAPC grant, visit http://masstapp.edc.org/massachusetts-opioid-abuse-prevention-collaborative

For more information about SAMHSA's SPF model, visit http://masstapp.edc.org/prevention-tools

Appendix 2: Milestones and Timelines for MOAPC Grantees

*Please note that this timeline is from the originally funded MOAPC sites from 2013

This document reflects the desire of the Massachusetts Department of Public Health's Bureau of Substance Abuse Services (BSAS) to:

1. Provide MOAPC clusters a full **10 months to create a Regional Strategic Plan** that will guide the work of the cluster in Year Two, and

2. Provide lead communities and partner communities an opportunity to begin to pilot discrete interventions in Year One – even though these interventions may not be continued into subsequent years based on the results of the strategic planning process.

OVERVIEW: Year 1 (July 1, 2013 – June 30, 2014)

- **Assessment**: The lead community and partner communities begin work on assessing need and resources across all communities in the cluster.

- **Capacity**: The lead community and partner communities begin work on coalition building and developing the structure that will support successful implementation of the grant.

- **Planning**: The cluster begins to develop their Regional Strategic Plan. The Regional Strategic Plan should be a synthesis of information from the lead and partner communities – it should identify site-by-site variation in need, readiness, and capacity and draw overall conclusions about how to allocate and distribute resources and programming in a way that will best serve the region as a whole.

  - No later than December 30, 2013, all clusters will submit Part I of their Regional Strategic Plan. Part I of the plan will describe, in detail, how the cluster is currently undertaking SPF Steps 1-3 and how the cluster will continue to work on these three steps while working on Part II of the plan. Part I of the plan should **not** identify the strategies the cluster plans to implement during Year 2.

  - No later than April 30, 2014, all clusters will submit Part II of their Regional Strategic Plan. Part II of the plan will cover all 5 Steps of the SPF along with a list of the strategies the cluster plans to implement in Year 2 – including a detailed implementation plan.

- **Implementation**: The lead community in each cluster is required to pilot one primary prevention strategy while the Regional Strategic Plan is being developed and one of the partner communities in each cluster is required to pilot one overdose prevention strategy during this same time period. Implementation of the pilot projects (which are subject to BSAS approval) is to begin in the lead community and in the selected partner community no later than January 1, 2014. Details on this aspect of the project appear below in the Pilot Project Requirements section of this document.

  The 10 MOAPC communities that were MassCALL2 grant recipients previously funded to implement overdose prevention strategies may continue to implement one of the overdose

prevention strategies described below during Year One if they were already implementing one of these strategies under MassCALL2.

- **Evaluation**: Clusters are required to begin to track MIS service data on MOAPC activities immediately upon award. Templates for doing so will be provided by the State.

PILOT PROJECT REQUIREMENTS: Year 1 (July 1, 2013 – June 30, 2014)

The lead community in each cluster is required to pilot one primary prevention strategy and one partner community in each cluster is required to implement an overdose prevention strategy while the Regional Strategic Plan is being developed. These pilot strategies do not need to be chosen based on a complete SPF process – selection should be guided by capacity, feasibility, fit, and the wisdom of practice, as follows:

- REQUIRED: All 13 lead communities must identify and begin to implement a pilot of one *new* **primary prevention** strategy in the lead community by **January 1, 2014**. Acceptable strategies are those identified in the SAMHSA/CAPT Strategies/Interventions for Reducing Non-Medical use of Prescription Drugs document. Communities are encouraged to consider: (1) prescription drug take back events, (2) enrolling prescribers in the PMP, (3) working with pharmacists to reduce access, and (4) strategies promoting proper storage and disposal of prescription drugs.

  The goal is for lead communities to begin implementation of a prevention strategy (since MOAPC is being funded through the block grant and must include prevention programming) while the cluster is working on its Regional Strategic Plan. This strategy does not need to be chosen based on a complete SPF process – selection should be guided by capacity, feasibility, fit, and the wisdom of practice. This strategy may or may not be continued into subsequent years based on the results of the Regional Strategic Plan – it is a one-year pilot.

- REQUIRED: One partner community in each cluster must identify and begin to pilot one of the following **overdose prevention** strategies by **January 1, 2014**: (1) strategies that improve the response of first responders, (2) dissemination of overdose prevention materials, (3) strategies that share information about the Good Samaritan Law, (4) connecting/collaborating with a Learn to Cope group, or (5) strategies that promote connections to the Narcan Pilot Program.

  The goal is to leverage the experience from MassCALL2 to introduce overdose prevention programming in a new setting while the Regional Strategic Plan is being developed. This strategy does not need to be chosen based on a complete SPF process – selection should be guided by capacity, feasibility, fit, and the wisdom of practice. This strategy may or may not be continued into subsequent years based on the results of the Regional Strategic Plan – it is a one-year pilot.

  The determination of which partner community within each cluster will implement the pilot strategy should be determined collaboratively by the members of the cluster. Priority should be given to partner communities that demonstrate readiness to implement the strategy, need, and fit.

- OPTIONAL: The 10 MOAPC lead communities that were MassCALL2 grant recipients may continue to implement one of the following overdose prevention strategies if they were already doing so under MassCALL2: (1) strategies that improve the response of first responders, (2) dissemination of overdose prevention materials, (3) strategies that share information about the Good Samaritan Law, (4) connecting/collaborating with a Learn to Cope group, or (5) strategies that promote connections to the Narcan Pilot Program.

  The goal here is to continue work on one existing strategy, not to introduce a new overdose prevention strategy at this point.

DEADLINES: Year 1 (July 1, 2013 – June 30, 2014)

No Later Than November 30, 2013

- *The lead community must submit a memo to BSAS outlining*:

    a) whether or not the lead community will be continuing a MassCALL2 strategy,

    b) the new primary prevention strategy that the lead community will be implementing while the Regional Strategic Plan is being developed, and

    c) the new overdose prevention strategy that one partner community will be implementing while the Regional Strategic Plan is being developed – including an identification of which partner community has been selected for the pilot.

No Later Than December 30, 2013

- *All clusters submit Part I of their regional strategic plan that describes, in detail, how the cluster is currently undertaking SPF Steps 1-3 and how the cluster will continue to work on these three steps while working on Part II of the plan.*

No Later Than January 1, 2014

- *Lead communities begin piloting one new primary prevention strategy after receiving approval from BSAS.*

- *One partner community begins piloting one overdose prevention strategy after receiving approval from BSAS.*

No Later Than April 30, 2014

- *All clusters submit Part II of their regional strategic plan, which covers all 5 Steps of the SPF along with a list of Year 2 cluster strategies and a detailed implementation plan.*

No Later Than July 1, 2014

- *All clusters begin to implement the strategies identified in their Year Two strategic plan – which may or may not include the pilot/continuation strategies from Year One based on the results of the regional needs assessment. Implementation may not begin on Year Two strategies until the Regional Strategic Plan has been approved by BSA*

Appendix 3: MIS Guidance Document for MOAPC Grantees

MIS Guidance Document for Calculating the Number and Demographics of People Served

What is this document?

This guidance explains how to use an accompanying spreadsheet that MassTAPP has developed with BSAS. This MIS spreadsheet (available for download here: http://masstapp.edc.org/tools-and-worksheets) will help you to report data as accurately as possible, and in a manner consistent with all other funded communities. It is designed to calculate all of the totals you will need to report to BSAS using the numbers you populate the spreadsheet with, according to the instructions below. This spreadsheet can also be used to help you to answer questions such as: Which strategies reach which age groups? Which strategies require me to estimate demographic information, and for which strategies can I analyze the demographic groups reached? How do my coalition's strategies compare to each other, in terms of ages reached, numbers reached and overall reach?

As BSAS grantees, you are required to report on how many people in your community you reach, and how you reach them. As part of this requirement, you must submit an Excel spreadsheet to BSAS that includes counts of the numbers of people reached each month as well as their demographic information, and a narrative report to accompany them. Your MassTAPP TA provider is available to assist you with this process.

The big picture of MIS reporting

The Prevention Management Information System (MIS) data collection instrument has been designed for the purpose of capturing the necessary information BSAS needs to complete the yearly federal Uniform Block Grant Application to the Substance Abuse and Mental Health Services Administration (SAMHSA). The Substance Abuse Prevention Treatment (SAPT) Block Grant supports the staff and the operation of the prevention programs.

The aggregated statistical data from States can be used by the SAMHSA to demonstrate to Congress the array of substance abuse prevention strategies being implemented and provide an understanding of who benefits from these strategies. This information will also provide Congress with a better understanding of future needs. Data from your reports may also be used by BSAS to get the big picture of how prevention work is impacting communities across the state.

Demographics: Whenever possible, demographic information should be collected through self-report (ask people how they identify in terms of gender, race, ethnicity, language group and age). If that's not possible, try to access information about the demographics of the people you reached through other means, like school records or program files where participants have reported their own ethnicity, race and language. In these cases you'll have to write an explanation about how you gathered the information. In any case where you would need to guess demographics, report the demographics as "unknown". It is important that you collect this information from a reliable source such as school demographic data and that you do not try to guess.

Calculating the "New" and the "Total" Number of Participants: Each person should be counted as "new" only once each fiscal year (the state fiscal year goes from July 1 to June 30). For example, if you hold a monthly community meeting starting in July, you would only count the individuals as "new" in the month of July, and you would not include them in your "new" count again even if they attend your meeting each month. Demographics are only entered for new participants in order to avoid double-counting. You should keep track of the total number of people served by activity each month, but these totals will not be used by the spreadsheet to create the totals you submit in your quarterly summaries, since they will likely include multiple counts of the same people.

Entering your Strategies/Activities: Your first step in using the new spreadsheet should be to enter the names of the strategies that are part of your logic model and action plan under the "activities" tab.

Definitions of prevention strategies

Information Dissemination: Information dissemination provides awareness and knowledge of the nature and extent of substance abuse and addiction and its effects on individuals, families, and communities. Information dissemination is characterized by one-way communication from the source to the audience. Types of services conducted and methods used for implementing this strategy include the following: clearinghouse/information resource center(s); resource directories; media campaigns (including positive social norms marketing campaigns); brochures; radio/TV public service announcements; speaking engagements; and health fairs/health promotions, such as conferences, meetings, and seminars.

Community-Based Process: Community-based process strategies aim to enhance the ability of the community to more effectively provide substance abuse prevention and treatment. Services in this strategy include organizing, planning, and enhancing the efficiency and effectives of services. Types of services include community and volunteer training (e.g., neighborhood action training, training of key people in the system, staff/officials training); systematic planning; multi-agency coordination and collaboration; community team-building; and accessing services and funding.

Education: Substance abuse prevention education involves two-way communication and is distinguished from the information dissemination strategy by the fact that interaction between the educator and/or facilitator and the participants is the basis of its components. Types of services conducted and methods used include the following: children of substance abusers groups, classroom educational services, educational services for youth groups, parenting/family management services, peer leader/helper programs, and small-group sessions.

Environmental: The environmental strategy establishes or changes written and unwritten community standards, codes, and attitudes, thereby influencing the incidence and prevalence of the abuse of alcohol, tobacco, and other drugs by the general population. Types of services include: compliance checks in liquor outlets/establishments; promoting the establishment or review of alcohol, tobacco and drug use policies in schools; guidance and technical assistance on monitoring enforcement governing availability and distribution of alcohol, tobacco and other drugs; modifying alcohol and tobacco advertising practices; and product pricing strategies. Social marketing and positive social norms marketing campaigns are not examples of environmental strategies, according to CSAP. These fall under "information dissemination."

Problem Identification and Referral: Problem identification and referral aims to classify those who have indulged in illegal or age-inappropriate use of tobacco or alcohol and those who have indulged in the first use of illicit drugs, and to assess whether their behavior can be reversed through education. Types of services include the following: employee assistance programs, student assistance programs, and DUI, DWI, and MIP programs.

Alternatives: Alternatives provide for the participation of target populations in activities that exclude substance abuse. Types of services include: drug free dances and parties; youth/adult leadership activities; community service activities; community drop-in centers; Outward Bound; and recreation activities.

Activities coded by category and color:

Education	Strategies that improve the response of first responders Training for police or fire officials re: Narcan use Outreach worker education regarding narcan use for community Distribution of lock boxes for prescription drugs Working individually with pharmacists to reduce access Strategies promoting proper storage and disposal of prescription drugs
Environmental	Strategies that promote connections to the Narcan Pilot Program Establishment of policies for fire or police to carry Narcan
Information Dissemination	Dissemination of overdose prevention materials Strategies that share information about the Good Samaritan Law Prescription drug take back events Working with pharmacists to reduce access Enrolling prescribers in the PMP Positive Social Norms Marketing
Community-Based Process	Public events One-on-one interviews
Problem identification and referral	Connecting individuals in need to local resources Employee assistance programs Student assistance programs Connecting/Collaborating with a Learn to Cope group
Alternatives	"Substance-free" or "Alternative" activities and events

Strategies/types of activities for MOAPC programs

The following chart provides guidance on how to quantify the reach of your programs, depending on whether the activity is one where participants can be counted, both counted and estimated, or only estimated, and designates which of the six strategy *categories* these activities fit within. Many activities appear in several categories, depending on the intent of the activity.

Activities where participants *can be counted* accurately:

Activity	Guidance	Category
Strategies that improve the response of first responders	Number of people attending a training or presentation for first responders.	Education
Training for police or fire officials re: Narcan use	Number of people who participate in the activity	Education
Outreach worker education regarding Narcan use for community	Number of people reached	Education
Distribution of lock boxes for prescription drugs	Number of lock boxes distributed	Education
Working individually with pharmacists to reduce access	Number of pharmacists reached	Education
Strategies promoting proper storage and disposal of prescription drugs	Number of people reached	Education
Strategies that promote connections to the Narcan Pilot Program	Number of new Narcan sites established	Environmental
Establishment of policies for fire or police to carry Narcan	Number of new policies	Environmental
Dissemination of overdose prevention materials	Number of materials disseminated	Info Dissemination
Strategies that share information about the Good Samaritan Law	Number of people receiving information in print or verbally, regarding the law	Info Dissemination
Prescription drug take-back events	Number of people reached	Info Dissemination
Working with pharmacists to reduce access	Number of pharmacists reached	Info Dissemination
Enrolling prescribers in the PMP	Number of prescribers reached	Info Dissemination
Public events	Number of people organizing and/or attending the event; such as, a planning event for a town hall meeting or town hall meeting itself	Comm-based process
One-on-one interviews	Number of people who you talk to during one-on-ones	Comm-based process
Public events	Number of people organizing and/or attending the event; such as, a substance free dance	Alternatives
Connecting/collaborating with a Learn to Cope group	Number of people connected to services	Problem identification and Referral

Activities where participants *can only be estimated*:

Activity	Guidance	Category
Poster campaigns	Calculate by multiplying the number of posters placed by the number of unique people you think will see each one.[6]	Info Dissemination
Poster campaigns that are part of a positive social norms marketing campaign	Calculate by multiplying the number of posters placed by the number of unique people you think will see each one.[8]	Info Dissemination/ Positive Social Norms Marketing
Billboards	Estimated number of people reached (but not their demographics) can be taken from the estimates provided by the billboard company. Make sure you count the number of unique individuals reached, not the number of "views" or "exposures" that the company provides.	Info Dissemination
Billboards that are part of a positive social norms marketing campaign	Estimated number of people reached (but not their demographics) can be taken from the estimates provided by the billboard company. Make sure you count the number of unique individuals reached, not the number of "views" or "exposures" that the company provides.	Info Dissemination/ Positive Social Norms Marketing
Radio spots	Estimated number of people reached (but not their demographics) can be taken from the estimates provided by the radio company. Make sure you count the number of unique individuals reached, not the number of "views" or "exposures" that the company provides.	Info Dissemination
Radio spots that are part of a positive social norms marketing campaign	Estimated number of people reached (but not their demographics) can be taken from the estimates provided by the radio company. Make sure you count the number of unique individuals reached, not the number of "views" or "exposures" that the company provides.	Info Dissemination/ Positive Social Norms Marketing
TV spots	Estimated number of people reached (but not their demographics) can be taken from the estimates provided by the TV company. Make sure you count the number of unique individuals reached, not the number of "views" or "exposures" that the company provides.[7]	Info Dissemination
TV spots that are part of a positive social norms marketing campaign	Estimated number of people reached (but not their demographics) can be taken from the estimates provided by the tv company. Make sure you count the number of unique individuals reached, not the number of "views" or "exposures" that the company provides.[9]	Info Dissemination/ Positive Social Norms Marketing

[6] *Unique exposure* is a term used by media companies to capture one person's viewing of an advertisement. It refers to the number of individuals reached and not the number of times that individual has viewed an ad.
[7] *Total exposure* refers to the number of times people were "exposed" to the advertisement; it is a larger number than "unique" because one individual may have seen an ad many times.

Letters to the editor that are part of a positive social norms marketing campaign	Number of people estimated through the newspaper's circulation.	Info Dissemination/ Positive Social Norms Marketing
Letters to the editor that are not part of a positive social norms marketing campaign	Number of people estimated through the newspaper's circulation.	Info Dissemination
Blogging/Facebook/other online presence	Number of unique hits on your page or website.	Info Dissemination

Activities where *some participants can be counted directly* but *others will be estimated*:

Activity	Guidance	Category
Trainings for police or fire staff on the use of Narcan	**Direct:** Number of individuals trained	Education
	Indirect (estimated count): Total number of interventions where police or fire will be using Narcan	
Developing, advocating for, or passing policies re: preventing the use and abuse of opioids	**Direct:** Calculate by counting those who participate actively in the advocacy and planning for the policy change, as well as people who are contacted directly about the initiative.	Environmental
	Indirect (estimated count): Includes the number of people exposed to the advocacy messages (letters to the editor, news stories, etc.). If a policy change is successful, the number of people indirectly served can be calculated by estimating the number of people who the change will affect (for example, how many people attend events at the establishment where the policy was enacted? How many people live in the town where the change will be in effect?).	
Distribution of lock boxes	**Direct**: Number of lock boxes distributed	Info Dissemination
	Indirect (estimated count): Number of people in the families where the lock boxes are distributed	

Appendix 4: MIS Guidance Document Workbook

MassTAPP Prevention Program MIS Report Workbook, FY 2015
Bureau of Substance Abuse Services
Massachusetts Department of Public Health

Type of project: In the white space below, specify whether you are reporting on a MOAPC or UAD project:

Your community: In the white space below, provide the name of your community (and cluster communities, if applicable):

Instructions: This EXCEL workbook includes data entry sheets and summary sheets for each of the four quarters of FY 2015, plus summary sheets for the whole fiscal year. The purpose of the workbook is to facilitate detailed tracking of project activities and people served during each three-month quarter and the year as a whole. (blank MIS form can be found here: http://masstapp.edc.org/tools-and-worksheets)

The first step in use of the workbook is to complete the "Activities" sheet, which follows this sheet. This is done by listing all of the activities/strategies to be carried out during the project year. In doing so, note that this is the only place where activities/strategies can be listed in the workbook. In addition, while additional activities/strategies can be added later in the project year, please do not remove any activities/strategies from the list, even if no additional activities of that type are provided during some months of the year.

Then, for each Quarter, the workbook includes nine sheets and is intended to facilitate tracking of project activities and people served during a three-month quarter of the project year. The first six sheets are for recording your project data by month, with two sheets for each month: (1) a sheet to record activities provided during the month, and (2) a second sheet to record demographic characteristics of people served during the month.

The monthly sheets are filled out by populating the **pink and light blue background cells** in the appropriate sheet for each of the three months in a quarter, first filling in each activity carried out and the estimated and direct numbers of people reached with each activity in the first sheet and then filling in the blue background cells in the second table to provide the demographic breakouts for those people where that data is available. Please note the additional instructions in the yellow background cells of the demographic summary sheet for each month.

So please remember: You fill out only the pink and light blue background cells. All the other non-blue and non-pink background cells contain labels, instructions, cell references, and/or formulas that provide various sub-totals and totals for your own use or to forward figures from the current month to quarterly or year-long summaries so that they can be combined automatically in cumulative summary statistics.

For each Quarter, the last three sheets are summary tables that automatically provide quarterly summary statistics as the monthly tracking sheets are completed. **You do not fill out these sheets.** The seventh and eighth sheets of the workbook provide detailed cumulative summary statistics for project activities and demographics of people served during the quarter, and the ninth and last sheet is structured the same way as the MIS reporting form currently used by BSAS. All three of these final sheets are populated automatically by completing the blue background sections of the monthly tracking sheets.

Finally, the last three sheets of the workbook are summary tables for the year as a whole that provide statistics for the project year as a whole as the monthly tracking sheets are completed. **Again, you do not fill out these sheets**. The first two year-long summary sheets provide summary statistics for project activities and demographics of people served during the year. The final sheet is structured the same way as the "Year to Date" sheet of the MIS reporting form used by BSAS. As with the quarterly summaries, these year-long summary sheets are populated automatically by completing the blue background sections of the monthly tracking sheets.

EXCEL tips:
1. The blue cells have been set to accept only whole numbers and will reject text or other types of data. This was done to prevent accidental inclusion of data that cannot be processed by the formulas. The pink cells are set to accept text responses.

2. Sheets have been formatted to show as much of each table as possible, leaving columns somewhat narrow. As a result, very large numbers (over 100,000) may show as ###### in some cells. The numbers become visible by running the cursor over these cells. Of course, the columns also can be widened to make the numbers visible.

Appendix 5: MOAPC Strategies, November 2014

Community	Strategies
Boston	Strategy 1 (consumption): Educate groups of 16–25 year olds on risk/harm Strategy 2 (consumption): Train parents/caregivers on limiting home access Strategy 3 (consequence): Educate neighborhood organizations/businesses on OD prevention resources and environmental strategies to decrease opioid consequences in their businesses Strategy 4 (consequence): Provide incarcerates with opioid use history OD prevention information prior to release
Brockton	Strategy 1 (consumption): School-based education of youth on perception of harm/risk Strategy 2 (consumption): Improve parental monitoring through education and awareness through community programming Strategy 3 (consumption): Promote prescription monitoring and take back. Strategy 4 (consequence): Promote the Good Samaritan 911 law throughout the general public Strategy 5 (consequence): Train potential overdose bystanders Strategy 6 (consequence): Increase access to local nasal Narcan pilot sites. Strategy 7 (consequence): Expand SBIRT services in local medical practices.
Cambridge	Strategy 1 (consumption): Prescription Take Back events Strategy 2 (consumption): Dissemination of educational/ informational materials about NMUPD to parents and youth Strategy 3 (consumption): Display information about NMUPD (non-medical use of prescription drugs) and community specific, state, and national resources on OPEN website Strategy 4 (consumption): Outreach to public and private schools to disseminate information on NMUPD Strategy 5 (consumption): Pharmacy outreach Strategy 6 (consumption): Outreach to local hospitals and private practices to reach medical providers in order to disseminate information about NMUPD risk factors and harm reduction strategies Strategy 7 (consequence): Outreach to first responders and staff serving at risk populations to promote calling 911 among users and bystanders Strategy 8 (consequence): Distribute informational materials on the Good Samaritan Law

Cambridge (cont.)	Strategy 9 (consequence): Outreach to first responders to reduce stigma toward opiate users. Strategy 10 (consequence): Provide training and information to opioid users and bystanders on opioid overdose and Narcan Strategy 11 (consequence): Pharmacy outreach Strategy 12 (consequence): Outreach to medical providers on opiate overdose prevention Strategy 13 (consequence): Create and distribute opioid overdose prevention materials
Fitchburg	Strategy 1 (consumption): Promote proper storage and disposal of Rx drugs Strategy 2 (consumption): Distribute educational materials Strategy 3 (consequence): Educate police about Narcan Strategy 4 (consequence): Train family members Strategy 5 (consequence): Facilitate peer-led parent meeting and provide resource manual to allow community members to access information and resources as to treatment available.
Gloucester	Strategy 1 (consumption): Install cluster-wide medications disposal and safe storage program to decrease social access to Rx drugs Strategy 2 (consumption): Use mass media to increase public concern of opioid misuse and change perception of harm/risk Strategy 3 (consumption): Implement a youth driven opioid abuse prevention information campaign for 12–19-year-old youth Strategy 4 (consumption): Outreach to family practice pediatricians and dentists on screening and prescribing practice Strategy 5 (consequence): Increase Good Samaritan Law awareness and education Strategy 6 (consequence): Provide community-based opioid OD prevention training for behavioral clinicians, direct service agency/shelter outreach workers and volunteers. Strategy 7 (consequence): Increase access to Narcan prescriptons via healthcare providers. Strategy 8 (consequence): Increase nasal Narcan access and opioid OD prevention policy and standard practices in behavioral health settings. Strategy 9 (consequence): Increase law enforcement interagency practice/policy to: (a) carry nasal Narcan, (b) increase diversion to mental health and treatment services, and (c) distribute on-site opioid OD information

Lowell	Strategy 1 (consumption): Create social and marketing campaigns on proper disposal and storage of prescription medication

Lowell (cont.)	Strategy 2 (consumption): Education for Prescribers and dispensers within cluster on enrolling and utilizing the PMP and the greater community on the proper disposal and storage of prescription medication Strategy 3 (consumption): Identify and integrate age appropriate evidence based curriculum for school aged children. Strategy 4 (consequence): Education on the Good Samaritan Law, Harm Reduction Strategies and increased intervening skills Strategy 5 (consequence): Create social and marketing campaigns on overdose and use of bystander Narcan and Good Samaritan Law to high risk populations including users, co-users, family members and bystanders. Strategy 6 (consequence): Increase access to nasal Narcan
Lynn	Strategy 1 (consumption): Training to prescribers on concomitant use of opioids and other drugs, medication diversion, and use of the PMP Strategy 2 (consequence): Training healthcare providers working with people in treatment on opioid risk, recognition, and response using train-the-trainer model Strategy 3 (consequence): Direct education to active users/family members/bystanders via treatment centers or outreach from local Naloxone distribution program on OD risk, recognition, and response Strategy 4 (consequence): Increase access to and availability of Naloxone via direct training of users, bystanders, prescribers and first responders. Strategy 5 (consumption): Increase access to and availability of Naloxone via direct training of users and bystanders, increasing prescribers, changing policy regarding use by first responders. Strategy 6 (consequence): Encourage initiation of treatment in emergency room settings.

Medford	Strategy 1 (consumption): Create a media campaign adapted from SAMHSA Mental Health Stigma Reduction Campaign Initiative Strategy 2 (consumption): SBIRT in public and private schools piloted in Melrose Strategy 3 (consumption): Train coaches of youth sports teams and school sports teams on pain management after an injury Strategy 4 (consumption): Train coaches of youth sports teams and school sports teams on (age appropriate) substance use prevention. Strategy 5 (consumption): Hold community dialogue sessions with athletes Strategy 6 (consumption): Parental training/intervention aimed at improving clear communication of disapproval of use Strategy 7 (consumption): Educate parents on substance abuse prevention education and skill building Strategy 8 (consumption): Train parents on pain management after an injury Strategy 9 (consumption): Social marketing campaign

	Strategy 10 (consumption): Outreach and education for prescribers Strategy 11 (consumption): Provide information to community physician/primary care practitioners on substance abuse treatment referrals for opioid dependent patients Strategy 12 (consequence): Provide information/training to bystanders (family, friends, co-users, local businesses with public bathrooms) on OD risk factors and OD prevention strategies (including Narcan) Strategy 13 (consequence): Collaborate with EMT and first responders to facilitate their distribution of information about causes and consequences of OD to victims and bystanders Strategy 14 (consequence): Pharmacy outreach Strategy 15 (consequence): Training for first responders on OD risk factors and OD prevention strategies Strategy 16 (consequence): Provide treatment information, referrals, and linkages with support services/treatment for OD patients in Hallmark Health.
Pittsfield/Berkshire	Strategy 1 (consumption): Pharmacy outreach Strategy 2 (consumption): Educate prescribers on alternative chronic pain methods and referrals to training Strategy 3 (consumption): Promote safe storage and proper disposal of unused opioids Strategy 4 (consumption): Support school districts in implementing evidence-based comprehensive health education and/or special programming for educators (integrate substance use disorders, assertiveness/refusal skills, and decision making) Strategy 5 (consequence) Support implementation of Learn to Cope program Strategy 6 (consequence): Community education around perception of harm Strategy 7 (consequence): Build local capacity to train the community in the use of nasal NARCAN and increase access to NARCAN Strategy 8 (consequence): Emergency department overdose education and training for ED and crisis staff on engaging individuals post-overdose Strategy 9 (consequence): Expand Good Samaritan Law education campaign from North Adams to the rest of the county
Revere	Strategy 1 (consumption): Toolkit/portal Strategy 2 (consumption): Community leadership mobilization Strategy 3 (consequence): Overdose prevention and training Strategy 4 (consequence): Recovery coach model
Quincy	Strategy 1 (consumption): Social marketing campaign with middle school youth Strategy 2 (consumption): Prescriber education on substance use disorders Strategy 3 (consumption): Educational mailing for high school parents

	Strategy 4 (consequence): Targeted educational resources for users/peers on the Good Samaritan law/calling 911 Strategy 5 (consequence): Targeted education to inmates and those recently released

Springfield	Strategy 1 (consumption): Implement SCOPE of Pain workshop and companion workshops targeting prescribers Strategy 2 (consequence): Provide overdose prevention information and training on overdose risk factors, the use of Naloxone and its availability in Holyoke, Chicopee, and East Longmeadow.
Worcester	Strategy 1 (consumption): Prescription take-back events to reduce home access Strategy 2 (consumption): Outreach to Fallon Health prescribers Strategy 3 (consumption): Adult mass media campaign to increase safe use, storage, and disposal of prescription drugs Strategy 4 (consequence): Utilize reentry programs and parole/probation officers to provide OD prevention information to former incarcerates during reentry into the community—emphasis on Good Samaritan Law Strategy 5 (consequence): Provide information on how to reduce OD risk for opioid users admitted to detox, treatment, or undergoing replacement therapy—emphasis on loss of tolerance and accessing/using nasal Narcan

Appendix 6: MOAPC Logic Model Development Guide and Template

MOAPC Logic Model Development Guide

Logic Model Template

Problem identified by BSAS:

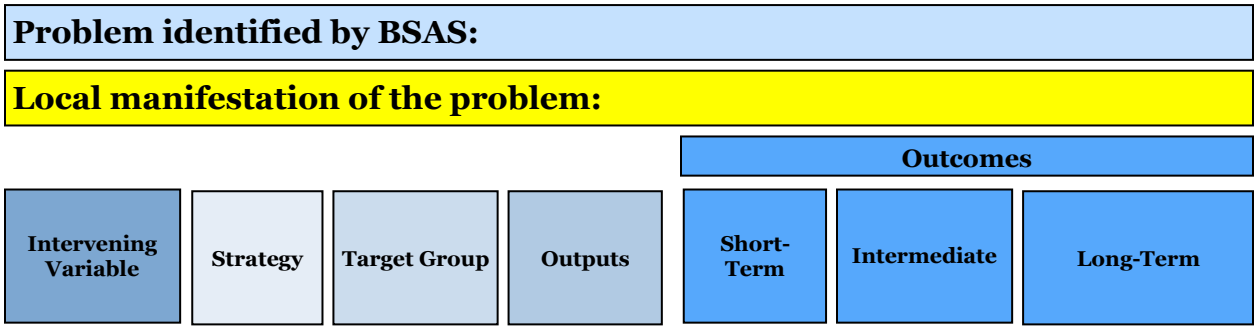
Local manifestation of the problem:

				Outcomes		
Intervening Variable	**Strategy**	**Target Group**	**Outputs**	**Short-Term**	**Intermediate**	**Long-Term**

Logic Model Example

Problem identified by BSAS: Misuse/abuse of opioids and unintentional deaths/non-fatal hospital events associated with opioid poisoning.						
Local manifestation of the problem: 10% of local high school students in grades 9–12 report past 30 day misuse of prescription opioids.						
Intervening Variables	**Strategy**	**Target Group**	**Outputs**	**Outcomes**		
				Short-Term	**Intermediate**	**Long-Term**
Low perception of harm/risk of misuse of prescription opioids among 9th–12th-graders.	Rx opioid prevention curriculum infusion in all high school wellness classes	All 9th–12th grade students attending Smithtown high school. Across the Cluster	Number of teachers trained to deliver the curriculum Number of sessions delivered per classroom Number of students reached.	Significant pre-post increase in knowledge of effects of Rx opioids on the body among 9th–12th-graders exposed to curriculum.	Significant pre-post increase in perception of harm/risk of misuse of prescription opioids among 9th–12th-graders exposed to the curriculum.	Decrease in the % of 9th–12th grade students who report past 30 day misuse of prescription opioids.

- Complete a logic model sheet for each problem identified.
- Include additional rows for each intervening variable being targeted.



Part 1: Problem Identified by BSAS

This is taken from the RFR for each BSAS initiative. It describes why BSAS has made these grant dollars available.

Example:

- *Misuse/abuse of opioids and unintentional deaths/non-fatal hospital events associated with opioid poisoning.*

Part 2: Local Manifestation of the Problem

In this section, define the extent of the problem in the local community (quantitative or qualitative).

Example:

- *10% of local high school students in grades 9-12 report past 30 day misuse of prescription opioids.*

Part 3: Intervening Variable

These are the biological, social, environmental, and economic factors that research has shown to be related to substance use and consequences of use. This category subsumes but is not limited to risk and protective factors.

Example:

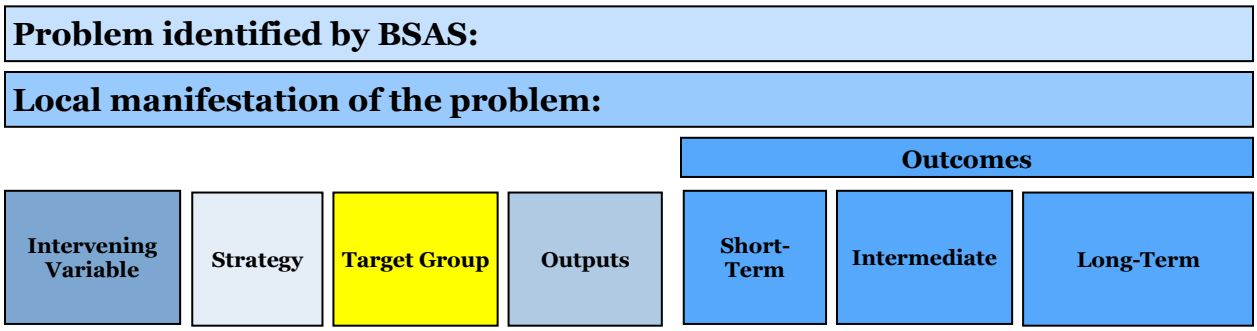
- *Low perception of harm/risk of misuse of prescription opioids among 9–12th-graders.*

Part 4: Strategy (or Intervention)

These are the programs, policies, and/or practices to reduce use and/or consequences of use. Expected to affect intervening variable, which affects outcomes. It is likely that multiple strategies will be used to address each intervening variable.

Example:

- *Rx opioid prevention curriculum infusion in all high school wellness classes*



Part 5: Target Group

This refers to the immediate audience for *each* strategy. Please also specify whether this group is specific to the entire area/cluster or specific communities.

Example:

- *All 9th–12th grade students attending Smithtown high school across the entire cluster.*

Part 6: Outputs

This measures the extent to which **strategies** are being implemented as planned (e.g., head counts of individuals participating in a program, estimated views of a prevention billboard).

Examples:

- *Number of teachers trained to deliver the curriculum; Number of sessions delivered per classroom; Number of students reached.*

Part 7: Short-Term Outcomes

These are the immediate effects of a program; they often focus on the knowledge, attitudes, and skills gained by a target audience.

Example:

- *Significant pre-post increase in knowledge of effects of Rx opioids on the body among 9th–12th-graders exposed to curriculum.*

Part 8: Intermediate Outcomes

These are the changes in behaviors, norms, and/or policies, often expressed as changes in the intervening variable.

Example:

- *Significant pre-post increase in perception of harm/risk of misuse of prescription opioids among 9-12th graders exposed to the curriculum.*

Part 9: Long-Term Outcomes

These are the ultimate goals of the program, which often take time to achieve.

Example:

- *Decrease in the % of 9th–12th grade students who report past 30 day misuse of prescription opioids.*

Additional Notes

- This Logic Model should cover the period from **July 1, 2014**, to **June 30, 2015** (State Fiscal Year).
- You will be **required** to update your Logic Model **annually.**

Blank Logic Model

Problem identified by BSAS:						
Local manifestation of the problem:						
Intervening Variables	**Strategy**	**Target Group**	**Outputs**	**Outcomes**		
				Short-Term	**Intermediate**	**Long-Term**

Appendix 7: List of Grantees: MOAPC, Partnerships for Success, and First Responders

MOAPC

Eighteen grants were awarded to more than 100 cities and towns across the state. The following municipalities were awarded funding:

1. Berkshire Public Health Alliance (includes all of Berkshire County)
2. Boston Public Health Commission (includes the entire City of Boston)
3. Brockton (in partnership with Rockland, East Bridgewater, and Whitman)
4. Cambridge (in partnership with Somerville, Watertown, and Everett)
5. Fitchburg (in partnership with Gardner, Leominster, and Athol)
6. Gloucester (in partnership with Beverly and Danvers)
7. Lowell (in partnership with Billerica, Chelmsford, Tewksbury, Wilmington, Westford and Dracut)
8. Lynn (in partnership with Peabody and Salem)
9. Medford (in partnership with Malden, Melrose, Stoneham, Wakefield, and Reading)
10. Quincy (in partnership with Braintree, Randolph, Stoughton, and Weymouth)
11. Revere (in partnership with Chelsea, Saugus, and Winthrop)
12. Springfield (in partnership with Chicopee, Holyoke, East Long Meadow)
13. Worcester/Central MA Regional Public Health Alliance (in partnership with Holden, Millbury, Grafton, Shrewsbury, West Boylston, and Leicester)
14. Northampton (in partnership with Easthampton, South Hadley, Amherst, and Quabbin Health District - Belchertown, Pelham, and Ware)
15. Fall River (in partnership with Taunton and Dighton)
16. New Bedford (in partnership with Dartmouth, Wareham, Marion, and Rochester)
17. Barnstable County Health District (in partnership with Barnstable, Bourne, Falmouth, Yarmouth, Harwich, Sandwich, and Mashpee)
18. Lawrence (in partnership with Methuen, Andover and Haverhill)

Partnerships For Success (PFS)

The Massachusetts Department of Public Health (MDPH), Bureau of Substance Abuse Services (BSAS), used funding awarded under the Substance Abuse and Mental Health Services Administration (SAMHSA)'s Strategic Prevention Framework–Partnerships for Success II (PFS II) to address prescription drug misuse and abuse among persons ages 12 to 25 in eight high-need communities and funded eight cities and towns across the state. The following municipalities were awarded funding:

1. Boston Public Health Commission (includes the entire City of Boston)
2. Brockton
3. Fall River
4. Lynn
5. New Bedford
6. Quincy

7. Springfield
8. Worcester

First Responders

MDPH awarded grants to 23 communities across Massachusetts to help first responders save lives by providing funding for opioid overdose response training and naloxone units that can be used to reverse overdoses:

1. Barnstable
2. Boston
3. Brockton
4. Chelsea
5. Everett
6. Fall River
7. Fitchburg
8. Framingham
9. Haverhill
10. Holyoke
11. Lowell
12. Lynn
13. Malden
14. New Bedford
15. Quincy
16. Revere
17. Saugus
18. Somerville
19. Stoughton
20. Taunton
21. Weymouth
22. Winthrop
23. Worcester

For more information and resources please visit: http://masstapp.edc.org/first-responder-naloxone-narcan-technical-assistance

Appendix 8: Responding to Opioid Overdose Spates

Scott Formica, Social Science Research and Evaluation, Inc.

August 17, 2014

Background

The health consequences of opioid misuse are well-known and include the possibility of fatal and non-fatal overdose. Although overdoses are relatively rare, they will sometimes cluster together by time and location—often referred to as a "rash" or a "spate" of overdoses. A common response to these spates is to issue public health warnings to providers and the general public that inform them about the situation and offer guidance and resources (Kerr et al., 2013). This is done despite the fact that little is known about the causes of these spates and the effectiveness of the public health response (Miller, 2007). This brief report was developed to (1) familiarize public health officials and providers with the most current evidence available about clusters of overdoses, (2) provide guidance about how to interpret surveillance data related to opioid overdose events, and (3) offer recommendations for instances in which the local public health authority or others opts to issue a public health warning or alert in response to a spate of overdoses.

Relevant Literature on Opioid Overdose

Although Edward Brecher wrote about overdose spates in the early 1970s, the cause of these events has never been adequately explained. Heroin purity levels (so called "killer batches") and the presence of adulterants have been implicated, but there has been substantive disagreement among researchers about the role of these factors in explaining overdose spates and isolated overdose events, in general (Miller, 2007).

In a recent editorial in *Drug and Alcohol Review*, Shane Darke summarizes decades of research related to myths about opioid overdose. Darke (2014) begins the article by stating, "Indeed, it is not stretching truth too far to opine that almost everything that we firmly believed to be the case regarding overdose was subsequently shown to be incorrect. As with many cherished beliefs, it was only in the harsh light of research that this was shown to be the case" (p. 109). Among the myths Darke addresses are (1) it is variation in the purity of illicit opioids that is the major cause of overdose; (2) it is the opioid that is important in overdose, not other drugs being used; and (3) impurities are the major cause of overdose. Regarding purity, Darke reviews a series of studies from the 1970s through the 1990s across multiple countries that consistently find little to no relationship between heroin potency and overdose fatalities. The most liberal estimates suggest that variations in purity may only account for one-quarter of the variance in overdose fatalities. Contrary to the second myth, studies have shown that polydrug toxicity is the major factor in opioid overdose. No fewer than ten prominent studies have found that "the overwhelming majority of opioid overdoses, both fatal and non-fatal, involve multiple central nervous system depressants, most notably alcohol and benzodiazepines" (Darke, 2014, p. 110).

What about adulterants? To date, there has not been any convincing evidence to suggest that adulterants play a substantial role in opioid overdose. Contaminants are rarely detected in blood toxicology screens and in examinations of used syringes, and they tend to be fairly innocuous when they are detected. As Darke notes, "In retrospect, this should not be surprising. At the most prosaic level, for a dealer, killing one's customers is never good business" (p. 111).

The findings reported in peer-reviewed studies and those summarized by Darke and others do not indicate that that factors such as purity and adulterants do not play *any* role in overdose, but the causal role of these factors are often inappropriately over-hyped by the media, based on insufficient information (e.g., lack of toxicology results), and more influenced by anecdotal and circumstantial evidence versus hard facts. Miller (2007) recounts a story where three newspapers reported on a very pure batch of heroin circulating around a city that was causing a rash of overdose events. Subsequent interviews with local intravenous drug users (IDUs) revealed that there was no "killer batch" of heroin; those who were overdosing were all recently released from jail and were using the same heroin and the same dose as they were before they went to jail. This is an isolated story, but it illustrates how the media and others can jump to conclusions without having all of the facts.

Relevant Literature on Overdose-Related Public Health Alerts

As noted by Kerr and colleagues (2013), public health alerts and warnings are a popular initial response when a spate of overdoses is identified. To date, there have been four studies that have examined the effectiveness of this approach.

The first, reported in 1992 by Sorensen and colleagues, examined a spate of 50 non-fatal and 3 fatal overdoses that occurred over one weekend in 1989 in San Francisco. The purpose of this study was to examine whether and how drug users learned about these overdose events. One-hundred and fifteen patients in outpatient heroin detox, methadone maintenance, and a multimodality outpatient clinic were interviewed within two weeks of the overdose spate. Importantly, almost all of those interviewed (96%) were aware of the overdoses by the time of the interview. The most popular sources of information were television (54%), information from the street (46%), newspapers (40%), and friends (37%). The authors warn that their findings suggest that public health messages could have the unintended effect of increasing some drug users' interest in acquiring dangerously potent heroin, but that mass media—especially TV—may serve as a vital source of information when OD events do occur in a short period of time. The authors recommend that public health planners collaborate with the media, and that emergency room administrators notify both the media and drug treatment programs when spates occur as part of standard procedure.

Freeman and French (1995) report on 12 fatal overdose deaths that occurred in a short period of time during 1991 in New Jersey that were attributed to fentanyl. The New Jersey Department of Health used community outreach workers to interview 160 IDUs across three municipalities to assess their awareness of the outbreak and their response. All but one of the interviewees had heard about the outbreak, but their sources varied widely—including television, ratio, newspapers, other addicts, friends, relatives, and the police. The investigators also examined who IDUs trusted most for information about good and bad drugs. Friends and other addicts were the most trusted source of information among this sample of IDUs; no respondents regarded television, radio reports, or police as reliable sources. Interestingly, many IDUs in the study did

not regard the warnings as being personally relevant. As noted by the authors, "Because it is an article of faith among many addicts that drug effects can be controlled by altering dosage levels, reports of bad dope are often regarded as evidence of a potent substance that may be harmful only when insufficient care is taken in its administration" (p. 623). On average, 21% of those interviewed reported that they actively searched for the drug after hearing about the ODs (the highest percentage was 45% in one of the three cities). The authors conclude that collaboration between public health planners and the media might be effective in limiting adverse consequences from such incidents, but more research is needed to delineate the networks through which health messages reach drug users.

Miller (2007) examined heroin-user perceptions of television, radio, and print media reports of spates of heroin overdoses not tied to a specific event. Sixty heroin users were interviewed over a six week period in April/May 2000. Almost all of the interviewees had encountered public health warning messages about overdose spates, but none of those interviewed reported using less often or taking more precautions because of these messages. Overall, two themes emerged from the interviews: (1) users did not believe the messages and (2) a sizeable proportion of interviewees attempted to gain access to the drugs in question. Miller writes, "Messages concerning killer batches of heroin either go unheeded or can actually encourage risky behavior. It would appears that media reports of a killer batch have little value as a public health measure. Well-intentioned measures may have unintended consequences when they do not consider the lived reality of their target audience" (p. 119).

Kerr and colleagues (2013) attempted to assess heroin injectors' perceptions of and responses to a warning issues by public health officials in Vancouver regarding high-potency heroin and increases in fatal overdoses. Eighteen IDUs were interviewed approximately two weeks after the warning was issued. Consistent with earlier studies, nearly all of the participants were aware of the warning but none reported changes in their overdose risk behaviors and many reported actively seeking out the high potency heroin. The authors noted that, "Warnings were obscured by ongoing social interactions within the drug scene that focused on heroin quality—discussions focused primarily on quality of heroin that was available and where it could be purchased rather than the elevated risk of OD it presented" (p. 1274).

These studies indicate that those most at risk during an overdose spate are aware of the spate either through public health warnings or other sources. None of the studies, however, found evidence to support the effectiveness of this approach in changing overdose risk factors among the drug using community. Users' reported low levels of trust in information from these sources, and the warnings often resulted in unintended consequences—i.e., increase in drug-seeking behavior. Dietz (2013) suggests that information on overdose spates is important for public health officials, providers, users, and members of the general public to understand so that there can be a response and subsequent preventative action, but that such warnings should be carefully planned and executed as discussed at the end of this report.

Recommendations for Understanding and Interpreting Overdose Data

Given the severity of ODs, the urge to intervene immediately with a cluster of these events is understandable. As noted earlier, a danger in reacting quickly is that it this is sometimes based on insufficient information (e.g., lack of toxicology results), and more influenced by anecdotal and circumstantial evidence than hard facts. In the face of a suspected overdose spate, the first step is to carefully assess the data and information available. Recommendations for doing this include the following:

1. It is important to assess current changes in light of several previous years of data. This will reveal whether current overdoses represent a substantive increase over previous years, or reflects year-to-year volatility in OD data.
2. Community-level data should be examined in the context of data for all of the state. If OD rates are rising in your community this may reflect changes in the state as a whole. That would not mean that the rise in ODs isn't a problem for your community, but it suggests that its cause and strategies for addressing it are more general than community specific.
3. When possible, examine changes in OD (over several years) by gender, age, race/ethnicity, and their geographic distribution in your community. It may be that changes in the OD rate are due to changes in a sub-population of opiate users, rather than the whole population of users. Knowing this may lead you to consider different strategies to address the change. For example, learning that ODs are clustered in a small geographic area, may help direct scare resources (e.g., community health outreach workers) to address the problem.
4. When possible, examine data on the types of substances involved in ODs. It may be, for example, that an increase in ODs is due to an increase in the purity of heroin, or its adulteration with Fentanyl or another substance—in combination with other factors. Knowing this may lead you to different prevention strategies than you might adopt without the information, such as an information campaign to inform users that heroin has become more dangerous.
5. Since the number of ODs in most communities is small, presenting data about the change in overdoses using percentages may be misleading with fewer than 50 cases (at 50, each case would represent 2% of the total cases).
6. Track both fatal and non-fatal ODs, with an eye to changes in the ratio between the two. The number of ODs may increase due to factors not readily controlled by communities, such as increases in the availability of heroin or changes in its potency. If ODs increase but the ratio of non-fatal to fatal overdoses rises, this may reflect success in implementing prevention strategies, such as improved access to first responders.
7. It may be helpful to obtain assistance from an epidemiologist, evaluator, or other researcher familiar with OD data. To identify them, consult with Colleges/universities, the Massachusetts Department of Public Health, and/or local hospitals and departments of public health.

Recommendations on Issuing Public Health Alerts

Despite the lack of evidence to support their effectiveness in modifying risk behavior among active users and the potential for unintended consequences, public health alerts and warnings may have utility for other purposes (e.g., informing providers, bystanders, and other members of the general public). As described by Dietz (2013), these messages often contain the following type of information:

- Limited information on the increase in fatal and non-fatal overdoses
- Basic advice to drug users and the broader public about overdose avoidance
- Proactive steps that users can take to minimize the risk of overdose (do not use alone, know your source, titrate your dose)
- Reactive steps that bystanders can take during an overdose event (call 911; administer naloxone)
- Resources and contact information for public health, treatment, and support systems.

When preparing a public health warning, communities may wish to consider the following:

1. Is there sufficient statistical evidence to conclude that an overdose spate is actually occurring (versus a random fluctuation in ODs as mentioned above)?
2. Is there good evidence about the specific factors that may be contributing to the spate in overdoses?
3. Is an official public health response warranted—weighing the risks and benefits of initiating such a response?
4. Is there an understanding of the networks and sources through which health messages reach drug users and how such messages are interpreted?
5. Have members of the drug using community been consulted to ensure that messaging is appropriate and that planners have as much information as possible about the factors that may be contributing to the suspected spate? Do such messages consider the lived-reality of their target audience (i.e., do they take into account the context in which use occurs)?
6. Collaboration between public health planners, media, emergency room administrators, community providers, treatment providers, and law enforcement may help limit adverse or unintended consequences such as increases in drug-seeking behavior.
7. Does the message unintentionally serve as a heroin or other opioid market advertisement? Does it provide too much information or information that might facilitate the acquisition of bad batches?
8. Dietz (2013) suggests that it may be wise to simply report on deaths, the need for ongoing investigation, and effective responses to overdose to inform the public of this urgent public health issue—without mentioning potency or other factors that may be contributing to the spate. While this approach may or may not lead to changes in key target behaviors it may at least avoid the unintended consequences.

9. Contact the state Department of Public Health to determine whether state epidemiologists have also identified the issue, to seek guidance on how to address the issue, and to assist in the development of appropriate messaging and language if such an approach is warranted.

MassTAPP hosted a webinar with Scott Formica that can be viewed here: http://masstapp.edc.org/virtual-meeting-responding-cluster-overdoses-your-community

References and Recommended Readings

Brecher, E. M. (1972). The "heroin overdose" mystery and other occupational hazards of addiction. In E. M. Brecher (Ed.), *Licit and Illicit Drugs* (pp. 101–114). Boston, MA: Little, Brown.

Darke, S. (2014). Opioid overdose and the power of old myths: What we thought we knew, what we do know and why it matters. *Drug and Alcohol Review*, *33*, 109–114.

Dietze, P. (2013). Commentary on Kerr *et al*. (2013): Advertising high-potency heroin. *Addiction*, *108*, 1277–1278.

Freeman, R. C., & French, J. F. (1995). What is the addicts' grapevine when there's "bad dope"? An investigation in New Jersey. *Public Health Reports*, *110*, 621–624.

Kerr, T., Small, W., Hyshka, E., Maher, L., & Shannon, K. (2013). "It's more about the heroin": Injection drug users' responses to an overdose warning campaign in a Canadian setting. *Addiction*, *108*, 1270–1276.

Miller, P. G. (2007). Media reports of heroin overdose spates: Public health messages, moral panics, or risk advertisements? *Critical Public Health*, *17*(2), 113–121.

Sorensen, J. L., London, L., Tusel, D., Wolfe, R., & Washburn, A. (1992). Mass media as drug users' key information source on overdoses. *American Journal of Public Health*, *82*(9), 1294–1295.

Appendix 9: MYHS 2013 Opioid-Related Questions

1) In your lifetime, have you used heroin (also called smack, junk, or China White)?
    a. Yes
    b. No

2) During the past 30 days, have you used heroin (also called smack, junk, or China White)?
    a. Yes
    b. No

3) In your lifetime, have you ever taken prescription drugs that weren't your own?
    a. Yes
    b. No

4) In the past 30 days, have you taken prescription drugs that weren't your own?
    a. Yes
    b. No

5) In your lifetime, which of the following prescription drugs have you ever taken that were not your own?
    a. Narcotics (such as Methadone, Opium, Morphine, Codeine, Oxycontin, Percodan, Demerol, Percocet, Ultram, Vicodin) YES NO
    b. Ritalin or Adderall YES NO
    c. Steroids (body building hormones in the form of pills or shots) YES NO
    d. Other prescription drugs YES NO

6) In the past 30 days, which of the following prescription drugs have you taken that were not your own?
    a. Narcotics (such as Methadone, Opium, Morphine, Codeine, Oxycontin, Percodan, Demerol, Percocet, Ultram, Vicodin) YES NO
    b. Ritalin or Adderall YES NO
    c. Steroids (body building hormones in the form of pills or shots) YES NO
    d. Other prescription drugs YES NO

7) How much do you think people risk harming themselves if they occasionally use:

	No Risk	Slight Risk	Moderate Risk	Great Risk
Marijuana				
Narcotics (such as Methadone, Opium, Morphine, Codeine, Oxycontin, Percodan, Demerol, Percocet, Ultram, Vicodin from prescriptions that are not their own)				
Ritalin or Adderall (from prescriptions that are not their own)				
Tranquilizers (such as Valium, Zanax, Klonopin, Ativan and Librium from prescriptions that are not their own)				
Inhalants (sniffing glue, breathing the contents of aerosol spray cans, or inhaling any paints or sprays to get high)				
Heroin				

Appendix 10: Opioid-Related Events in Mass., 2008–2010[8]

Deaths[9] and Nonfatal Hospital Encounters[10] for Opioid[11] Poisoning (Unintentional, Undetermined and Missing Intent), Mass. Residents, 2010–2012

City/Town	3-Year Average	City/Town	3-Year Average
ABINGTON	26	BERLIN	<11
ACTON	<11	BERNARDSTON	<11
ACUSHNET	<11	BEVERLY	22
ADAMS	<11	BILLERICA	26
AGAWAM	18	BLACKSTONE	<11
ALFORD	0	BLANDFORD	<11
AMESBURY	<11	BOLTON	<11
AMHERST	<11	**BOSTON**	**553**
ANDOVER	<11	BOURNE	17
AQUINNAH	0	BOXBOROUGH	<11
ARLINGTON	20	BOXFORD	<11
ASHBURNHAM	<11	BOYLSTON	<11
ASHBY	<11	BRAINTREE	29
ASHFIELD	0	BREWSTER	<11
ASHLAND	<11	BRIDGEWATER	17
ATHOL	11	BRIMFIELD	<11
ATTLEBORO[12]	**30**	**BROCKTON**	**109**
AUBURN	<11	BROOKFIELD	<11
AVON	<11	BROOKLINE	11
AYER	<11	BUCKLAND	<11
BARNSTABLE	26	BURLINGTON	<11
BARRE	<11	**CAMBRIDGE**	**54**
BECKET	0	CANTON	11
BEDFORD	<11	CARLISLE	0
BELCHERTOWN	<11	CARVER	11
BELLINGHAM	<11	CHARLEMONT	<11
BELMONT	<11	CHARLTON	<11
BERKLEY	<11	CHATHAM	<11

[8] Sources: Registry of Vital Records and Statistics, Mass. Department of Public Health; Mass. Inpatient Hospital, Outpatient Observation Stay, and Emergency Department Discharge Databases; and Mass. Center for Health Information and Analysis. The data were prepared by the Mass. Department of Public Health.
[9] Deaths include those of unintentional or undetermined intent. Suicides are excluded from this analysis
[10] Counts represent nonfatal (unintentional, undetermined, or missing intent) acute-care hospital episodes, which include hospital and emergency department discharges and observations stays. Self-inflicted episodes are excluded.
[11] Opioids include heroin, opioid-based prescription painkillers, and other/unspecified opioids.
[12] Counts of 30 and above are in **boldface**.

City/Town	3-Year Average
CHELMSFORD	14
CHELSEA	**31**
CHESHIRE	<11
CHESTER	<11
CHESTERFIELD	0
CHICOPEE	**40**
CHILMARK	0
CLARKSBURG	<11
CLINTON	14
COHASSET	<11
COLRAIN	0
CONCORD	<11
CONWAY	0
CUMMINGTON	0
DALTON	<11
DANVERS	14
DARTMOUTH	17
DEDHAM	16
DEERFIELD	<11
DENNIS	<11
DIGHTON	<11
DOUGLAS	<11
DOVER	0
DRACUT	13
DUDLEY	<11
DUNSTABLE	<11
DUXBURY	<11
EAST BRIDGEWATER	15
EAST BROOKFIELD	<11
EAST LONGMEADOW	<11
EASTHAM	<11
EASTHAMPTON	<11
EASTON	15
EDGARTOWN	<11
EGREMONT	0
ERVING	<11
ESSEX	<11
EVERETT	**54**
FAIRHAVEN	<11
FALL RIVER	**149**
FALMOUTH	20
FITCHBURG	**30**
FLORIDA	0
FOXBOROUGH	<11
FRAMINGHAM	**31**

City/Town	3-Year Average
FRANKLIN	<11
FREETOWN	<11
GARDNER	22
GEORGETOWN	<11
GILL	0
GLOUCESTER	**30**
GOSHEN	<11
GOSNOLD	0
GRAFTON	<11
GRANBY	<11
GRANVILLE	<11
GREAT BARRINGTON	<11
GREENFIELD	12
GROTON	<11
GROVELAND	<11
HADLEY	<11
HALIFAX	<11
HAMILTON	<11
HAMPDEN	<11
HANCOCK	<11
HANOVER	<11
HANSON	<11
HARDWICK	<11
HARVARD	<11
HARWICH	<11
HATFIELD	0
HAVERHILL	**38**
HAWLEY	0
HEATH	0
HINGHAM	<11
HINSDALE	0
HOLBROOK	11
HOLDEN	<11
HOLLAND	<11
HOLLISTON	<11
HOLYOKE	**32**
HOPEDALE	<11
HOPKINTON	<11
HUBBARDSTON	<11
HUDSON	11
HULL	19
HUNTINGTON	<11
IPSWICH	<11
KINGSTON	<11
LAKEVILLE	<11

City/Town	3-Year Average
LANCASTER	<11
LANESBOROUGH	0
LAWRENCE	**38**
LEE	<11
LEICESTER	<11
LENOX	<11
LEOMINSTER	26
LEVERETT	0
LEXINGTON	<11
LEYDEN	0
LINCOLN	<11
LITTLETON	<11
LONGMEADOW	<11
LOWELL	**99**
LUDLOW	11
LUNENBURG	<11
LYNN	**102**
LYNNFIELD	<11
MALDEN	**59**
MANCHESTER	<11
MANSFIELD	<11
MARBLEHEAD	<11
MARION	<11
MARLBOROUGH	17
MARSHFIELD	18
MASHPEE	<11
MATTAPOISETT	<11
MAYNARD	<11
MEDFIELD	<11
MEDFORD	**51**
MEDWAY	<11
MELROSE	17
MENDON	<11
MERRIMAC	<11
METHUEN	20
MIDDLEBOROUGH	24
MIDDLEFIELD	<11
MIDDLETON	<11
MILFORD	16
MILLBURY	11
MILLIS	<11
MILLVILLE	<11
MILTON	<11
MONROE	0
MONSON	<11
MONTAGUE	<11

City/Town	3-Year Average
MONTEREY	0
MONTGOMERY	0
MOUNT WASHINGTON	0
NAHANT	<11
NANTUCKET	<11
NATICK	11
NEEDHAM	<11
NEW ASHFORD	0
NEW BEDFORD	**152**
NEW BRAINTREE	0
NEW MARLBOROUGH	0
NEW SALEM	0
NEWBURY	<11
NEWBURYPORT	<11
NEWTON	21
NORFOLK	<11
NORTH ADAMS	12
NORTH ANDOVER	<11
NORTH ATTLEBORO	15
NORTH BROOKFIELD	<11
NORTH READING	<11
NORTHAMPTON	22
NORTHBOROUGH	<11
NORTHBRIDGE	12
NORTHFIELD	<11
NORTON	<11
NORWELL	<11
NORWOOD	22
OAK BLUFFS	<11
OAKHAM	0
ORANGE	<11
ORLEANS	<11
OTIS	<11
OXFORD	<11
PALMER	13
PAXTON	<11
PEABODY	**37**
PELHAM	0
PEMBROKE	19
PEPPERELL	<11
PERU	0
PETERSHAM	<11
PHILLIPSTON	<11
PITTSFIELD	**31**
PLAINFIELD	0
PLAINVILLE	<11

City/Town	3-Year Average
PLYMOUTH	**41**
PLYMPTON	<11
PRINCETON	<11
PROVINCETOWN	0
QUINCY	**125**
RANDOLPH	21
RAYNHAM	<11
READING	14
REHOBOTH	<11
REVERE	**73**
RICHMOND	0
ROCHESTER	0
ROCKLAND	21
ROCKPORT	<11
ROWE	0
ROWLEY	<11
ROYALSTON	<11
RUSSELL	<11
RUTLAND	<11
SALEM	**31**
SALISBURY	<11
SANDISFIELD	0
SANDWICH	11
SAUGUS	29
SAVOY	0
SCITUATE	13
SEEKONK	<11
SHARON	<11
SHEFFIELD	<11
SHELBURNE	<11
SHERBORN	<11
SHIRLEY	<11
SHREWSBURY	19
SHUTESBURY	0
SOMERSET	13
SOMERVILLE	**48**
SOUTH HADLEY	<11
SOUTHAMPTON	<11
SOUTHBOROUGH	<11
SOUTHBRIDGE	<11
SOUTHWICK	<11
SPENCER	<11
SPRINGFIELD	**103**
STERLING	<11
STOCKBRIDGE	0
STONEHAM	17

City/Town	3-Year Average
STOUGHTON	**30**
STOW	<11
STURBRIDGE	<11
SUDBURY	<11
SUNDERLAND	<11
SUTTON	<11
SWAMPSCOTT	<11
SWANSEA	13
TAUNTON	**58**
TEMPLETON	<11
TEWKSBURY	15
TISBURY	<11
TOLLAND	0
TOPSFIELD	<11
TOWNSEND	<11
TRURO	<11
TYNGSBOROUGH	<11
TYRINGHAM	0
UPTON	<11
UXBRIDGE	<11
WAKEFIELD	21
WALES	<11
WALPOLE	11
WALTHAM	24
WARE	11
WAREHAM	21
WARREN	<11
WARWICK	0
WASHINGTON	0
WATERTOWN	22
WAYLAND	<11
WEBSTER	15
WELLESLEY	<11
WELLFLEET	<11
WENDELL	0
WENHAM	0
WEST BOYLSTON	<11
WEST BRIDGEWATER	<11
WEST BROOKFIELD	<11
WEST NEWBURY	0
WEST SPRINGFIELD	19
WEST STOCKBRIDGE	0
WEST TISBURY	<11
WESTBOROUGH	<11
WESTFIELD	23
WESTFORD	<11

City/Town	3-Year Average
WESTHAMPTON	<11
WESTMINSTER	<11
WESTON	<11
WESTPORT	<11
WESTWOOD	<11
WEYMOUTH	**78**
WHATELY	0
WHITMAN	15
WILBRAHAM	<11
WILLIAMSBURG	<11
WILLIAMSTOWN	<11
WILMINGTON	14

City/Town	3-Year Average
WINCHENDON	<11
WINCHESTER	<11
WINDSOR	0
WINTHROP	19
WOBURN	27
WORCESTER	**196**
WORTHINGTON	0
WRENTHAM	<11
YARMOUTH	16
UNKNOWN MA	<11
TOTAL MA	**4,495**

Additional Notes for Acute Care Hospital Episodes

- Data are submitted by and reported by fiscal year (October 1–September 30).
- Counts of less than 11 are suppressed due to data confidentiality guidelines.
- Deaths are excluded from all databases; transfers from an acute care hospital to another are excluded from the hospital discharge (hospitalizations) data.
- Counts do not include self-inflicted injury or assault-related cases.
- ICD-9-CM codes selected: 9650 - 96502; 96509; E8500 - E8502.

Total Poisonings and Opioid Poisoning Overdose Deaths, Mass. Residents, 2000–2012

The Commonwealth of Massachusetts
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SECRETARY

CHERYL BARTLETT, RN
COMMISSIONER

Total Poisonings and Opioid Poisoning Overdose Deaths, MA Residents, 2000-2012

		Opioid Poisoning/Overdose Deaths		
Year of Death	Total Poisoning Deaths	Deaths by Unintentional/ Undetermined Intent[1]	Deaths by Other Intent[2]	Total Opioid Poisonings Death
2000	586	338	25	363
2001	716	468	19	487
2002	690	429	20	449
2003	836	549	25	574
2004	734	456	19	475
2005	802	525	19	544
2006	989	615	22	637
2007	965	614	23	637
2008	867	561	33	594
2009	941	599	28	627
2010	839	526	29	555
2011	965	603	39	642
2012	963	668	43	711

[1] Opioid overdoses of unintentional/undetermined intents are combined to account for a change in death coding that occurred in 2005.

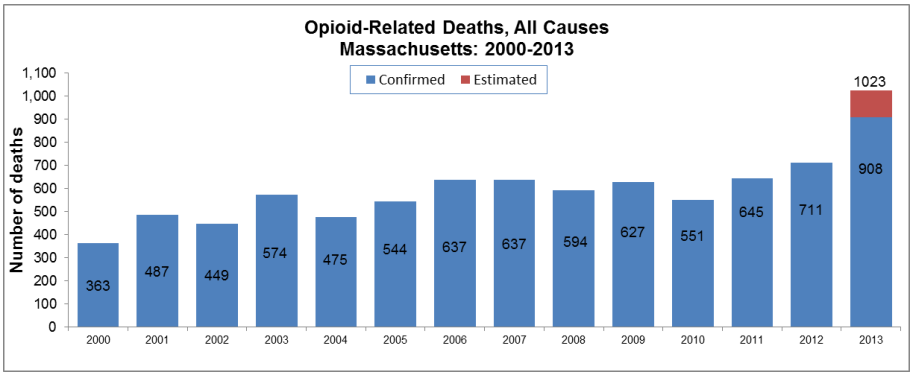
[2] Includes opioid poisonings by suicide and other intents.

Source: Registry of Vital Records and Statistics, MDPH

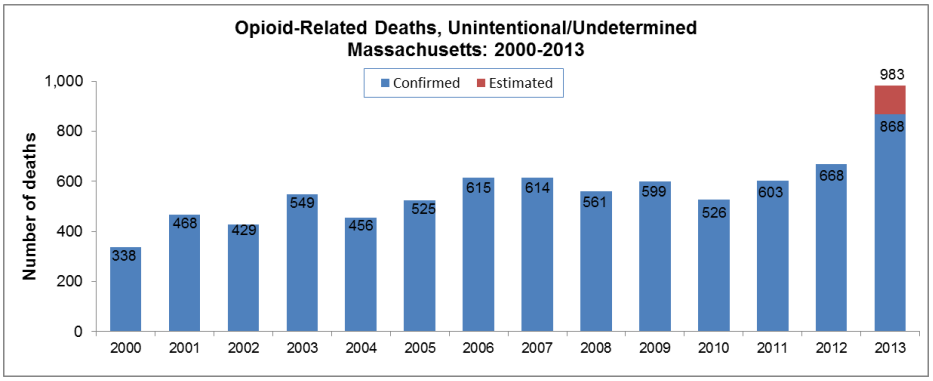
Data Brief: Fatal Opioid-related Overdoses among MA Residents

Massachusetts Department of Public Health — *December 2014*

As of December 18th, 2014 there were 908 confirmed fatal opioid-related overdoses among Massachusetts residents in 2013. This includes 868 that are considered unintentional[1]. At this time, there are still 456 deaths for which a final cause of death has not yet been assigned; therefore, the number of fatal overdoses will likely rise.

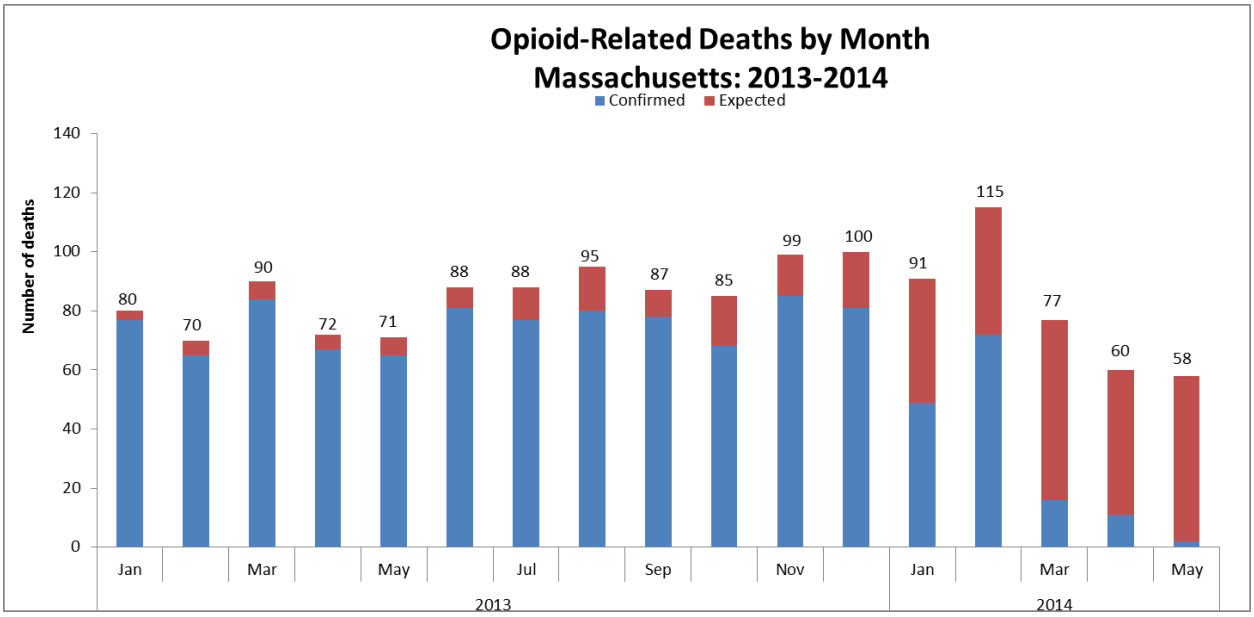


Despite incomplete data, the number of confirmed cases of unintentional overdose already represents a 30% increase over 2012 (n=668). In order to obtain a more timely estimate of the total number of opioid overdose deaths in Massachusetts for 2013, DPH analysts used predictive modeling techniques to estimate the cause of death for all cases not yet certified by the Office of the Medical Examiner. These estimates were tracked through the end of the year in 2014 to confirm their reliability. Based on these modeled estimates and the data available as of 12/18/2014, DPH expects that there will be an additional 115 (95% CI: 101 to 131) unintentional opioid-related fatal overdoses in 2013 making a total of 983 deaths in 2013 (95% CI: 1,009 to 1,039).



[1] Unintentional includes unintentional *and undetermined* intents to account for a change in death coding that occurred in 2005. Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids. This report tracks opioid-related overdoses due to difficulties in identifying heroin separately. Many deaths related to heroin cannot be specifically coded as such due to the fast metabolism of heroin into morphine and the possible interaction of multiple drugs. To avoid underrepresenting the magnitude of the problem, all unintentional and undetermined opioid-related deaths are tracked.

DPH analysts have also made month-by-month estimates for all of 2013 and the first five months of 2014. In order to stabilize the monthly estimates, we only report data for those months in which at least 80% of deaths have a recorded final cause of death. As this fact is updated, more months will become available.



Notes:

The figures cited here are estimates. As estimates, the Department will regularly review the projections as more information becomes available. Should the estimates change to any significant degree, updates will be posted. We used the closed analytic files for the years 2008 – 2012 to create and then refine a model to predict the likelihood that the cause of death for any person will be an opioid-related overdose. We then applied the final model to the 2013 open file to estimate the number of pending cases in 2013 and 2014 that will be an opioid-related overdose. Included in the final model are: age, race, education, gender, year of death, place of death, autopsy status, and latent class geography. We added this estimate to the number of confirmed cases in order to estimate the total number of opioid-related overdoses. In order to ensure stability in the estimates, 2014 numbers are only included for months where at least 80% of records have a final cause of death.

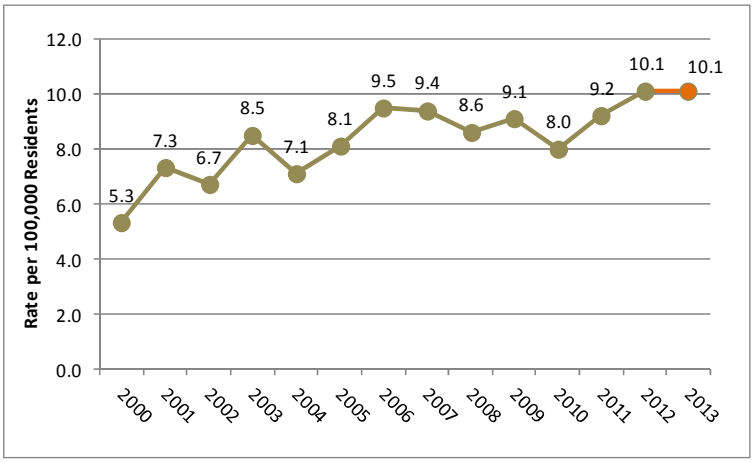
Fatal Opioid-related Overdoses among MA Residents, 2000-2013

Massachusetts Department of Public Health — *April 2014*

The rate of unintentional opioid-related[1] overdose deaths, which includes deaths related to heroin, reached levels in 2012 previously unseen in Massachusetts. The rate of 10.1 deaths per 100,000 residents for 2012 (the most recent full year of data available) was the highest ever for unintentional opioid overdoses and represents a 90% increase from the rate of 5.3 deaths per 100,000 residents in 2000. In 2012, 668 Massachusetts residents died from unintentional opioid overdoses, a ten percent increase over the previous year. While data are still preliminary, unintentional overdose deaths for the first six months of 2013[2] point to even higher numbers than 2012. (Figures 1 and 2).

This bulletin provides a brief summary of the Massachusetts data to inform discussion about this national public health epidemic. The Department of Public Health is applying a number of promising practices to help reduce deaths, including promoting safe opiate prescribing, preventing opiate abuse from occurring and treating addictive disorders.

Figure 1. Rate of Unintentional Opioid Overdose Deaths, MA Residents, 2000-2013

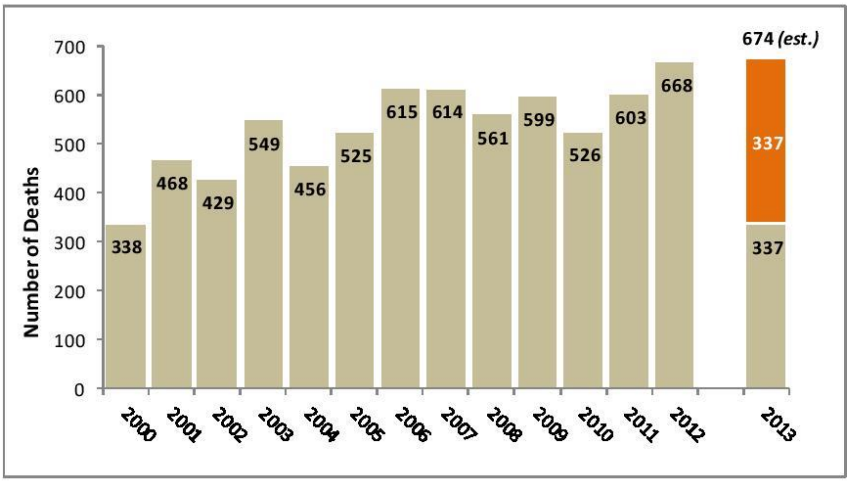


Source: Registry of Vital Records and Statistics, MDPH

[1] Unintentional includes unintentional *and undetermined* intents to account for a change in death coding that occurred in 2005. Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids. This report tracks opioid-related overdoses due to difficulties in identifying heroin separately. Many deaths related to heroin cannot be specifically coded as such due to the fast metabolism of heroin into morphine and the possible interaction of multiple drugs. To avoid underrepresenting the magnitude of the problem, all unintentional and undetermined opioid-related deaths are tracked.

[2] This is the projected rate for 2013 based on the first six months of preliminary data.

Figure 2. Number of Unintentional Opioid Overdose Deaths, MA Residents, 2000-2013



Source: Registry of Vital Records and Statistics, MDPH

Table 1. Cities/Towns with Over 7 Unintentional Opioid Overdose Deaths in 2012, MA Residents

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
BOSTON	36	66	57	72	55	47	90	82	52	69	43	59	62
BROCKTON	8	7	9	10	8	14	10	17	15	13	8	13	9
CHICOPEE	2	6	7	4	3	7	6	5	5	7	7	4	9
EVERETT	0	2	4	14	6	5	7	6	3	8	2	8	9
FALL RIVER	10	22	17	24	20	21	19	26	20	23	20	25	22
HAVERHILL	0	5	2	5	5	4	7	11	8	8	3	2	11
LOWELL	11	13	5	13	12	9	11	17	10	20	9	25	8
LYNN	9	18	12	21	15	25	22	22	8	15	15	10	21
MALDEN	4	5	7	5	9	3	9	7	9	8	10	4	9
MEDFORD	2	7	5	6	7	8	7	5	10	6	9	5	10
NEW BEDFORD	12	11	22	20	25	27	28	12	26	17	27	19	25
PITTSFIELD	1	1	0	0	1	4	0	5	1	3	0	1	8
QUINCY	6	11	9	13	15	12	11	6	19	19	11	22	23
REVERE	4	8	10	11	10	8	8	7	9	14	10	9	11
SAUGUS	5	6	3	6	1	2	4	3	5	5	4	2	9
SPRINGFIELD	16	18	13	20	12	7	16	11	19	17	13	15	22
TAUNTON	3	5	8	7	4	9	6	4	4	5	5	3	14
WEYMOUTH	5	4	4	5	5	13	7	6	9	15	11	10	11
WORCESTER	26	33	15	10	10	16	21	33	25	17	26	22	24

Source: Registry of Vital Records and Statistics, MDPH

Table 2. A Comparison between Two Time Periods for Cities/Towns with 10 or more Unintentional Opioid Overdose Deaths between 2008 and 2012, MA Residents

	5-YR Total 2003-2007	5-YR Total 2008-2012
AGAWAM*	9	11
ARLINGTON	14	16
ATTLEBORO*	13	27
BARNSTABLE	23	23
BEVERLY	16	18
BILLERICA	17	12
BOSTON	346	285
BOURNE*	3	12
BRAINTREE*	9	13
BRIDGEWATER*	9	13
BROCKTON	59	58
CAMBRIDGE	37	14
CARVER*	4	10
CHELSEA	29	21
CHICOPEE*	25	32
DANVERS*	8	10
DARTMOUTH	14	15
DEDHAM	13	11
DRACUT	12	13
EVERETT	38	30
FAIRHAVEN	15	12
FALL RIVER	110	110
FALMOUTH*	12	17
FITCHBURG	27	26
FRAMINGHAM	24	23
GLOUCESTER	28	13
HAVERHILL	32	32
HOLYOKE*	13	27
LAWRENCE	37	23
LEOMINSTER	21	15
LOWELL	62	72
LYNN	105	69
MALDEN*	33	40
MARLBOROUGH	20	11
MARSHFIELD*	8	15
MEDFORD*	33	40
MELROSE	12	14
METHUEN	21	10
MIDDLEBOROUGH*	9	13
MILFORD	11	10

	5-YR Total 2003-2007	5-YR Total 2008-2012
NEW BEDFORD	112	114
NEWTON*	11	18
NORTH ADAMS	10	10
NORTH ATTLEBOROUGH*	8	16
NORTHAMPTON*	9	16
NORTHBRIDGE*	5	12
NORTON*	9	11
NORWOOD	11	13
PEABODY	18	18
PEMBROKE*	5	11
PITTSFIELD*	10	13
PLYMOUTH*	15	28
QUINCY*	57	94
RANDOLPH*	8	14
REVERE*	44	53
ROCKLAND	14	14
SALEM	31	17
SALISBURY*	6	10
SAUGUS*	16	25
SOMERSET*	6	10
SOMERVILLE	26	24
SOUTHBRIDGE*	8	11
SPRINGFIELD*	66	86
STONEHAM*	9	11
STOUGHTON*	12	26
TAUNTON	30	31
TEWKSBURY*	3	13
WAKEFIELD*	10	13
WALTHAM	23	17
WAREHAM*	10	15
WATERTOWN	17	10
WEBSTER*	5	13
WEST SPRINGFIELD	17	13
WESTFIELD	17	18
WEYMOUTH*	36	56
WILMINGTON*	7	10
WINTHROP*	16	20
WOBURN*	17	21
WORCESTER*	90	114
YARMOUTH	14	13

* Indicates a 20% or greater increase between the two time periods.

Across Massachusetts, the total number of unintentional opioid overdose deaths increased from 2,759 in the first 5-year time period (2003-2007), to 2,957 in the second 5-year time period (2008-2012). In addition to the burden in major cities, many smaller communities saw increases between the two time periods.

DATA SOURCES AND METHOD NOTES

Data Sources:

Deaths to Massachusetts Residents:

MA Registry of Vital Records and Statistics, MA Department of Public Health.

Please note that 2013 death data are preliminary and subject to updates. The projected rate for 2013 is based on the first six months of data. Case reviews of deaths are evaluated and updated on an ongoing basis. A small number of death certificates have yet to be received from the municipalities and many have yet to be assigned cause-of-death codes.

The Department's 2013 death report will be available in the summer of 2014.

Population Data:

2000-2009. National Center for Health Statistics. Postcensal estimates of the resident population of the United States, Based on Vintage 2010 file. March 29, 2012.

2010-2011. National Center for Health Statistics. Postcensal estimates of the resident population of the United States, Based on Vintage 2011 file. May 17, 2012.

2012. U.S. Census Bureau, Population Division. Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States.

Method Notes:

Unintentional opioid-related poisoning deaths (overdoses) were defined using the International Classification of Disease (ICD-10) codes for mortality. The following codes were selected from the underlying cause of death field to identify poisonings of an unintentional (and undetermined) intent: X40-X49, Y10-Y19. All multiple cause of death fields were then used to identify an opioid-related death: T40.0, T40.1, T40.2, T40.3, T40.4, and T40.6.

This report tracks unintentional opioid-related overdoses due to difficulties in identifying heroin separately. Many deaths related to heroin cannot be specifically coded as such due to the fast metabolism of heroin into morphine and the possible interaction of multiple drugs. To avoid underrepresenting the magnitude of the problem, all unintentional opioid-related deaths are tracked.

All rates are crude rates per 100,000 residents (# of deaths/total population*100,000).

RESOURCES

For additional data:

Injury Surveillance Program
250 Washington Street, 6th Floor
Boston MA, 02108
Tel. (617) 624-5648
www.mass.gov/dph/bhsre/isp/isp.htm

For general poisoning prevention:

Injury Prevention and Control Program
250 Washington Street, 4th Floor
Boston MA, 02108
Tel. (617) 624-5557
Fax (617) 624-5075
TTY (617) 624-5992
www.mass.gov/dph/fch/injury/index.htm

For information on treatment and services:

Bureau of Substance Abuse Services
250 Washington Street, 3rd Floor
Boston MA, 02108
Tel. (617) 624-5111
Fax (617) 624-5185
TTY 1-888-448-8321
www.mass.gov/dph/bsas/BSAS.htm

Number of Unintentional Opioid Overdose Deaths by City/Town, Mass. Residents, 2000–2013

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
ABINGTON	1	0	0	0	1	1	3	2	1	3	1	3	1	**17**	0	0
ACTON	0	0	0	0	0	1	0	0	0	0	2	0	2	**5**	0	0
ACUSHNET	0	0	1	0	0	0	0	1	1	1	0	0	2	**6**	1	0
ADAMS	0	0	0	0	1	1	0	0	0	1	2	1	1	**7**	0	0
AGAWAM	0	1	1	3	0	0	3	3	1	2	2	5	1	**22**	1	1
AMESBURY	1	0	0	3	0	2	2	0	0	1	0	2	1	**12**	1	0
AMHERST	2	0	1	2	0	0	0	2	0	2	0	1	0	**10**	0	1
ANDOVER	1	0	0	1	0	0	1	2	1	0	1	2	1	**10**	1	2
ARLINGTON	1	2	2	2	0	4	5	3	2	2	4	4	4	**35**	1	1
ASHBURNHAM	0	0	0	0	0	0	1	0	0	0	1	0	0	**2**	0	0
ASHBY	0	0	1	0	0	0	0	0	1	0	0	1	0	**3**	0	0
ASHFIELD	0	0	0	1	0	0	0	0	0	0	1	0	0	**2**	0	0
ASHLAND	0	2	1	0	0	1	1	0	1	1	2	1	1	**11**	0	0
ATHOL	1	1	2	1	1	2	0	1	1	1	1	2	2	**16**	2	0
ATTLEBORO	2	5	3	4	0	3	2	4	5	7	3	8	4	**50**	1	3
AUBURN	1	0	0	1	1	0	0	1	1	2	1	5	0	**13**	0	0
AVON	1	0	1	0	0	0	2	0	1	0	0	1	2	**8**	1	1
AYER	1	0	0	0	1	3	0	0	1	1	0	1	0	**8**	0	1
BARNSTABLE	2	1	6	1	5	4	6	7	7	4	3	4	5	**55**	3	4
BARRE	0	0	0	0	0	0	1	0	2	0	0	0	1	**4**	0	0
BEDFORD	1	0	1	1	1	0	1	2	0	1	0	0	2	**10**	0	0
BELCHERTOWN	0	1	0	0	0	2	0	1	0	0	1	1	1	**7**	1	1
BELLINGHAM	0	4	0	1	0	0	1	3	3	0	2	1	3	**18**	0	0
BELMONT	0	0	0	0	0	3	0	1	0	0	0	0	0	**4**	0	0
BERKLEY	0	1	0	0	1	0	1	0	0	0	1	0	2	**6**	2	1
BERLIN	0	0	0	0	0	0	0	0	1	0	1	0	0	**2**	0	0
BERNARDSTON	0	0	0	0	0	0	0	0	0	0	0	2	2	**4**	1	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
BEVERLY	0	2	0	4	5	1	3	3	1	4	2	4	7	**36**	4	1
BILLERICA	0	2	4	3	1	4	4	5	3	5	2	1	1	**35**	0	2
BLACKSTONE	1	0	0	0	1	2	0	0	0	1	0	1	0	**6**	0	0
BLANDFORD	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**	0	0
BOLTON	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**	0	0
BOSTON	36	66	57	72	55	47	90	82	52	69	43	59	62	**790**	21	20
BOURNE	0	1	1	0	0	1	0	2	2	3	3	0	4	**17**	1	1
BOXFORD	0	0	0	0	0	0	0	0	1	0	0	1	0	**2**	0	0
BOYLSTON	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**	0	0
BRAINTREE	0	1	2	1	1	2	2	3	3	2	3	2	3	**25**	0	1
BREWSTER	0	1	1	0	0	1	1	1	0	0	1	0	1	**7**	0	0
BRIDGEWATER	1	1	0	2	3	1	0	3	1	4	2	4	2	**24**	0	0
BRIMFIELD	0	0	1	0	0	0	0	0	0	0	0	1	0	**2**	0	0
BROCKTON	8	7	9	10	8	14	10	17	15	13	8	13	9	**141**	5	10
BROOKFIELD	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1
BROOKLINE	0	2	2	1	1	0	3	2	1	0	0	2	0	**14**	0	0
BUCKLAND	0	0	0	0	0	0	0	0	0	1	0	0	0	**1**	0	0
BURLINGTON	1	1	1	1	0	3	0	1	0	3	2	0	3	**16**	2	2
CAMBRIDGE	1	6	4	11	7	7	8	4	1	6	0	2	5	**62**	3	3
CANTON	0	0	1	3	2	0	2	0	2	2	1	2	1	**16**	1	2
CARLISLE	0	0	0	0	0	0	0	0	0	1	0	0	0	**1**	0	0
CARVER	0	1	1	3	0	0	1	0	1	1	1	3	4	**16**	2	0
CHARLEMONT	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**	0	0
CHARLTON	0	0	0	0	2	0	1	1	3	1	0	2	1	**11**	0	0
CHATHAM	0	1	0	0	0	0	0	1	1	0	1	0	0	**4**	0	0
CHELMSFORD	0	0	2	0	0	0	1	3	2	1	1	3	0	**13**	0	0
CHELSEA	4	5	3	9	6	4	2	8	2	4	6	7	2	**62**	1	4

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
CHESTERFIELD	0	0	0	0	0	0	0	0	0	1	0	0	0	**1**	0	0
CHICOPEE	2	6	7	4	3	7	6	5	5	7	7	4	9	**72**	4	4
CLARKSBURG	0	0	0	1	0	0	0	0	0	0	0	0	1	**2**	0	0
CLINTON	1	1	1	0	1	1	3	2	1	2	1	2	3	**19**	3	2
COHASSET	0	1	0	0	0	0	0	0	1	0	1	0	0	**3**	0	0
CONCORD	1	1	0	0	0	0	0	0	1	0	0	1	0	**4**	0	0
CUMMINGTON	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
DALTON	0	0	0	0	0	0	0	0	0	1	0	1	1	**3**	0	0
DANVERS	0	1	3	1	2	1	3	1	2	2	2	0	4	**22**	2	3
DARTMOUTH	0	2	3	5	1	5	3	0	5	1	2	5	2	**34**	2	1
DEDHAM	1	0	1	2	1	3	4	3	3	4	1	1	2	**26**	1	2
DENNIS	0	0	2	4	1	1	3	4	1	2	2	0	2	**22**	1	1
DIGHTON	0	0	0	1	0	0	0	1	1	0	0	0	0	**3**	0	0
DOUGLAS	0	0	2	0	0	2	2	0	0	0	0	1	1	**8**	0	0
DRACUT	2	0	2	1	2	3	5	1	2	1	5	2	3	**29**	3	2
DUDLEY	0	0	1	0	0	1	0	0	1	0	4	0	1	**8**	1	0
DUNSTABLE	0	0	0	0	0	0	0	1	0	0	1	0	1	**3**	0	0
DUXBURY	0	0	0	1	0	0	1	1	0	0	0	0	2	**5**	2	0
E. BRIDGEWATER	2	1	3	0	0	1	1	2	1	3	1	1	0	**16**	0	1
E. BROOKFIELD	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**	0	0
E. LONGMEADOW	0	1	1	1	0	2	1	2	1	0	0	1	3	**13**	2	3
EASTHAM	1	0	0	0	0	0	1	0	0	0	1	0	0	**3**	0	1
EASTHAMPTON	0	1	0	3	2	0	3	3	0	3	1	0	3	**19**	1	2
EASTON	1	1	0	1	0	1	1	0	1	0	0	0	1	**7**	0	2
EDGARTOWN	0	0	0	0	0	2	0	0	0	0	0	0	0	**2**	0	0
ERVING	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**	0	1
ESSEX	0	0	0	0	0	0	0	0	0	0	1	0	1	**2**	1	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
EVERETT	0	2	4	14	6	5	7	6	3	8	2	8	9	**74**	8	0
FAIRHAVEN	1	2	0	5	2	1	4	3	4	3	3	1	1	**30**	0	1
FALL RIVER	10	22	17	24	20	21	19	26	20	23	20	25	22	**269**	8	14
FALMOUTH	4	3	3	4	1	0	3	4	3	8	0	2	4	**39**	4	4
FITCHBURG	8	7	5	9	1	5	8	4	7	5	4	6	4	**73**	4	3
FOXBOROUGH	0	0	2	1	1	0	2	2	2	1	0	1	0	**12**	0	0
FRAMINGHAM	1	5	6	6	4	5	6	3	5	3	5	4	6	**59**	3	1
FRANKLIN	0	2	1	1	1	1	2	3	1	3	0	2	1	**18**	1	1
FREETOWN	1	1	0	0	0	0	0	0	0	0	0	2	1	**5**	1	0
GARDNER	1	4	4	2	1	0	4	0	2	2	1	2	1	**24**	1	1
GEORGETOWN	0	0	0	0	0	0	0	1	0	0	2	0	0	**3**	0	0
GLOUCESTER	1	2	3	6	7	7	5	3	4	2	1	5	1	**47**	1	1
GRAFTON	0	0	1	1	0	0	1	0	0	1	2	1	0	**7**	0	1
GRANBY	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**	0	1
GRANVILLE	0	0	0	1	1	0	0	0	0	0	0	0	0	**2**	0	0
GREAT BARRINGTON	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**	0	0
GREENFIELD	3	1	1	2	2	1	2	1	1	0	0	2	4	**20**	1	1
GROTON	1	0	0	1	0	0	0	0	2	2	0	1	0	**7**	0	1
GROVELAND	0	0	1	1	0	0	0	1	0	2	1	4	0	**10**	0	0
HADLEY	0	0	0	0	1	0	0	0	0	0	0	1	0	**2**	0	0
HALIFAX	0	1	1	0	0	0	0	1	1	0	0	1	1	**6**	0	0
HAMILTON	0	1	0	0	0	0	0	0	0	0	1	0	0	**2**	0	0
HAMPDEN	0	0	0	0	0	0	1	0	0	0	1	2	0	**4**	0	0
HANOVER	0	2	1	2	1	0	2	1	2	0	0	1	1	**13**	1	0
HANSON	1	1	0	3	1	0	0	0	0	1	3	0	1	**11**	1	1
HARDWICK	0	0	0	0	0	0	0	1	0	1	0	0	0	**2**	0	0
HARVARD	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**	0	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
HARWICH	3	1	0	0	1	1	0	1	3	0	0	1	2	**13**	0	2
HATFIELD	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	1
HAVERHILL	0	5	2	5	5	4	7	11	8	8	3	2	11	**71**	5	4
HINGHAM	0	1	0	1	0	0	2	1	0	0	0	1	2	**8**	2	0
HINSDALE	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
HOLBROOK	0	2	1	0	1	2	1	5	1	2	2	1	1	**19**	1	1
HOLDEN	0	1	0	0	0	0	0	0	0	1	2	0	1	**5**	1	0
HOLLISTON	0	0	1	0	1	1	0	2	0	0	0	1	0	**6**	0	0
HOLYOKE	7	4	1	3	0	3	1	6	6	4	8	4	5	**52**	3	3
HOPEDALE	0	0	0	0	0	0	0	0	1	0	1	0	0	**2**	0	0
HOPKINTON	1	0	0	1	2	2	0	0	0	0	1	0	1	**8**	0	0
HUBBARDSTON	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**	0	0
HUDSON	0	1	0	1	1	0	0	1	1	1	0	3	2	**11**	1	0
HULL	1	1	0	1	1	0	4	2	0	0	1	1	1	**13**	1	0
HUNTINGTON	0	0	0	1	1	0	0	0	0	0	0	0	0	**2**	0	0
IPSWICH	0	1	0	1	0	1	0	2	1	0	2	1	3	**12**	2	0
KINGSTON	0	1	0	1	1	0	0	1	2	1	1	2	0	**10**	0	0
LAKEVILLE	0	0	0	0	0	0	1	1	0	0	0	1	0	**3**	0	1
LANCASTER	1	1	0	1	0	0	0	0	0	1	1	0	2	**7**	2	0
LANESBOROUGH	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
LAWRENCE	9	9	4	5	5	9	9	9	4	5	1	7	6	**82**	3	3
LEICESTER	2	0	0	0	2	1	1	3	0	1	1	1	0	**12**	0	2
LENOX	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**	0	0
LEOMINSTER	4	1	4	2	7	3	5	4	1	3	3	4	4	**45**	2	2
LEVERETT	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**	0	0
LEXINGTON	0	1	1	2	1	2	0	1	1	1	1	2	0	**13**	0	1
LEYDEN	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**	0	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
LITTLETON	0	0	0	0	0	0	0	0	0	2	1	0	0	**3**	0	0
LONGMEADOW	0	0	0	1	0	2	0	1	0	0	0	0	1	**5**	1	0
LOWELL	11	13	5	13	12	9	11	17	10	20	9	25	8	**163**	4	7
LUDLOW	1	0	0	3	0	1	0	1	2	2	2	1	1	**14**	0	2
LUNENBURG	0	0	0	2	1	2	0	1	0	0	0	0	1	**7**	0	1
LYNN	9	18	12	21	15	25	22	22	8	15	15	10	21	**213**	14	8
LYNNFIELD	0	0	0	1	1	2	0	0	0	0	1	0	0	**5**	0	0
MALDEN	4	5	7	5	9	3	9	7	9	8	10	4	9	**89**	6	5
MANCHESTER	0	0	0	2	0	0	0	0	0	0	0	0	0	**2**	0	0
MANSFIELD	0	3	1	4	5	1	2	0	2	1	0	2	0	**21**	0	1
MARBLEHEAD	2	0	1	1	0	0	0	2	0	1	0	0	2	**9**	2	0
MARION	0	0	0	1	0	1	0	0	0	0	0	1	0	**3**	0	0
MARLBOROUGH	2	0	1	6	3	2	2	7	2	2	1	4	2	**34**	0	0
MARSHFIELD	0	1	1	1	1	1	2	3	2	4	4	1	4	**25**	2	3
MASHPEE	2	2	1	2	1	2	1	2	1	0	2	2	0	**18**	0	2
MATTAPOISETT	1	0	1	0	1	0	0	0	0	0	0	0	0	**3**	0	0
MAYNARD	2	0	0	0	0	0	1	0	0	0	2	1	2	**8**	2	0
MEDFIELD	0	0	1	0	0	0	0	0	1	0	1	1	0	**4**	0	0
MEDFORD	2	7	5	6	7	8	7	5	10	6	9	5	10	**87**	4	1
MEDWAY	0	1	1	0	1	1	0	0	1	2	3	1	0	**11**	0	1
MELROSE	0	1	1	1	2	4	4	1	1	4	1	7	1	**28**	0	3
MENDON	0	0	0	0	1	0	1	1	0	0	0	0	0	**3**	0	0
MERRIMAC	0	0	0	0	0	0	0	0	0	2	0	0	0	**2**	0	0
METHUEN	1	2	3	4	3	2	5	7	3	4	1	2	0	**37**	0	3
MIDDLEBOROUGH	2	1	1	2	1	3	2	1	3	1	2	3	4	**26**	1	3
MIDDLEFIELD	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	1	0
MIDDLETON	0	0	0	0	0	0	2	2	1	0	0	0	0	**5**	0	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
MILFORD	3	1	0	2	2	2	2	3	2	0	3	1	4	**25**	2	1
MILLBURY	1	1	1	0	2	2	0	1	1	2	2	2	1	**16**	1	0
MILLIS	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**	0	1
MILTON	2	0	0	0	1	4	0	2	2	0	0	0	1	**12**	1	0
MONSON	0	0	1	0	1	0	1	0	1	0	0	0	1	**5**	1	1
MONTAGUE	1	0	0	1	1	2	2	1	0	0	1	0	0	**9**	0	0
NAHANT	1	0	0	0	0	0	0	1	0	2	0	0	0	**4**	0	0
NANTUCKET	0	0	0	0	0	0	0	1	0	1	1	0	0	**3**	0	0
NATICK	0	0	1	2	1	0	1	1	1	0	1	2	0	**10**	0	2
NEEDHAM	0	1	1	0	2	0	0	0	1	0	0	1	0	**6**	0	0
NEW BEDFORD	12	11	22	20	25	27	28	12	26	17	27	19	25	**271**	11	12
NEW BRAINTREE	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**	0	0
NEWBURY	0	1	0	0	0	0	1	1	1	0	0	0	0	**4**	0	0
NEWBURYPORT	0	2	0	1	2	2	0	2	0	0	0	1	1	**11**	0	1
NEWTON	3	2	1	2	2	0	5	2	1	6	3	3	5	**35**	2	0
NORFOLK	1	0	0	0	0	0	1	0	0	1	0	0	1	**4**	1	0
NORTH ADAMS	0	1	0	1	1	4	1	3	2	3	0	1	4	**21**	2	0
NORTH ANDOVER	2	0	0	0	3	2	2	2	0	0	2	2	2	**17**	0	1
N. ATTLEBOROUGH	3	0	0	1	0	0	4	3	3	1	4	3	5	**27**	3	3
N. BROOKFIELD	0	0	0	0	0	0	0	0	0	1	1	0	2	**4**	1	0
NORTH READING	1	0	0	0	0	2	1	1	0	2	0	0	0	**7**	0	0
NORTHAMPTON	3	2	1	2	1	0	2	4	5	2	3	5	1	**31**	0	0
NORTHBOROUGH	0	0	0	0	0	1	2	0	0	1	1	1	1	**7**	1	0
NORTHBRIDGE	0	2	1	4	0	0	1	0	3	2	0	5	2	**20**	1	1
NORTHFIELD	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**	0	0
NORTON	0	1	3	2	1	2	2	2	2	2	1	2	4	**24**	1	1
NORWELL	0	0	0	0	0	1	1	1	1	1	0	0	1	**6**	1	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
ROCKPORT	1	0	1	2	0	0	0	0	0	2	0	0	2	**8**	1	0
ROWLEY	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	1	0
RUSSELL	0	0	0	0	0	0	0	0	0	1	0	1	0	**2**	0	0
RUTLAND	0	0	1	1	1	1	0	0	0	0	0	0	1	**5**	0	0
SALEM	3	4	5	3	8	8	8	4	3	5	1	3	5	**60**	2	4
SALISBURY	2	1	0	0	0	1	4	1	0	2	2	3	3	**19**	2	0
SANDWICH	0	0	2	0	2	2	2	1	1	0	2	1	1	**14**	1	0
SAUGUS	5	6	3	6	1	2	4	3	5	5	4	2	9	**55**	2	1
SCITUATE	2	0	0	0	0	1	1	0	2	0	0	5	1	**12**	0	0
SEEKONK	0	0	0	0	2	1	0	0	1	0	1	2	0	**7**	0	0
SHARON	0	0	0	0	0	0	0	1	1	0	1	1	2	**6**	2	0
SHELBURNE	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**	0	0
SHERBORN	0	0	0	0	0	0	0	0	0	1	0	0	0	**1**	0	0
SHIRLEY	0	1	0	1	2	0	0	1	0	1	1	1	1	**9**	0	0
SHREWSBURY	3	1	1	4	1	3	2	0	2	1	2	2	0	**22**	0	1
SOMERSET	1	1	1	1	2	0	1	2	1	1	3	3	2	**19**	0	1
SOMERVILLE	8	8	10	8	1	9	5	3	4	4	6	6	4	**76**	2	2
SOUTH HADLEY	0	0	1	0	2	0	3	0	3	1	1	0	1	**12**	1	2
SOUTHAMPTON	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**	0	0
SOUTHBOROUGH	0	0	0	0	0	0	2	0	0	1	0	1	0	**4**	0	0
SOUTHBRIDGE	0	5	0	1	1	2	1	3	2	3	1	3	2	**24**	1	1
SOUTHWICK	0	2	0	0	0	0	1	1	3	0	0	1	1	**9**	0	0
SPENCER	0	1	1	0	0	1	2	3	0	3	2	3	0	**16**	0	0
SPRINGFIELD	16	18	13	20	12	7	16	11	19	17	13	15	22	**199**	13	11
STERLING	0	0	0	1	1	1	0	0	0	2	1	0	1	**7**	1	0
STONEHAM	0	0	1	3	0	2	4	0	1	4	1	3	2	**21**	0	1
STOUGHTON	1	3	1	1	3	1	1	6	6	4	8	4	4	**43**	0	2

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
STOW	0	1	0	0	0	0	0	0	1	0	0	0	0	**2**	0	0
STURBRIDGE	0	3	0	0	1	0	0	0	1	0	2	0	0	**7**	0	1
SUDBURY	1	0	0	0	1	0	0	0	0	0	2	0	1	**5**	1	0
SUTTON	0	0	0	0	0	0	0	0	1	0	1	2	0	**4**	0	0
SWAMPSCOTT	0	1	1	0	1	1	1	0	4	2	1	1	0	**13**	0	0
SWANSEA	1	0	1	3	1	1	4	3	0	3	2	0	4	**23**	3	2
TAUNTON	3	5	8	7	4	9	6	4	4	5	5	3	14	**77**	6	4
TEMPLETON	2	0	1	0	0	0	0	1	3	1	1	0	1	**10**	0	0
TEWKSBURY	1	1	0	0	1	1	0	1	3	6	1	1	2	**18**	0	1
TISBURY	0	0	0	0	0	0	0	2	1	1	0	0	0	**4**	0	0
TOPSFIELD	0	0	0	0	0	0	0	1	0	1	0	0	1	**3**	0	1
TOWNSEND	0	0	0	1	0	0	1	2	2	0	0	0	1	**7**	0	2
TRURO	0	0	1	0	0	0	0	0	0	0	1	0	0	**2**	0	0
TYNGSBOROUGH	0	0	2	1	0	2	0	1	1	0	0	1	2	**10**	0	0
UPTON	0	0	1	0	0	0	0	1	0	0	0	0	1	**3**	1	1
UXBRIDGE	0	1	1	1	0	0	1	2	1	0	2	0	3	**12**	2	2
WAKEFIELD	2	2	4	0	1	5	3	1	6	0	3	3	1	**31**	0	2
WALES	0	0	0	0	1	0	1	0	0	0	0	0	0	**2**	0	0
WALPOLE	2	0	0	0	0	2	2	0	2	1	1	2	1	**13**	0	2
WALTHAM	2	3	2	2	6	7	5	3	6	1	3	4	3	**47**	2	6
WARE	0	0	1	1	1	0	0	2	0	0	2	1	3	**11**	1	2
WAREHAM	1	0	2	3	3	0	4	0	3	3	1	6	2	**28**	2	3
WARREN	0	0	0	0	0	1	1	0	0	0	0	0	0	**2**	0	1
WATERTOWN	2	1	2	3	4	3	2	5	2	1	3	3	1	**32**	0	3
WAYLAND	0	0	0	0	1	0	0	0	0	2	0	1	1	**5**	1	0
WEBSTER	1	1	4	2	1	1	0	1	0	4	2	3	4	**24**	3	2
WELLESLEY	0	1	0	1	0	0	0	1	1	0	0	0	0	**4**	0	0

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
WELLFLEET	0	0	0	0	1	0	0	0	1	0	1	1	0	**4**	0	0
WENHAM	0	0	0	0	1	0	0	1	0	0	0	0	0	**2**	0	1
WEST BOYLSTON	0	1	1	0	0	0	0	0	1	0	1	0	1	**5**	0	0
WEST BRIDGEWATER	0	0	0	0	0	0	2	0	0	1	0	0	3	**6**	2	1
WEST BROOKFIELD	0	0	0	0	0	0	1	0	0	1	1	1	0	**4**	0	1
WEST NEWBURY	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
WEST SPRINGFIELD	2	0	2	4	2	5	4	2	4	3	4	2	0	**34**	0	3
WEST STOCKBRIDGE	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**	0	0
WEST TISBURY	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
WESTBOROUGH	0	2	1	1	1	1	0	0	0	0	0	0	0	**6**	0	0
WESTFIELD	2	3	3	2	4	4	5	2	1	7	4	2	4	**43**	1	4
WESTFORD	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**	0	0
WESTHAMPTON	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**	0	0
WESTMINSTER	0	0	1	0	0	0	1	0	0	1	2	0	0	**5**	0	0
WESTON	0	0	0	0	0	0	0	0	1	0	1	0	0	**2**	0	0
WESTPORT	0	0	0	0	2	1	2	0	1	1	1	0	2	**10**	0	0
WESTWOOD	0	1	0	1	1	0	0	2	0	0	1	0	0	**6**	0	0
WEYMOUTH	5	4	4	5	5	13	7	6	9	15	11	10	11	**105**	4	5
WHITMAN	1	2	1	5	1	2	2	1	1	2	2	0	4	**24**	1	2
WILBRAHAM	0	0	2	0	2	2	0	1	0	1	1	0	1	**10**	0	0
WILLIAMSBURG	0	0	0	1	0	0	1	0	0	0	0	0	0	**2**	0	0
WILMINGTON	0	0	1	1	2	1	2	1	5	0	2	1	2	**18**	1	0
WINCHENDON	1	3	2	0	0	1	2	0	4	1	1	1	2	**18**	2	0
WINCHESTER	0	0	0	0	0	0	1	3	2	2	1	0	0	**9**	0	0
WINTHROP	0	0	5	1	2	3	6	4	4	4	1	4	7	**41**	4	0
WOBURN	2	4	2	2	7	4	2	2	7	2	1	5	6	**46**	2	2
WORCESTER	26	33	15	10	10	16	21	33	25	17	26	22	24	**278**	14	14

Number of Unintentional[1] Opioid[2] Overdose Deaths by City/Town, MA Residents, 2000-2013[3]

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ● April 2014

City/Town	Year of Death														JAN-JUN	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL 2000-2012	2012	2013[3]
WRENTHAM	0	1	0	1	0	0	1	0	2	0	2	0	1	**8**	1	0
YARMOUTH	0	2	0	1	4	3	1	5	1	3	2	4	3	**29**	0	2
TOTAL	**338**	**468**	**429**	**549**	**456**	**525**	**615**	**614**	**561**	**599**	**526**	**603**	**668**	**6951**	**321**	**337**
Statewide Crude Rate per 100,000 Residents	**5.3**	**7.3**	**6.7**	**8.5**	**7.1**	**8.1**	**9.5**	**9.4**	**8.6**	**9.1**	**8.0**	**9.2**	**10.1**	--	--	**10.1**

[1] Unintentional (also known as "accidental") poisoning/overdose deaths combine unintentional and undetermined intents to account for a change in death coding that occurred in 2005. Suicides are excluded from this analysis.

[2] Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids.

[3] Please note that 2013 death data are preliminary and subject to updates. Case reviews of deaths are evaluated and updated on an ongoing basis. A small number of death certificates have yet to be received from the municipalities and many have yet to be assigned cause-of-death codes.

Method Notes:

● Cases were defined using the International Classification of Disease (ICD-10) codes for mortality. The following codes were selected from the underlying cause of death field to identify poisonings/overdoses: X40-X49, Y10-Y19. All multiple cause of death fields were then used to identify an opioid-related death: T40.0, T40.1, T40.2, T40.3, T40.4, and T40.6.

● This report tracks unintentional opioid-related overdoses due to difficulties in identifying heroin separately. Many deaths related to heroin cannot be specifically coded as such due to the fast metabolism of heroin into morphine and the possible interaction of multiple drugs.

Source: Registry of Vital Records and Statistics, MDPH

Appendix 11: MDPH Naloxone Pilot Program and Pharmacies with Standing Orders

Massachusetts Department of Public Health

Opioid Overdose Prevention & Reversal

Information Sheet

The Opioid Overdose Prevention and Reversal Project

Opioid Overdose is one of the leading causes of deaths in Massachusetts. Some examples of opioids include Heroin, Oxycodone, Methadone, Fentanyl, Codeine, & Morphine. In order to save lives, the Department of Public Health is conducting a pilot project to distribute a medication called nasal naloxone that can reverse an opioid overdose.

Nasal Naloxone (also known as Narcan®)

In an overdose, opioids can slow breathing to the point of death. Nasal naloxone blocks the opioids and restores normal breathing when sprayed into the nose of someone who has overdosed. It is safe, easy to administer, and has no potential for abuse.

Program Overview

Programs participating in the pilot project offer referrals to substance abuse treatment for all participants who are misusing opioids. These programs train opioid users, their families and their friends on how to prevent and recognize an opioid overdose, and what to do if one occurs. The training covers the importance of calling 9-1-1, how to perform rescue breathing, and how to administer nasal naloxone.

This pilot project is possible under Massachusetts General Law - MGL c. 94C and DPH Drug Control Program regulations at 105 CMR 700.000.

For More Information

- To hear recorded information on how to prevent, recognize, and respond to an opioid overdose call: **800-383-2437**
- If you have questions about the DPH naloxone distribution pilot contact: Sarah Ruiz at 617-624-5136 or at Sarah.Ruiz@state.ma.us
- For the latest information on where to get naloxone or for a treatment referral call: the Massachusetts Substance Abuse Information and Education Helpline at **800-327-5050**

Last updated: January, 2015

Over →

Where to Get Naloxone in Massachusetts

Athol
Center for Human Development
357 Main St., **978-830-4120**

Boston
Boston Public Health Commission, AHOPE
774 Albany Street, **617-534-3967**
Mobile Unit—call for locations and schedule
617-592-7828

Brockton
Brockton Area Multi-Services, Inc.
The COPE Center
81 Pleasant Street, **508-583-3405**

Cambridge
AIDS Action Committee
359 Green Street, **617-599-0246**

Fall River
Seven Hills Behavioral Health
310 South Main Street, **508-235-1012**

Greenfield
Tapestry Health
80 Sanderson St., **413-773-8888**

Holyoke
Holyoke Health Center
230 Maple Street, lower level, **413-420-2276**
Tapestry Health
15A Main Street, **413-315-3732**

Hyannis
AIDS Support Group of Cape Cod
428 South Street**, 866-990-2437** or
508-778-1954

Lawrence
Greater Lawrence Family Health Center
100 Water Street, **978-685-7663 X 8504**

Lowell
Lowell Community Health Center
161 Jackson St., **978-221-6767**
Lowell House
555 Merrimack St. **978-459-8656**

Lynn
Health Innovations, Inc
Healthy Streets Outreach Program
100 Willow Street, 2nd floor, **781-592-0243**

New Bedford
Seven Hills Behavioral Health
1173 Acushnet Avenue**, 508-996-0546**

Northampton
Tapestry Health
16 Center Street, Suite 423, **413-586-0310**

Orange
Center for Human Development
131 West Main Street, **978-544-2148 option 4**

Provincetown
AIDS Support Group of Cape Cod
336 Commercial Street, Unit #10, **866-668-6448, 508-487-8311**

Quincy
Manet Community Health Center
1193 Sea St, **857-403-0803**

Revere
North Suffolk Mental Health
265 Beach Street
Tuesdays 5-8pm, **617-912-7554**

Springfield
Tapestry Health, La Voz
130 Maple Street, lower level, **413-363-9472**

Worcester
AIDS Project Worcester
85 Green Street, **508-755-3773 X 29**

Pharmacy Access
You can get naloxone from a pharmacy with or without a prescription, under a standing order. Please call or visit a local pharmacy for more information.

Learn to Cope
Naloxone is available at support groups for parents and family members dealing with a loved one suffering from addiction. Please go to www.learn2cope.org for meeting locations and times.

Mass. Health Promotion Clearinghouse
Free Educational Materials
http://massclearinghouse.ehs.state.ma.us/

Pharmacies with Standing Orders

For more information and an updated list, please visit: http://masstapp.edc.org/prescription-and-pharmacy-access-naloxone-rescue-kits

Naloxone Standing Order Log		
Pharmacy Name	**Address**	**Authorizing Physician**
Cambridge Health Alliance	1493 Cambridge Street, Cambridge, MA	Dr. David Oscar
Chicopee Health Center Pharmacy	505 Front St, Chicopee, MA	Dr. Nicole Kirchen
Eaton Apothecary	Lowell 116 Jackson Street, Lowell MA	Dr. Walley
	Dorchester 1353 Dorchester Ave, Dorchester MA	Dr. Rachel King - Dorchester house patients ONLY
	Peabody 2 Centennial Drive, Peabody MA	Dr. Walley
	Lynn 298 Union Street, Lynn MA	Dr. Early - Health center patients Dr. Walley - All other patients
	Lynn 12 Market Square, Lynn MA	Dr. Early - Health center patients Dr. Walley - All other patients
	Brockton 63 Main Street, Brockton MA	Dr. Lightfoot - Health center patients only Dr. Walley - All other patients
	Salem 47 Congress Street, Salem MA	Dr. Mahaniah - Health center patients Dr. Walley - All other patients
	South Boston 409 West Broadway, South Boston MA	Dr. Saxena - Health center patients Dr. Walley - All other patients
	Framingham 266 Waverly Street, Framingham MA	Dr. Walley
	Milford 23 Maple Street, Milford MA	Dr. Walley
East Boston Neighborhood Health center Pharmacies (Operated by Eaton Apothecary)	10 Grove Street, East Boston 20 Maverick Square, East Boston	Dr. Catherine Silva
Codman Square Health Center	637 Washington Street, Dorchester MA	Dr. Ian Huntington

Pharmacy Name	Address	Authorizing Physician
Holyoke Health Center Pharmacy	230 Maple St, Holyoke, MA	Dr. Nicole Kirchen
Inman Pharmacy	1414 Cambridge Street, Cambridge MA	Dr. Mark Albanese
Massachusetts General Hospital	55 Fruit Street Boston, MA	Dr. Sarah Wakeman
Walgreens	1847 757 Gallivan Blvd, Dorchester, MA	Dr. Alexander Y. Walley
	1855 15 School Street, Framingham, MA	Dr. Alexander Y. Walley
	1863 60 Bedford Street, Lexington, MA	Dr. Alexander Y. Walley
	1864 324 Massachusetts Ave, Arlington, MA	Dr. Alexander Y. Walley
	1871 22 Langley Rd, Newton Centre, MA	Dr. Alexander Y. Walley
	2309 175 Main Street, Woburn, MA	Dr. Alexander Y. Walley
	2330 1101 Beacon Street, Newton, MA	Dr. Alexander Y. Walley
	2669 20 Weston Street, Waltham, MA	Dr. Alexander Y. Walley
	2861 653 Worcester Rd, Framingham, MA	Dr. Alexander Y. Walley
	2933 841 Boylston St, Boston, MA	Dr. Alexander Y. Walley
	3112 1425 Massachusetts Ave, Arlington, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	3135 825 Morton Street, Boston, MA	Dr. Alexander Y. Walley
	3251 15 Main Street, Waltham, MA	Dr. Alexander Y. Walley
	3564 99 Harvard Street, Brookline, MA	Dr. Alexander Y. Walley
	4923 1999 Centre St, West Roxbury, MA	Dr. Alexander Y. Walley
	5687 1324 Beacon St, Brookline, MA	Dr. Alexander Y. Walley
	6349 585 Washington St, Dorchester Center, MA	Dr. Alexander Y. Walley
	6767 625 Massachusetts Ave, Cambridge, MA	Dr. Alexander Y. Walley
	6805 130 Bowdoin St, Dorchester, MA	Dr. Alexander Y. Walley
	10152 624 Waverly St, Framingham, MA	Dr. Alexander Y. Walley
	10318 78 Turnpike Rd, Southborough, MA	Dr. Alexander Y. Walley
	10376 277 Main St, Wilmington, MA	Dr. Alexander Y. Walley
	10673 256 Washington St, Hudson, MA	Dr. Alexander Y. Walley
	10940 235 S Main St, Middleton, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	11119 720 Main St, Clinton, MA	Dr. Alexander Y. Walley
	11387 24 Newton St, Southborough, MA	Dr. Alexander Y. Walley
	11499 158 Main St, North Reading, MA	Dr. Alexander Y. Walley
	13081 399 Washington St, Newton, MA	Dr. Alexander Y. Walley
	13803 675 Main St, Woburn, MA	Dr. Alexander Y. Walley
	13804 266 Washington St, Wellesley, MA	Dr. Alexander Y. Walley
	13805 397 Boston Post Rd, Weston, MA	Dr. Alexander Y. Walley
	13806 533 Columbia Rd, Dorchester, MA	Dr. Alexander Y. Walley
	15001 980 American Legion Hwy, Roslindale, MA	Dr. Alexander Y. Walley
	15184 822 Somerville Ave, Cambridge, MA	Dr. Alexander Y. Walley
	15307 21-23 Stanhope St, Boston, MA	Dr. Alexander Y. Walley
	15390 24 School St, Boston, MA	Dr. Alexander Y. Walley
	1852 1478 Highland Ave, Needham, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	1917 983 Providence Hwy, Dedham, MA	Dr. Alexander Y. Walley
	2759 550 Adams St, Quincy, Ma	Dr. Alexander Y. Walley
	2781 38 West Main St, Norton, MA	Dr. Alexander Y. Walley
	2577 1228 Broadway, Saugus, MA	Dr. Alexander Y. Walley
	3062 595 Washington St, Canton, MA	Dr. Alexander Y. Walley
	3758 610 Pleasant St, Brockton, MA	Dr. Alexander Y. Walley
	4118 767 Chief Justice Cushing Hwy, Cohasset, MA	Dr. Alexander Y. Walley
	4403 418 Quincy Ave, Quincy, MA	Dr. Alexander Y. Walley
	4404 771 Centre St, Brockton, MA	Dr. Alexander Y. Walley
	4535 170 N Main St, Randolph, MA	Dr. Alexander Y. Walley
	4729 951 Boston Providence Tpke, Norwood, MA	Dr. Alexander Y. Walley
	5586 1 Plymouth St, Holbrook, MA	Dr. Alexander Y. Walley
	5755 413 Washington St, Stoughton, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	6470 750 Washington St, Weymouth, MA	Dr. Alexander Y. Walley
	1851 148 W. Central St, Natick, MA	Dr. Alexander Y. Walley
	7329 75 Market St, Rockland, MA	Dr. Alexander Y. Walley
	7734 165 Samoset St, Plymouth, MA	Dr. Alexander Y. Walley
	9405 969 Main St, Weymouth, MA	Dr. Alexander Y. Walley
	9477 2177 Ocean St, Marshfield, MA	Dr. Alexander Y. Walley
	10269 32 Main St, Lakeville, MA	Dr. Alexander Y. Walley
	10272 392 Bedford St, Whitman, MA	Dr. Alexander Y. Walley
	10562 4 Central SQ, Bridgewater, MA	Dr. Alexander Y. Walley
	10638 121 Main St, Foxboro, MA	Dr. Alexander Y. Walley
	10650 880 N. Montello St, Brockton, MA	Dr. Alexander Y. Walley
	10685 3 Liberty Ln, Norfolk, MA	Dr. Alexander Y. Walley
	11831 324 Hancock St, Quincy, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	11947 5 Tremont St, Taunton, MA	Dr. Alexander Y. Walley
	12399 226 Broadway, Taunton, MA	Dr. Alexander Y. Walley
	13135 21 South St, Mashpee, MA	Dr. Alexander Y. Walley
	13802 683 High St, Westwood, MA	Dr. Alexander Y. Walley
	13883 19 N. Main St, Sherborn, MA	Dr. Alexander Y. Walley
	2063 29 New Derby St, Salem, MA	Dr. Alexander Y. Walley
	2208 35 Main St, Peabody, MA	Dr. Alexander Y. Walley
	2325 290 Broadway St, Lynn, MA	Dr. Alexander Y. Walley
	2471 166 Walnut St, Saugus, MA	Dr. Alexander Y. Walley
	2517 201 Main St, Gloucester, MA	Dr. Alexander Y. Walley
	2577 1228 Broadway St, Saugus, MA	Dr. Alexander Y. Walley
	2716 21 Joyce St, Lynn, MA	Dr. Alexander Y. Walley
	2823 841 Western Ave, Lynn, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	2760 343 Broadway St, Somerville, MA	Dr. Alexander Y. Walley
	3016 416 warren St, Roxbury, MA	Dr. Alexander Y. Walley
	3130 185 Centre St, Malden, MA	Dr. Alexander Y. Walley
	3496 317 Ferry St, Everett, MA	Dr. Alexander Y. Walley
	3508 572 Main St, Wakefield, MA	Dr. Alexander Y. Walley
	3548 225 Main St, Stoneham, MA	Dr. Alexander Y. Walley
	3759 1010 Broadway St, Chelsea, MA	Dr. Alexander Y. Walley
	4072 1890 Columbus Ave, Roxbury, MA	Dr. Alexander Y. Walley
	4393 54 Elliott St, Beverly, MA	Dr. Alexander Y. Walley
	4595 59 Boston St, Salem, MA	Dr. Alexander Y. Walley
	4966 215 Beach St, Malden, MA	Dr. Alexander Y. Walley
	5756 1 Central Sq, East Boston, MA	Dr. Alexander Y. Walley
	6072 1603 Washington St, Boston, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	6295 229 Andover St, Peabody, MA	Dr. Alexander Y. Walley
	7189 1630 Tremont St, Roxbury Crossing, MA	Dr. Alexander Y. Walley
	9011 107 High St, Danvers, MA	Dr. Alexander Y. Walley
	9319 49 Station Lndg, Medford, MA	Dr. Alexander Y. Walley
	9538 2275 Washington St, Roxbury, MA	Dr. Alexander Y. Walley
	10342 897 Main St, Melrose, MA	Dr. Alexander Y. Walley
	10824 430 Broadway St, Revere, MA	Dr. Alexander Y. Walley
	10996 429 Brookline Ave, Boston, MA	Dr. Alexander Y. Walley
	11797 465 Cambridge St, Allston, MA	Dr. Alexander Y. Walley
	13801 47 Elm St, Danvers, MA	Dr. Alexander Y. Walley
	13807 89 Pleasant St, Marblehead, MA	Dr. Alexander Y. Walley
	15335 48 Dodge St, Beverly, MA	Dr. Alexander Y. Walley
	1862 450 Paradise Rd, Swampscott, MA	Dr. Alexander Y. Walley

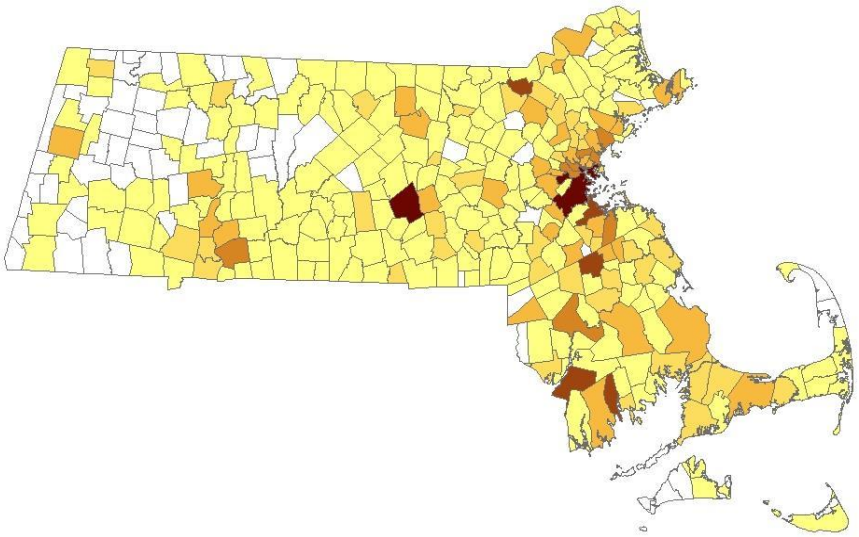
Pharmacy Name	Address	Authorizing Physician
Walgreens	16237 75 Armory St, Boston, MA	Dr. Alexander Y. Walley
	10317 1065 Truman Hwy, Boston, MA	Dr. Alexander Y. Walley
	3020 196 Pleasant St, Attleboro, MA	Dr. Alexander Y. Walley
	3021 1737 Acushnet Ave, Fall River, MA	Dr. Alexander Y. Walley
	3469 369 Plymouth Ave, Fall River, MA	Dr. Alexander Y. Walley
	6226 220 Huttleston Ave, New Bedford, MA	Dr. Alexander Y. Walley
	6850 1103 Kempton St, New Bedford, MA	Dr. Alexander Y. Walley
	11363 847 Purchase St, New Bedford, MA	Dr. Alexander Y. Walley
	12869 296 Buffington St, Somerset, MA	Dr. Alexander Y. Walley
	10802 328 Rhode Island Ave, Fall River, MA	Dr. Alexander Y. Walley
	3090 838 Pleasant Street, New Bedford, MA	Dr. Alexander Y. Walley
	2268 50 Cape James Blvd, Springfield, MA	Dr. Alexander Y. Walley
	10375 2968 Acushnet Ave, New Bedford, MA	Dr. Alexander Y. Walley

Pharmacy Name	Address	Authorizing Physician
Walgreens	3151 320 Park Ave, Worcester, MA	Dr. Alexander Y. Walley
	3625 707 State St, Springfield, MA	Dr. Alexander Y. Walley
	9152 937 W. Boylston St, Worcester, MA	Dr. Alexander Y. Walley
	10127 625 Carew Street, Springfield, MA	Dr. Alexander Y. Walley
	10401 220 Grafton St, Worcester, MA	Dr. Alexander Y. Walley
	10639 99 Stafford Street, Worcester, MA	Dr. Alexander Y. Walley
	10319 472 Lincoln, Street, Worcester, MA	Dr. Alexander Y. Walley
	3736 501 Sumner Ave., Springfield, MA	Dr. Alexander Y. Walley
	02945 16 Beacon St. Somerville, MA 0	Dr. Alexander Y. Walley

Appendix 12: Opioid Overdose Response Strategies in Massachusetts, April 2014

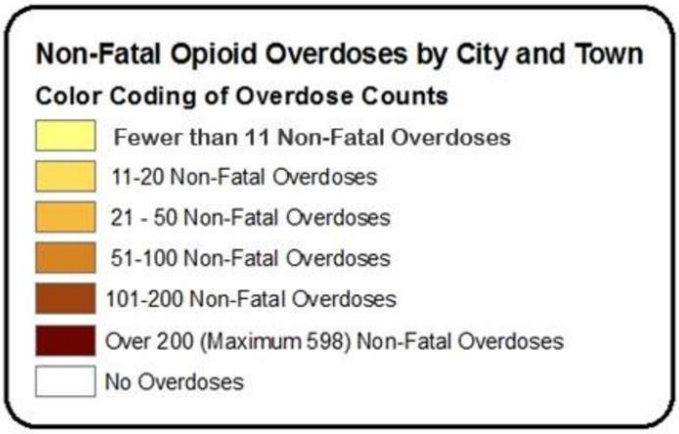
Opioid Overdose Response Strategies in Massachusetts

April 2014



Massachusetts Department of Public Health
Bureau of Substance Abuse Services

Cover image:
2012 Total Non-Fatal Opioid-related Overdoses



Sources: MA Inpatient Hospital Discharge Database, MA Outpatient Emergency Department Discharge Database, and MA Observation Stay Database, Center for Health Information and Analysis (CHIA). Counts represent acute-care hospital episodes which include hospital and emergency department discharges, and observation stays. Deaths are excluded; transfers from one acute care hospital to another are excluded. Counts do not include self-inflicted injury or assault-related cases. Counts are based on fiscal year 2012 (October 1, 2011 – September 30, 2012)

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BACKGROUND AND EPIDEMIOLOGY

Opioid

The term *opioid* designates a class of drugs derived naturally from the opium poppy (opium, morphine, codeine), synthesized or derived from a natural opiate (heroin, oxycodone, hydrocodone), or manufactured synthetically with a chemical structure similar to opium (fentanyl, methadone). Among their many effects, opioids depress breathing by changing neurochemical activity in the brainstem where automatic bodily functions are controlled.

Overdose

An overdose occurs when opioid concentrations are so high in the body that they begin to cause respiratory depression. Overdoses can be further characterized as being either non-fatal (loss of consciousness and depressed breathing) or fatal (respiration ceases and/or cardiac arrest ensues) (Warner-Smith, et al, 2001).

Overdose is a common experience among opioid users. In a review of the literature on overdoses, Darke and Hall (2003) found that at least half of opioid users in cross-sectional studies report a history of non-fatal overdose, many of whom report overdosing multiple times. Additionally, Darke and Zador (1996) report that opioid users have mortality rates that are between six and twenty times those of their peers. These authors go on to report that deaths attributable to overdose are the most common cause of death among opioid users.

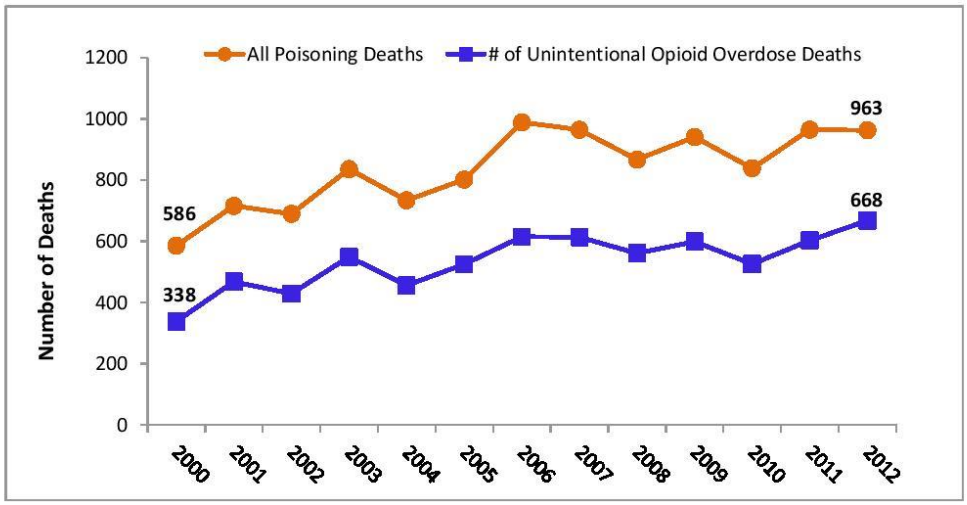
In a report released by the U.S. Centers for Disease Control and Prevention (CDC) in December 2011, drug overdose was identified as the cause of death for over 41,000 people in 2008 (Warner, et al, 2011). With the rate nearly tripling in the past three decades, drug overdose is now the leading cause of accidental death nationally, exceeding motor vehicle accidents; in 2008, there were 38,000 motor vehicle deaths.

While the CDC report identifies overdose as a national issue, the northeast region is disproportionately affected. In its 2011 New England High Intensity Drug Trafficking Area (NE HIDTA) Drug Market Analysis, the National Drug Intelligence Center (NDIC) noted, "opioid abuse remains the most significant drug threat to the NE HIDTA – (NDIC, 2011). The authors identify pharmaceutical opioid abuse as the driving factor behind this increase. Evidence suggests that pharmaceutical opioid abusers often switch from prescription medications to heroin due to its lower cost and greater purity.

Massachusetts

Data from the Massachusetts Department of Public Health's Bureau of Health Information, Statistics, Research, and Evaluation corroborate this assessment. One-third of all injury deaths among Massachusetts residents are poisonings. Among these poisoning deaths, 69% are unintentional[1] opioid overdoses (Figure 1). In 2012, unintentional opioid overdoses (n=668) increased ten percent over the previous year (n=603). Based on the first six months of preliminary data[2], unintentional overdose deaths for 2013 are at least as high as 2012.

Figure 1: All Poisoning and Unintentional Opioid-Related Overdose Deaths, MA Residents, 2000-2012



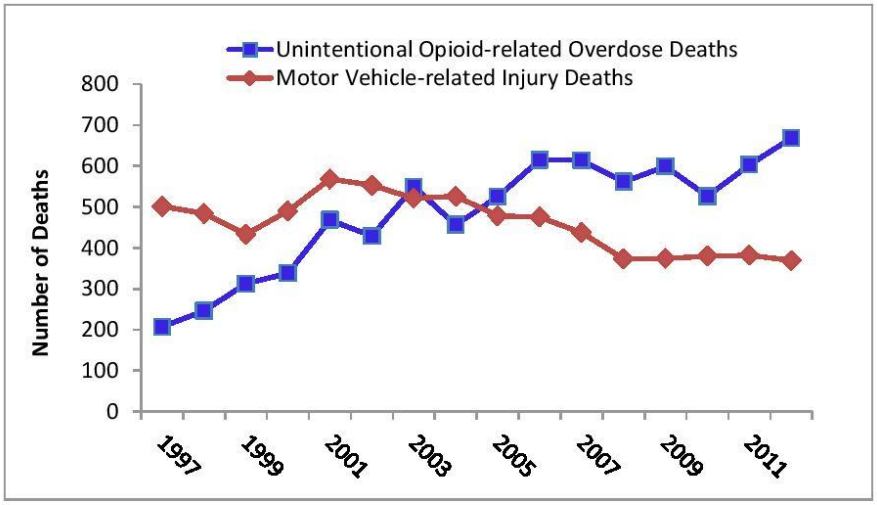
Source: Registry of Vital Records and Statistics, MDPH

The rate of unintentional opioid overdose deaths per 100,000 residents had an average annual increase of 8% between 2000 and 2006 and remained relatively constant from 2006 to 2011 (data not shown). The 2012 rate reached a level previously unseen in Massachusetts. The rate rose to 10.1 deaths per 100,000 residents for 2012, which represents a 90% increase from the rate of 5.3 deaths per 100,000 residents in 2000 (data not shown).

[1]Unintentional combines unintentional *and undetermined* intents to account for a change in coding during the time period.

[2] The 2013 RVRS death file is preliminary and subject to updates.

Figure 2: Unintentional Opioid-Related Overdose Deaths vs. Motor Vehicle-Related Injury Deaths, MA Residents, 1997-2012



Source: Registry of Vital Records and Statistics, MDPH

More people die of opioid overdoses than are killed in motor vehicle crashes. Figure 2 illustrates that since 2005 the number of deaths due to unintentional opioid overdoses surpassed those due to motor vehicles. Unintentional opioid overdoses continue to increase while motor vehicle-related injury deaths have declined.

DECLARATION OF PUBLIC HEALTH EMERGENCY

On Thursday, March 27, 2014, Governor Deval Patrick declared a public health emergency in Massachusetts in response to the growing opioid addiction epidemic. The Governor directed the Department of Public Health (DPH) to take several action steps that will combat overdoses, stop the epidemic from getting worse, help those already addicted to recover and map a long-term solution to ending widespread opioid abuse in the Commonwealth.

The Governor's Public Health Emergency declaration provides emergency powers to DPH Commissioner Cheryl Bartlett, RN. The Public Health Council convened an emergency session March 27, 2014, and granted Commissioner Bartlett the authority to work with the Public Health Council to take the following actions:

- Universally permit first responders to carry and administer naloxone (Narcan), a safe and effective opioid antagonist that, when timely administered, can reverse an overdose and save a life. Naloxone will also be made widely available through standing order prescription in pharmacies in order to provide greater access to family and friends who fear a loved one might overdose.
- Accelerate the mandatory use of prescription monitoring by physicians and pharmacies to better safeguard against abuse or misuse. This was historically a voluntary program.

- Re-task the Commonwealth's Interagency Council on Substance Abuse and Prevention with added members from public health, provider organizations, law enforcement, municipalities and families impacted by the opioid epidemic, to make recommendations in 60 days on further actions that can be taken, including, but not limited to: how to better coordinate services, ensure a full range of treatment regardless of insurance, and how to divert non-violent criminal defendants struggling with addiction into treatment programs.

The Administration will also dedicate an additional $20 million to increase substance abuse treatment and recovery services to the general public, to the Department of Corrections, and to Sheriffs' Departments.

In conjunction with this public health emergency declaration, Commissioner Bartlett issued a public health advisory to help educate and raise awareness about treatment options currently available to combat and prevent the spread of opioid addiction.

MASSACHUSETTS OVERDOSE RESPONSE STRATEGIES

To address the public health burden faced by its citizens, the Massachusetts Department of Public Health (MDPH) has developed a comprehensive opioid overdose response, which includes the following objectives and strategy:

Objectives and Strategy

MDPH has **four objectives:**

1. Prevent and reduce the incidence of opioid abuse and overdoses.
2. Improve the management of overdoses.
3. Reduce the misuse of prescription opioids, which leads to overdoses.
4. Increase the number of people who access treatment.

To meet these objectives, the department is applying a **four-part strategy**:

1. Promote safe opioid prescribing and prescribing guidelines, including the use of the Massachusetts Prescription Monitoring Program (PMP).
2. Provide help if someone becomes addicted to prevent sickness, injury, or death.
3. Treat people's addiction to alcohol and other drugs.
4. Provide recovery support for individuals and their families.

Massachusetts Department of Public Health Initiatives

The following pages describe programs that highlight BSAS' opioid overdose response work with its DPH and community partners.

BSAS Overdose Prevention Materials

The Bureau of Substance Abuse Services (BSAS) has developed a collection of educational materials about opioid overdose prevention that are distributed free of charge within Massachusetts. The materials were developed with community partners and with focus groups within the target populations. The following are three of the items that are available from the Massachusetts Health Promotion Clearinghouse (www.mass.gov/maclearinghouse):

- *"Know the Signs of Overdose"* fold out wallet card (see Figure 3)
- *"An Overdose is a Medical Emergency"* magnet (see Figure 4)

Figure 3: "Know the Signs of an Overdose" – Fold-Out Wallet Card

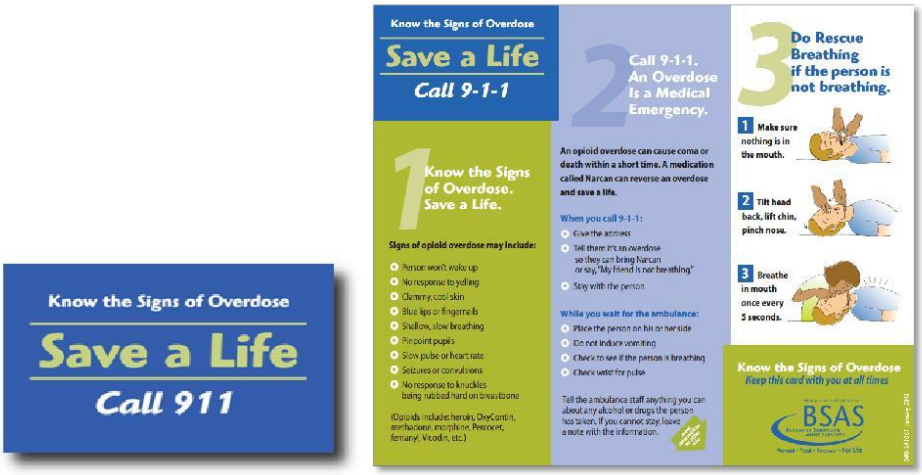


Figure 4: "An Overdose is a Medical Emergency" – Magnet

Strategic Prevention Framework - Partnerships for Success II (SPF-PFS II) Grant

The Substance Abuse and Mental Health Services Administration (SAMHSA) awarded BSAS with the Strategic Prevention Framework - Partnerships for Success II (SPF-PFS II) grant to address prescription drug misuse and abuse among persons aged 12 to 25 in high-need Massachusetts communities. The choice of prescription drug abuse reflects the results of priority-setting by the Massachusetts Epidemiological Workgroup (MEW) and the Governor's Interagency Council on Substance Abuse and Prevention (ICSAP). Both groups identified it as a new and emerging issue based on data showing that a growing proportion of the population are misusing and abusing prescription drugs. Among some individuals, the misuse or abuse of prescription drugs can lead to a cross-over into other opioids such as heroin. The goal of the project is to support these high-need communities in using evidence-based prevention programs and practices to reduce prescription drug abuse in the targeted age group.

Massachusetts Opioid Abuse Prevention Collaborative (MOAPC) Grant

The purpose of the Massachusetts Opioid Abuse Prevention Collaborative Grant is to implement local policy, practice, systems, and environmental change(s) to prevent the use/abuse of opioids, prevent/reduce fatal and non-fatal opioid overdoses, and increase both the number and capacity of municipalities addressing these issues. Additionally, this program seeks to provide financial support for groups of municipalities to enter into formal, long term agreements to share resources and coordinate activities in order to increase the scope of this work and their capacity to address these issues among their populations. This program also emphasizes the integration of SAMHSA's Strategic Prevention Framework (SPF) model into overall prevention systems, to ensure a consistent data-driven planning process across the Commonwealth focused on implementing effective and sustainable strategies and interventions.

Massachusetts Technical Assistance Partnership for Prevention (MassTAPP)

The Massachusetts Technical Assistance Partnership for Prevention (MassTAPP) is funded by BSAS to provide statewide substance abuse prevention support. MassTAPP staff offers technical assistance, capacity building, and other resources to BSAS-funded Underage Drinking Programs, MOAPC grantees, SPF-PFS II grantees, and other communities across the state. In addition, MassTAPP resources are available to all communities and coalitions seeking technical assistance to support their substance abuse prevention efforts, regardless of their funding sources. BSAS-funded communities are prioritized based on available individualized technical assistance resources; however, unfunded communities are always welcome to attend any in-person or online learning events.

Office Based Opioid Treatment Programs (OBOT)

The Bureau of Substance Abuse Services (BSAS) at the Massachusetts Department of Public Health currently funds 14 Office Based Opioid Treatment Programs (OBOT) located in health centers across the Commonwealth. Office based opioid treatment with Buprenorphine (OBOT-B) is a primary care model that provides evidence-based treatment for patients with opioid addiction. OBOT programs provide detoxification and maintenance treatment to opioid addicted individuals in an office based setting, often within community health centers. Patients receive treatment with prescribed buprenorphine/naloxone (Suboxone), self-administer the medication on a daily basis as prescribed with supports and education as needed. OBOT patients are also provided with integrated medical and addiction care that includes medical visits with a Primary Care Physician (PCP), visits with a Registered Nurse skilled in the care of addictive disorders, and counseling sessions with qualified clinicians. Patients are also evaluated for other opioid treatment needs including: methadone, naltrexone, and injectable naltrexone; with some sites offering these services, treatments or referrals, and coordination of services.

Overdose Education and Naloxone Distribution (OEND)

Since December of 2007, the Massachusetts Department of Public Health has implemented overdose education and intra-nasal naloxone (Narcan) distribution in various community-based settings. These programs have trained potential bystanders to an overdose (drug users, friends, family members) on how to reduce overdose risk, recognize signs of an overdose, access emergency medical services, and administer intra-nasal naloxone. Programs instruct potential bystanders to deliver naloxone when opioid overdose occurs; in addition to taking other actions (e.g. rescue breathing, contacting the emergency medical system). After being trained, each participant is eligible to receive an overdose prevention kit which includes instructions, two syringes pre-filled with Naloxone Hydrochloride, and a nasal atomization delivery device. Between December 2007 and March 2014, OEND programs have trained over 22,500 potential bystanders and documented over 2,655 opioid overdose reversals. The emergency declaration by Governor Deval Patrick, followed by the action of DPH Commissioner Cheryl Bartlett and the Public Health Council, will universally permit first responders to carry and administer naloxone (Narcan).

For more information about the OEND program visit the BSAS web site.

Screening, Brief Intervention, and Referral to Treatment (SBIRT) Programs

Screening, Brief Intervention, and Referral to Treatment (SBIRT) as part of routine healthcare practice has been shown to reduce unhealthy substance use, and to save lives and money.

Universal screening identifies risky alcohol and drug behaviors, such as opioid misuse. Brief interventions can encourage patients to reduce or stop unhealthy use, and, when needed, referral to treatment may get help for patients who might never have sought it on their own. Trained health care providers, including community health workers, can engage patients in discussions about change and, if needed, engage them in a discussion about treatment, including medication assisted treatment.

BSAS-funded MASBIRT TTA (Massachusetts Screening, Brief Intervention, and Referral to Treatment Training & Technical Assistance) provides training, coaching, and consultations on implementation for healthcare and public health professionals statewide; equips providers to identify and address patients' unhealthy substance use, including prescription drug misuse; and helps organizations build linkages with specialty substance abuse treatment.

MASBIRT TTA strongly encourages all prescribers to routinely screen all patients before prescribing opioids or other medications with the potential for abuse.

Between 2007 and 2012, BSAS funded an SBIRT initiative in six Massachusetts hospitals' emergency departments. Five of the six hospitals continue this effort, though funding has ended. Some of these programs have been able to distribute take-home intra-nasal naloxone kits to individuals at risk of opioid overdose and their friends or family members as part of the OEND program. BSAS continues to support the adoption of SBIRT at a wide variety of settings, including community hospitals, large hospital systems, and school-based health centers.

For more information about MASBIRT TTA visit www.masbirt.org.

CONTACT INFORMATION

For more information on the Massachusetts Overdose Response Strategy or on any of the material provided in this document, please contact: **Hilary Jacobs**, Director, Massachusetts Department of Public Health Bureau of Substance Abuse Services.
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SELECTED KEY REFERENCES

National Reports

- Warner, M., et al (2011). Drug Poisoning Deaths in the United States, 1980-2008. NCHS Brief No. 81, December 2011. Centers for Disease Control and Prevention, National Center for Health Statistics.
- New England High Intensity Drug Trafficking Area, Drug Market Analysis 2011. September 2011. U.S. Department of Justice, National Drug Intelligence Center (NDIC).

MOAPC, SPF-PFSII, and SPHERE

- Darke, S., & Hall, W. (2003). Heroin overdose: Research and evidence-based intervention. *Journal of Urban Health*, 80: 189-200.
- Darke, S. & Zador, D. (1996). Fatal heroin 'overdose': A review. *Addiction*, 91: 1765-1772.
- Pollini RA, McCall L, Mehta SH, Celentano DD, Vlahov D, Strathdee SA. (2006) Response to overdose among injection drug users. *American Journal of Preventive Medicine*; 31:261-264.
- Sporer, K.A. (1999). Acute heroin overdose. (1999). *Annals of Internal Medicine*, 130: 584-590.
- Tracy, M., Piper. T.M., Ompad, D., Bucciarelli, A., Coffin, P.O., Vlahov, D., & Galea, S. (2005). Circumstances of witnessed drug overdose in New York City: implications for intervention. *Drug and Alcohol Dependence*, 79: 181-190.
- Warner-Smith, M., Darke, S., Lynskey, M., & Hall, W. (2001). Heroin overdose: Causes and consequences. *Addiction*, 96: 1113-1125.

OBOT

- Center for Substance Abuse Treatment (CSAT). (2004). Clinical guidelines for the use of buprenorphine in the treatment of opioid addiction. Treatment Improvement Protocol (TIP) Series 40. DHHS Publication No. (SMA) 04-3939. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Colameco, S., Armando, J., & Trotz, C. (2005). Opiate dependence treatment with buprenorphine: One year's experience in a family practice residency setting. *Journal of Addictive Diseases*, 24(2): 25-32.
- Fiellin, D.A., & O'Connor, P.G. (2002). Office-based treatment of opioid dependent patients. *New England Journal of Medicine*, 347(11): 817-823.
- Magura, S., Lee, S.J., Salsitz, E.A., Kolodny,A., Whitley, S.D., Taubes, T., Seewald, R., Joseph, H., Kayman, D.J., Fong, C., Marsch, L.A., & Rosenblum, A. (2007). Outcomes of buprenorphine maintenance in office-based practice. *Journal of Addictive Diseases*, 26(2), 13-23.

Narcan

- Baca, C.T., & Grant, K.J. (2005). Take-home Naloxone to reduce heroin death. *Addiction*, 100: 1823-1831.
- Galea, S., Worthington, N., Piper, T.M., Nandi, V.V., Curtis, M. & Rosenthal, D.M. (2006). Provision of Naloxone to injection drug users as an overdose prevention strategy: Early evidence from a pilot study in New York City. *Addictive Behaviors*, 31: 907-12.
- Maxwell, S., Bigg, D., Stanczykiewicz, K., & Carlberg-Racich, S. (2006). Prescribing naloxone to actively injecting heroin users: a program to reduce heroin overdose deaths. *Journal of Addictive Diseases*, 25: 89-96.
- Seal, K. H., Thawley, R., Gee, L., Bamberger, J., Kral, A.H., Ciccarone, D., Downing, M., & Edlin, B.R. (2005). Naloxone distribution and cardiopulmonary resuscitation training for injection drug users to prevent heroin overdose death: A pilot intervention study. *Journal of Urban Health*, 82: 303-311.
- Strang, J., Manning, et al. (2008). "Overdose training and take-home naloxone for opiate users: prospective cohort study of impact on knowledge and attitudes and subsequent management of overdoses." *Addiction*, 103: 1648-1657.
- Tobin, K., Sherman, S.G., Latkin, C.A., Welsch, C., Bielenson, P. (in press). Evaluation of the Staying Alive Program: Training Injection Drug Users to Properly Administer Naloxone and Save Lives. *International Journal of Drug Policy*.

SBIRT

- Babor TF, McRee BG, Kassebaum PA, Grimaldi PL, Ahmed K, Bray J. Screening, Brief Intervention, and Referral to Treatment (SBIRT): Toward a Public Health Approach to the Management of Substance Abuse. Co-published simultaneously in *Substance Abuse*. 2007; 28 (3): 7-30; and: *Alcohol/Drug Screening and Brief Intervention: Advances in Evidence-Based Practice* (ed: Richard Saitz, and Marc Galanter)
- Bernstein E, Bernstein J, & Levenson S. Project ASSERT: An ED-based intervention to increase access to primary care, preventive services, and the substance abuse treatment system. *Annals of Emergency Medicine*. 1997: 30: 181-189.
- Brown RL. Configuring Health Care for Systematic Behavioral Screening and Intervention. *Population Health Management*. 2011; 14 (6): 299-305
- Smith PC, et al. A single-Question Screening Test for Drug Use in Primary Care. *Arch Intern Med*. 2010; 170 (13): 1155-1160.

Appendix 13: Opioids Program Directory—Massachusetts

To come in the near future, will be added as soon as it's received

Appendix 14: Obtaining Data on Opioid Poisoning

Obtaining Hospital Data on Nonfatal Opioid Poisoning

Data on the number of nonfatal opioid overdoses can often be obtained from hospitals serving your community. Forming relationships with hospital administrators is an important first step in determining how to gain access to these records.

There are three sources of data on nonfatal acute care hospital discharges associated with opioid poisoning:

- Mass. Inpatient Database
- Mass. Outpatient Observation Stay Database
- Mass. Emergency Department Discharge Databases operated by the Mass. Division of Health Care Finance and Policy

These hospital discharge records document information on the nature of case based on International Classification of Disease (ICD) codes. Working in collaboration with hospital administrators and database staff, you can obtain more current data on nonfatal opioid poisonings than are available at the state level (due to time lags in aggregating these data at the state level).

The three databases capture billing, demographic, and discharge diagnosis data on all discharges at all Massachusetts acute care hospitals (excluding Federal, psychiatric, or rehabilitation hospitals). These data include all discharges from an inpatient, observation stay unit, or emergency department at all Massachusetts acute care hospitals that were associated with a discharge diagnosis of opioid poisoning.

The following ICD-9 diagnostic codes can be used to identify cases of nonfatal opioid poisoning:

- 965.0: Poisoning by opiates and related narcotics
- 965.00: Poisoning by opium (alkaloids), unspecified
- 965.01: Poisoning by heroin
- 965.02: Poisoning by methadone
- 965.09: Poisoning by opiates and related narcotics, other

The diagnostic codes do not, however, address the issue of intent (i.e., unintentional vs. intentional). Cases without an accompanying external cause of injury code (E-code) (meaning missing intent), those with E-codes in the range of E980.x through E989.x (meaning that it's undetermined whether the injury was accidentally or purposefully inflicted), and cases with E-codes in the following ranges should all be included in the count of unintentional nonfatal opioid overdoses:

- E800–E807: Railway accidents
- E810–E819: Motor vehicle traffic accidents

- E820–E825: Motor vehicle nontraffic accidents
- E826–E829: Other road vehicle accidents
- E830–E838: Water transport accidents
- E840–E845: Air and space transport accidents
- E846–E849: Vehicle accidents, not elsewhere classifiable
- E850–E858: Accidental poisoning by drugs, medicinal substances, and biologicals
- E860–E869: Accidental poisoning by other solid and liquid substances, gases, and vapors
- E880–E888: Accidental falls
- E890–E899: Accidents caused by fire and flames
- E900–E909: Accidents due to natural and environmental factors
- E910–E915: Accidents caused by submersion, suffocation, and foreign bodies
- E916–E928: Other accidents
- E929–E929: Late effects of accidental injury

Special note: Cases with the following E-codes are included in the count regardless of diagnostic code:

- E850.0: Accidental poisoning by heroin
- E850.1: Accidental poisoning by methadone
- E850.2: Accidental poisoning by other opiates and related narcotics

Obtaining Data on Opioid-Related Poisoning Deaths

The source of data for opioid-related positioning deaths is the Massachusetts Registry of Vital Records and Statistics (MA-RVRS). The electronic death file maintained by the MA-RVRS contains death certificate data on all deaths that occur in the state. Included in this file are ICD codes on the underlying and associated causes of these deaths, which are generated from text on the death certificate.

A manual review of local death certificates can provide information on deaths for which overdose was a contributing or primary factor based on the text provided on the death certificate. In most communities, these records are housed with the Town Clerk or Registrar of Vital Records.

Although there is a time lag, data on deaths among Massachusetts residents due to poisonings (including drug overdoses) that were associated with an opioid, either alone or in combination with another agent, can be obtained. Begin with the following ICD-10 mortality codes, which can identify cases of accidental or undetermined fatal poisoning:

- X40–X49: Accidental poisoning by and exposure to noxious substances
- Y10–Y19: Event of undetermined intent

Since these codes are not specific to opioids, one or more of the following T-codes must also appear in the associated cause-of-death fields:

- T40.0: Opium
- T40.1: Heroin
- T40.2: Other opioids (Codeine, Morphine)
- T40.3: Methadone
- T40.4: Other synthetic narcotics (Pethidine)
- T40.6: Other and unspecified narcotics

As described above, more timely information can be obtained at the local level based on a manual audit of death certificates.

PRESCRIPTION DRUG OVERDOSE DATA & STATISTICS

GUIDE TO ICD-9-CM AND ICD-10 CODES RELATED TO POISONING AND PAIN

From Epi to Policy:
Prescription Drug Overdose
State Health Department Training and Technical Assistance Meeting

Version 1.2 – Revised July 8th, 2013

Prescription Drug Overdose Team
Health Systems and Trauma Systems Branch
Division of Unintentional Injury Prevention
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
4770 Buford Highway Northeast
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Atlanta, GA 30341-3724

Introduction to ICD-9-CM and ICD-10 Codes Related to Poisoning and Pain

This guide provides a list of the International Classification of Disease (ICD) version 10 (ICD-10) and the ICD version 9 Clinical Modification (ICD-9-CM) codes for poisoning and pain. This list can be used to query databases featuring either morbidity (ICD-9-CM) or mortality (ICD-10) data.

This information is organized by type of poison and intent. For ICD-10, both underlying and contributing cause of death codes are given. For ICD-9-CM, both the diagnosis and external (E) cause of injury codes are provided. For value labels or definitions of each code, please download the complete matrices from the National Center for Health Statistics at http://www.cdc.gov/nchs/icd.htm

Note that the Safe States Alliance's Report, "Consensus Recommendations for National and State Poisoning Surveillance,"[13] includes poisoning definitions broader than those used in the traditional ICD system, including codes for conditions commonly associated with chronic drug abuse. The ICD-9-CM and ICD-10 codes that correspond to those broader definitions can be found in the appendices of that report.

Please note that the ICD-9-CM codes for conditions causing pain included here were selected by the CDC Injury Center for research with insurance claims information. The codes have not been validated in any way. They should not be considered a recommendation for or a standard definition of conditions causing pain. NCIPC offers them for use by others with that understanding

Table 1: All Poisoning

	ICD-10 Codes[1]		ICD-9-CM Codes[2]	
Category Intent	**Underlying Cause[3]**	**Contributing Cause**	**Diagnosis**	**External Cause of Injury**
All Poisoning All intents	U01.6 U01.7 X40 X41 X42 X43 X44 X45 X46 X47 X48 X49 X60 X61 X62 X63 X64 X65 X66 X67 X68 X69 X85 X86 X87 X88 X89 X90 Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 Y18 Y19 Y35.2 Y35.5 Y36.6 Y36.7	T36 T37 T38 T39 T40 T41 T42 T43 T44 T45 T46 T47 T48 T49 T50 T51 T52 T53 T54 T55 T56 T57 T58 T59 T60 T61 T62 T63 T64 T65	960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989	E850 E851 E852 E853 E854 E855 E856 E857 E858 E860 E861 E862 E863 E864 E865 E866 E867 E868 E869 E950 E951 E952 E962 E972 E975 E976 E980 E981 E982
All Poisoning Unintentional	X40 X41 X42 X43 X44 X45 X46 X47 X48 X49			E850 E851 E852 E853 E854 E855 E856 E857 E858 E860 E861 E862 E863 E864 E865 E866 E867 E868 E869

[13] Safe States Alliance. Consensus Recommendations for National and State Poisoning Surveillance. Report from the Injury Surveillance Workgroup (ISW7). April 2012. Available at: http://safestates.org/displaycommon.cfm?an=8

All Poisoning Self-harm/Suicide	X60 X61 X62 X63 X64 X65 X66 X67 X68 X69			E950 E951 E952
All Poisoning Assault/ Homicide	X85 X86 X87 X88 X89 X90			E962
All Poisoning Legal intervention or operation of war	U01.6 U01.7 Y35.2 Y35.5 Y36.6 Y36.7			E972 E997.1 E997.2
All Poisoning Undetermined Intent	Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 Y18 Y19			E980 E981 E982

[1] For ICD-10, the death must have an underlying cause code among those shown. Contributing cause codes can then be used to indicate the specific poison involved, but they do not specify intent.

[2] For ICD-9-CM, the event can have either an N code listed in the Diagnosis column OR an E code listed in the External Cause of Injury column. Only E codes specify intent.

[3] The ICD-10 codes for "All Poisoning" underlying cause are those used by CDC WISQARS.

Table 2: All Drug Poisoning

	ICD-10 Codes[1]		**ICD-9-CM Codes[2]**	
Category Intent	**Underlying Cause**	**Contributing Cause**	**Diagnosis**	**External Cause of Injury**
Drug poisoning All intents	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T36 T37 T38 T39 T40 T41 T42 T43 T44 T45 T46 T47 T48 T49 T50	960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979	E850 E851 E852 E853 E854 E855 E856 E857 E858 E950.0 E950.1 E950.2 E950.3 E950.4 E950.5 E962.0 E980.0 E980.1 E980.2 E980.3 E980.4 E980.5
Drug poisoning Unintentional	X40 X41 X42 X43 X44			E850 E851 E852 E853 E854 E855 E856 E857 E858
Drug poisoning Self-harm/Suicide	X60 X61 X62 X63 X64			E950.0 E950.1 E950.2 E950.3 E950.4 E950.5
Drug poisoning Assault/ Homicide	X85			E962.0

Drug poisoning Legal intervention or operation of war	-			-
Drug poisoning Undetermined Intent	Y10 Y11 Y12 Y13 Y14			E980.0 E980.1 E980.2 E980.3 E980.4 E980.5

[1] For ICD-10, the death must have an underlying cause code from among those shown. Contributing cause codes can then be used to indicate the specific type(s) of drug involved but do not specify intent.

[2] For ICD-9-CM, the event can have either an N code listed in the Diagnosis column OR an E code listed in the External Cause of Injury column. Only E codes specify intent.

Table 3: Sub-Categories of Drug Poisoning

	ICD-10 Codes[1]		**ICD-9-CM Codes[2]**	
Category	**Underlying Cause**	**Contributing Cause**	**Diagnosis**	**External Cause of Injury**
Illicit drug poisoning	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.1 T40.5 T40.7 T40.8 T40.9 T43.6	Can't be defined[3]	Can't be defined[3]
Pharmaceutical poisoning[4]	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T36 T37 T38 T39 T40.2 T40.3 T40.4 T41 T42 T43.0 T43.1 T43.2. T43.3 T43.4 T43.5 T43.8 T43.9 T44 T45 T46 T47 T48 T49 T50.0 T50.1 T50.2 T50.3 T50.4 T50.5 T50.6 T50.7 T50.8	960 961 962 963 964 965.00 965.02 965.09 965.1 965.4 965.5 965.6 965.7 965.8 965.9 966 967 968.0 968.1 968.2 968.3 968.4 968.6 968.7 968.9 969.0 969.1 969.2 969.3 969.4 969.5 969.8 969.9 970.0 970.1 970.9 971 972 973 974 975 976 977.0 977.1 977.2 977.3 977.4 978 979	E850.1 E850.2 E850.3 E850.4 E850.5 E850.6 E850.7 E850.8 E850.9 E851 E852 E853 E854.0 E854.3 E854.8 E855.0 E855.1 E855.3 E855.4 E855.5 E855.6 E855.8 E855.9 E856 E857 E858.0 E858.1 E858.2 E858.3 E858.4 E858.5 E858.6 E950.0 E950.1 E950.2 E950.3 E980.0 E980.1 E980.2 E980.3
Prescription opioid poisoning	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.2 T40.3 T40.4	965.00 965.02 965.09	E850.1 E850.2
Other pharmaceutical poisoning	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T36 T37 T38 T39 T41 T42 T43.0 T43.1 T43.2. T43.3 T43.4 T43.5 T43.8 T43.9 T44 T45 T46 T47 T48 T49 T50.0 T50.1 T50.2 T50.3 T50.4 T50.5 T50.6 T50.7 T50.8	960 961 962 963 964 965.1 965.4 965.5 965.6 965.7 965.8 965.9 966 967 968.0 968.1 968.2 968.3 968.4 968.6 968.7 968.9 969.0 969.1 969.2 969.3 969.4 969.5 969.8 969.9 970.0 970.1 970.9 971 972 973 974 975 976 977.0 977.1 977.2 977.3 977.4 978 979	E850.1 E850.2 E850.3 E850.4 E850.5 E850.6 E850.7 E850.8 E850.9 E851 E852 E853 E854.0 E854.3 E854.8 E855.0 E855.1 E855.3 E855.4 E855.5 E855.6 E855.8 E855.9 E856 E857 E858.0 E858.1 E858.2 E858.3 E858.4 E858.5 E858.6 E950.0 E950.1 E950.2 E950.3

				E980.0 E980.1 E980.2 E980.3
Illicit opioid poisoning (opium and heroin)	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.0 T40.1	965.01	E850.0
All opioid poisoning (illicit and prescription)	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.0 T40.1 T40.2 T40.3 T40.4	965.00 965.01 965.02 965.09	E850.0 E850.1 E850.2

[1] For ICD-10, the the death must have an underlying cause code from among those shown. Contributing cause codes can then indicate the specific type of drug involved, but they do not specify intent.

[2] For ICD-9-CM, the event can have either an N code listed in the Diagnosis column OR an E code listed in the External Cause of Injury column. Only E codes specify intent.

[3] Illicit drugs as a group are included in several ICD-9-CM codes that also contain pharmaceuticals, so they are difficult to isolate. Such codes have been omitted from the pharmaceutical codes. Their absence is not likely to have a large effect on overall rates of pharmaceutical poisoning.

[4] "Pharmaceutical" is used as opposed to "prescription" drugs because a small number of codes include both prescription and over-the-counter drugs.

Table 4: Conditions Causing Pain

	ICD-10 Codes		**ICD-9 Codes[1]**	
Category Intent	**Underlying Cause**	**Contributing Cause**	**Diagnosis**	**External Cause of Injury**

Acute Pain from Disease and/or Injury	-	-	282.62 338.11 338.12 338.18 338.19 522.5 522.7 574 577 592 733.1 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 850 851 852 853 854 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 890 891 892 893 894 895 896 897 900 901 902 903 904 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959	E800 E801 E802 E803 E804 E805 E806 E807 E810 E811 E812 E813 E814 E815 E816 E817 E818 E819 E820 E821 E822 E823 E824 E825 E826 E827 E828 E829 E830 E831 E832 E833 E834 E835 E836 E837 E838 E839 E840 E841 E842 E843 E844 E845 E846 E847 E848 E849 E880 E881 E882 E883 E884 E885 E886 E887 E888 E890 E891 E892 E893 E894 E895 E896 E897 E898 E899 E900 E901 E902 E903 E904 E905 E906 E907 E908 E909 E916 E917 E918 E919 E920 E921 E922 E923 E924 E925 E926 E927 E928 E953 E954 E955 E956 E957 E958 E959 E960 E961 E962 E963 E964 E965 E966 E967 E968 E970 E971 E972 E973 E974 E975 E976 E983 E984 E985 E986 E987 E988 E989 E990 E991 E992 E993 E994 E995 E996 E997 E998 E999
Chronic Pain	-	-	338.21 338.22 338.28 338.29 338.4 346.0 346.1 346.2 346.3 346.4 346.5 346.6 346.7 346.8 346.9 307.81 710 711 712 713 714 715	-

			716 717 718 719 720 721 722 723 724 725 726 727 728 729	
Back Pain, either acute or chronic	-	-	307.89 721.2 721.3 724.2 724.4 724.5 724.6 724.7 724.8 846, 846.0 846.1 846.2 846.3 846.8 846.9 847 847.2 847.4 847.9	-

[1] For ICD-9-CM, the event can have either an N code listed in the Diagnosis column OR an E code listed in the External Cause of Injury column.

Appendix 15: Key Stakeholder Interviews

This appendix provides information on how to conduct stakeholder interviews. An interview guide and summary sheet are also included.

Tips for Conducting Key Stakeholder Interviews

Pre-Interview Planning Process

Send a Letter of Introduction

Once you have identified the key stakeholders in your community, send an official letter of introduction. The letter should include information about your coalition, provide background information on the NMUPD initiative, briefly describe the needs and assets assessment that is being conducted, describe how key stakeholders were identified, briefly highlight what sort of information you will request during the interview and how the information will be used, and inform them that they will be contacted by phone in the near future to set up the interview.

Call to Set Up the Interview

After a reasonable amount of time has passed, call each key stakeholder to set up the interview. Introduce yourself and briefly review the information in your letter of introduction. Make an appointment to interview the stakeholder at a time and place that is convenient for him or her.

Send the Questions Ahead of Time

Once the interview has been scheduled, send each key stakeholder a copy of the questions that you will ask. This allows respondents adequate time to prepare their thoughts and to identify any relevant materials ahead of time.

Conducting the Interview

Begin by Introducing Your Project and Purpose

Remind the respondent about your purpose and the ultimate use of the information. Also, explain who will have access to your interview notes and whether the respondents will be identified in any reports or public discussions of your investigation.

Don't Let the Interview Go Much Over an Hour

The people you choose as key stakeholders are likely to be busy. The quality of the conversation can deteriorate if they feel rushed. Many of your respondents may be people with whom you will want to collaborate in the future, so do not antagonize them by letting the interview go on too long.

Don't Move to a New Topic Prematurely

Do not leave important issues hanging—you might run out of time before you can return to them. Also, you will get more useful information by discussing one subject at a time.

Don't Get Stuck on a Question

Sometimes you just won't get the information you want from a particular respondent. Know when to move on so you don't frustrate yourself or antagonize your respondent by trying to elicit information that he or she does not have, cannot articulate, or isn't willing to share.

Use Two Interviewers

While not always feasible, it can be useful to have two people—one to conduct the interview and one to take detailed notes. Primary interviewers will still need to take their own notes to help with summarizing the information at the end of the interview, but this allows them to pay more attention to the interview process itself knowing that their partner is taking more detailed notes.

Use Active Listening Techniques

Pay close attention to what the key stakeholder is telling you. Follow up on anything that is unclear or that you don't understand.

Take Notes

As described above, whether a single interviewer or a team of two conducts the interviews, it is essential to take detailed notes. Do not rely on your memory of the conversation after the fact.

Record the Interview

If possible, record the interview in addition to taking formal notes. This will allow you the opportunity to go back and clarify any points of confusion from your notes. If you choose to record the interviews, you need to obtain permission from the key stakeholder at the beginning of

the interview. It is also traditional when taping an interview to inform respondents that they have the option of going "off the record" at any time they wish—at which point the recorder should be turned off.

End the Interview by Summarizing the Key Points

Summarizing what was said is a good way to end the interview. This step is important because it gives you an opportunity to put what the stakeholder said into your own words. This also allows the stakeholder to correct any mistakes or to emphasize key points that you may have overlooked.

Post-Interview

Review Your Notes Immediately After the Interview

This is the best time to clarify your notes and to add any additional information that was not possible to note during the interview, including information about the tenor of the interview,

such as the degree to which the respondent was cooperative, how strongly he or she felt about issues discussed, whether and why the interview may have been cut short. It's also the best time to create a formal summary of the discussion based on your notes. As discussed above, analysis of the qualitative interview data should involve at least one other person who will be relying on your notes.

Follow Up with a Thank You

Send a thank-you call or letter after each interview. This provides an additional opportunity to thank key stakeholders for their time and participation, and allows you a chance to follow up on any themes or pieces of information that were missed during the interview, or items that you found to be confusing when preparing your summary.

Key Stakeholder Interviewer Guide

This guide is intended for the individual(s) conducting the key stakeholder interview and should not be distributed to the key stakeholders.

Notes:

- Instructions to interviewers appear in brackets.
- All questions and probes should be answered (even if only by a "don't know"). It is not necessary to ask a probe if the respondent has already provided a response in his or her answer to the general question or to another probe.
- Ask the questions/probes in the order shown.
- You may add questions, but do so only after item 9 and ask item 10 before concluding the interview.

- Begin with introductions as needed.
- Explain that you will be taking notes and audio-recording the interview. Discuss the respondent's option of "going off the record."
- Ask, "Do you have any questions about how the interview is going to work?" Answer all questions the respondent may have before proceeding to the questions below.

Part I: Assessment of the Issue

(1) How would you describe the opioid misuse situation in the community?

Probes: What is the severity of the issue? How has the issue changed over time? Who is misusing opioids (age, gender, race)? What are the consequences? When are the use and consequences occurring (specific days of the week or times)? Where are the use and consequences occurring? What are the factors that drive the problem?

(2) What impact, if any, has the misuse of opioids in the community had on the functioning of your agency/organization?

Probes: How much of a burden has this placed on your agency/organization? How has it made your job harder? [Note that this information may be useful in recruiting the respondent's support for your initiative.]

Part II: Steps to Address the Issue

(3) What has your organization done, if anything, to address opioid misuse in the community?

Probes: How well have these efforts worked? Did you work with any other agencies/organizations in the community on this? [If so] Which organization(s), and how and how well did you work together?

(4) What do you think should be done to address opioid misuse in the community?

Part III: Readiness to Address the Issue

(5) What is your assessment of the level of readiness within your agency/organization to address opioid misuse in the community?

Probes: What is the level of interest in the issue? What is the level of willingness to address the issue? What factors would facilitate this work (e.g., what resources are available)? What factors might undermine or complicate this work?

(6) What is your assessment of the level of readiness in the community at large to address opioid misuse?

Probes: Who are the leaders/champions of this issue? What is the level of interest in the issue? What is the level of willingness to address the issue? What factors would facilitate this work (e.g., what resources are available)? What factors might undermine or complicate this work?

Part IV: Data on the Issue

(7) What data are collected by your agency/organization, if any, that might help inform our assessment of opioid misuse in the community or related factors?

Probes: How are the data collected? How often are the data collected? How recent are the data? Where are the current data gaps? Are there any problems with the data? How would we go about getting permission to access the data?

Part V: Resources to Address the Issue

(8) What role, if any, would your agency/organization be willing to play in our efforts to reduce opioid misuse in the community?

(9) What other individuals do you think we should talk to in order to obtain more information about opioid misuse in the community?

Probes: Are there any other individuals in your agency/organization whom we should talk to?

Part VI: Additional Comments, Observations, or Questions

(10) Do you have any other comments or observations you would like to make?

Probes: Do you have any questions about this project?

Key Stakeholder Interview Summary Form

Interviewers should use this form to record information related to setting up an interview and, if you conduct the interview, to provide a summary of the information you gathered. If you contact someone and he or she does not want to participate, record that information at the top of the form.

Key Stakeholder Contact Information Name:	**Date Contacted:**
Organization:	**Response?** (Yes No)
Address:	**Interview Date:**

Phone:	**Interview Time:**
Fax:	**Location:**
E-Mail:	**Interviewer:**

Appendix 16: Tips for Conducting Focus Groups

The following materials provide guidance on conducting focus groups. Focus groups are small, structured group discussions during which respondents reply to open-ended questions in their own words. Focus group subjects (or participants) are chosen to represent the larger group of people about whom you want information—your target audience. Discussion typically focuses on one or two specific topics.

A. Developing Questions—Focus Group Protocol

A1. Develop a protocol

A focus group needs a plan. Give some thought to what you want to learn from the group and the questions that will best elicit this information. Develop a written protocol that includes primary questions, potential follow-up questions (or probes), the order in which these questions should be asked, and introductory and closing statements.

A2. Rely on a small number of core questions

Your protocol should include between 10 and 12 questions. When developing a protocol, imagine that each participant will respond to every question. Focus groups should not last more than 90 minutes.

Use broad, open-ended questions. Don't ask questions that call for a "yes" or "no" response, as they tend to end discussion and make it harder to learn why people believe what they do.

A3. Ask participants to speak from their own experience

In general, it is more useful to have participants speak from their own experience than to ask them what other people do or think or to predict what they might do or think in the future.

A4. Start easy

Start with a question that everyone should be able to answer and that doesn't require much disclosure. This will help get everyone talking and provide you with an indication of people's styles so you can better manage the group.

A5. End by asking if participants have anything to add to the discussion

This may result in some incredibly useful information that you did not anticipate.

B. Group Characteristics and Composition

B1. Focus groups are typically composed of 8 to 10 participants

If the group gets much smaller, it can be difficult to sustain a lively interesting discussion. If it gets much larger, people have less opportunity to participate, which often leads to disruptive side conversations among small clusters of two or three participants.

B2. The environment should be conducive to open discussion

It is the job of the facilitator to create an environment that nurtures differences in points of view, protects participants, and does not pressure participants to reach consensus or vote on issues discussed.

B3. Typical focus group discussions last 60–90 minutes

In addition, you should allocate another 30 minutes (15 minutes at the beginning and 15 minutes at the end) in order to check people in, orient them to the group, have them introduce themselves, and lay out the ground rules for the discussion, and then to debrief at the end and allow them to ask any questions they might have about the study and or how the information will be used.

B4. Participants should share characteristics that relate to the topic being investigated

For example, you may convene a group of first responders (police, EMT workers, etc.). You should not recruit participants who know little or nothing about the issues being discussed.

B5. Participants should be similar to one another (though not in their opinions about the topics being investigated)

The rule for selecting focus group participants is commonality, not diversity. This is based on research that shows that people are more likely to reveal their opinions and beliefs and to talk about sensitive issues when they are with people they perceive to be like themselves. People tend to defer to those whom they perceive to be more knowledgeable than they are, wealthier than they are, and more influential than they are. You don't want to combine dissimilar people in focus groups—for example, don't put together people with high levels of education and people with low levels of education.

B6. Participants should be selected so that they are likely to represent the views and opinions of a defined population

For example, focus group members might be chosen to represent all police officers in a community, or all ED nurses.

B7. Participants should be unfamiliar with one another

This helps to ensure the validity of the data by encouraging participants to state their real opinions and views. When participants know one another, (1) they are often less likely to reveal highly personal or sensitive information, (2) they are more likely to express views that conform

to those of others in the group (especially others who they perceive as having some power or influence outside the group), and (3) they may respond to questions based on their past experiences with one another, which can confound the data.

C. Locating and Recruiting Participants

C1. When recruiting participants, try to define the group as precisely as possible

It usually makes sense to consider gender, age, occupation, geographic location, ethnicity, and language. First think about what you want, then about how you might identify potential members who match your needs, then about whether they are so diverse that you need to eliminate some or put some in a separate group.

C2. Finding participants

There are several ways to reach potential focus group participants. One way is to go where they are. For example, to recruit law enforcement officers, you might work with their unions. You might also put announcements in local newspapers and on public access cable stations or post notices in public places such as libraries, supermarkets, or public health clinics. Once you find potential participants, simple screening questions can help you decide whom to include.

C3. Convincing people to participate

Make an upbeat pitch. People may be more likely to participate if they believe that the project will benefit their community. Remind them that participating in the group gives them a chance to offer their opinions and experience to the project.

Make it easy. Schedule groups at a convenient time (one that will not interfere with, for example, the participants' jobs) and in a convenient place (one that is easy to reach by public transportation and has adequate parking).

C4. What do you say?

You might mention the following:

- The name of the agency or organization sponsoring the research or conducting the focus group
- The reason the focus group is being conducted
- How they were selected
- What they will do in the group (for example, "If you agree to participate in the group, you will be asked to take part in a one-hour discussion about misuse of drugs containing opioids. The discussion will include 8–10 other community members and two discussion leaders")
- Who is eligible to participate in the group
- How their confidentiality will be protected and how they will be expected to respect the confidentiality of the other participants

-
- When and where the focus group will take place, and how much time it will take
- (Optional) That a reminder letter will be sent to participants
- Your name and telephone number so they can call you if they have additional questions or discover they are unable to attend the group

C5. What can be done to ensure that participants attend?

Send a follow-up letter, and telephone each participant the day before the meeting. Recruit more subjects than you need. Recruit 12 people with the hope that 10 show up.

D. Setting and Other Conditions

D1. Provide refreshments

It is a good idea to serve light refreshments. Sometimes members are served a meal and given a chance to socialize under the supervision of the group leaders. The theory is that this increases their willingness to converse once the group convenes. If you do this, it is not wise to allow subjects to speak about the content of the group before it begins—it tends to solidify positions and to make the group discussion something of an anticlimax.

D2. Use a comfortable and private meeting space

Don't hold focus groups in high-traffic areas. The surroundings should be comfortable and private so participants feel free to speak openly. For example, use a private conference room.

E. Typical Opening Procedures

E1. Keep an attendance list

Keep a checklist of those expected to attend the group.

E2. Determine how to deal with late arrivals

Generally it's best to dismiss people who arrive late because it is difficult to integrate them successfully into a group discussion that has already started.

E3. Obtain informed consent if needed

Generally, informed consent is not necessary, provided that the group comprises adults, the topic is not sensitive, and the questions do not focus on members' illegal or potentially embarrassing behavior. With minors, informed consent from a parent or guardian is always needed.

E4. Distribute name tags/cards (first names only)

Distribute name tags/cards with the participants' first names written on them. You can also have participants fill out their own cards/tags (instructing them to use their first name only).

F. Conducting the Focus Group

F1. Use two facilitators—a primary and a secondary leader

There is a lot to manage in a focus group, and while it is possible to use one leader, two are better. One person is primarily responsible for putting questions to the group and managing the group process. This person must be experienced with group process. The assistant leader can assist in the discussion but is mostly responsible for taking detailed notes. Both leaders should take notes, but the assistant will have more time to keep careful notes. He or she is also responsible for managing latecomers, housekeeping issues, etc.

F2. Read the opening remarks statement

Begin the group by reading the opening remarks statement to all group members and having group members introduce themselves to one another.

F3. Follow your focus group protocol

Ask the questions in the order specified in your protocol. Not following your plan can get confusing, both to you and the participants.

F4. Invite and promote participation by all members

At times it is necessary to ask participants who have not spoken to contribute. Use prompts such as, “John, we haven’t heard your opinions about this issue yet. What do you think?” But don’t put people on the spot if they just don’t have anything to say.

F5. Wait for responses

Give people time to think. Don’t bias their answers by suggesting possible responses.

F6. Clarify responses using neutral probes

For example: Can you explain further? Can you give us an example of what you mean? Is there anything you would like to add? Can you say more about that? I’m not sure I understand, can you help me out?

F7. Elicit and protect minority opinion

Focus groups should help you understand the perspectives and experiences present in your target population, not just the perspectives and beliefs of the majority of that population.

F8. Do not state or show your opinion

Avoid body language that reflects how you feel—especially nodding or shaking your head. Avoid approving or disapproving comments after people speak, such as saying “Good” or “Correct.”

F9. Maintain order

It is the leader's job to cope with our favorite group members—the expert, the endless rambler, the shy participant, and the dominant talker. It is better to intervene with them a bit early than it is to let things go.

G. Note Taking

G1. Some Tips for Taking Notes

Use a "Focus Group Notes" form to assist you in taking notes. Here are some other helpful tips:

- Indicate individual responses or different points of view held by several members by beginning notes for each on a new line.
- Try to identify speakers so you can keep track of individual themes.
- Try to record the number of people holding various views.
- Try to record important comments verbatim.
- Review your notes and summarize them immediately after the group ends.

H. Debriefing

H1. Record observations of the group process

The two leaders should meet immediately after the group ends to share and record their views about the group. Consider the following issues:

- Were there any major departures from the protocol?
- Were there any unusual events? If so, how were they handled?
- Was there sufficient time to complete the protocol comfortably? If not, why not? What issues were cut short?
- Was the group fairly unified in its views, or was there diversity of opinion? If there was diversity, did it seem associated with particular types of participants, such as males versus females?
- Were there were any major disagreements in the group? If so, what were they?
- What was the group process like—were people bored, restless, excited, angry, silent, confused?
- What, if anything, should be changed for the next group?

Appendix 17: MassCALL2 Opioid Overdose Annotated Bibliography (November 2012)

Developed by Center for the Application of Prevention Technologies/ Northeast Resource Team

INTERVENING VARIABLES

The following list of intervening variables, risk factors, and high-risk populations has been updated from the original MassCALL2 guidance document titled Revised 2008. The following are updates to the literature from 2008 MassCALL2 guidance documents and contains articles from 2007 to October 2012. The original citations from the 2008 MassCALL2 guidance document are omitted from the current version, although the categorization/groupings have been retained so that the original citations might be added back in to represent a broader picture of the supporting literature base.

Actively injecting drug users with HIV/AIDS or Hepatitis C Virus (HCV) (Bohnert et al. 2012)

Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement (no new articles for 2012 update).

Co-morbid substance abuse and mental health (e.g., anxiety, depression) issues (Havens et al. 2012).

Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opioids (Havens et al. 2012; Jenkins et al. 2011).

Drug users who drop out of treatment especially during the first 12 months following dropout (no new articles for 2012 update)

Fluctuations in heroin purity levels (no new articles for 2012 update)

Individuals who use opioids alone (no new articles for 2012 update)

Intravenous drug users presenting in the Emergency Department with soft tissue infections (no new articles for 2012 update).

Intravenous drug users with impaired hepatic or pulmonary function (no new articles with 2012 update)

History of intravenous drug use (Bohnert et al. 2012; Havens et al. 2012; Silva et al. 2012)

Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids (Hickman et al. 2006; Jenkins et al. 2011)

Opioid users who are homeless or marginally housed (Bohnert et al. 2012; Jenkins et al. 2011)

New with 2012 Update

Opioid users who had prior history of non-fatal overdose (Bohnert et al. 2012)

Opioid users who had witnessed overdose (Bohnert et al. 2012; Havens et al. 2011; Silva et al. 2012)

Active methadone prescription (Hickman et al. 2006)

Overdose Prevention—Strategies for Opioid Users/Bystanders

Provide information/training to opioid users and bystanders (friends, family, co-users) on overdose risk factors Phillips, P., C. Glover, et al. (2009).

Provide information/training to opioid users and bystanders (friends, family, co-users) on overdose prevention strategies including use of including intramuscular, subcutaneous and intranasal naloxone (narcan) (Phillips, P., C. Glover, et al. (2009); Dope Project; Enteen, L., J. Bauer, et al. (2010); Kerr et al. (2008); Strang et al. (2008).

Overdose Prevention—Strategies for Healthcare Providers

Identification of individuals at-risk for overdose through screening conducted by emergency department (ED) staff, emergency medical technicians (EMT), and/or hospital staff (No new articles for 2012 update).

Identification of individuals at-risk for overdose through targeting intravenous drug users with soft tissue infections seeking care in the Emergency Department, hospital, or primary care physician (No new articles for 2012 update).

EMTs and first responders distribute information about causes and consequences of overdose to victims and bystanders – especially those refusing transport to the hospital (no new articles for 2012 update).

Deliver overdose risk and response training (including intramuscular, subcutaneous and intranasal naloxone [narcan]) to clients recruited from needle exchange sites (Bennett, A. S., A. Bell, et al. (2011); Doe-Simkins et al. (2008); Piper, T. M., S. Stancliff, et al. (2008); Sherman et al. (2008); Sporer and Kral 2007; Wheeler, E., P. J. Davidson, et al. (2010).

Overdose Prevention—Strategies for Opioid Users in Treatment

Provide information on how to reduce overdose risk for opioid users admitted to treatment– including:

- Information on loss of drug tolerance after completion or withdrawal from treatment (Walley et al. 2012)
- Increased risk of overdose for clients in the first few weeks of initiating methadone substitution therapy (Walley et al. 2012)
- Increased risk of overdose using heroin or other opiates while on methadone or other replacement/maintenance therapy (Walley et al. 2012)
- Incorporate information on opioid overdose prevention into relapse management trainings – how to avoid overdose if relapse occurs (no new articles with 2012 update)
- (New 2012) Use of “cascade method” training model for clinicians on recognition of opioid overdose risk factors, signs of opioid overdose and administration of naloxone so that they can train other clinicians and clients in overdose prevention and reversal strategies (Mayet et. al. 2011)

Identification of individuals at-risk for overdose through screening detoxification patients for mental health issues (depressive symptoms) and other risk factors for overdose – particularly history of prior overdose (Bohnert et al. 2012).

Provide education and support for individuals completing detoxification particularly information on loss of tolerance after detoxification (Walley et al. 2012).

Overdose Prevention—Strategies for Criminal Justice System Personnel

Provide incarcerates with a history of opioid use with overdose prevention information upon release from prison or jail (no new articles with 2012 update)

Provide incarcerates with a history of opioid use with overdose prevention information PRIOR to release from prison or jail including information about risks of re-initiation of use after release (Wakeman et al. 2009; Thurman and Bowman 2007)

Utilize parole/probation officers to provide former incarcerates that have a history of opioid use with overdose prevention information during re-entry into the community (no new articles with 2012 update)

Bennett, A. S., A. Bell, et al. (2011). "Characteristics of an overdose prevention, response, and naloxone distribution program in Pittsburgh and Allegheny County, Pennsylvania." Journal Of Urban Health: Bulletin Of The New York Academy Of Medicine 88(6): 1020-1030. *In 2002 Prevention Point Pittsburgh (PPP), a public health advocacy organization that operates Allegheny County's only needle exchange program, implemented an Overdose Prevention Program (OPP) in response to an increase in heroin-related and opioid-related overdose fatalities in the region. In 2005, the OPP augmented overdose prevention and response trainings to include naloxone training and prescription. The trainings included information on identifying overdoses and overdose risk factors, performing rescue breathing, and safely administering naloxone. 426 individuals participated in the OPP between July 1, 2005, and December 31, 2008 and of these, 89 individuals reported administering naloxone in response to an overdose in a total of 249 separate overdose episodes. Of these 249 overdose episodes in which naloxone was administered, participants reported 96% were reversed. Participants who used naloxone reported very few problems, and only two fatalities were recorded. 61% of study participants also reported performing rescue breathing in an overdose situation indicates that the general knowledge and skills conveyed during trainings were being translated into action.*

Doe-Simkins, M., A. Y. Walley, et al. (2009). "Saved by the Nose: Bystander-Administered Intranasal Naloxone Hydrochloride for Opioid Overdose." American Journal of Public Health **99**(5): 788-791. *The Boston Public Health Commission passed a regulation in 2006 authorizing distribution of intranasal naloxone by trained nonmedical public health workers as part of efforts to reduce fatalities from opioid overdose. This intervention specifically targeted bystanders who could be trained to recognize symptoms of overdose and administer intranasal naloxone to reverse overdose. The 15 minute bystander training covered overdose prevention techniques and included distribution of the naloxone with an atomizer for intranasal administration. The program provided training and intranasal naloxone to 385 participants who reported 74 successful overdose reversals during a 15 month period.*

Enteen, L., J. Bauer, et al. (2010). "Overdose Prevention and Naloxone Prescription for Opioid Users in San Francisco." Journal of Urban Health 87(6): 931-941. *Presents findings from the Drug Overdose Prevention and Education (DOPE) Project which was the first naloxone prescription program (NPP) established in partnership with a county health department (San Francisco Department of Public Health), and is one of the longest running NPPs in the USA. From September 2003 to December 2009, 1,942 individuals were trained and prescribed naloxone through the DOPE Project, of whom 24% returned to receive a naloxone refill and 11% reported using naloxone during an overdose event. Of 399 overdose events where naloxone was used, participants reported that 89%were reversed. In addition, 83%of participants who reported overdose reversal attributed the reversal to their administration of naloxone, and less than 1% reported serious adverse effects. Side effects included several instances of seizers and negative effects included vomiting and "anger" or discomfort expressed by victim upon waking. Victim death was reported by participants in four (1%) events where naloxone was used, but in three of these cases participants reported that the victim had been unconscious for an undetermined amount of time before they were found.*

Hickman, M., S. Carrivick, et al. (2007)."*London audit of drug-related overdose deaths: characteristics and typology, and implications for prevention and monitoring."* Addiction ***102****(2): 317-323The authors, one an expert in toxicology and the other in emergency medicine and poisons conducted an audit of 148 drug overdose deaths (involving heroin, methadone, dihydrocodeine, cocaine, amphetamine or MDMA) investigated by coroners in London, England during 2003. Information on toxicology, pathology and circumstances were used to identify drug(s) implicated in the death. Poly- or multiple drug use was detected in the overwhelming majority of deaths (90% of the fatalities). A witness was present and the death was not instantaneous in 92 (61%) cases, although evidence in the coronial file suggested that in the majority of cases the overdose went unnoticed until too late to intervene. In all, 15 (one in 10) of the deceased were released from prison within 3 months of death; and 37 (one in four) were reported as in receipt of a methadone prescription.*

Jenkins, L. M., C. J. Banta-Green, et al. “Risk factors for nonfatal overdose at Seattle-area syringe exchanges.” Journal Of Urban Health: Bulletin Of The New York Academy Of Medicine **88**(1): 118-128. *In a survey of 443 participants at syringe exchanges in Seattle, Washington, 16% had overdosed in the last year. Only recent incarceration and sharing of injection materials were significantly associated with overdose in a multivariate logic regression analysis.*

Havens, J. R., C. B. Oser, et al. “Individual and network factors associated with non-fatal overdose among rural Appalachian drug users.” Drug And Alcohol Dependence **115**(1-2): 107-112. *The authors examined correlates of non-fatal overdose and witnessed overdose among rural Appalachian drug users participating in a longitudinal study of social networks and HIV transmission. Factors independently associated with a greater number of overdoses included having ever been in drug treatment, past 30-day injection of prescription opioids, meeting the criteria for post-traumatic stress disorder and/or antisocial personality disorder and having more members in one’s support network. The authors described the findings related to the number of members in one’s support network as counterintuitive, but theorized that this may be due to a higher proportion of network members abusing substances and thus providing more access or support for substance use. Rural drug users with history of overdose were more likely to have injected with prescription opioids--which is different from urban heroin users. The authors suggested that current overdose prevention strategies employed in urban settings may be effective in preventing fatal overdose in this population.*

Kerr, D., P. Dietze, et al. (2008). “Attitudes of Australian heroin users to peer distribution of naloxone for heroin overdose: perspectives on intranasal administration.” Journal Of Urban Health: Bulletin Of The New York Academy Of Medicine **85**(3): 352-360. *This study explored attitudes of 99 Australian IDUs to administration of naloxone to others after heroin overdose, and preferences for method of administration. The majority of the sample reported positive attitudes toward naloxone distribution (good to very good idea: 89%) and 92% said they were willing to participate in a related training program. Some participants raised concerns about peer administration including the competence of IDUs to administer naloxone in an emergency, victim response on wakening and legal implications. Most (74%) preferred intranasal administration in comparison to other administration methods (21%).*

Mayet, S., V. Manning, et al. “Impact of training for healthcare professionals on how to manage an opioid overdose with naloxone: Effective, but dissemination is challenging.” International Journal of Drug Policy **22**(1): 9-15. *Clinicians from addiction services across England received training about overdose risk signs and overdose management and prevention strategies including administration of naloxone. Clinicians were supposes to train other clinicians (train the trainer) and the cadres of trained clinicians would in turn train patients in overdose prevention strategies (“cascade method”). Participants self-completed pre and post-tests consisting of a structured questionnaire recording overdose knowledge, confidence and barriers to implementation. One hundred clinicians were trained initially, who trained a further 119 clinicians (n =219) and thereafter trained 239 drug users. The clinicians demonstrated statistically significant improvements in knowledge opioid overdose risk signs and actions and willingness to use naloxone in an opioid overdose after training. Barriers to implementing training were clinician time and confidence, service resources, client willingness and naloxone formulation. The authors concluded that the training clinicians how to manage an opioid overdose and administer naloxone was effective but that that “cascade method” was only modestly successful for disseminating training to a large clinician workforce.*

“Naloxone distribution saves more than 400 lives in SF overdose project.” DATA: The Brown University Digest of Addiction Theory & Application 29(12): 4-5. *Overview of San Francisco’s Drug Overdose Prevention and Education (DOPE) Project, the first naloxone prescription program supported by a county department of public health. It is modeled on underground community-based programs that conduct outreach to street-level drug users via needle exchange programs. County medical providers conducted training and distributed prefilled syringes to syringe exchange programs, methadone maintenance and buprenorphine treatment programs, and single-room occupancy hotels about 8 times a month throughout San Francisco. The project changed from dispensing intramuscular syringes to intranasal administration in the spring of 2010 because of preconceptions around giving a drug user a medication that’s injected*

and researcher Joshua Bamberger, M.D. then noticed a large uptick in dispensation of the intranasal naloxone. There were 399 Participant-reported responses and outcomes of opioid overdose events where naloxone was administered, among participants receiving a naloxone refill from the DOPE Project from2004-2009. 36% used naloxone on a companion (e.g. friend, spouse), 15% on a stranger, and 21% used it on themselves. In 75% of the cases the participant reported using another strategy in addition to using naloxone including Sternum rub, awakening the victim, and rescue breathing. 83% of the reported situations were reversed due to participant administering naloxone.

Horyniak, D., P. Higgs, et al. "An evaluation of a heroin overdose prevention and education campaign." Drug and Alcohol Review **29**(1): 5-11. *Provides an overview of a Victoria Department of Human Services (Australia) campaign targeted at injecting drug users' (IDU) and details the campaign's evaluation. The campaign was aimed at increasing injecting drug users' (IDU) awareness of overdose risks and prevention strategies as well as encouraging them to access treatment. Stickers, wallet cards, and posters featuring five key messages were distributed via needle and syringe programs (NSP) and other drug and alcohol services between November 2005 and April 2006. An evaluation of the campaign was conducted in late 2006. The evaluation included survey questions and follow-up interviews with IDU who were NSP clients during the campaign period and interviews with 9 NSP staff and other key stakeholders. While key experts felt that the campaign messages had lasting impact for at least some IDU, these positive impressions did not show up in NSP client data, with less than one quarter of all campaign messages being mentioned by a significantly higher proportion of clients during the post-campaign period compared with baseline. Key experts perceived the greatest weakness of the campaign to be the delay between issue identification and the introduction of campaign materials. Article not used due to very small n and lack of reliability/generalizability.*

Phillips Phillips, P., C. Glover, et al. (2009). "Using a Group Approach to Preventing Heroin Overdose in North London." Drugs: Education, Prevention & Policy **16**(4): 328-342. *Outlines a group psycho-education intervention used to assist injecting heroin users in preventing, and responding to overdose. An 'OD Prevention' group was advertised in a London prescribing service and associated primary care unit. The intervention took place in a small group over one afternoon (3.5 hours), and trained participants, who were all injecting heroin users, in recognizing, and responding to heroin overdoses (defining overdose, discussing known risk factors and on-site instruction in cardio-pulmonary resuscitation (CPR). Participants completed pre- and post-group questionnaires. Of the107 people who attended the group, 42% had witnessed others' overdose and 29% had witnessed one or more deaths as a result of overdose. Following the group intervention more participants reported feeling 'quite or very confident' in managing an OD situation, confident in undertaking CPR with someone who had overdosed, and were less likely to pursue 'folklore' remedies to overdose.*

Bohnert, A. S. B., M. Tracy, et al. "Characteristics of drug users who witness many overdoses: implications for overdose prevention." Drug And Alcohol Dependence **120**(1-3): 168-173. *A cross-sectional study of 1184 New York City residents aged 18 and older with heroin and/or cocaine use in the past two months revealed a number of factors predicting risk for witnessing overdose. The participants were part of a larger study focused on determinants of HIV and concurrent were administered structured interviews exploring various probing overdose response, drug use behavior, treatment history and demographic information. Factors predictive of witnessing overdose included being male, history of homelessness, prior non-fatal overdose, and history of heroin and injection drug use. Respondents who reported witnessing a greater number of overdoses also reported using ineffective actions to prevent or reverse overrode. The implications of the study are that witnessing overdose. The authors proposed that individuals who have witnessed many overdoses are likely key targets of overdose response training.*

Piper, T. M., S. Stancliff, et al. (2008). "Evaluation of a naloxone distribution and administration program in New York City." Substance Use & Misuse 43(7): 858-870. *This report summarizes the first systematic evaluation of large-scale naloxone distribution among injection drug users (IDUs) in the United States. In 2005 an evaluation was conducted of a comprehensive overdose prevention and naloxone administration training program in New York City. One hundred twenty-two IDUs at syringe exchange programs (SEPs) were trained in Skills and Knowledge on Overdose Prevention (SKOOP), and all were given a prescription for naloxone by a physician. Participants in SKOOP were over the age of 18, current*

participants of SEPs, and current or former drug users. Participants completed a questionnaire that assessed overdose experience and naloxone use. Naloxone was administered 82 times; 68 (83.0%) persons who had naloxone administered to them lived, and the outcome of 14 (17.1%) overdoses were unknown. Ninety-seven of 118 participants (82.2%) said they felt comfortable to very comfortable using naloxone if indicated; 94 of 109 (86.2%) said they would want naloxone administered if overdosing. In addition to administering the naloxone, responses to overdose included trying to cause pain, administering a shower or bath, and/or applying ice (41, 82%) and calling an ambulance (37, 74%). The valuation supports Naloxone administration by IDUs as a feasible as part of a comprehensive overdose prevention.

Sherman, S. G., D. S. Gann, et al. (2008). "A qualitative study of overdose responses among Chicago IDUs." Harm Reduction Journal **5**: 2-2. *The current study is based upon qualitative interviews (N = 31) with injection drug using clients of the Chicago Recovery Alliance needle exchange program who had witnessed an overdose in the past six months to determine the effectiveness of use of naloxone to reverse overdose. The interviews explored participants' drug use history, personal overdose experiences, and details concerning their last witnessed overdose. Verbatim transcripts were coded and analyzed thematically to address major study questions. Participants were 81% were male, their median age was 38. They reported having a median of a 10 year history of injection drug use and witnessing a median of six overdoses in their lifetime. All described overdoses were recognized and responded to quickly. None of the overdoses resulted in a fatality and naloxone was successfully administered in 58% of the last witnessed overdoses. Emergency medical personnel were called in 10 of the 31 described overdoses, including four in which participants administered naloxone. The overwhelming majority of experiences with police and paramedics were positive. The authors reported that overdose prevention efforts build on extensive knowledge possessed by IDUs including use of naloxone are an effective risk reduction strategy for overdose.*

Silva, K., S. M. Schrager, et al. (2012). "Factors associated with history of non-fatal overdose among young nonmedical users of prescription drugs." Drug and Alcohol Dependence. *This article contains the results of a cross sectional study of 16-25 year old non-medical users of prescription opioids and tranquilizers and examined the prevalence and correlates of lifetime non-fatal overdose (OD) in New York, NY and Los Angeles, CA (n=596). Lifetime prevalence of non-fatal overdose involving prescription opioids and/or tranquilizers was 23.6%. Factors associated with increased risk of non-fatal overdose included lower social class while growing, having ever received care at a psychiatric hospital, ever witnessing a family member OD on drugs, being prescribed tranquilizers, ever snorting or sniffing opioids, injecting tranquilizers and past 90-day injection drug use. Participants who reported past 90-day stimulant misuse had lower odds of reporting OD compared to those who were not recent stimulant users.*

*Sporer, K. A. and A. H. Kral (2007). "Prescription naloxone: a novel approach to heroin overdose prevention." Annals Of Emergency Medicine **49**(2): 172-177.* This article reviews the use of naloxone education programs and their effectiveness in reducing overdose. Key findings include greater efficacy of educational curricula accompanying naloxone administration offered in shorter sessions offered at needle exchange programs as well as intramuscular or subcutaneous administration of naloxone over intranasal administration.

Strang, J., V. Manning, et al. (2008). "Family carers and the prevention of heroin overdose deaths: Unmet training need and overlooked intervention opportunity of resuscitation training and supply of naloxone." Drugs: Education, Prevention & Policy **15**(2): 211-218. *Carers attending local support groups for friends and families of drug users were surveyed to assess experience of witnessing overdose, interest in receiving training on overdose management and their training needs (n=147). The sample was drawn from local support groups for families and friends of drug users throughout England. Carers were usually parents (80%); 89% were currently caring for a heroin user of whom 49% had already had an overdose (93% involving opiates). One third had witnessed heroin being used, and 31 had witnessed an overdose. Respondents reported a lack of knowledge of how to effectively manage an overdose. Only a quarter had received advice on overdose management (26%) and only one third knew of the opiate antagonist naloxone (33%). The majority (88%) wanted training in overdose management, especially in emergency naloxone administration (88%). Authors recommended targeting carers for bystander training on management of opioid overdose.*

Wakeman, S. E., S. E. Bowman, et al. (2009). “Preventing death among the recently incarcerated: an argument for naloxone prescription before release.” Journal of Addictive Diseases **28**(2): 124-129. *This study assessed overdose experience and response among long-term opiate users involved in the criminal justice system. One hundred thirty-seven subjects from a project linking opiate-dependent individuals being released from prison with methadone maintenance programs were asked 73 questions regarding overdose. Most had experienced (53%) and witnessed multiple overdoses (80%); 911 was often not called. The majority of personal overdoses occurred within 1 month of having been institutionalized. Nearly all participants expressed an interest in being trained in overdose prevention with Naloxone. The authors advocated for use of pre-release program of overdose prevention education, including Naloxone prescription, for inmates with a history of opiate addiction to prevent overdose deaths.*

Walley, A. Y., M. Doe-Simkins, et al. (2012). “Opioid overdose prevention with intranasal naloxone among people who take methadone.” Journal of Substance Abuse Treatment. *This study describes the implementation of overdose education and naloxone distribution (OEND) among people taking methadone in the previous 30 days in various settings in Massachusetts. OEND programs are public health interventions that address overdose risk among people who take methadone and their social networks. From 2008 to 2010, 1553 participants received OEND who had taken methadone in the past 30days. Settings included inpatient detoxification (47%), HIV prevention programs (25%), methadone maintenance treatment programs (MMTP) (17%), and other settings (11%). Previous overdose, recent inpatient detoxification and incarceration, and polysubstance use were overdose risks factors common among all groups. Participants reported 92 overdose rescues.*

Wheeler, E., P. J. Davidson, et al. “Community-Based Opioid Overdose Prevention Programs Providing Naloxone- United States, 2010.” JAMA: Journal of the American Medical Association 307(13): 1357-1364. *This report summarizes the findings for the 48 of the 50 programs known to distribute naloxone in the United States that completed an online survey the Harm Reduction Coalition e-mailed in October of 2012. The 48 responding programs (including health departments) were located in 15 states and the District of Columbia and provided information for 188 local programs that distributed naloxone. Since the first opioid overdose prevention program began distributing naloxone in 1996, the respondent programs reported training and distributing naloxone to 53,032 persons and receiving reports of 10,171 overdose reversals. During a recent 12-month period, respondents had distributed an estimated 38,860 naloxone vials. Twenty-one (43.7%) responding programs reported problems obtaining naloxone in the “past few months” before the survey. The most frequently reported reasons for difficulties obtaining naloxone were the cost of naloxone relative to available funding and the inability of suppliers to fill orders. In this analysis, the majority (76.0%) of the 25 states with 2008 age-adjusted drug overdose death rates higher than the median did not have a community based opioid overdose prevention program that distributed naloxone. The findings in this report suggest that distribution of naloxone and training in its administration might have prevented numerous deaths from opioid overdoses.*

Appendix 18: Capacity Building Worksheet

Instructions: Fill out this worksheet for each identified area of needed growth.

Issue / Area of Growth:

How the Capacity Need Will Be Addressed:

Person(s) Responsible:

Timeline:

Measure of Success:

Appendix 19: Action Plan Template

Example:

Strategy 1: Work with law enforcement to address user/bystander fear of contacting police or other emergency services when an opioid overdose occurs.

Action Steps	Who Is Responsible	Timeline	Measure of Success

Appendix 20: Strategic Plan Template

This template outlines the sections and content of the regional strategic plan that must be submitted to BSAS no later than **July 24, 2015**. Please note that the term "OD prevention" is used in this document versus "consequences of opioid use" – these terms are synonymous. If you are focusing on a consequence other than overdose, please note this in the plan. Also, note that this plan covers the time period beginning September 1, 2015 when you move to full implementation – it does not cover what you may have done during the pilot period.

NOTE: A draft of this plan must be submitted to your MassTAPP TA provider for review no later than **June 19, 2015** prior to the final submission to BSAS on **July 24, 2015**.

OVERVIEW/ABSTRACT (1 page max)

Please provide a one-page summary of your plan that includes the following:

- A brief description of your Cluster (include any demographic, or other information related to cultural or environmental factors, that are relevant to the issue).
- The intervening variable(s) you are targeting related to opioid consumption (i.e. primary prevention).
- The intervening variable(s) you are targeting related to opioid consequences (i.e. OD prevention)
- The strategies you will be implementing related to opioid consumption (including the area[s] of your Cluster in which they will be implemented).
- The strategies you will be implementing related to OD prevention (including the area[s] in which they will be implemented).

STEP 1: ASSESSMENT

1.1a. Local Assessment Data on Opioid Consumption

Process

- Briefly describe the process you used to collect data on opioid **consumption** across your Cluster. Were there any major data gaps or challenges that you faced during the assessment process?
- What data sources and techniques for data collection did you use? (e.g. focus groups, surveys, key informant interviews)

Results

Describe the results/findings of your assessment of opioid consumption in your Cluster, including the following:

- Numbers/rates demonstrating your best source(s) of evidence related to what opioid consumption looks like in your Cluster. Please identify the source(s) of information for any quantitative (e.g., statistics) and qualitative data provided.
- Any gaps in the opioid consumption data available that you feel limit your understanding of the issue and how you plan to address these gaps moving forward.
- Any additional information that you think would help the reader understand how the assessment of opioid consumption data was conducted.

1.1b. Local Assessment Data on Opioid Consequences

Process

- Briefly describe the process you used to collect data on opioid **consequences** across your Cluster. Were there any major data gaps or challenges that you faced during the assessment process?
- What data sources and techniques for data collection did you use? (e.g. focus groups, surveys, key informant interviews)

Results

Describe the results/findings of your assessment of opioid consequences in your Cluster, including the following:

- Numbers/rates demonstrating your best source(s) of evidence related to what opioid overdose looks like in your Cluster. Please identify the source(s) of information for any quantitative (e.g., statistics) and qualitative data provided.
- Any gaps in the opioid overdose data available that you feel limit your understanding of the issue and how your plan to address these gaps moving forward.
- Any additional information that you think would help the reader understand how the assessment of opioid overdose data was conducted.

1.2a. Assessing Local Intervening Variables (IVs) on Opioid Consumption

Process

- How did you collect data on IVs as they relate to opioid consumption in your Cluster?

Results

Describe the results/findings of your assessment of intervening variables (IVs) related to opioid consumption in your Cluster, including:

- List all IVs investigated related to opioid consumption – including data (qualitative and/or qualitative) on each variable and the source(s) of evidence.

- Any gaps in the opioid consumption IV data available that you feel limit your understanding of the issue and how your plan to address these gaps moving forward.
- Any additional information that you think would help the reader understand how the assessment of opioid consumption IV data was conducted.

1.2b. Assessing Local Intervening Variables (IVs) on Opioid Consequences

Process

- How did you collect data on IVs as they relate to opioid **consequences** in your Cluster?

Results

Describe the results/findings of your assessment of intervening variables (IV) related to opioid consequences in your Cluster, including:

- List all IVs investigated related to opioid consequences – including data (quantitative and/or qualitative) on each variable and the source(s) of evidence.
- Any gaps in the opioid consequence IV data available that you feel limit your understanding of the issue and how your plan to address these gaps moving forward.
- Any additional information that you think would help the reader understand how the assessment of opioid consequence IV data was conducted.

TECHNICAL ASSISTANCE

- What assistance, if any, do you need from MassTAPP, BSAS, or others in the area of assessment?

STEP 2: CAPACITY BUILDING

2.1 Process - General

Please answer the following questions in relation to both opioid consumption and consequences:

COMMUNITY

1. What is your understanding of the populations being disproportionately affected by opioid consumption and opioid use consequences in your Cluster? (e.g., geographical, cultural, socioeconomic populations, etc.). Please list these populations and refer to the data/evidence that was used to determine this.
2. Which of these populations have already been engaged by the project and how have they been engaged? Please list all populations being engaged in your Cluster.
3. What is your plan around engaging populations that are not yet represented?

KEY STAKEHOLDERS

1. Please list the key sectors (Healthcare, Law Enforcement, Faith Based, etc.) currently collaborating with you on this project.
2. Please describe how you will engage key stakeholders from sectors not yet represented.

CORE PLANNING COMMITTEE

1. Please list the membership of the core planning committee responsible for guiding the Strategic Planning Process.
2. How many times has your committee met?
3. What challenges have you encountered so far related to the functioning of your Core Planning Committee and what are you doing to overcome these challenges?

STRUCTURE

1. Please provide an organizational chart of your governing structure of the MOAPC project within your Cluster including any subgroups.
2. Please explain of how members of the general community will be engaged in the MOAPC project.

DECISION MAKING

1. What is the decision-making process in your Cluster?

TEAM FUNCTIONING

1. How are the representatives of each community within your Cluster functioning as a team?
2. What challenges have you encountered so far related to the functioning of your team and what are you doing to overcome these challenges?

EDUCATION AND TRAINING

1. What trainings, if any, have you conducted or attended so far (for yourself or for the Cluster)?
2. What trainings do you plan to attend or are you planning to conduct (please include intended audience) within the next 3 months?
3. What other training or information is needed or could be helpful?

OVERALL NEEDS

1. What are the overall capacity building needs of your Cluster?

2.2a. Capacity Building Needs Related to Opioid Consumption

Describe the results/findings of your assessment of the existing level of capacity to address the issue of opioid consumption in your Cluster, including the following:

- The strengths that exist in your Cluster to help address the issue of opioid consumption.
- Areas of growth in your Cluster that will need to be addressed in order for you to more effectively address the issue of opioid consumption.
- Describe your capacity building action plan to address your identified areas of growth/capacity needs including the following information (you do not need to use the table format):

Area of Growth/ Capacity Need	How this will be addressed	Who is responsible	Timeline	Measure of Success

2.2b. Capacity Building Needs Related to Opioid Consequences

Describe the results/findings of your assessment of the existing level of capacity to address the issue of opioid consequences in your Cluster, including the following:

- The strengths that exist in your Cluster to help address the issue of opioid consequences.
- Areas of growth in your Cluster that will need to be addressed in order for you to more effectively address the issue of opioid consequences.
- Describe your capacity building action plan to address your identified areas of growth/capacity needs including the following information (you do not need to use the table format):

Area of Growth/ Capacity Need	How this will be addressed	Who is responsible	Timeline	Measure of Success

TECHNICAL ASSISTANCE

- What assistance, if any, do you need from MassTAPP, BSAS, or others in the area of capacity building?

STEP 3: STRATEGIC PLANNING

3.1. Planning Process

Briefly describe the process that was followed to develop this plan, including who was involved.

3.2a. Planning to Address Opioid Consumption

Please describe the following related to your plan for addressing opioid consumption:

- The final set of intervening variable(s) from section 1.2a – including how this list was selected (prioritized) from among the larger list of variables considered.

- The specific target population(s) for opioid consumption
- The list of strategies you propose to implement to address opioid consumption - including the area[s] in your Cluster in which they will be implemented.
- The rationale for each selected strategy (conceptual fit, practical fit, link to research)
- The cultural competence of the selection process and the selected strategy or strategies
- The potential sustainability of the selected strategy or strategies.

3.2b. Planning to Address Opioid Consequences

Please describe the following related to your plan for addressing opioid consequences:

- The final set of intervening variable(s) from section 1.2b – including how this list was selected (prioritized) from among the larger list of variables considered.
- The specific target population(s) for opioid consequences
- The list of strategies you propose to implement to address opioid consequences-including the area[s] in your Cluster in which they will be implemented.
- The rationale for each selected strategy (conceptual fit, practical fit, link to research)
- The cultural competence of the selection process and the selected strategy or strategies
- The potential sustainability of the selected strategy or strategies.

TECHNICAL ASSISTANCE

- What assistance, if any, do you need from MassTAPP, BSAS, or others in the area of Strategic Planning?

3.3a. Problem Statement related to Opioid Consumption

Based on your analysis and understanding of the issue, please provide a concise problem statement about opioid consumption in your Cluster.

3.3b. Problem Statement related to Opioid Consequence

Based on your analysis and understanding of the issue, please provide a concise problem statement about opioid consequence in your Cluster.

3.4 Logic Model

Attach your Logic Model. This Logic Model should cover the period from **September 1, 2015 – June 30, 2016**. You will be required to update your Logic Model **annually**. Please refer to the "Logic Model Development Guide" document for additional guidance.

STEP 4: IMPLEMENTATION

4.1a. Implementation of Opioid Consumption Strategies

In this section, describe your opioid consumption strategy implementation plans in depth, using an action plan in the format below. Be specific (e.g., how many training sessions and how long each session will last, how many participants, when the intervention will begin and end, where the scope of implementation: multiple cities w/in the cluster, across the cluster, etc).

Strategy 1:

Action Steps	Who Is Responsible	Timeline	Measure of Success

Strategy 2:

Action Steps	Who Is Responsible	Timeline	Measure of Success

4.2a. Implementation of Opioid Consequence Strategies

In this section, describe your opioid consequence strategy implementation plans in depth, using an action plan in the format below. Be specific (e.g., how many training sessions and how long each session will last, how many participants, when the intervention will begin and end, where the scope of implementation: multiple cities w/in the cluster, across the cluster, etc).

Strategy 1:

Action Steps	Who Is Responsible	Timeline	Measure of Success

Strategy 2:

Action Steps	Who Is Responsible	Timeline	Measure of Success

TECHNICAL ASSISTANCE

- What assistance, if any, do you need from MassTAPP, BSAS, or others in the area of Implementation?

STEP 5: EVALUATION

The MOAPC initiative does not provide additional support for program evaluation, but some sites have decided to contract for local evaluation support on their own. In addition, The Massachusetts Technical Assistance Partnership for Prevention (MassTAPP) TA center is available to assist program staff to build internal capacity for basic local evaluation.

5.1a. Evaluation of Opioid Consumption Strategies

If you are evaluating any of your opioid consumption strategies, please briefly describe what information you will be collecting and which outcomes you will be tracking. If you are not evaluating your opioid consumption strategies, please simply describe what outcomes you hope to achieve despite not being able to thoroughly track them.

5.1b. Evaluation of Opioid Consequence Strategies

If you are evaluating any of your opioid consequence strategies, please briefly describe what information you will be collecting and which outcomes you will be tracking. If you are not evaluating your opioid consequence strategies, please simply describe what outcomes you hope to achieve despite not being able to thoroughly track them.

5.2. Affirmation

Please affirm that you will continue to participate in the BSAS MIS data collection process and that you will submit brief quarterly progress reports to the state evaluation team (using a template to be provided).

TECHNICAL ASSISTANCE

- What assistance, if any, do you need from MassTAPP, BSAS, or others in the area of Evaluation?

ADDITIONAL REQUIREMENTS

- Strategic Plan must **not exceed 45 pages** (this includes the information and tables outlined in this document but does not include any supporting data or appendices).

Appendix 21: Best Practices from MassCALL2 Grantees

PROGRAM HIGHLIGHT
Massachusetts Collaborative for Action, Leadership and Learning (MassCALL2)
Opioid Overdose Prevention Strategies

BACKGROUND

The Massachusetts Collaborative for Action, Leadership, and Learning (MassCALL2) is a strategic prevention framework state incentive grant (SPF-SIG) targeting unintentional fatal and non-fatal opioid overdoses. This document highlights the process Massachusetts went through to identify evidence-based opioid overdose strategies that could be utilized by its sub-recipient communities.

PROCESS USED TO IDENTIFY OPIOID OVERDOSE PREVENTION STRATEGIES

In contrast to areas such as alcohol and tobacco prevention, the scientific knowledge base for opioid overdose prevention is not as well developed. While a great deal of effort has been devoted to understanding risk factors and intervening variables for opioid overdose, relatively little attention has been paid to developing and studying the impact of interventions in this area. Strategies with the potential to reduce opioid overdose are more likely to be based on expert opinion/consensus than on the results of formal evaluations of effectiveness. In this context, traditional guidance about strategy selection (e.g., selecting interventions from Federal lists of evidence-based prevention; multiple independent replications of an intervention) becomes difficult to follow. The strategies identified in this document are the product of a comprehensive review of the peer-reviewed literature on opioid overdoses conducted by Massachusetts. Following the initial review of the literature, a preliminary list of strategies was sent to a group of leading international researchers and practitioners in the field to assess its inclusiveness and appropriateness. The initial list of strategies was then expanded to reflect their feedback.

TYPOLOGY OF OPIOID OVERDOSE PREVENTION STRATEGIES

Strategies with the potential to prevent/reduce unintentional fatal and non-fatal opioid overdose fall into three broad categories along the continuum of prevention:

> *Pre-Event Strategies:* Strategies that seek to prevent overdose from occurring,
>
> *During-Event Strategies*: Strategies that seek to minimize negative/fatal consequences when an opioid overdose does occur
>
> *Post-Event Strategies:* Strategies that seek to prevent future overdoses through facilitating access to/utilization of treatment services.

Within each of these broad strategy types, it is also important to think about the priority groups for intervention and the most appropriate providers/settings.

Priority Groups for Intervention

- Active users
- Friends and family members
- Individuals leaving treatment
- Individuals currently on maintenance therapy
- Individuals released from prison with history of opioid use
- Individuals undergoing detoxification

Providers/Settings

- Healthcare professionals
- First responders/EMTs
- Treatment professionals
- Criminal justice system
- Probation system
- Law enforcement system
- Outreach/social workers
- Health promotional advocates

LIST OF OPIOID OVERDOSE PREVENTION STRATEGIES

The following is a list of the ***broad*** categories of strategies. Each of these strategies may look different based on the targeted group and the nature of the provider/setting. For example, providing information on overdose prevention and risk factors could be conducted by healthcare professionals, EMTs, outreach workers, parole officers, treatment staff, etc. across various settings. A complete list of strategies being implemented appears in a grid at the end of this document.

Pre-Event Strategies

1. Provide information/training on overdose prevention and risk factors (e.g., danger of using alone, concomitant use of CNS depressants, re-initiation after periods of abstinence) to opioid users and bystanders (friends, family, co-users).
2. Identification of individuals at-risk for overdose through screening conducted by emergency department staff, emergency medical technicians, hospital staff, and primary care providers.
3. Train healthcare providers on making treatment referrals for opioid dependent patients and doctor shoppers.
4. Train pharmacists on educational strategies and referral services for suspected intravenous drug users purchasing syringes.

During-Event Strategies

5. Provide information/training on overdose recognition/response (e.g., recognizing signs of an overdose, rescue breathing, contacting emergency medical services, take-home Naloxone) to opioid users and bystanders (friends, family, co-users).
6. Reduce barriers to contacting emergency medical services in the event of an overdose (e.g., working with police, housing authority).

Post-Event Strategies

7. Provide treatment information, referrals, and/or linkages with support services and follow-up for overdose victims.
8. Brief motivational interviewing to promote entry into treatment.
9. First responders distribute information on treatment options to overdose victims – especially those refusing transport to the hospital.
10. Provide incarcerates with a history of opioid use referrals to community treatment services upon release from prison.

Contact Information

For more information on the MA SPF-SIG or on any of the material provided in this document, please contact:

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Selected Research References

- Baca, C.T., & Grant, K.J. (2005). Take-home Naloxone to reduce heroin death. Addiction, 100: 1823-1831.
- Bernstein, E., Bernstein, J., & Levenson, S. (1997). Project ASSERT: An ED-based intervention to increase access to primary care, preventive services, and the substance abuse treatment system. Annals of Emergency Medicine, 30: 181-189.
- Binswanger, I.A., Stern, M.F., Deyo, R.A., Heagerty, P.J., Cheadle, A., Elmore, J.G., & Koepsell, T.D. (2007). Release from prison – A high risk of death for former inmates. New England Journal of Medicine, 356: 157-165.
- Coffin, P.O., Tracy, M., Bucciarelli, A., Ompad, D., Vlahov, D., & Galea, S. (2007). Identifying injection drug users at risk of nonfatal overdose. Academy of Emergency Medicine, 14: 616-623.
- Coomber, R. (1999). The cutting of heroin in the United States in the 1990s. Journal of Drug Issues, 29: 17-36.
- Darke, S., & Hall, W. (2003). Heroin overdose: Research and evidence-based intervention. Journal of Urban Health, 80: 189-200.
- Darke, S, & Hall, W. (1997) Distribution of Naloxone to heroin users. Addiction, 92: 1195-99.
- Darke, S., Hall, W., Weatherburn, D., & Lind, B. (1999). Fluctuations in heroin purity and the incidence of fatal heroin overdose. Drug and Alcohol Dependence, 54: 155-161.
- Darke, S., Ross, J., & Hall, W. (1996). Overdose among heroin users in Sydney, Australia: I. Prevalence and correlated of non-fatal overdose. Addiction, 91, 405-411.
- Darke, S. & Zador, D. (1996). Fatal heroin 'overdose': A review. Addiction, 91: 1765-1772.
- Davidson, P.J., Mclean, R.L., Kral, A.H., Gleghorn, A.A., Edlin, B.R., & Moss, A.R. (2003). Fatal heroin-related overdose in San Francisco, 1997-2000: a case for targeted intervention. Journal of Urban Health, 80: 261-73.
- Davidson, P.J., Ochoa, K.C., Hahn, J.A., Evans, J.L., & Moss, A.R. (2002). Witnessing heroin-related overdoses: the experiences of young injectors in San Francisco. Addiction, 97: 1511-1516.
- Davoli, M., Perucci, C.A., Forastiere, F., Doyle, P., Rapiti, E., Zaccarelli, M., & Abenti, D. (1993). Risk factors for overdose mortality: A case-control study within a cohort of intravenous drug users. International Journal of Epidemiology, 22: 273-277.
- Desmond, D.P, Maddux, J.F., & Trevino, A. (1978). Street heroin potency and deaths from overdose in San Antonio. American Journal of Drug and Alcohol Abuse, 5: 39-49.
- Fuller, C.M., Galea, S., Caceres, W., Blaney, S., Sisco, S. & Vlahov, D. (2007). Multilevel community-based intervention to increase access to sterile syringes among injection drug users through pharmacy sales in New York City. American Journal of Public Health, 97: 117-124.

- Galea, S., Worthington, N., Piper, T.M., Nandi, V.V., Curtis, M. & Rosenthal, D.M. (2006). Provision of Naloxone to injection drug users as an overdose prevention strategy: Early evidence from a pilot study in New York City. Addictive Behaviors, 31: 907-12.
- Gossop, M., Griffiths, P., Powis, B., Williamson, S. & Strang, J. (1996). Frequency of non-fatal heroin overdose: Survey of heroin users recruited in non-clinical settings. British Medical Journal, 313: 402.
- Gossop, M., Stewart, D., Treacy, S., & Marsden, J. (2002). A prospective study of mortality among drug misusers during a 4-year period after seeking treatment. Addiction, 97: 39-47
- Jones, R., Gruer, L., Gilchrist, G., Seymour, A., Black, M. & Oliver, J. (2002). Recent contact with health and social services by drug misusers in Glasgow who died of a fatal overdose in 1999. Addiction, 97: 1517-22.
- Kung HC, Hoyert DL, Xu JQ, Murphy SL. (2008). Deaths: Final data for 2005. National vital statistics reports; vol 56 no 10. Hyattsville, MD: National Center for Health Statistics.
- Langendam, M.W., van Brussel, G., Coutinho, R.A., & van Ameijden, E. (2001). The impact of harm-reduction-based methadone treatment on mortality among heroin users. American Journal of Public Health, 91: 774-780.
- Man, L.H., Best, D., Gossop, M., Stillwell, G., & Strang, J. (2004). Relationship between prescribing and risk of opiate overdose among drug users in and out of maintenance treatment. European Addiction Research, 10: 35-40.
- Martyres, R.F., Clode, D. & Burns, J.M. (2004). Seeking drugs or seeking help? Escalating "doctor shopping" by young heroin users before fatal overdose. Medical Journal of Australia 180: 211-214.
- Maxwell, S., Bigg, D., Stanczykiewicz, K., & Carlberg-Racich, S. (2006). Prescribing naloxone to actively injecting heroin users: a program to reduce heroin overdose deaths. Journal of Addictive Diseases, 25: 89-96.
- National Drug Intelligence Center (2006). National Drug Threat Assessment, 2007. Product No. 2006-Q0317-003. U.S. Department of Justice: Johnston, PA.
- O'Driscoll, P.T., McGough, J., Hagan, H., Thiede, H., Critchlow, C. & Alexander, E.R. (2001). Predictors of accidental fatal drug overdose among a cohort of injection drug users. American Journal of Public Health, 91: 984-987.
- Pollini RA, McCall L, Mehta SH, Celentano DD, Vlahov D, Strathdee SA. (2006) Response to overdose among injection drug users. American Journal of Preventive Medicine; 31:261-264.
- Pollini, R.A., McCall, L., Mehta, S.H., Vlahov, D., Strathdee, S.A. (2005). Non-fatal overdose and subsequent drug treatment among injection drug users. Drug and Alcohol Dependence, 83: 104-110.
- Risser, D., Uhl, A., Stichenwirth, M., Honigschnabl, S., Hirz, W., Schneider, B., Stellwag-Carion, C., Klupp, N., Vycudilik, W. & Bauer, G. (2000). Quality of heroin and heroin-related deaths from 1987 to 1995 in Vienna, Austria. Addiction, 95: 375-382.
- Saitz, R., Gaeta, J., Cheng, D.M., Richardson, J.M., Larson, M., Samet, J.H. (2007). Risk of mortality during four years after substance detoxification in urban adults. Journal of Urban Health, 84: 272-282.
- Seal, K. H., Thawley, R., Gee, L., Bamberger, J., Kral, A.H., Ciccarone, D., Downing, M., & Edlin, B.R. (2005). Naloxone distribution and cardiopulmonary resuscitation training for injection drug users to prevent heroin overdose death: A pilot intervention study. Journal of Urban Health, 82: 303-311.
- Seaman, S.R., Brettle, R.P., Gore, S.M. (1998). Mortality from overdose among injecting drug users recently released from prison: Database linkage study. British Medical Journal, 316: 426-428.

- Sherman, S.G., Cheng, Y., Kral, A.H. (2007). Prevalence and correlates of opiate overdose among young injection drug users in Baltimore, Maryland. Drug and Alcohol Dependence, 88: 182-187.
- Sherman, S.G., Gann, D., Scott, G.S., Carlberg, S., Bigg, D. Heimer, R. (2008). Qualitative exploration of experiences with overdose and using Naloxone. Harm Reduction Journal, 5:2.
- Sporer, K.A. (1999). Acute heroin overdose. (1999). Annals of Internal Medicine, 130: 584-590.
- Strang, J., Darke, S., Hall, W., Farrell, M. & Ali, R. (1996) Heroin overdose: the case for take-home naloxone. BMJ, 312: 1435-1436.
- Strang, J. McCambridge, J., Best, D., Beswick, T., Bearn, J., Rees, S., & Gossop, M. (2003). Loss of tolerance and overdose mortality after inpatient opiate detoxification: Follow up study. British Medical Journal, 326: 959-960.
- Strang, J., Manning, et al. (2008). "Overdose training and take-home naloxone for opiate users: prospective cohort study of impact on knowledge and attitudes and subsequent management of overdoses." Addiction, 103: 1648-1657.
- Tobin, K., Sherman, S.G., Latkin, C.A., Welsch, C., Bielenson, P. (in press). Evaluation of the Staying Alive Program: Training Injection Drug Users to Properly Administer Naloxone and Save Lives. International Journal of Drug Policy.
- Tracy, M., Piper. T.M., Ompad, D., Bucciarelli, A., Coffin, P.O., Vlahov, D., & Galea, S. (2005). Circumstances of witnessed drug overdose in New York City: implications for intervention. Drug and Alcohol Dependence, 79: 181-190.
- Warner-Smith, M., Darke, S., Lynskey, M., & Hall, W. (2001). Heroin overdose: Causes and consequences. Addiction, 96: 1113-1125.
- Wines, J.D., Saitz, R., Horton, N.J., Lloyd-Travaglini, C., Samet, J.H. (2007). Overdose after detoxification: A prospective study. Drug and Alcohol Dependence, 89: 161-169.

MASSCALL2 COMMUNITIES GRID WITH INTERVENING VARIABLES AND STRATEGIES

Funding Period: October 1, 2006 – September 30, 2013

Communities Funding Cycle: July 1, 2008 – June 30, 2013

Communities	Intervening Variables	Strategies Selected
1. Gloucester **☑ Narcan Site** **☑ ED SBIRT** **☑ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opiates* 3. *Loss of tolerance among drug users who drop out of treatment - especially during the first 12 months following dropout*	▪ Provide training and information to opiate users and bystanders on overdose awareness and prevention strategies. ▪ Educate users and bystanders in the use of overdose awareness, prevention, and reversal strategies, such as the administration of Narcan. ▪ Educate patients enrolled in or leaving treatment or detoxification in appropriate overdose awareness, prevention, and management strategies. ▪ Work with police and law enforcement to address users' and bystanders' reluctance to contact emergency medical services out of fear for police involvement. ▪ Participate in the DPH/BSAS Nasal Narcan Pilot Program ▪ Initiate a local ED-SBIRT Pilot program ▪ Create and distribute Overdose Prevention materials - "Tip Cards" - Poster Campaign ▪ Creation of an "Action Peer Advisory Group" to continue and sustain activities, conversations, and planning around OD prevention work

Key Relationships:

- Addison Gilbert Hospital, Lahey Health System Affiliate
- Lahey Health Pastoral Care Program, Lahey Health Behavioral Services: Healthy Streets Program
- Gloucester Methadone Clinic and Emergency Services
- Discover Day Treatment Program
- Gloucester Family Health Center
- Grace Day Drop-in Center Inc.
- Gloucester Police and Fire Departments
- Action, Inc., Action Peer Advisory group

Highlights:

- Gloucester Police and Fire Department Nasal Narcan Pilot - Institutionalized policy change which increases capacity to help prevent unintentional fatal and non fatal overdose in Gloucester.
- Formation of Gloucester Cape Ann Chapter of Learn to Cope (LTC)
- Creation and utilization of Gloucester Fire Department Online OD Data System to track and report ODs
- ED-SBIRT Pilot at Addison Gilbert Hospital (AGH) will be sustained

Communities	Intervening Variables	Strategies Selected
2. Lynn **☑ Narcan Site** **☑ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Lack of post overdose medical intervention/ linkages to treatment* 4. *Low healthcare provider knowledge of the problem* 5. *Previous non-fatal overdose*	▪ Working with law enforcement to address user/bystander fear of contacting police or other emergency services when an overdose occurs. ▪ Providing education/training to users on risk factors for overdose prevention, and overdose management following periods of abstinence. ▪ Overdose prevention and treatment education and training for emergency room, medical staff, first responders. ▪ Train providers in opioid risk management and in screening and assessment of overdose risk. ▪ Provision of information and training to users on the risk factors for overdose, overdose prevention, and overdose management.

Key Relationships:

- Addison Gilbert Hospital, Lahey Health System Affiliate
- Lahey Health Pastoral Care Program, Lahey Health Behavioral Services: Healthy Streets Program
- Gloucester Methadone Clinic and Emergency Services
- Discover Day Treatment Program
- Gloucester Family Health Center
- Grace Day Drop-in Center Inc.
- Gloucester Police and Fire Departments
- Action, Inc., Action Peer Advisory group

Highlights:

- Train prescribers how to apply the prescription monitoring program (PMP)
- Create and disseminate a training video for behavioral health practitioners
- Create and disseminate a training video for prescribing clinicians

Communities	Intervening Variables	Strategies Selected
3. Lowell **☑ Narcan Site** **☑ OBOT** **☐ ED SBIRT** **☑ Learn to Cope** **☑ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Low healthcare provider knowledge of the problem* 4. *Previous non-fatal overdose*	▪ Work with first responders to raise awareness of the fear to contact emergency medical services in the event of an overdose. ▪ Educate opioid users/bystanders on the specifics of when/how to call 911. Will include police involvement and legal issues when calling 911. ▪ Provide training and information to opioid users and bystanders on overdose risk factors and prevention strategies. ▪ Provide incarcerates (with a history of opioid abuse) and those that work with incarcerates with overdose risk factors and prevention strategies upon release from incarceration. ▪ Overdose screening of at risk individuals by emergency department staff, EMTs, police, firefighters or hospital staff. ▪ Overdose prevention and treatment referral training for medical providers, dentists and primary care practitioners. ▪ Create educational materials for use in local hospitals for users, co-users, bystanders, family/friends, and community to raise awareness that calling 911 saves lives. ▪ Create Learn2cope group in Lowell area to educate families, friends and bystanders of known users, many with previous overdoses, risk factors and prevention strategies. ▪ Provide police officers with overdose risk factors and prevention strategies upon release from incarceration. ▪ Create informational material to educate patients from local hospitals as well as users, co-users, bystanders, family/friends, and community, on opioid facts, overdose risk factors, and prevention strategies.

Key Relationships:

- Municipal involvement: other city departments, police and fire, support by the City Manager and the City Council, involvement with the Lowell school administration - placing this epidemic squarely before the city government so it stayed visible
- First Responders (Trinity EMS, Police, Fire)
- Lowell House Inc.
- Department of Corrections
- Billerica House of Corrections
- Re-entry Coalition in Lowell
- Learn to Cope
- Greater Lowell Health Alliance (GLHA). Task forces include; The Alcohol, Tobacco and Other Drugs (ATOD) and the Environmental Strategies Working Group (ESWG).
- Habit OPCO

Highlights:

- Developed a relationship with Department of Corrections (DOC). Program mirrored the educational program began almost three years ago in the Billerica House of Correction, a county correctional facility. This will increase significantly the number of incarcerated individuals educated on OD risk factors/prevention strategies.
- Policy change within Habit OPCO and Lowell House Inc. who now incorporate overdose prevention information at intake and client case management.
- Program purchased disposal boxes for all the police departments in their Public Health Coalition. The surrounding towns include Dracut, Chelmsford, Tyngsboro, Tewksbury, Billerica and Westford. The box is up and running at the Lowell Police Department and other surrounding towns are currently working with the Police Departments to get the boxes up and running.
- Lowell House (in conjunction with Lowell Community Health Center OBOT provider) became a pilot site for Narcan responders
- Education in the Billerica House of Corrections will be sustained after MC2 grant cycle.
- Overdose prevention resources and PR materials are available at the following locations: Health Department; Unwanted Medication Disposal Days and at police departments; local treatment provider (Habit OPCO); both local hospitals - a large outreach area (specifically on Opioid Overdose Prevention) was created in one of the emergency departments that will be kept up to date.
- Probation officers will continue to incorporate Opioid overdose prevention information into their programs upon an individual's re-entry into society.
- Program will continue to work with DOC as we pilot the Overdose education in 4 of the 18 facilities to assist in how the program could be incorporated into their re-entry services.

Communities	Intervening Variables	Strategies Selected
4. Quincy **☑ Narcan Site** **☐ OBOT** **☑ ED SBIRT** **☑ Learn to Cope** **☑ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opiates* 4. *Previous non-fatal overdose* 5. *Individuals who use opioids alone*	▪ Provide information on strategies which lessen risk of arrest. ▪ Provide information to the community on 911 Good Samaritan Bill. ▪ Provide information/ training on loss of tolerance risk and teach strategies to reduce risk factors associated with loss of tolerance. ▪ Provide information/training on risk of concomitant use and strategies to lower risk. ▪ Develop informational materials, referrals and linkages. ▪ Through screenings, identify individuals at-risk for overdose. ▪ Provide information/training on increased risk due to previous non-fatal overdose risk and teach strategies to reduce risk factors associated with previous non-fatal overdose. ▪ Teach strategies to lower risk factors of using alone. ▪ MedReturn Kiosks installed in Quincy Police Department. QPD is also responsible for disposal of materials. ▪ Quincy Police Department Narcan policy – Formal, written policy to train all personnel in the use of Narcan and is carried on all shifts 24/7. ▪ Implement prescription and OTC Take Back Days. ▪ Work with local pharmacies (CVS, Walgreen's, and Rite-Aid) to collaborate with the city on Rx Take Back Days. ▪ Establish local Learn2Cope support group for parents and loved ones of active users or those in recovery ▪ Create Training of the Trainer (TOT) – ½ day opioid overdose training to be presented in Quincy, Weymouth, and Braintree to social service, health, education, and police personnel. Goal for the training is to have each organization institutionalize the training for their staff. Copies of the training and all materials will be provided to be stored at these organizations. ▪ Create educational video depicting first aid to reverse an opioid overdose created (IQ) – Includes: administering Narcan, calling 911, and rescue techniques. It will be available in English and Spanish and be placed within

		social service agencies, health care facilities, and libraries.

Communities	Intervening Variables	Strategies Selected
4. Quincy (cont.)		• Create informational Booklet (IQ) – The booklet will trace the history and timeline of the Quincy initiative. Its purpose is to share Quincy's story so that other communities can replicate its successful strategies. It will be distributed throughout Massachusetts and nationally. • Create Quincy Overdose Help Website (IQ) – Website containing information and resources on opioid overdose will be maintained with necessary updates, when needed. • Enroll all Community Health Service physicians in Prescription Monitoring Program (PMP) - Enrollment is now mandatory. ▪ Enroll all Quincy Medical Center Emergency Room physicians in PMP – Quincy Medical ER physicians are now required to be enrolled.

Key Relationships:

- Municipal government: police, health, and public works departments
- Proactive parents and substance abuse based community groups
- TA System
- Local Evaluation Team

Highlights:

- Policy change that incorporates Narcan Training within Quincy Police Department
- Rx Take Back Days are now automatically entered biannually on City of Quincy calendar
- OD prevention training in Quincy police and fire departments
- Providing support groups to individuals dealing with the issue of opioid abuse
- Formal Narcan policy for local homeless shelter
- Formal Narcan policy for fire department and parking police
- All Quincy pharmacies (including supermarkets) collaborate for Take Back Day events and MedReturn kiosk advertising
- Establishing Quincy Medical Center policy for Prescription Monitoring Program (PMP) enrollment

Communities	Intervening Variables	Strategies Selected
5. Cambridge **☑ Narcan Site** **☐ OBOT** **☐ ED SBIRT** **☑ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opiates* 4. *Lack of post overdose medical intervention/ linkages to treatment*	▪ Overdose prevention videos created ▪ Training of the Trainers curriculum created ▪ Community outreach workers utilized (work with incarcerated population at Cambridge Police station) ▪ Website created ▪ Data alerts around OD events provided by local ambulance company

Key Relationships:

- Cambridge Police Department
- Pro Ambulance Company
- CASPAR (community-based non-profit organization focused on substance abuse treatment)
- AIDS Action Committee
- Cambridge Hospital
- North Charles Methadone clinic

Highlights:

- Reached over 8,500 Cambridge residents, with a focus on those at highest risk, with Outreach program and education to providers, teaching OD prevention and response and providing referrals, and raising awareness about the issue in Cambridge.
- Had an impact on practice, helping to shift the way that many places serving drug users and those in recovery "do business," by introducing harm reduction messaging into traditional abstinence-only approaches. These changes will also be sustained over time.
- Through work with the Narcan Pilot site at AIDS Action, developed a comprehensive training (including videos and PowerPoint presentations) which AIDS Action will continue to provide one evening per month for area agencies.
- The Cambridge Police Department will train all officers in OD response and Narcan administration. All officers will be trained as of June 2013 and Narcan will be carried in all squad cars, available at the station, and carried on the person of Outreach Officers. A policy has been drafted and is awaiting final approval
- The Director of CASPAR has agreed to make OD prevention and Narcan training mandatory for all employees. The policy is in its final stages of approval and will be rolled out later this year.

Highlights (cont.):

- As a result of their collaboration with Melisa Lai Becker, formerly of the Cambridge Hospital and now Chief of Emergency Medicine at Whidden Hospital and Director of Medical Toxicology for Cambridge Health Alliance, patients receiving opioids from the Emergency room are limited to three days of medications. Dr. Lai Becker attended OPEN meetings while she was still at TCH and implemented this change (which involved changing the computerized default for the hospital) after discussions at those meetings. Additionally, the program assisted Dr. Lai Becker with getting all the emergency room doctors at Cambridge Hospital signed up for the Prescription Monitoring Program.
- Harvard University changed their policy, limiting the number of doses a student could get from their Health Services, and requiring the student to follow up with his/her own doctor after they were initially seen for a refill.
- OPEN has also continued to develop its relationship with Mount Auburn Hospital. After more than two years, Emergency Department staff there agreed to being trained on harm reduction concepts. In addition, OPEN was able to provide the head of the Emergency Department with information on the success of SBIRT, which led him to consider implementing an SBIRT program into his department. Mount Auburn Hospital has begun to display program's literature in its Emergency Room. OPEN is collaborating with the Director of Community Health at Mount Auburn on a Photovoice project about addiction in Cambridge.
- Because of OPEN's efforts, CASPAR allows its guests to carry Narcan, will let the women in their program leave the site to obtain Narcan, and routinely has OPEN and AAC in for OD prevention and Narcan trainings for staff. OPEN is working to ensure that these practice changes become policy as well.
- North Charles now integrates harm reduction, OD Prevention training, and Narcan referrals into its Induction groups for all new enrollees via our training. OPEN is now working to ensure that these practice changes become policy and that their workers will be able to take over this training.
- AIDS Action Committee utilizes our videos and material when doing Narcan trainings for groups, enhancing their messaging with a more comprehensive prevention and response message.

Communities	Intervening Variables	Strategies Selected
6. Charlestown **☑ Narcan Site** **☐ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Lack of post overdose medical intervention/ linkages to treatment*	▪ Work with police and law enforcement to address user/bystander fear of contacting emergency services out of fear for police involvement. ▪ Work with housing authorities to address user/ bystander fear of calling 911 for fear of eviction. ▪ Reduce barriers to contacting emergency medical services in the event of an overdose. ▪ Provide incarcerates with a history of opioid use with linkages to community treatment services upon release from prison. ▪ Provide opioid users admitted to and released from treatment programs with linkages to community treatment services. ▪ Provide information on how to reduce overdose risk for users admitted to treatment. ▪ Provide education/support for individuals completing detoxification, particularly around loss of tolerance after detox.

Communities	Intervening Variables	Strategies Selected
6. Charlestown (cont.)		▪ Provide incarcerates with history of opioid use with overdose prevention information upon release from prison. ▪ Provide treatment information, referrals, or linkages with support services or treatment for overdose victims. ▪ Provide follow-up services by health promotion advocates after an overdose to encourage initiation of treatment services.

Key Relationships:

- Boston Police Department
- Corrections (Charlestown Court, etc)
- Massachusetts General Hospital (MGH)
- Housing Authority

Highlights:

- A primary programmatic accomplishment for the Network Navigator has been substantial expansion of work associated with the local Court and Probation Department. At the invitation of the Judge and Chief of Probation, the Network Navigator now routinely engages in the following activities at the local Court: (1) advocacy and joint planning with Court personnel regarding diversion of drug offenders from prison to treatment; (2) ongoing training of Court and Probation personnel regarding opioid overdose prevention and management; and (3) frequent referrals of opioid users from the Court and Probation Department to the Network Navigator for linkage and education services. Finally, based on these initial experiences, discussions are underway regarding possible establishment of a Drug Court serving Charlestown including a role for the Navigator.
- The CHW/ Navigator has also established an educational role in training medical students at the Charlestown Health Center.
- A new working relationship (established protocols and procedures) with the Boston Police Department greatly improved program's outreach efforts to post overdose victims
- Integrating CHW model into health center medical practice with chronic substance abusers

Communities	Intervening Variables	Strategies Selected
7. South End **☑ Narcan Site** **☑ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Lack of post overdose medical intervention/ linkages to treatment*	▪ Reduce barriers to contacting emergency medical services in the event of an overdose. ▪ Work with police and law enforcement to address user/bystander fear of contacting emergency medical services. ▪ Provide information/training to opioid users and bystanders on overdose risk factors. ▪ Provide information/training to opioid users and bystanders on overdose prevention strategies. ▪ Identification of individuals at risk for overdose through screening conducted by Emergency Department staff- including history of prior overdose. ▪ Provide follow-up services by health promotion advocates after an overdose to encourage initiation of treatment services.

Key Relationships:

- A-Hope
- Boston Public Health Commission;
- Hope House
- Pine Street
- Habit OPCO
- Project Lazarus
- Entre Familia
- Latinas y Ninas
- Latino Health Institute
- North East Behavioral Health
- HRIA
- South End Community Health Center
- Boston Police
- North Easton Companies
- BMC Emergency Department
- Tenant Development Association
- St. Stephen's Church

Highlights:

- Overdose **prevention trainings become institutionalized** within partnering outreach organizations.
- **Physicians provide adapted "after-care" packets** with information on Narcan/Overdose prevention to patients prescribed opiate prescription medications.

Communities	Intervening Variables	Strategies Selected
8. South Boston **☑ Narcan Site** **☑ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison*	▪ Provide information on how to reduce overdose risk for Opioid users admitted to treatment (overdose reversal strategies for users in treatment). ▪ Provide education and support for individuals completing detoxification-particularly information on loss of tolerance after detoxification (overdose risk factors for those completing detox). ▪ Provide incarcerates with a history of opioid use with overdose prevention information upon release from prison-including information about risks of re-initiation of use after release (overdose prevention strategies for recent incarcerates). ▪ Utilize parole/probation officers to provide former incarcerates that have history of opioid use with overdose prevention information during re-entry into the community (overdose prevention/treatment information for former incarcerates via Probation/Parole Officers).

Key Relationships:

- Family support programs: Learning to Cope, Families Anonymous, Alanon
- Boston Public Health Commission; Prevention and Treatment Services Bureau
- Treatment Programs: Collaborative Center, Gavin Foundation
- Prevention Programs : South Boston Community Health Center- Youth Ambassadors, South Boston Action Center Action Center
- Faith Based Community: St Monica-St Vincent Parish, Fourth Presbyterian Church
- Court/legal system: South Boston District Court Probation Department, C-6 Boston Police Community Officer-Community Liaison Officer
- News-Media outlets: South Boston Online
- South Boston Association of Non-Profits

Highlights:

- Creation of an information packet to be distributed among new and current coalition members with pertinent information around overdose prevention, information around Learn to Cope meetings, and key contact information in the neighborhood. There is potential to share this information with other community based agencies.

Communities	Intervening Variables	Strategies Selected
9. JP/Roxbury **☑ Narcan Site** **☑ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opiates* 4. *Stigma and Racism towards users*	▪ Working with first responders (Training & education on overdose prevention; Relationship building). ▪ Provide linkages to incarcerates upon release (Overdose education and support provided by volunteers in recovery). ▪ Peer-Driven education and training (Calling 911, drug use management, recognizing OD, rescue breathing, & Narcan). ▪ Working with first responders (Training & education on overdose prevention; Relationship building).

Key Relationships:

- Boston Public Health Commission (BPHC)
- Suffolk County House of Corrections
- Men's Health and Recovery Program (BPHC)
- Massachusetts Organization for Addiction Recovery (MOAR)
- AHOPE/Boston Needle Exchange (BPHC)
- Boston Police Department

Highlights:

- South Bay Prison changed their practice by no longer hosting an outside agency to provide overdose prevention education. Instead, the prison teaches inmates to teach each other the information utilizing a peer-educator modality. This type of practice change could have statewide impact if the curriculum was formally developed and posted on-line.
- The Rhode Island researchers working with the Rhode Island Department of Correction created an excellent 20-minute video for ex-offenders. Once the video is posted on-line, prisons and jails (including South Bay) will have direct access without the need for an outside agency to facilitate.
- Linking inmates to services upon release: Referring inmates to Narcan and drug use management (AHOPE), and referring trained peer educators for paid speaking gigs at the Men's Health and Recovery program is a new opportunity for inmates. The speaking gig in and of itself is an excellent opportunity, while also giving the recently released inmate another opportunity to engage in treatment by meeting the staff and patients and learning more about the program as a result of the speaking gig.
- The incorporation of the PDI into existing programming at AHOPE (and no longer affiliated with the Coalition), means that services will continue long after the grant ends. Rather than a one-time innovative intervention, the work will now be integrated into on-going practice.
- Informally, a high ranking official from the Boston Police has expressed support of officers carrying Narcan, although the logistics and operationalizing of that has not yet occurred.
- When the grant ends, police training for all 2200 officers will be available on-line from the Police Academy. Police can access the training without intermediaries, or at any time of day or night, or without leaving his/her desk.

Communities	Intervening Variables	Strategies Selected
10. Revere **□ Narcan Site** **☑ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Users misconception and lack of awareness about risks of OD and addiction* 3. *Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opiates*	▪ Educate/train users on importance of calling 911 in order to reduce barriers to contacting EMS in the event of an overdose. ▪ Engage active users on what would encourage them to call 911 & integrate new information into training curriculum. ▪ Educate / train users and bystanders on overdose prevention strategies. ▪ Educate / train users and bystanders on recognizing the signs of overdose. ▪ Educate users / bystanders in appropriate overdose management strategies. ▪ Educate users / bystanders in overdose reversal strategies. ▪ Educate / train users on overdose risk factors.

Key Relationships:

- City of Revere Police, Fire and Health Departments
- Massachusetts General Hospital/Revere CARES Coalition
- North Suffolk Mental Health Association (NSMHA)
- Massachusetts Organization for Addition Recovery (MOAR)
- Cataldo Ambulance, Inc.
- Chelsea Drug Court

Highlights:

- The progress that the RFD has made in preventing overdose fatalities and addressing community stigmas around calling 911 will be sustained through the continuation of the first responder Narcan pilot. As previously mentioned, Cataldo Ambulance, Inc. has assumed Narcan training responsibilities for the department as part of its established training contract with the City.
- The MassCALL 2 grant led to the creation of a new grant manager position for the City of Revere and practice changes within the Health Department; it now includes more prevention-focused initiatives in its work.
- The Recovery Coach model is now being implemented by NSMHA and will continue to expand in the future. While the agency would most likely have adopted this model at some point, the agency's readiness to do so was expedited largely because of the agency's collaboration with the City of Revere's MassCALL 2 Grant.

Communities	Intervening Variables	Strategies Selected
11. Fall River **☑ Narcan Site** **☑ OBOT** **☑ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Lack of post overdose medical intervention/ linkages to treatment* 3. *Low healthcare provider knowledge of the problem* 4. *Lack of knowledge of overdose risk factors, prevention, and intervention*	▪ Exploration of Informal or Formal Policy Change. ▪ Education, training for EMTs, Fire, Police and other Law Enforcement, consumers, family and other first responders. ▪ Education and training for Hospital staff, Providing Screening and Motivational Interviewing to patients in the Emergency Room to increase the number of referrals. ▪ Education, training for EMTs, Fire, Police and other Law Enforcement, consumers, family and other first responders.

Key Relationships:

- Having a staff person for TA from Health Imperatives was essential
- Fall River Police Department
- Saint Anne's Hospital
- Charlton Memorial Hospital
- Seven Hills Behavioral Health
- SPHERE
- Habit Opco
- SSTAR
- Arbor Services
- Our local evaluation team have been an important part of our success.
- Being a part of city government allowed us access and credibility

Highlights:

- SSTAR has developed a relationship with the police department and will have access to the required training schedule every year.
- Through the Training of Trainers there is now a core group of well trained professionals in the community. In addition, the e-learning from SPHERE will be available to Fall River agencies three times this year and will be offered every year by SPHERE. The emergency department trainings are ongoing and will continue.
- St. Anne's Hospital has a full time Health Advocate and has added a weekend Health Advocate.
- Charlton Memorial Hospital has a full time Health Advocate and has added a weekend Health Advocate.
- SSTAR will continue to provide overdose prevention education to inpatient clients.
- Habit OPCO has implemented a procedure to include emphasizing history of overdose in their bio psychosocial assessment (asking patients about their overdose history)
- Habit OPCO has trained 9 clinicians so that they are able to educate all their patients in overdose prevention

Communities	Intervening Variables	Strategies Selected
12. New Bedford **☑ Narcan Site** **☐ OBOT** **☐ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Low healthcare provider knowledge of the problem*	▪ Outreach and Training to Users and Bystanders. ▪ Outreach and Training to EMTs and First Responders as way to reach users and Bystanders. ▪ Informal police/EMS policy regarding interactions/arrests at OD scenes. ▪ Develop Screening Tool and Protocol for Providers. ▪ Outreach and Training to Providers regarding linkages to community treatment services.

Key Relationships:

- City of New Bedford Community Services
- Southcoast Hospital: Health Resource Advocates, Healthy Aging Focus Group, Mental Health Group
- Inter-Church Council of Greater New Bedford: Inter-Church Outreach Network, Community Outreach Program
- Fall River Coalition

Highlights:

- Established a Health Resource Advocate Program, which has become institutionalized within the Southcoast Health Care System and will be sustained into the future by the hospital. The program will continue to serve more than a thousand people per year.
- Created an Inter-Church Outreach Network – the network provides education, support, and training for the faith community.
- The data collection systems developed by the local evaluation team, along with Southcoast hospitals, have created great tools and systems to monitor progress and trends with regards to ODs.
- Three types of Educator Program have been created: 1. Consumer Education, 2. Provider Education, and 3. Community Education.

Communities	Intervening Variables	Strategies Selected
13. Brockton **☑ Narcan Site** **☐ OBOT** **☐ ED SBIRT** **☑ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Low healthcare provider knowledge of the problem* 3. *Lack of knowledge of overdose risk factors, prevention, and intervention* 4. *Delays in Seeking Medical Attention due to lack of knowledge of OD management*	▪ Work with police & other 1st responders to address user/bystander fear of contacting emergency services out of fear for police involvement. ▪ EMTs and 1st responders distribute information options to OD victims. ▪ Train community physician/primary care practitioners on making treatment referrals for opioid dependent patients & identified doctor shoppers. ▪ Provide treatment information, referrals & linkages with support services/treatment for OD victims. ▪ Provide follow-up services by health promotion advocates after an overdose to encourage initiation of treatment services. ▪ Provide info/training to opioid users and bystanders on risk factors. ▪ Provide info / training to opioid users & bystanders on OD prevention strategies. ▪ EMT & 1st responders distribute information about causes & consequences of OD to victims& bystanders *(via User/Bystander Training & 1-on-1 user education).* ▪ Provide info on how to reduce OD risk for opioid users admitted to treatment *(via User/Bystander Training & 1-on-1 user education).* ▪ Provide education & support for individuals leaving detox, particularly info on loss of tolerance*).* ▪ Train opioid users& bystanders on recognizing signs of OD. ▪ Educate users/bystanders on appropriate OD management strategies such as rescue breathing & contacting EMS. ▪ Educate users/bystanders in the use of overdose reversal strategies such as NARCAN. ▪ Educate patients enrolled in or leaving treatment/detox in appropriate OD management strategies such as rescue breathing and contacting EMS.

Brockton (cont.)

Key Relationships:

- High Point
- Mayor Balzotti's office
- Cope Center
- Learn to Cope
- Plymouth County District Attorney's Office
- Brockton Hospital
- American Medical Response
- Brockton Police Department
- Brockton Fire Department
- Brockton Neighborhood Health Clinic

Highlights:

- The Men's Addiction Treatment Center (MATC) and adolescent program Clean and Sober Teens Living Empowered (CASTLE) groups were integrated into the clinical rotation and are facilitated by the unit clinicians, to allow this programming to be sustainable after the duration of the grant. This same training is done weekly at BATC in both the detox and the step down unit.
- Integration of OD prevention training into the Intensive Outpatient Program, including access to nasal Narcan.
- The city of Brockton runs an in school suspension program for youth who have brought substances into the schools, and the overdose prevention group has been incorporated into this program.
- Opioid Advocate position created 2011 & 2012
- Public awareness events: Drug Forum, Overdose Vigil, A Deadly Silence, etc.
- Overdose trainings at the inpatient treatment level of care, as well as outpatient level of care
- Brockton Hospital School of Nursing: integrating opioid overdose prevention into curriculum
- Local business associations interested in OD prevention as local public safety measure

Communities	Intervening Variables	Strategies Selected
14. Worcester **☑ Narcan Site** **☑ OBOT** **☑ ED SBIRT** **☑ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Previous non-fatal overdose*	▪ Worcester Police Department will conduct bilingual info sessions/dialogues with consumer on 911 at various location (i.e. MOAR meetings, community centers, Recover Center and treatment facilities) to dispel misconceptions. ▪ Provide incarcerates and individuals in detox or treatment facilities with a history of Opioid use with overdose prevention information prior to or upon release. ▪ Brief motivational interviewing for overdose victims to promote entry to treatment.

Key Relationships:

- All Worcester substance abuse prevention, treatment, and recovery service providers
- Recovery community
- Senator Michael Moore, Senator Harriette Chandler, and Rep James O'Day
- Worcester Police Department Vice Squad
- Media outlets to promote events and issues

Highlights:

- Through the program's "911 Strategy", the police have a better understanding amongst their organization that an OD is a medical emergency, not a crime. Therefore, they are helping the victim get the life saving medical attention they need. The police have a much improved relationship with consumers, trust has been created. The police have changed their role of simply arresting at the scene to providing information and referral to consumers, by-standers and family members.
- Through the program's "Re-entry Strategy", whish was to implement the Opioid Overdose Prevention Curriculum at the Worcester County House of Corrections, the curriculum has now been institutionalized. All incarcerates with a history of substance abuse receive this information prior to re-entry. Advocates, Inc. provides additional support upon release.

Communities	Intervening Variables	Strategies Selected
15. Springfield **☑ Narcan Site** **☑ OBOT** **☑ ED SBIRT** **☐ Learn to Cope** **☐ Rx Take-Back**	1. *Barriers (failures or delay) to contacting emergency medical services out of fear for police involvement* 2. *Loss of tolerance due to abstinence, incarceration in prison or jail, detoxification, treatment and other periods of non-use of opioids - especially during the first 12 months after discontinuation of treatment and the first two weeks after release from prison* 3. *Concomitant use of alcohol, benzodiazepines, and other drugs (e.g., cocaine) with opiates* 4. *Previous non-fatal overdose* 5. *Drug users who drop out of treatment - especially during the first 12 months following dropout* 6. *Opioid users who are homeless or marginally housed* 7. *Long history of opioid use and/or previous non-fatal overdose*	▪ Reduce barriers to contacting EMS in the event of an overdose. ▪ Work with Springfield Police/law enforcement to address opioid user/bystander fear of contracting EMS out of fear of police involvement. ▪ Provide education & support for individuals completing detoxification particularly information on loss of tolerance**.** ▪ Provide incarcerates with histories of opioid use with overdose prevention information upon release from jail. ▪ Utilize parole & probation officers to provide opioid overdose prevention during re-entry into community**.** ▪ Provide information & training to individuals who use/abuse opioids and bystanders on overdose risk factors including concomitant use of alcohol, benzodiazepines & other drugs. ▪ Provide training & information to opioid users & bystanders on overdose prevention. ▪ Educate users & bystanders in use of overdose reversal strategies, e.g. Narcan administration. ▪ Provide education & support for individuals completing detoxification particularly information on loss of tolerance. ▪ Train opioid users and bystanders on recognizing the signs of an overdose. ▪ Provide information/training to opioid users and bystanders on overdose risk factors including danger of using alone.

Key Relationships:

- The Hampden County Sheriff's Department
- Springfield Police Department
- Tapestry Health
- Baystate Medical Center
- The substance abuse prevention and treatment organizations in the city of Springfield and surrounding communities.

Springfield (cont.)

Highlights:

- Strong, productive, and trusting collaborations and relationships that have been fostered and sustained with Coalition members in a focused effort to reduce opiate overdose fatalities and to implement overdose prevention strategies.
- There is now a wide range and numbers of people including users, bystanders, key stakeholders, trained in overdose risk factors and concomitant use of other drugs, overdose prevention strategies, recognizing signs of overdose.
- The Springfield Police Department has developed a willingness to participate in training sessions focusing on overdose prevention strategies.
- A strong relationship has developed with the Hampden County Sheriff's Department to implement cultural competency curriculum on substance abuse and opiate overdose prevention.