Rhode Island: Substance Abuse

Instructions for Mail Order

Once you've finished studying the course material:

- 1. Record your test answers on the answer sheet.
- 2. Complete the course evaluation.
- 3. Complete your registration and payment*.

Mail the completed forms with your payment to:

ATrain Education, Inc 5171 Ridgewood Rd Willits, CA 95490

*Check or money order payable to ATrain Education, Inc (or enter your credit card information on the registration form).

When we receive your order, we will grade your test, process your payment, and email a copy of your certificate to the email address you provide.

If you would like a fancy copy of your certificate (suitable for framing), please add \$8.50 to your payment.

Questions? Call 707 459-1315 (Pacific Time) or email (info@ATrainCeu.com).

Rhode Island: Substance Abuse

Authors: Sara E. Wilson, BA; Lauren Robertson, BA, MPT; Tracey Long, RN, PhD, APRN

Contact hours: 2

Pharmacotherapy hours: 2

Course price: \$15

Course Summary

On July 2, 2018, the Rhode Island Department of Health made regulatory changes to the Rules and Regulations for Pain Management, Opioid Use, and the Registration of Distributors of Controlled Substances in Rhode Island [216-RICR-20-20-4]. These regulations require prescribers to:

- 1. Have a conversation with patients about the risks and benefits of taking an opioid prescription;
- 2. Indicate the diagnosis code(s) on a patient's opioid prescription; and
- 3. Co-prescribe naloxone to patients who are at a higher risk for opioid overdose. (RI Department of Health, 2018)

This course offers information about the prescription drug abuse crisis, alternatives to opioids for managing and treating pain, best practices for prescribing controlled substances, and drug diversion and safeguards to prevent diversion.

Learning Objectives

When you finish this course, you will be able to:

- 1. State 4 factors that have contributed to the opioid crisis.
- 2. Relate the three classes of most-abused prescription drugs.
- 3. Describe the difference between tolerance, dependence, and addiction.
- 4. State the 3 main guidelines Rhode Island providers must follow when prescribing controlled dangerous substances, including opioids in any schedule.
- 5. List 5 complementary alternatives to opioids for pain management.
- 6. Relate the 5 most common sources of illicit drugs.

1. Abuse and Misuse of Prescription Opioids

Over the past 25 years, pharmaceutical companies deceptively promoted opioid use in ways that were often neither safe nor effective, contributing to unprecedented increases in prescribing, opioid use disorder, and deaths by overdose.

Andrew Kolodny, MD AMA Journal of Ethics

More than two decades ago, a trend emerged of almost-unquestioned use of opioids for the treatment of acute and chronic pain. Although mostly well-intentioned, individual consequences have been serious: a dramatic increase in the abuse of opioids; increases in dependence, addiction, and overdose; and other less-known side effects such as neonatal abstinence syndrome and transmission of infectious diseases. Society has suffered as a result with loss of productivity, increased crime and violence, neglect of children, and expanded healthcare costs.

Prescribing opioids for acute and chronic pain —and diversion and abuse of prescription pain medications—has become so widespread that nearly one hundred thirty people die each day from an opioid overdose, about a third of which are related to *prescription* opioids. Over a 10-year period, that has averaged to nearly 50,000 deaths each year from opioid overdoses. The availability of narcotic-reversal drugs such as Narcan (naloxone) has helped but has not stopped the epidemic of opioid deaths.



Source: CDC.

Our nation faces a crisis of overdose deaths from opioids, including heroin, illicit fentanyl, and prescription opioids. These deaths represent a mere fraction of the total number of Americans harmed by opioid misuse and addiction. Many Americans now suffer daily from a chronic medical illness called **opioid addiction**, or **OUD**. Healthcare professionals, treatment providers, and policymakers have a responsibility to expand access to evidence-based, effective care for people with OUD (SAMHSA, 2020, May).

Since the early 2000s, Rhode Island has ranked among the states experiencing the most severe and protracted crisis of opioid abuse. In 2018 the state's opioid-related overdose death rate was the tenth highest in the United States among the 38 states that were ranked by the Centers for Disease Control and Prevention (CDC) (Burke & Sullivan, 2020).

Rhode Island Response

To respond to its opioid crisis, Rhode Island has prioritized expanding access to evidence-based treatments, emphasizing medication-assisted treatment (MAT) for opioid use disorder (Burke & Sullivan, 2020).

COVID: A Crisis Within a Crisis

After experiencing a brief period of relatively stable death rates, recent evidence suggests that Rhode Island has seen a resurgence in opioid-related mortality in 2020, due in part to the COVID-19 pandemic (Burke & Sullivan, 2020). This has caused what some call "a crisis within a crisis." And it is not only Rhode Island: since the beginning of the coronavirus pandemic more than 40 states have reported increased opioid deaths (Desmon, 2020).

Cells Infected with Coronavirus



Colorized scanning electron micrograph of an apoptotic cell (blue) infected with SARS-COV-2 virus particles (red), isolated from a patient sample. Source: NIAID.

From July 2019 to July 2020, more than 80,000 overdose deaths occurred throughout the United States, the highest number ever recorded in one year, which represents a 25% increase over previous years (NCHS, 2021). Although overdose deaths were increasing in the months preceding the COVID-19 pandemic, these numbers suggest an acceleration of overdose deaths related to the pandemic (CDC, 2020, December 17). During that same period, Rhode Island experienced an increase in overdose deaths of more than 6% (NCHS, 2021).

Due to the many healthcare challenges faced by this population, people with a substance use disorder may be more susceptible to COVID-19 infection. Medical care is lacking, and many people have comorbid conditions. Lung function may already be affected, especially for those who use methamphetamine, vape, or smoke cigarettes or marijuana. A high percentage of individuals with substance use disorder experience homelessness and are exposed to increased transmission of COVID-19 in homeless shelters and prisons (Volkow, 2020).

2. Factors Contributing to the Opioid Epidemic

Over the last two decades, several factors have contributed to the opioid crisis. In 1966 pain was added as the fifth vital sign, leading to practices that sought to minimize or eliminate pain. Campaigns by pharmaceutical companies advertised the effectiveness of their drugs for the treatment of acute and chronic pain. Clinical practice guidelines began to be influenced by pharmaceutical companies, and financial and conflict-of-interest disclosures were avoided by some researchers and clinicians (Spithoff et al., 2020).

Pain as a Fifth Vital Sign

The introduction of pain as the fifth vital sign by the American Pain Society in 1995, the Veteran's Health Administration in 1999, and the Joint Commission in 2001, overemphasized pain as a quantifiable measure. The intent was to ensure that pain is measured and treated (Bernard et al., 2018).

Perceptions of undertreatment led to increased use of opioids, at first for cancer-related pain and later for noncancer pain. The increased use was related to exaggerated claims in the medical literature (and by the pharmaceutical industry), of a lack of addiction—a claim that was subsequently found to be false and even deliberatively deceptive. The epidemic of opioid prescribing that began in the 1990s resulted in an alarming rise in opioid deaths (Bernard et al., 2018).

Pharmaceutical Industry Campaigns

As prescription opioids became more acceptable as a first-line treatment for noncancer pain, evidence began to slowly emerge about the harm associated with this practice. Despite this increasing awareness, prescriptions for opioids gradually increased, and then exploded. The influence of the pharmaceutical industry in pushing the use of prescription opioids for pain management was a significant factor and has been described as "pervasive" by some researchers (Spithoff et al., 2020).

In a particularly egregious example, in the late 1990s Purdue Pharma began aggressively marketing OxyContin (oxycodone), for chronic non-cancer pain through academic detailing* and education sessions for physicians. Many other pharmaceutical companies followed suit (Spithoff et al., 2020). Purdue provided financial support to the American Pain Society, the American Academy of Pain Medicine, the Federation of State Medical Boards, The Joint Commission, pain patient groups, and other organizations (Lopez, 2018).

***Academic detailing**: Peer-to-peer educational outreach that has its roots in pharmaceutical detailing and was designed to improve prescribing practices by physicians.

There is evidence that the pharmaceutical industry influenced physicians' clinical practice guidelines. Organizations that produced the guidelines failed to employ, regularly, mechanisms such as appointing a methodologist in a lead role or conducting an external review, that would mitigate potential bias from industry involvement (Spithoff et al., 2020).

Some of this acceleration in the rate of increase in opioid prescribing may have been due to the FDA's allowing labelling on OxyContin that read that iatrogenic* addiction was "very rare" and that the delayed absorption of OxyContin reduced the abuse liability of the drug (Baker, 2017).

***Iatrogenic**: a harmful complication caused by a doctor or healthcare provider.

These claims were used in marketing campaigns to physicians and in more than forty national pain-management and speaker-training conferences for which all expenses were paid. The FDA required removal of these unsubstantiated claims from OxyContin's labeling in 2001. However, the concept that iatrogenic addiction was rare and that long-acting opioids are less addictive was greatly reinforced and widely repeated, and studies refuting these claims were not published until several years later (Baker, 2017).

Lack of Clinician Disclosures

Although accurate clinician disclosure was the accepted standard during that time, some researchers involved with the development of guidelines either did not report—or did not accurately report—funding sources for the sponsoring organization and conflicts-of-interest for individuals. One top cancer researcher failed to disclose millions in payments. Reasons for not declaring conflicts of interest have been poorly studied but may include not understanding what to declare; believing that a conflict is irrelevant; and concern about reducing trust in the guideline user (Spithoff et al., 2020).

2020 saw the largest ever settlement by a pharmaceutical company for its role in fueling the opioid crisis. Purdue Pharma pleaded guilty on November 24, 2020 to felony charges that included paying illegal kickbacks to physicians who prescribed unnecessary or excessive doses of the drug. As part of the settlement, Purdue Pharma agreed to pay \$8 billion to the United States and to dissolve their business and form a public benefit corporation, which will continue manufacturing drugs but steer profits from future opioid sales toward programs aimed at alleviating the addiction crisis (Desmon, 2020).

Oxycodone Tablets



Source: National Library of Medicine.

3. Abuse of Prescription Opioids

There has been a dramatic increase in the acceptance, use, and abuse of prescription opioids for the treatment of chronic non-cancer pain, despite serious risks and lack of evidence about their long-term effectiveness. Prescription opioid overdose deaths are on the rise and remain 4 times higher than in 1999 (CDC, 2021, January 25).

An Opioid Overdose



Source: National Library of Medicine.

Three Waves

In the United States the rise in opioid overdose deaths has been described as occurring in three distinct waves. The first wave began in the early 1990s, with increased prescribing of opioids. Overdose deaths involving prescription opioids (natural and semi-synthetic opioids and methadone) began to increase around 1999. The second wave began in 2010, with rapid increases in overdose deaths involving heroin (CDC, 2020, September 4).

The third wave began in 2013, with significant increases in overdose deaths involving synthetic opioids, particularly those involving illicitly manufactured fentanyl. The market for illicitly manufactured fentanyl continues to change, and it is used in combination with heroin, counterfeit pills, and cocaine . During the third wave, nearly 85% of overdose deaths involved illicitly manufactured fentanyl, heroin, cocaine, or methamphetamine (alone or in combination) (CDC, 2020, September 4).

Most Overdose Deaths Involve One or More Illicit Drugs The 10 most frequently occurring opioid and stimulant combinations accounted for 76.9% of overdose deaths.	19.8%	10.5%	10.3%	9.2%	6.3%	5.5%	5.1%	3.7%	3.3%	3.2%
Illicitly Manufactured Fentanyls*	•	۲	•				•			
Heroin			•				•			•
Prescription Opioids				•					•	
Cocaine		•				•	•			
Methamphetamine					•			•		

*IMFs include fentanyl and fentanyl analogs. Source: CDC, 2020, September 4.

Illicit designer drugs have been particularly difficult to identify and track. Amateur and professional chemists can quickly reproduce an illicit drug, alter its potency, and flood the market with modified compounds undetectable by most known tests. Often little is known about the effects of these drugs because their chemical structures are modified so rapidly and so often that it is impossible for researchers and law enforcement to keep up with the changes.



Source: CDC, 2020 September 3.

Most-Abused Prescription Drugs

Overall, the three classes of most-abused prescription drugs are:

- 1. Opioids that include oxycodone (Percocet, Tylox, OxyContin), hydrocodone (Vicodin, Lortab), and methadone (Dolophine).
- 2. Central nervous system depressants that include butalbital (Fiorinal/Fioricet), diazepam (Valium), and alprazolam (Xanax).
- 3. Stimulants that include methylphenidate (Ritalin) and amphetamine/dextroamphetamine (Adderall). (NIDA, 2020, June)

Most-Abused Prescription Pain Relievers, Nationally

Hydrocodone	Oxycodone	Codeine
Tramadol	Buprenorphine	Morphine
Oxymorphone	Hydromorphone	Fentanyl

Source: SAMHSA, 2020, May.

The burden of the opioid epidemic, involving both the misuse of prescribed opioids and the use of illicit opioids, is not uniform across the United States. Drug poisoning mortality and opioid consumption rates vary significantly by state and region, with drug poisoning rates highest in the Southwest and lowest in the Midwest (Yang et al., 2020).

Sales of opioid analgesics, which are prone to abuse, have also varied significantly by state. For example, prescription drug abuse of oxycodone has been unevenly concentrated in eastern and southeastern states with a pattern of migration from the Northeast and Appalachia toward the Southeast and West (Yang et al., 2020).

Opioid prescribing remains high and inconsistent across the United States and varies widely from county to county. Some characteristics of areas with higher opioid prescribing:

- Small cities or large towns
- Areas with a higher percentage of white residents
- Areas with more dentists and primary care physicians
- Areas with more people who are unemployed or uninsured
- Areas with more people with diabetes, arthritis, or disability (CDC, 2017, July 6)

Overdose Deaths in Rhode Island

Every county in Rhode Island has been affected by the opioid crisis, but five cities have experienced a higher number of overdose deaths: Cranston, Pawtucket, Providence, Warwick, and Woonsocket. Although the state's overdose crisis started with prescription drugs, overdose deaths from this source have leveled. Deaths from illicit drugs—such as heroin and fentanyl—are on the rise. Strikingly, about 75% of people who die of an overdose in Rhode Island are men (Prevent Overdose RI, 2020a).



Rhode Island Overdose Deaths by Drug Type, 2009–2019

Illicit Drugs Combination Prescription Drugs

Orange = Illicit drugs; Blue = Combination; Gray = Prescription drugs. Source: Prevent Overdose RI, 2020a.

Fentanyl continues to pose the greatest threat and has worsened Rhode Island's overdose crisis. The number of overdose deaths related to illicit fentanyl has increased by almost 30fold since 2009. From January to October of 2020, over 70% of overdose deaths have involved illicit fentanyl (Prevent Overdose RI, 2020a).





Orange = Fentanyl involved deaths; Gray = Total deaths. Source: Prevent Overdose RI, 2020a.

Reversing the Tide

The Rhode Island Department of Health has implemented initiatives to help reverse the effects of the opioid epidemic. Unfortunately, in about 60% of cases, help is available but it is not offered by healthcare providers.

The Drug Overdose Prevention Program advances and evaluates comprehensive state-level interventions for preventing drug overuse, misuse, abuse, and overdose. Prescriber Education Sessions provide one-on-one or small-group sessions covering resources, naloxone education, and best practices. The Recovery and Hope Hotline connects counselors licensed in chemical dependency who offer support, tips, self-help tools, and referrals to opioid use disorder treatment services.

Case: Bob, Construction Worker

Bob, a 45-year-old construction worker was being treated in an acute care hospital for a broken femur and a low-back, work-related injury. The nurses offered narcotic analgesics around the clock,* as ordered, to keep Bob comfortable.

*Rather than offer any other comfort measures, it was easier to administer the narcotic that kept him from using the call light repeatedly.

After he was discharged, Bob followed up with his primary care physician, who initially prescribed oxycodone and muscle relaxers in a limited supply and without refills, per standard practice. Within one month, Bob returned complaining of constant pain, and he was given a new prescription for oxycodone. The monthly visits became routine, without additional assessments. No alternative modalities were discussed or offered, and no narcotic use contract was written. Prescriptions continued to be written and filled.

Eventually, the medications offered no further pain relief and Bob began supplementing with legal marijuana to provide relief for the initial back pain and for the progressive physical craving for the opioid. He visited several other physicians to increase his supply and none of the providers were aware of his multiple visits and duplicated prescriptions.

Bob eventually advanced to street heroin and ultimately overdosed on the combination of opioids that took his life.

What could have been done to avoid this needless loss of life?

What is the role of healthcare professionals in the prescribing and monitoring of opioid drugs?

What is the nurse's role in the opioid epidemic?

What prevention and treatment strategies are available?

4. Tolerance, Dependence, and Addiction

Opioids are a class of drugs that includes heroin, hydrocodone, oxycodone, and other morphine-derived drugs. Use of such drugs can cause tolerance, dependence, and addiction, and for some people, result in what is referred to as **opioid use disorder (OUD)**.

Opioid Tolerance

Opioid tolerance occurs when a person using opioids begins to experience a reduced response to the medication, requiring more opioids to experience the same effect. Psychological tolerance can develop quickly, meaning a user must take more of the medication to achieve the same effect, often in doses significantly higher than a therapeutic dose. In contrast, analgesic tolerance develops slowly and patients with stable pain may be able to stay on the same dose for months or years.

Opioid Dependence

Opioid dependence occurs when the body adjusts its normal functioning around regular opioid use (CDC, 2021, January 26). Dependence is often part of addiction, but they are not the same thing.

If a drug is abruptly reduced or stopped, those who are dependent experience unpleasant physical withdrawal symptoms. Depending on the drug, these symptoms can be mild to severe and can usually be managed medically—or avoided by slowly tapering the drug dosage downward (NIDA, 2020, June). Dependence can resolve after medically supervised withdrawal (formerly called detoxification).

Opioid Addiction

Opioid addiction occurs when attempts to cut down or control use are unsuccessful or when use results in social problems and a failure to fulfill obligations at work, school, and home. Addiction often comes after a person has developed opioid tolerance and dependence, making it physically challenging to stop opioid use and increasing the risk of withdrawal (CDC, 2021, January 26).

Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People addicted to opioids use substances or engage in behaviors that become compulsive and often continue despite harmful consequences (ASAM, 2019).

Prevention efforts and treatment approaches for addiction are generally as successful as those for other chronic diseases (ASAM, 2019). As with other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death (ASAM, 2015).

Understanding the difference between dependence and addiction provides a better grasp of the issues related to opioid use and abuse.

Opioid Use Disorder

The DSM-5 defines **opioid use disorder (OUD)** as a disorder characterized by loss of control of opioid use, risky opioid use, impaired social functioning, tolerance, and withdrawal. Tolerance and withdrawal do not count toward the diagnosis in people experiencing these symptoms when using opioids under appropriate medical supervision. OUD covers a range of severity and replaces what DSM-IV termed *opioid abuse* and *opioid dependence*.

Generally, those who are dependent on opioids vary between feeling sick without the drug and feeling the desired high after taking the drug. Being addicted to the drug (having OUD) motivates a person to do whatever it takes to get and take the drug in order to avoid withdrawal symptoms. Prescription Drug Monitoring Programs (PDMPs) are designed to identify patients who are drug-seeking or at risk for opioid use disorder.

People with opioid use disorder who follow detoxification with complete abstinence are likely to relapse. While relapse is a normal step on the path to recovery, it can also be life threatening, raising the risk for a fatal overdose. An important way to support recovery from heroin or prescription opioid use disorder is to maintain abstinence from those drugs (NIDA, 2018, June).

5. Treatment of Opioid Use Disorder

Because drug abuse and addiction have so many dimensions and disrupt so many aspects of a person's life, treatment is not simple. Most people cannot simply stop using drugs for a few days and be cured.

Effective treatment incorporates many components, each directed to a particular aspect of the illness and its consequences. Patients usually require long-term or repeated episodes of care for sustained abstinence and recovery.

The goal of addiction treatment is to help a person stop using drugs, maintain a drug-free lifestyle, and achieve productive functioning in the family, at work, and in society. To be successful, treatment must be readily available and address the multiple needs of the individual, not just his or her drug abuse (NIDA, 2018, January).

Medications are an important element of treatment for many patients, especially when combined with counseling and behavioral therapies. Medications may be taken for varying lengths of time, including lifelong treatment (NIDA, 2018, January).

Medically assisted withdrawal (detoxification) is only the first stage of addiction treatment and by itself does little to change long-term drug abuse. Detoxification is not in itself "treatment," but only the first step in the process. Patients who do not receive any further treatment after detoxification usually resume their drug use (NIDA, 2019, January).

Because drug abuse and addiction often co-occur with other mental illnesses, patients presenting with one condition should be assessed for the other. If these problems co-occur, treatment needs to address both, including the use of appropriate medications (NIDA, 2018, January).

Drug use during treatment must be monitored continuously, as lapses during treatment do occur. Treatment programs should test patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases, as well as provide targeted risk-reduction counseling (NIDA, 2018, January).

Unfortunately, only a minority of people with OUDs receive treatment of any kind, even after a nonfatal overdose. This represents a missed public health opportunity, given the well-established effectiveness of opioid agonist treatment in reducing mortality (Tsai, et al., 2019).

As a result of the Affordable Care Act, the number of Rhode Islanders without health insurance declined by more than half between 2013 and 2016. Most of that decline was accounted for by the Medicaid expansion, which brought in nearly 90,000 new enrollees. These enrollees gained access to generous benefits for mental health and substance abuse treatment services, including full coverage for methadone treatment in specialized opioid treatment programs (OTPs) and full coverage of buprenorphine prescriptions (Burke & Sullivan, 2020).

Overview of Medications for OUD

Ongoing outpatient medication treatment for opioid use disorder is linked to better retention and outcomes than treatment without medication. Although some people stop using opioids on their own and others recover through support groups or specialty outpatient or residential treatment with or without medication, FDA-approved medication should be considered and offered to patients with OUD as part of their treatment (SAMHSA, 2020, May).

Methadone (Dolophine, Methadose), buprenorphine (Suboxone, Subutex, Probuphine, Sublocade), and naltrexone (Vivitrol) are approved by the FDA for treatment of opioid addiction. Acting on the same targets in the brain as heroin and morphine, methadone and buprenorphine suppress withdrawal symptoms and relieve cravings. *Naltrexone* blocks the effects of opioids at their receptor sites in the brain and *should be used only in patients who have already been detoxified* (NIDA, 2019, January).

Only physicians, nurse practitioners, physician assistants, and—until October 1, 2023 clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives can prescribe buprenorphine for opioid use disorder. They must get a federal waiver to do so (SAMHSA, 2020, May).

Only federally certified, accredited **opioid treatment programs (OTPs)** can dispense methadone to treat OUD. Opioid treatment programs can administer and dispense buprenorphine without a federal waiver. Any prescriber can offer naltrexone, which is carried by many EMTs who are first responders (SAMHSA, 2020, May).

Did You Know?

In Rhode Island, Medicaid expansion brought in nearly 90,000 new enrollees, who gained full coverage for methadone treatment and full coverage of buprenorphine prescriptions (Burke & Sullivan, 2020).

Opioid Agonist Treatment

Opioid agonist treatment (OAT)—consisting of daily use of methadone or buprenorphine after an initial period of detoxification from other opioids—has been found to be most effective for achieving long-term abstinence from opioids of abuse. The decision of whether to take methadone, buprenorphine, or naltrexone should be specific to each patient and should consider the risks of side effects and interactions with other medications (Burke & Sullivan, 2020).

The science that demonstrates the effectiveness of these medications for opioid use disorder is strong. For example, methadone, extended-release injectable naltrexone (XR-NTX), and buprenorphine were each found to be more effective in reducing illicit opioid use than no medication in randomized clinical trials. Methadone and buprenorphine treatment have also been associated with reduced risk of overdose death (SAMHSA, 2020, May).

Once treatment is initiated, both a buprenorphine/naloxone combination and an extendedrelease naltrexone formulation are similarly effective in treating opioid addiction. Because full detoxification is necessary for treatment with naloxone, initiating treatment among active users is difficult, but once detoxification is complete both medications have similar effectiveness (NIDA, 2019, January). Opioid agonist treatment with long-acting oral medications is widely used in Western countries. Most patients receiving OAT will stop or reduce their use of street opioids and may improve their physical and mental health and social connections. Another effective alternative treatment available in some European and Canadian settings, is *injectable* OAT (iOAT) with either diacetylmorphine (heroin) or hydromorphone (Oviedo-Joekes et al., 2021).

The delivery of injectable OAT comes with more restrictive regulatory limits compared to oral OAT. A main premise of injectable OAT is that the medications are dispensed and self-administered by injection under direct observation, for the safety of the patient and the community. When the medications are taken onsite, patients can be monitored for signs of intoxication before the injection or after, for signs of over-sedation or respiratory depression. If an overdose occurs after the injection of the medication, immediate onsite treatment is available, ensuring the safety of the patient (Oviedo-Joekes et al., 2021).

The risk for the community stems from the possibility of diversion of the patients' medication, or its use not as prescribed, posing risk to others. Take home doses (also called *carries*) for injectable medications are not allowed in this framework, even if clinically advised (Oviedo-Joekes et al., 2021).

Medication Assisted Treatment (MAT)

The term **medication-assisted treatment** refers to the use of medications in conjunction with individual and/or group counselling and other recovery support services. The World Health Organization (WHO) and the U.S. Department of Health and Human Services (DHHS) both strongly endorse the use of MAT for opioid dependence, based on its proven effectiveness in reducing abuse of opioids, risk of fatal overdose, and all-cause mortality (Burke & Sullivan, 2020).

Medication-assisted treatment provides a whole-patient approach to the treatment of substance use disorders. Medications used in MAT are approved by the Food and Drug Administration and MAT programs are tailored to meet each patient's needs (SAMHSA, 2021).

For some people struggling with addiction, MAT can help sustain recovery. It may also prevent or reduce opioid overdose. MAT has proved to be clinically effective and to significantly reduce the need for inpatient detoxification services. These medications and therapies can also contribute to lowering a person's risk of contracting HIV or hepatitis C by reducing the potential for relapse (SAMHSA, 2021).

The goal of MAT is full recovery, including the ability to live a self-directed life. This treatment approach has been shown to:

- Improve patient survival.
- Increase retention in treatment.
- Decrease illicit opiate use and other criminal activity among people with substance use disorders.
- Increase patients' ability to gain and maintain employment.
- Improve birth outcomes among women who have substance use disorders and are pregnant. (SAMHSA, 2021)

Getting into approved treatment programs, where these drugs can be given and monitored closely, in combination with behavioral therapy, is often difficult, expensive, and may not be approved by some insurance companies. Many— or even most—OUD sufferers receive no relevant medications during treatment, or they receive no treatment whatsoever.

In March of 2020, in response to challenges in accessing treatment during the COVID-19 pandemic, the federal government suspended a law that required patients to have an inperson visit with a healthcare provider before they could be prescribed MAT. Through the end of the declared public health emergency, patients were temporarily able to initiate treatment over the phone without in-person or video appointments. Telehealth-delivered MAT was found to be effective in small-scale studies before the pandemic, and patients were more likely to remain in treatment uninterrupted (Burke & Sullivan, 2020).

In response to COVID-19, people with OUD are facing unique challenges, such as not being able to practice physical distancing, financial insecurity, living in shelters, or being homeless. They have other medical conditions that make them more likely to be immunocompromised and at risk of developing COVID-19 (Oviedo-Joekes et al., 2021).

Medications for Opioid Use Disorder						
Methadone (Dolophine, Methadose)	Synthetic opioid agonist	Eliminates withdrawal symptoms and relieves drug cravings				
Buprenorphine	Partial opioid agonist	Reduces cravings and withdrawal symptoms				
Naltrexone	Opioid antagonist	Prevents opioids from producing euphoria				

Lucemyra (Lofexidine)

Lofexidine (**Lucemyra**) is a non-opioid centrally acting alpha2-adrenergic receptor agonist that was first approved for the treatment of opioid withdrawal in the United Kingdom in 1992. It was originally studied for use as an antihypertensive in 1980, but research was stopped as it was found less effective for the treatment of hypertension than clonidine. Lofexidine was then repurposed for the treatment of opioid withdrawal, as it was seen to be more economical and have fewer side effects than clonidine (NLM, 2021). In 2018 the FDA approved lofexidine for use in reducing symptoms associated with opioid withdrawal in adults, whether they have been using opioids appropriately or experience opioid use disorder.

The Role of Naloxone (Narcan)

Naloxone (**Narcan**) is a medication designed to rapidly reverse opioid overdose. It is an opioid antagonist—meaning that it binds to opioid receptors and can reverse and block the effects of opioids. It can quickly restore normal respiration to a person whose breathing has slowed or stopped due to overdosing with heroin or prescription opioid pain medications.

Naloxone is available as an injectable, auto injectable, or a prepackaged nasal spray. If a patient is unconscious, follow the ABCs of emergency response* such as calling 911, checking for a pulse, securing an open airway, and providing rescue breaths. Patients will often respond quickly and be confused and possibly combative.

*ABCs: Airway, Breathing, and Circulation.

Naloxone Kit



Source: James Heilman, Wikipedia.

Most states have passed laws to widen the availability of naloxone for family, friends, and other potential bystanders of overdose. In April 2019, the FDA approved the first generic naloxone hydrochloride nasal spray that can stop or reverse the effects of an opioid overdose. Naloxone nasal spray delivers a measured dose when used as directed. It can be used for adults or children and is easily administered by anyone, even those without medical training. *The drug is sprayed into one nostril while the patient is lying on his or her back and can be repeated if necessary* (FDA, 2019).

Naloxone Availability in Rhode Island

In Rhode Island, naloxone is available at local pharmacies without a prescription. The Good Samaritan law protects you from arrest for helping anyone you think is having an overdose (Prevent Overdose RI, 2020b).

Harm Reduction

Harm reduction is the use of strategies that promote safer use, managed use, abstinence, meeting people who use drugs "where they are," and addressing conditions of use along with the use itself (NHRC, 2021). Harm reduction strategies include:

- Access to sterile injection equipment to reduce secondary transmission of HIV and hepatitis C
- Supervised consumption facilities and supervised treatment with diacetylmorphine (heroin) to reduce overdose risk
- Expansion of overdose education and naloxone distribution to reduce the casefatality rate of opioid overdoses when they do occur (Tsai, et al., 2019)

6. Responsible Prescribing Practices

People who are exposed to opioids—including prescribed opioids—are at increased risk of long-term use and of developing an opioid use disorder. Surveys of people with opioid use disorders often identify prescription opioids as the "initiating" opioid. The importance of the admonition to "**keep opioid-naive patients opioid naive**" cannot be overstated (Tsai et al., 2019).

Healthcare professionals who prescribe or administer opioids must keep in mind the potential for misuse and abuse. They must be well informed about the appropriate use and cautions for opioid misuse and must be able to recognize effectiveness, side effects, overdose symptoms, and abuse in patients and in other healthcare professionals.

Primary and secondary prevention practices include reducing incautious and long-term opioid prescribing; preventing diversion; and identifying patients who may be at risk for, or who have already developed, an opioid use disorder. Thoughtful and cautious opioid prescribing is a key part of prevention (Tsai et al., 2019).

Over the last decade, opioid prescribing has been in decline, especially the incidence of initial opioid prescriptions for opioid-naive patients. Despite this favorable trend, drug overdose mortality has continued to increase, with nonpharmaceutical fentanyl and its analogues increasingly associated with drug overdose deaths (Tsai et al., 2019). Improving the way opioids are prescribed can ensure patients have access to safer, more effective chronic pain treatment while reducing the number of people who misuse or overdose from these drugs.

Guidelines for Chronic Pain

In response to the opioid crisis, in 2016 CDC developed the *Guideline for Prescribing Opioids for Chronic Pain*. The guideline included a recommendation to limit opioids for acute pain in most cases to 3 to 7 days. This recommendation was based on evidence showing an association between use of opioids for acute pain and long-term use. In the last several years, more than 25 states have passed laws restricting prescribing of opioids for acute pain (AHRQ, 2020, January 2).

The Guideline provides recommendations for primary care clinicians who are prescribing opioids for chronic pain outside of active cancer treatment, palliative care, and end-of-life care. It addresses 1) when to initiate or continue opioids for chronic pain; 2) opioid selection, dosage, duration, follow-up, and discontinuation; and 3) assessing risk and addressing harms of opioid use (Dowell et al., 2016).

Key Points

- > Long-term opioid use often begins with treatment of acute pain.
- > The lowest effective dose of an opioid is recommended.
- > For chronic pain, non-opioid therapies are preferred.
- > Immediate-release opioids are preferred over extended-release/long-acting opioids.

Evaluate the benefits and harms within 1 to 4 weeks of starting opioid therapy.

Source: NIDA, 2017.

In addition:

- Use a Prescription Drug Monitoring Programs (PDMPs) to determine concurrent opioid use.
- Use urine drug test screening to test for concurrent illicit drug use.
- Avoid concurrent prescribing of other opioids and benzodiazepines if possible.
- Offer evidence-based treatment for opioid use disorders. (NIDA, 2017)

On January 1, 2018, the Joint Commission implemented revised pain assessment and management standards. The new standards state that hospitals must identify pain assessment and pain management, including safe opioid prescribing, as an organizational priority. They must:

- Involve medical staff in performance improvement activities to improve quality of care, treatment, and patient safety.
- Assess and manage the patient's pain and minimize the treatment risks.
- Collect, compile, and analyze data to monitor performance. (Joint Commission, 2017)

Promising actions for safer opioid prescribing.



Source: CDC, 2017, July 6.

Rhode Island Prescribing Regulations

In Rhode Island, before prescribing an opioid, healthcare providers must talk to patients about the risks of taking opioid pain medications as prescribed. This conversation is an opportunity to thoughtfully consider risks, potential benefits, and must include the following topics:

- Risks of developing physical and psychological dependence which may lead to harmful use, addiction, overdose, and/or death;
- Risks associated with concurrent use of alcohol or other sedating medications, such as benzodiazepines;
- Impaired ability to safely operate any motor vehicle;
- Patient's responsibility to safeguard all opioid medications in a secure location;
- Patient's ability to safely dispose of unnecessary or unused opioids;
- Alternative treatments for managing pain; and
- Risks of relapse for those who are in recovery from substance dependence. (RIDOH, 2018)

For patients with chronic pain, opioids are associated with small beneficial effects versus placebo but are associated with increased risk of short-term harms and do not appear to be superior to nonopioid therapy. Evidence on intermediate-term and long-term benefits is limited, and additional evidence confirms an association between opioids and increased risk of serious harms that appears to be dose-dependent (AHRQ, 2019).

Rhode Island has a statewide **Prescription Drug Monitoring Program (PDMP)**. It collects data for controlled substance prescriptions (Schedules II–V, or opioid antagonists) in a centralized database. These data can then be used by prescribers and pharmacists in the active treatment of their patients. Under Rhode Island regulations, information about all transactions for controlled substances dispensed in Rhode Island must be reported.

The Dilemma in Acute Pain Management

Acute pain occurs in response to noxious stimuli and is normally sudden in onset and time limited. It usually lasts for less than 7 days but can extend up to 30 days; for some conditions, acute pain episodes may recur periodically. In some patients, acute pain persists to become chronic.

The dilemma in the medical management of acute pain lies in selecting an intervention that provides adequate pain relief, improves function, and facilitates recovery, while minimizing adverse effects and avoiding overprescribing of opioids. When acute pain is adequately treated, it may prevent the transition to chronic pain (AHRQ, 2020, January 2).

Many factors influence acute pain management. For example, postoperative pain is usually managed with multimodal strategies in a monitored setting prior to discharge. By contrast, treatment of pain in an outpatient setting can be more difficult. A treatment that is effective for one acute pain condition and patient in a particular setting may not be effective in others (AHRQ, 2020, January 2).

Reducing the Use of Opioids

Effective pain management should focus on avoiding opioid-only therapy and reducing the doses used to treat acute pain. This approach involves the administration of various opioid and non-opioid agents that act on different sites, resulting in a synergistic* and additive** effect. The goal is to reduce opioid-related adverse drug events and their costs, as well as the risks of opioid abuse or dependence (Carter et al., 2020).

***Synergistic**: combining the drugs that lead to a larger effect than expected from a single drug.

****Additive**: 2 or more drugs combined produce a greater effect than either drug taken alone.

Non-opioid pharmacologic therapies include acetaminophen and/or non-steroidal antiinflammatory drugs. When NSAIDs and/or acetaminophen are included with opioids in treatment regimens for pain relief, an opioid-sparing* effect has been demonstrated (Carter et al., 2020).

***Opioid-sparing**: drugs that allow a patient to feel a similar level of pain relief while taking fewer opioids.

Cannabis may have an opioid-sparing effect whereby a smaller dose of opioids provides equivalent analgesia when paired with cannabis. Studies involving patients who use cannabis to manage pain demonstrate reductions in the use of prescription analgesics along with favorable pain management outcomes. However, there is a lack of research from realworld settings on the opioid-sparing potential of cannabis among high-risk individuals who may be engaging in frequent illicit opioid use to manage pain (Lake et al., 2019).

Avoiding Stigma

The primary problem with the opioid epidemic is simple: It is easier to get high than it is to get help. People who need substance use treatment sometimes do not have access to treatment. Stigma surrounding substance use disorders remains high.

Negative attitudes toward people with OUD undermine secondary prevention. People taking prescription opioid medications for chronic noncancer pain who experience physiologic dependence may be marked with the same labels as people with OUDs and experience difficulties obtaining care. Healthcare professionals' stigmatizing beliefs can lead to suboptimal care, a form of **enacted stigma** that reduces patients' engagement with drug treatment (Tsai et al., 2019).

In some instances, care providers may maintain overly rigid and non-beneficial policies that lack respect for patient autonomy. They may deploy punitive care terminations in response to policy violations or positive urine toxicology screening (Tsai et al., 2019).

In the years since CDC published its opioid-prescribing guideline, stigma has included the imposition of rigid dosage or duration caps or initiation of noncollaborative tapers with established patients, escalating potential harms and transition to nonprescription opioids. Enacted stigma has also been directly associated with nonfatal overdose (Tsai et al., 2019).

To prevent stigmatizing a person, avoid labels ("addict," "junkie," or "drug user"). Understand that drug use falls along a continuum and that substance misuse is often linked to trauma. Use "person first" language, be aware of unintentional bias, and reflect on your own experiences.

7. Alternatives to Prescription Opioids for Pain Management

Opioids are associated with the potential risks of opioid-related adverse drug events, (e.g., respiratory and gastrointestinal related events) and abuse or dependence (Carter et al., 2020). For this reason, reducing opioid monotherapy,* and using nonopioid treatments, as well as complementary and alternative treatments are important factors in the management of pain.

***Monotherapy**: the use of a single drug to treat a disease or condition.

Complementary and Integrative Approaches

A growing body of evidence suggests that complementary and integrative approaches can help manage some painful conditions. In fact, opioids may be less effective than nonopioid therapies for some acute and chronic pain conditions. Adding to the problem, opioids prescribed for surgery and other acute pain conditions often go unused, a potential source for diversion and misuse (AHRQ 2020, January 2).

Complementary and integrative treatments include natural products such as vitamins, herbs, and probiotics; mind-body practices such as yoga, meditation, and naturopathy; and traditional Chinese medicine. At least 30% of the U.S. population uses complementary health approaches, most along with conventional treatments (Feinberg et al., 2018).

Research is lacking regarding demographic, lifestyle, and health-related factors for people using complementary health approaches for pain, and data is particularly sparse in underserved communities. Many of these communities have the highest rates of pain conditions in the nation, including arthritis, and have a rich anecdotal history of using natural products for pain management (Feinberg et al., 2018).

A 2017 review looked at which complementary approaches might be helpful for relieving chronic pain and reducing the need for opioid therapy. There was evidence that acupuncture, yoga, relaxation techniques, tai chi, massage, and osteopathic or spinal manipulation may have some benefit for chronic pain, but acupuncture was the only technique that reduced a patient's need for opioids (NCCIH, 2020).

Research shows that hypnosis is moderately effective in managing chronic pain when compared to usual medical care. However, the effectiveness of hypnosis varies from one person to another. Mindfulness meditation for chronic pain is associated with a small improvement in pain symptoms and music can reduce self-reported pain and depression symptoms in people with chronic pain (NCCIH, 2020).

Coverage of Nonpharmacologic Treatments

CDC's 2016 *Guideline for Prescribing Opioids for Chronic Pain* recommended the use of nonopioid and nonpharmacologic therapies as first-line treatment for chronic pain. Consistent with other recent clinical practice guidelines, CDC also advises that if opioids are prescribed, they should be combined with nonpharmacologic and nonopioid therapies (Heyward et al., 2018).

An increasing volume of evidence and consensus demonstrates the benefits of many of these approaches in clinical practice. The use of nonopioid and nonpharmacologic therapies provides a simultaneous opportunity to improve the quality of care for those with pain while reducing overreliance on prescription opioids (Heyward et al., 2018).

Despite CDC's recommendations, wide variation in insurance coverage of nonpharmacologic treatments hampers the use of complementary and alternative options for pain management. This may be driven by the absence of best practices, the administrative complexities of developing and revising coverage policies, and payers' economic incentives. Healthcare providers have an opportunity to improve the accessibility of services, reduce opioid use, and ultimately improve the quality of care for individuals with chronic noncancer pain while alleviating the burden of opioid addiction and overdose (Heyward et al., 2018).

8. Drug Diversion

Drug diversion is the intentional removal of a prescription medication from the legitimate channels of distribution and dispensing. Diversion occurs when family or friends share a prescription medication, when medication is stolen from its intended recipient, or when a prescription medication is otherwise illegally acquired.

People of all ages, genders, and backgrounds use illicit or prescription drugs nonmedically. This can include taking a medication in a manner or dose other than prescribed; taking someone else's prescription, even if for a legitimate medical complaint such as pain; or taking a medication to get high (NIDA, 2020, June).

Prescription drug diversion, misuse, and abuse is an escalating public health problem. Its impact is associated with a high likelihood of poor healthcare outcomes, increased incarceration cases, and increased mortality. Worldwide, sedatives, analgesics, and stimulants are the drug classes most-commonly diverted, misused, and abused (Chibi et al., 2020).

Most Common Sources of Illicit Drugs

Illicit drugs can be procured in several ways: from family and friends, by doctor shopping, from healthcare providers, through fraud, and via the internet.

Family and Friends

Although we might assume that drug users acquire opioids from street dealers, this is not usually the case. Because pain medications are so commonly prescribed, users may simply look in the medicine cabinet of a family member or friend. As a matter of fact, drug dealers are a relatively small source of illicitly used prescription opioids. Diversion through family and friends is by far the greatest source of illicit opioids (Dixon, 2018).

Doctor Shopping

Doctor shopping occurs when patients seek prescription pain medications from more than one physician. The patient does not inform the doctors of the multiple prescribers and fills multiple prescriptions for the same or similar medication at different pharmacies. However, most opioids are obtained by prescription from one physician (Dixon, 2018).

In the early part of the century, doctor shopping was identified as a risk factor for opioid use disorder, overdose, and diversion. Many states, including Rhode Island, have developed PDMP databases to flag patients who doctor shop (Schneberk et al., 2020).

Paradoxically, negative health outcomes can occur when patients are unable to get medications from a doctor and pursue opioids through riskier channels. Although there is evidence that PDMPs may reduce overall opioid prescriptions, there is insufficient evidence to determine if PDMPs curtail doctor-shopping behavior, or reduce negative patient centered outcomes, such as opioid overdoses (Schneberk et al., 2020).

Fraud

Patients who misuse or abuse prescription drugs may try to fill a fraudulent prescription. They may try to fill out a prescription for a fictitious patient on a prescription pad stolen from a prescriber's office or alter a legitimate prescription.

They may try to change the phone number on a legitimate prescription pad with an altered call-back number or call in a fraudulent prescription and provide the drug abuser's own call-back number for verification. They may also try to create a fraudulent prescription signed by a fictitious doctor or copy a prescription from a legitimate doctor.

Healthcare Providers

Data suggests that about 10% of healthcare workers are abusing drugs. They may become involved in drug diversion by providing drugs to patients engaging in fraud or doctor shopping. They may divert drugs from their patients for their own use.

Healthcare providers can divert controlled substances by replacing a controlled substance with a substitute drug or with saline solution. They may remove a substance from a premixed infusion or from a multidose vial. Additionally, they may:

- Divert and forge a prescription pad.
- Document that a medication has been given, but not administer it to the patient.
- Remove controlled substances from an unsecure waste container.
- Divert an expired controlled substance from a holding area. (Joint Commission, 2019)

Nonclinical healthcare workers can also divert drugs. Shipping-and-receiving personnel often handle drug shipments or returns and may take the drugs for personal use. Housekeeping staff can obtain pain medication by stealing partially filled vials from patient rooms (Fan et al., 2019).

Patients and their families may also divert drugs by, for example, acquiring fentanyl patches from unsecured waste receptacles or tampering with unsecured intravenous infusions (Fan et al., 2019). Due to the availability of, and access to, medications in the healthcare setting, diversion of controlled substances can be difficult to detect and prevent without a comprehensive controlled substances diversion–prevention program (Joint Commission, 2019).

Case: APNs Jan and Dora

Jan and Dora are advanced practice registered nurses who specialize in restructuring and rehabbing nursing homes that are on the brink of bankruptcy. They have had success "saving" several large nursing homes in Rhode Island, are paid handsomely, and have the respect and gratitude of their employers. When they arrive at a failing facility, it isn't unusual for them to fire employees who have been engaged in illegal activities such as diversion of controlled substances.

On a visit to their home, a friend noticed a plastic bag filled with pills on a table next to a recliner. The friend, a registered nurse and recovered heroin addict, immediately recognized the drugs as prescription pain pills. She asked Jan where she got the pills and Jan replied that she had retrieved them from a garbage can in her office at the facility she and Dora were currently working to save from bankruptcy. When pressed for an explanation, Jan said that as far as she was concerned, once a drug is thrown into a garbage can, it no longer belonged to anyone and she was free to take possession.

Do you think Jan is behaving appropriately? Is she stealing from the facility? What other ethical issues arise from Jan's behavior? Do her friends have a legal or ethical duty to report Jan to her employer or perhaps to the state department of health?

The diversion of controlled drugs from hospitals affects patients, healthcare workers, hospitals, and the public. Patients suffer inadequate pain control and experience substandard care from impaired healthcare providers. Healthcare workers that divert are at risk of overdose and death; they also face regulatory censure, criminal prosecution, and civil malpractice suits (Fan et al., 2019).

Hospitals bear the cost of internal investigations and follow-up care for affected patients and can be fined large amounts for inadequate safeguards. Hospitals that fail to regulate and report diversion compromise public trust (Fan et al., 2019).

Cryptomarkets

Drugs have been available for sale on the internet for more than fifteen years, but when the first cryptomarket, Silk Road 1, came online in 2011, illicit drugs began to be traded in large quantities. The annual turnover of drug sales conducted through cryptomarkets is estimated to be in the hundreds of millions of dollars, with most transactions involving recreational drugs such as cannabis and ecstasy. Since 2011 cryptomarkets have been analyzed using automated software "crawlers" that collect publicly available data from websites (Martin et al., 2018).

Before 2014 prescription drugs represented slightly less than 10% of all cryptomarket sales. People who buy through cryptomarkets are believed to be predominantly male, young (<25 years), educated, employed, and White (Martin et al., 2018).

In 2014, when the FDA rescheduled hydrocodone combination products from schedule III to the more restrictive schedule II, it became harder to get these drugs through a prescription, especially a repeat prescription. Restrictions had the unintended consequence of a displacement towards illicit substitutes such as heroin, oxycodone, and fentanyl. It has been suggested that the growing use of heroin and fentanyl in the United States is related to this prohibition, whereby interventions, such as increased enforcement and changes to drug scheduling, lead to illicit markets dominated by higher potency products (Martin et al., 2018).

The access of drugs through cryptomarkets makes it more difficult to reduce the harms associated with prescription opioids. With the move to an illicit market, it becomes more difficult to track use of prescription opioids gotten illegally, and to offer treatment and help to users. Prohibition also suggests that the move to an illicit market is associated with use of increasingly potent drugs (Martin et al.2018).

Sources of prescription pain medication	Percentage
Free of charge from a relative or friend	40.5%
From a healthcare provider via prescription or by stealing	36.4%
From one doctor	34.0%
Bought or stolen from a relative or friend	9.4%
Bought from a dealer or stranger	4.9%
From more than 1 doctor	1.7%

Source: Dixon, 2018.

9. Concluding Remarks

Under Governor Gina Raimondo, Rhode Island in 2016 became the first state in the country to offer medication-assisted treatment (MAT) to prison inmates, and it has since seen a steep decline in the number of overdose deaths among former inmates. Between 2016 and 2020, Rhode Island established 14 Centers of Excellence in various locations, each offering a high standard of care for opioid use disorder, including MAT in conjunction with other evidence-based treatments (Burke & Sullivan, 2020).

In 2017 the state formed a partnership with Brown University's Warren Alpert Medical School to incorporate training in addiction treatment into the curriculum and allow graduates who remain in Rhode Island to earn automatic waivers to prescribe buprenorphine in lieu of standard training requirements. This program became the model for a provision of the federal Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act of 2018, which similarly enables any graduate of a medical school that incorporates an approved addiction curriculum to apply for a buprenorphine waiver upon graduation without further training (Burke & Sullivan, 2020).

10. References

Agency for Healthcare Research and Quality (**AHRQ**). (2020, January 2). Treatments for Acute Pain: A Systematic Review. Retrieved March 5, 2021 from https://effectivehealthcare.ahrq.gov/products/treatments-acute-pain/protocol.

Agency for Healthcare Research and Quality (**AHRQ**). (2019). Opioid Treatments for Chronic Pain. Retrieved December 20, 2020 from https://effectivehealthcare.ahrq.gov/products/opioids-chronic-pain/protocol.

American Society of Addiction Medicine (**ASAM**). (2019). Definition of Addiction. Retrieved March 4, 2020 from https://www.asam.org/Quality-Science/definition-of-addiction.

American Society of Addiction Medicine (**ASAM**). (2015). National Practice Guideline in the Use of Medications for the Treatment of Addiction Involving Opioid Use. Retrieved January 15, 2021 from https://www.asam.org/docs/default-source/practice-support/guidelines-and-consensus-docs/asam-national-practice-guideline-supplement.pdf.

Baker DW. (2017). The Joint Commission's Pain Standards: Origins and Evolution. Retrieved May 3, 2021 from https://www.jointcommission.org/-/media/tjc/documents/resources/pain-management/pain_std_history_web_version_05122017pdf.pdf?db=web&hash=E7D12A5C3BE9DF031 F3D8FE0D8509580.

Bernard SA, Chelminski PR, Ives TJ, et al. (2018). Management of pain in the United States: A brief history and implications for the opioid epidemic. *Health Services Insights.* Retrieved February 1, 2021 from https://journals.sagepub.com/doi/full/10.1177/1178632918819440.

Burke MA, Sullivan R. (2020). Medication-assisted Treatment for Opioid Use Disorder in Rhode Island: Who Gets Treatment, and Does Treatment Improve Health Outcomes? New England Public Policy Center Research Report 20-3. Retrieved April 26, 2021 from file:///C:/Users/laure/Downloads/neppcrr2003.pdf.

Carter JA, Black LK, Sharma D, et al. (2020). Efficacy of non-opioid analgesics to control postoperative pain: A network meta-analysis. *BMC Anesthesiol* 20, 272. Doi:10.1186/s12871-020-01147-y. Retrieved January 19, 2021 from https://bmcanesthesiol.biomedcentral.com/articles/10.1186/s12871-020-01147-y.

Centers for Disease Control and Prevention (**CDC**). (2021, January 26). Opioid Overdose: Commonly Used Terms. Retrieved March 4, 2021 from https://www.cdc.gov/drugoverdose/opioids/terms.html.

Centers for Disease Control and Prevention (**CDC**). (2021, January 25). Opioid Data Analysis and Resources. Retrieved March 3, 2021 from https://www.cdc.gov/drugoverdose/data/analysis.html.

Centers for Disease Control and Prevention (**CDC**). (2020, December 17). Overdose Deaths Accelerating During COVID-19. Expanded Prevention Efforts Needed. Retrieved January 29, 2021 from https://www.cdc.gov/media/releases/2020/p1218-overdose-deaths-covid-19.html.

Centers for Disease Control and Prevention (**CDC**). (2020, September 4). Overdose Deaths and the Involvement of Illicit Drugs. Vital Signs. Retrieved February 8, 2021 from https://www.cdc.gov/drugoverdose/pubs/featured-topics/VS-overdose-deaths-illicit-drugs.html.

Centers for Disease Control and Prevention (**CDC**). (2020, September 3). Overdose Graphics. Retrieved February 8, 2021 from https://www.cdc.gov/drugoverdose/resources/overdose-graphics.html.

Centers for Disease Control and Prevention (**CDC**). (2017, July 6). Opioid Prescribing: Where you live matters. Vital Signs. Retrieved March 3, 2021 from https://www.cdc.gov/vitalsigns/opioids/index.html.

Chibi B, Torres NF, Mashamba-Thompson TP. (2020). Prescription drug diversion, misuse, and abuse among people living with HIV: A scoping review protocol. *Syst Rev* 9, 29. Doi:10.1186/s13643-020-1273-4. Retrieved December 22, 2020 from https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-020-1273-4.

Desmon S. (2020). A Crisis Within a Crisis. Hub. Johns Hopkins University. Retrieved January 19, 2021 from https://hub.jhu.edu/2020/12/14/opioid-crisis-coronavirus-pandemic-purdue-pharma-settlement/.

Dixon DW. (2018). Opioid Abuse: Practice Essentials, Background, Pathophysiology. Retrieved December 22, 2020 from https://emedicine.medscape.com/article/287790-overview#showall.

Fan M, Tscheng D, Hamilton M, et al. (2019). Diversion of controlled drugs in hospitals: A scoping review of contributors and safeguards. *J. Hosp. Med* 7;419–28. Doi:10.12788/jhm.3228. Retrieved December 23, 2020 from

https://www.journalofhospitalmedicine.com/jhospmed/article/202732/hospital-medicine/diversion-controlled-drugs-hospitals-scoping-review#jhm1406-sec-0003.

Federation of State Medical Boards (FSMB). (2017). Guidelines for the Chronic Use of Opioid Analgesics. Retrieved December 22, 2020 from https://www.fsmb.org/siteassets/advocacy/policies/opioid_guidelines_as_adopted_april-2017_final.pdf.

Feinberg T, Jones DL, Lilly C, et al. (2018). The Complementary Health Approaches for Pain Survey (CHAPS): Validity testing and characteristics of a rural population with pain. PLOS One. Retrieved January 18, 2021 from https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0196390.

Food and Drug Administration (**FDA**). (2019). News release. FDA approves first generic naloxone nasal spray to treat opioid overdose. Retrieved March 6, 2021 from https://www.fda.gov/news-events/press-announcements/fda-approves-first-generic-naloxone-nasal-spray-treat-opioid-overdose.

Heyward J, Jones CM, Compton WM, et al. (2018). *JAMA Netw Open* 1(6):e183044. Doi:10.1001/jamanetworkopen.2018.3044. Retrieved January 19, 2021 from https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2705853.

International Association for the Study of Pain (**IASP**). (2018). IASP Statement on Opioids. Retrieved December 20, 2020 from http://www.iasp-pain.org/Advocacy/Content.aspx?ItemNumber=7194.

Joint Commission, The. (2019). Drug diversion and impaired health care workers. Quick Safety; Issue 48; April 2019. Retrieved January 26, 2021 from https://www.jointcommission.org/-/media/tjc/newsletters/quick_safety_drug_diversion_final2pdf.pdf.

Joint Commission, The. (2017). Pain Assessment and Management Standards for Hospitals. Retrieved March 5, 2021 from https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_report_issue_11_2_11_19_rev.pdf.

Lake S, Walsh Z, Kerr T, et al. (2019). Frequency of cannabis and illicit opioid use among people who use drugs and report chronic pain: A longitudinal analysis. PLOS Medicine. Retrieved January 19, 2021 from https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002967.

Lopez G. (2018, May 15). The growing number of lawsuits against opioid companies, explained. Retrieved December 22, 2020 from https://www.vox.com/policy-and-politics/2017/6/7/15724054/opioid-epidemic-lawsuits-purdue-oxycontin.

Martin J, Cunliffe J, Décary-Hétu D, Aldridge J. (2018). Effect of restricting the legal supply of prescription opioids on buying through online illicit marketplaces: Interrupted time series analysis. *BMJ* 361:k2270. Retrieved December 22, 2020 from https://www.bmj.com/content/361/bmj.k2270.

National Center for Complementary and Integrative Health. (**NCCIH**). (2021). Chronic Pain: In Depth. Retrieved January 15, 2021 from https://www.nccih.nih.gov/health/chronic-pain-in-depth.

National Center for Complementary and Integrative Health (**NCCIH**). (2020). Chronic Pain: In Depth. NCCIH Pub No. D456. Retrieved December 15, 2020 from https://nccih.nih.gov/health/pain/chronic.htm.

National Center for Health Statistics (**NCHS**). (2021). Provisional Drug Overdose Death Counts. Retrieved February 16, 2021 from https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm.

National Harm Reduction Coalition (**NHRC**). (2021). Principles of Harm Reduction. Retrieved May 24, 2021 from https://harmreduction.org/about-us/principles-of-harm-reduction/.

National Institute on Drug Abuse (**NIDA**). (2020, June). Misuse of Prescription Drugs Research Report Overview. Retrieved February 8, 2021 from https://www.drugabuse.gov/publications/researchreports/misuse-prescription-drugs/overview-20

National Institute on Drug Abuse (**NIDA**). (2019, January). Treatment Approaches for Drug Addiction. Retrieved May 3, 2021 from https://www.drugabuse.gov/sites/default/files/drugfacts-treatmentapproaches.pdf.

National Institute on Drug Abuse (**NIDA**). (2018, June). Medications to Treat Opioid Use Disorder Research Report: How do medications to treat opioid use disorder work? Retrieved March 6, 2021 from https://www.drugabuse.gov/publications/research-reports/medications-to-treat-opioid-addiction/how-do-medications-to-treat-opioid-addiction-work.

National Institute on Drug Abuse (**NIDA**). (2018, January). Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition). National Institutes of Health; U.S. Department of Health and Human Services. Retrieved May 2, 2021 from https://www.drugabuse.gov/download/675/principles-drug-addiction-treatment-research-based-guide-third-edition.pdf?v=74dad603627bab89b93193918330c223.

National Institute on Drug Abuse (**NIDA**). (2017). Improving Opioid Prescribing. Opioid Prescribers Can Play a Key Role in Stopping the Opioid Overdose Epidemic. Retrieved March 5, 2021 from https://www.drugabuse.gov/publications/improving-opioid-prescribing.

National Library of Medicine (**NLM**). (2021). Compound Summary: Lofexidine. Retrieved April 25, 2021 from https://pubchem.ncbi.nlm.nih.gov/compound/Lofexidine#section=NORMAN-Suspect-List-Exchange-Classification.

Oviedo-Joekes E, MacDonald S, Boissonneault C. et al. (2021). Take home injectable opioids for opioid use disorder during and after the COVID-19 pandemic is in urgent need: A case study. *Subst Abuse Treat Prev Policy* 16, 22. Doi:10.1186/s13011-021-00358-x. Retrieved April 26, 2021 from https://substanceabusepolicy.biomedcentral.com/articles/10.1186/s13011-021-00358-x.

Prevent Overdose RI. (2020a). Overdose Death Data. Retrieved March 7, 2021 from https://preventoverdoseri.org/overdose-deaths/.

Prevent Overdose RI. (2020b). Get Naloxone. Retrieved March 7, 2021 from https://preventoverdoseri.org/get-naloxone/.

Rhode Island Department of Health (**RIDOH**). (2018). Frequently Asked Questions About July 2018 Updated Pain Management Regulations. Retrieved February 16, 2021 from https://health.ri.gov/publications/frequentlyaskedquestions/PainMgmtRegs.pdf.

Schneberk T, Raffetto B, Friedman J, et al. (2020). Opioid prescription patterns among patients who doctor shop: Implications for providers. PLoS ONE 15(5): e0232533. Doi:10.1371/journal.pone.0232533. Retrieved December 23, 2020 from https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0232533.

Schuckit M. (2016). Treatment of Opioid Use Disorders. *NEJM* 375(4):357. Retrieved March 6, 2021 from http://www.nejm.org/doi/full/10.1056/NEJMra1604339#t=article.

Spithoff S, Leece P, Sullivan F et al. (2020). Drivers of the opioid crisis: An appraisal of financial conflicts of interest in clinical practice guideline panels at the peak of opioid prescribing. PLoS ONE 15(1): e0227045. Doi:10.1371/journal.pone.0227045. Retrieved January 9, 2021 from https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0227045#sec005.

Substance Abuse and Mental Health Services Administration (**SAMHSA**). (2021). Medication-Assisted Treatment (MAT). Retrieved May 4, 2021 from https://www.samhsa.gov/medication-assisted-treatment.

Substance Abuse and Mental Health Services Administration (**SAMHSA**). (2020, September 11). Key Substance Use and Mental Health Indicators in the United States: Results from the 2019 National Survey on Drug Use and Health. Retrieved December 14, 2020 from https://www.samhsa.gov/data/report/2019-nsduh-annual-national-report.

Substance Abuse and Mental Health Services Administration (**SAMHSA**). (2020, May). TIP 63: Medications for Opioid Use Disorder. Retrieved February 8, 2021 from https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use-Disorder-Full-Document/PEP20-02-01-006.

Tsai AC, Kiang MV, Barnett ML, et al. (2019). Stigma as a fundamental hindrance to the United States opioid overdose crisis response. PLoS Med 16(11): e1002969. Doi:10.1371/journal.pmed.1002969. Retrieved March 5, 2021 from https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002969.

U.S Department of Health and Human Services (**HHS**). (2018). Facing Addiction in America: The Surgeon General's Spotlight on Opioids. Office of the Surgeon General. Retrieved January 16, 2021 from https://addiction.surgeongeneral.gov/sites/default/files/Spotlight-on-Opioids_09192018.pdf.

Volkow ND. (2020). Collision of the COVID-19 and Addiction Epidemics. *Annals of Internal Medicine*. Doi:10.7326/M20-1212. Retrieved February 8, 2021 from https://www.acpjournals.org/doi/10.7326/m20-1212.

Yang JC, Roman-Urrestarazu A, Brayne C. (2020). Responses among substance abuse treatment providers to the opioid epidemic in the USA: Variations in buprenorphine and methadone treatment by geography, operational, and payment characteristics, 2007–2016. PLoS ONE 15(3). Doi:10.1371/journal.pone.0229787. Retrieved March 4, 2021 from https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0229787.

Zimmerman B. (2017, February 28). Becker's Hospital Review. 7 Things to Know About the History of The Joint Commission Pain Standards. Retrieved December 20, 2020 from https://www.beckershospitalreview.com/opioids/7-things-to-know-about-the-history-of-the-joint-commission-pain-standards.html.

Quiz

1. On average each year, about **50,000** people in the United States die from opioid overdoses.

- a. True
- b. False

2. Three practices have contributed to the opioid crisis. They are:

a. Global warming, an aging U.S. population, and the pharmaceutical industry.

b. The pharmaceutical industry, marijuana legalization, and lack of training for doctors and nurse practitioners.

c. Adding pain as the fifth vital sign, the pharmaceutical industry, and lack of disclosures by some researchers and clinicians.

d. The COVID pandemic, increased use of marijuana, and unscrupulous doctors.

3. The opioid crisis has been described as occurring in three waves. They are:

a. Increase in U.S. population, increased use of heroin, and the development of Narcan.

b. Increased opioid prescribing, increase in opioid deaths involving heroin, and a rise in synthetic opioid overdose deaths.

c. Decreased opioid prescribing, increased overdose deaths from marijuana, and increased use of synthetic opioids.

d. Increased use of opioids by older adults, increased use of Vicodin, and increased acceptance of opioids by the general population.

4. The three classes of most-abused prescriptions drugs are:

- a. Analgesics, hormonal agents, and sedatives.
- b. Antidepressants, sedatives, and anxiolytic agents.
- c. Antipsychotics, antibiotics, and antidepressants.
- d. Opioids, central nervous depressants, and stimulants.

5. In Rhode Island:

- a. Overdose deaths from prescription drugs have increased dramatically in the last five years.
- b. Overdose deaths from illicit opioids has decreased dramatically in the last five years.
- c. Deaths from illicit drugs, such as heroin and fentanyl, are on the rise.
- d. More than 50% of overdose deaths involved illicit hydrocodone.

6. The distinction between dependence and addiction is:

- a. Addiction can resolve after long-term detoxification, but dependence is life-long.
- b. Only dependence can be healed without withdrawal symptoms.
- c. Dependence can resolve after detoxification, but addiction has long-lasting effects.
- d. Only addiction is associated with brain abnormalities.

7. Opioid agonist treatment (OAT):

a. Is no better than no treatment for achieving long-term abstinence from opioids of abuse.

b. Has been found to be most effective for achieving long-term abstinence from opioids of abuse.

- c. Is effective when combined with injectable heroin.
- d. Can be prescribed by a registered nurse.

8. Medication-assisted treatment:

- a. Is never used in combination with behavioral therapy.
- b. Is paid for by all medical insurance companies.
- c. Can benefit people with opioid use disorder.
- d. Is also effective for the treatment of hypertension.

9. Nalozone (Narcan):

- a. Binds to opioid receptors and can reverse and block the effects of opioids.
- b. Is a type of opioid that is 100x stronger than heroin.
- c. Is only available with a prescription in Rhode Island.
- d. Reduce the negative effects of withdrawal and cravings without producing euphoria.

10. Responsible prescribing of opioids includes:

- a. Reducing incautious and long-term opioid prescribing.
- b. Preventing diversion.

c. Identifying patients who may be at risk for, or who have already developed an opioid use disorder.

d. All of the above.

11. To prevent long-term opioid use:

- a. Understand that long-term opioid use often begins with treatment of acute pain.
- b. Avoid unproven, non-opioid therapies.

- c. Use a benzodiazepine along with opioids.
- d. Do not report a person's opioid use to hospital authorities.

12. When prescribing opioids to treat chronic pain:

- a. Prescribe the lowest effective dose possible.
- b. Stress that chronic pain is psychological.
- c. Start with a very high dose.
- d. Try more than 1 opioid at the same time.

13. A key part of effective pain management is:

- a. Avoid opioid-sparing treatment regimens.
- b. Avoid opioid monotherapy and reduce the doses used to treat acute pain.
- c. Prescribe cannabis instead of opioids.
- d. Use opioids rather than non-steroidal anti-inflammatories.

14. Opioids may be less effective than nonopioid therapies for some acute and chronic pain conditions.

- a. True
- b. False

15. Drug diversion is:

- a. Removal of a medication from its legitimate dispensing channels.
- b. Taking prescribed drugs while distracted.
- c. Failing to read the directions on a prescribed medication.
- d. Taking a prescription pain medication across a national boundary.

16. What is the most commonly reported source of diverted prescription pain medications?

- a. Purchased from drug dealer.
- b. Stolen from healthcare provider.
- c. Prescribed by more than one doctor.
- d. Received from relation or friend.

Answer Sheet

Name (Please print) _____

Date _____

Passing score is 80%

1.
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Course Evaluation

Please use this scale for your course evaluation. Items with asterisks * are required.

5 =Strongly agree 4 =Agree 3 =Neutral 2 =Disagree 1 =Strongly disagree

*Upon completion of the course, I was able to:

1. State 4 factors that have contributed to the opioid crisis.	5	4	3	2	1
2. Relate the three classes of most-abused prescription drugs.	5	4	3	2	1
3. Describe the difference between tolerance, dependence, and addiction.	5	4	3	2	1
4. State the 3 main guidelines Rhode Island providers must follow when prescribing co dangerous substances, including opioids in any schedule.	ontr 5	olle 4	d 3	2	1
5. List 5 complementary alternatives to opioids for pain management.	5	4	3	2	1
6. Relate the 5 most common sources of illicit drugs.	5	4	3	2	1
*The author(s) are knowledgeable about the subject matter.	5	4	3	2	1
*The author(s) cited evidence that supported the material presented.	5	4	3	2	1
*Did this course contain discriminatory or prejudicial language?	Ye	s	N	lo	
*Was this course free of commercial bias and product promotion?	Ye	s	N	lo	
*As a result of what you have learned, will make any changes in your practice?	Ye	s	N	lo	

If you answered Yes above, what changes do you intend to make? If you answered No, please explain why.

*Do you intend to return to ATrain for your ongoing CE needs?

Yes, within the next 30 days.	Yes, during my next renewal cycle.
/	

_____No, I only needed this one course.

*Would you recommend ATrain Education to a friend, co-worker, or colleague?

Yes, definitely	Possibly.	No, not at this time.
-----------------	-----------	-----------------------

*What is your overall satisfaction with this learning activity? 5 4 3 2 1

*Navigating the ATrain Education website was:

Easy. ____Somewhat easy. ____Not at all easy.

*How long did it take you to complete this course, pos	ttest, and course evaluation?
60 minutes (or more) per contact hour	59 minutes per contact hour
40-49 minutes per contact hour	30-39 minutes per contact hour
Less than 30 minutes per contact hour	
I heard about ATrain Education from:	
Government or Department of Health website.	State board or professional association.
Searching the Internet.	A friend.
An advertisement.	I am a returning customer.
My employer.	Social Media
Other	
Please let us know your age group to help us meet you	ır professional needs
18 to 3031 to 45	46+
I completed this course on:	
My own or a friend's computer.	A computer at work.
A library computer.	_A tablet.
A cellphone	A paper copy of the course.

Please enter your comments or suggestions here:

Registration and Payment Form

Please answer all of the following questions (* required).

*Name:	
*Email:	
*Address:	
*City and State:	
*Zip:	
*Country:	
*Phone:	
*Professional Credentials/Designations:	
*License Number and State:	
*Name and credentials as you want them to appear on your certif	icate.

Payment Options

You may pay by credit card, check or money order.

Fill out this section only if you are paying by credit card.

2 contact hours: \$15

Credit card information

*Name:						
Address (if different from above):						
*City and State:						
*Zip:						
*Card type:	Visa	Master Card	American Express	Discover		
*Card number: _						
*CVS#:		_ *Expira	tion date:			