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Contact Hours: **3**

## Best-Practice Prescribing and Drug Diversion Training for West Virginia Nurses (3 Hours)

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**LEARNING OUTCOME AND OBJECTIVES:** Upon completion of this continuing education course, you will be prepared to help prevent prescription drug misuse and diversion. Specific learning objectives to address potential knowledge gaps include:

- Discuss the scope of prescription drug misuse and diversion.
- Identify components of responsible prescribing practices for opioid medications.
- Summarize the CDC Guideline for Prescribing Opioids for Chronic Pain.
- Describe the West Virginia Safe and Effective Management of Pain (SEMP) Guidelines.
- Explain various strategies designed to prevent prescription drug misuse and diversion.
- Discuss considerations for the use of the opioid antagonist naloxone.

### SCOPE OF THE PROBLEM

The United States has been profoundly affected by the substance use epidemic that began in the 1990s. “Underprescribing” was a predominant issue at the time because of the physiologic and psychological effects caused by unrelieved pain. Concerns about undertreatment of pain despite the availability of effective drugs led to a movement toward more aggressive pain management, which then became a driving force behind more liberal opioid prescribing. Over time, this prescribing trend contributed to the drug epidemic the United States continues to face three decades later (U.S. DHHS, 2021).

The serious and deadly consequences of this epidemic prompted the medical community to reevaluate chronic pain treatment and prescribing practices, resulting in the CDC’s release of new evidence-based guidelines for prescribing opioids for chronic pain in 2016. Since that time,

the prescription opioid-involved death rate has decreased, with figures showing a 7% drop from 2018 to 2019.

However, the crisis is far from resolved. Disturbing evidence points to a growing number of individuals beginning to misuse prescription drugs. The National Survey on Drug Use and Health estimates that in 2019:

- 9.7 million people ages 12 and older misused prescription pain relievers.
- 4.9 million misused prescription stimulants.
- 5.9 million misused prescription tranquilizers or sedatives.
- Each day, 2,600 new people ages 26 and older began to misuse a prescription pain reliever.  
(SAMHSA, 2020)

Opioid addiction remains the driving force behind the prescription drug crisis in America. Alarming, a person is more likely to die today from an accidental opioid overdose than from a motor vehicle crash (NSDUH, 2020; NSC, 2019).

Substance use disorder has specifically impacted the health, well-being, and economy of West Virginia. In 2019, West Virginia had the highest age-adjusted drug overdose death rate in the nation (CDC, 2021a). And from March 2020 to March 2021, West Virginia experienced a 62.1% increase in counts of drug overdose-related deaths (CDC, 2021c).

One of the biggest challenges in healthcare practice is providing safe and appropriate pain care without contributing to this epidemic of prescription drug misuse, drug diversion, and drug overdose deaths. In West Virginia, SB 437 mandates that all healthcare providers who prescribe, dispense, or administer controlled substances receive specific education to help combat the problem of prescription drug abuse and diversion.

Nurses in particular are in a unique position to address this problem since they care for more patients than any other health profession. Nurses who understand the risks associated with prescription drug abuse will be better prepared to identify and intervene with patients and colleagues who may be at risk.

### **FENTANYL AND OVERDOSE DEATHS**

Drug overdose deaths accelerated during the COVID-19 pandemic, outpacing overdose death rates from any previous year. Illicitly manufactured fentanyl, which is increasingly found in counterfeit prescription medications, was the main driver of the near 30% increase in overdose deaths from 2020 to 2021 (CDC, 2021d).

(See also “Counterfeit Pills” later in this course.)



**DEFINITION OF TERMS**

**Addiction:** A treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences

**Chronic pain:** Pain that persists for weeks, months, or years

**CNS depressants:** Drugs that include sedatives, tranquilizers, and hypnotics that slow brain activity

**Dependence:** A state in which the body adapts to a drug, requiring more of it to achieve a certain effect (tolerance) and eliciting drug-specific physical or mental symptoms if drug use is abruptly ceased (withdrawal)

**Illicit drug use:** Nonmedical use of a variety of drugs that are prohibited by law (can be illegally obtained drugs or misuse of prescription drugs)

**Opioids:** Drugs that act on opioid receptors in the spinal cord and brain to reduce the intensity of pain-signal perception intensity

**Pain:** An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage

**Prescription drug misuse (or nonmedical use of prescription drugs):** Taking a medication in a manner or dose other than prescribed, taking someone else's prescription, or taking a medication to feel euphoria

**Prescription drug diversion:** Prescription medicines that are obtained or used illegally

**Psychotherapeutic drugs:** Drugs that have an effect on the function of the brain and that often are used to treat psychiatric/neurologic disorders; includes opioids, sedatives, tranquilizers, and stimulants

**Stimulants:** Drugs that speed up the body's system

**Substance abuse:** A term that is no longer used in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*; see instead *substance use disorder* below

**Substance use disorder (SUD):** A complex condition in which there is uncontrolled use of a substance despite harmful consequence; occurs when the recurrent use of alcohol and/or drugs causes clinically significant impairment, including health problems, disability, and failure to meet major responsibilities at work, school, or home

(ASAM, 2021; NINDS, 2021; NIDA, 2020; CDC, 2021b, 2019; Nicholas et al., 2019; SAMHSA, 2021a; U.S. DEA, 2020b; APA, 2021)



## RESPONSIBLE OPIOID PRESCRIBING

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Responsible prescribing involves individual prescribers following best practices and taking action to balance the risks and benefits of opioid pain management for each patient. Three important components to responsible prescribing include

- Thorough patient assessment
- Treatment plan design
- Periodic monitoring

Both the Centers for Disease Control and Prevention (CDC) Guideline for Prescribing Opioids for Chronic Pain and the West Virginia Safe and Effective Management of Pain (SEMP) Guidelines provide recommendations for prescribing opioid pain medications.

### Patient Assessment

A thorough patient assessment is critical prior to prescribing opioid medication for chronic pain. It is important to properly diagnose the condition to determine if opioid medication is an appropriate treatment. A well-documented patient history that includes past medical history, medication history, social history, family history, and psychosocial history is critical. Assessing and documenting a personal or family history of substance misuse is also important.

### ASSESSING PAIN

Proper diagnosis of the painful condition helps to assure that opioid medication is an appropriate treatment. It can be challenging, however, since pain is subjective and multidimensional. The patient's self-report of pain is the most reliable indicator, recognizing that perceptions of pain are influenced by culture, environment, emotional state, sleep patterns, and habits.

Any provider must conduct a pain assessment before they can determine what type of pain management is needed. Assessment of pain should include:

- Context (How did the pain begin?)
- Location (Where is the pain felt?)
- Severity (How does the pain rate on a 0–10 scale?)
- Quality (Is the pain sharp, stabbing, dull, pulsating, etc.?)
- Timing (How often does the pain occur?)
- Duration (How long has the pain been persisting?)
- Modifying factors (What makes the pain better or worse?)
- Chronic illness status (What conditions might impact or worsen the pain?)
- Associated signs and symptoms (What else occurs with the pain?)



## ASSESSING RISK

When clinicians assess patients with chronic pain, it is important to recognize two categories of risk due to opioid therapy: medical conditions that increase their risk for adverse events (e.g., respiratory depression) and risk of misuse, abuse, or addiction.

### *Risk of Adverse Events*

Risk due to medical conditions are assessed and documented as part of the patient's history and physical examination and the treatment plan adjusted accordingly to reduce risk of adverse events with opioid therapy. Older adults may be at higher risk because of cognitive decline and increased potential for falls. Patients with impaired renal or hepatic function, cardiopulmonary disease, mental health conditions, obesity, and sleep apnea are also at higher risk for adverse consequences when prescribed opioid medications.

#### **REMS**

A Risk Evaluation and Mitigation Strategy (REMS) is a drug safety program that may be required by the U.S. FDA to help ensure that benefits outweigh risks of certain drugs with significant safety concerns. REMS are designed to help reduce the occurrence and/or severity of certain serious risks by informing and/or supporting the execution of the safe use conditions described in the medication's FDA-approved prescribing information. REMS have been approved for dozens of opioid analgesic medications.

(U.S. FDA, 2019)

### *Risk for Misuse, Abuse, and Addiction*

Variables that have been associated with a higher risk for misuse, abuse, and addiction include history of addiction in biological parents, current drug addiction in the family, regular contact with high-risk groups or activities, and personal history of illicit drug use or alcohol addiction. (See also "Recognizing Aberrant Drug-Related Behaviors" later in this course.)

The use of **screening tools** is recommended, and multiple tools are available that can help healthcare providers to assess these risks. The specific tool to be used is determined based on:

- The type of substance of risk (or whether the patient is at a generalized risk to misuse numerous substances)
- The age of the patient (as certain tools are specific to children or adolescents)
- Whether it is preferred to have the patient self-administer the screening or to have a healthcare professional do so



Examples of screening tools include:

- **Opioid Risk Tool:** Administered at initial visit prior to beginning opioid therapy; questions address age, family, and personal history of substance abuse, history of preadolescent sexual abuse, and psychological diseases
- **Screening to Brief Intervention (S2BI):** A series of questions regarding frequency-of-use in adolescent patients of substances most commonly used
- **Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS):** A combined screening and brief assessment that addresses use-related behaviors and generates a risk level for each substance class

(See also “Resources” at the end of this course.)

## Treatment Plan

Responsible opioid prescribing requires clinicians to develop treatment plans that focus on patient-centered outcomes that improve quality of life. A function-based treatment strategy that aims to maximize the patient’s quality of life and minimize the burden of their pain includes a mutual understanding between prescriber and patient covering the following principles:

- Complete elimination of all pain is often not possible.
- The goal of treatment is to successfully manage pain and not exclusively to reduce a pain scale score.
- Functional goals will be collaboratively set, with the aim of improving quality of life; these goals must be realistic, achievable, verifiable, and meaningful.
- Risks, benefits, side effects, and potential adverse consequences of opioid use will be fully disclosed.
- Education about safe use, storage, and disposal of opioid medication will be provided.

This treatment plan must be documented, together with informed consent and patient education.

### SAMPLE PATIENT AGREEMENT FORM FOR LONG-TERM CONTROLLED SUBSTANCE PRESCRIPTIONS

Patient Name: \_\_\_\_\_

Medication(s): \_\_\_\_\_

The use of this medication(s) may cause addiction and is only one part of the treatment for (insert name of condition): \_\_\_\_\_

#### The goals of this medicine are:

- To improve my ability to work and function at home



- To help my condition (e.g., pain, anxiety, etc.) as much as possible without causing dangerous side effects

**I have been told that:**

- If I drink alcohol or use street drugs, I may not be able to think clearly and I could become sleepy and risk personal injury.
- I may get addicted to this medicine.
- If I or anyone in my family has a history of drug or alcohol problems, there is a higher chance of addiction.
- If I need to stop this medicine, I must do it slowly or I may get very sick.

**I agree to the following:**

- I am responsible for my medicines. I will not share, sell, or trade my medicine. I will not take anyone else's medicine.
- I will not increase my medicine until I speak with my doctor or nurse.
- My medicine may not be replaced if it is lost, stolen, or used up sooner than prescribed.
- I will keep all appointments set up by my primary care provider (e.g., primary care, physical therapy, mental health, substance abuse treatment, pain management)
- I will bring the pill bottles with any remaining pills of this medicine to each clinic visit.
- I agree to give a blood or urine sample, if asked, to test for drug use.

**Refills:**

- Refills will be made only during regular office hours. No refills on nights, holidays, or weekends.
- I must call at least three (3) working days ahead to ask for a refill of my medicine. No exceptions will be made.
- I must keep track of my medications. No early or emergency refills may be made.

**Pharmacy:**

- I will only use one pharmacy to get my medicine.
- The name of my pharmacy is: \_\_\_\_\_
- My primary care provider may talk with the pharmacist about my medicines.



**Prescriptions from other doctors:** If I see another healthcare provider who prescribes a controlled substance for me (e.g., dentist, emergency room doctor, provider at another hospital, etc.), I must bring this medicine to my primary care provider in the original bottle, even if there are no pills left.

**Privacy:** While I am taking this medicine, my primary care provider may need to contact other healthcare providers or family members to get information about my care and/or use of this medicine. I will be asked to sign a release at that time.

**Termination of Agreement:** If I break any of the rules or if my primary care provider decides that this medicine is hurting me more than helping me, this medicine may be stopped by my primary care provider in a safe way.

Patient signature: \_\_\_\_\_

Date: \_\_\_\_\_

(NIDA, n.d.)

## Periodic Monitoring

It is critical to regularly reevaluate the appropriateness of continuing opioid therapy due to changes in pain etiology, health condition, progress toward functional goals, and addiction risk. To corroborate self-reports, review of data within the prescription drug monitoring program should be conducted at each visit (see “Prescription Drug Monitoring Programs” later in this course). Periodic monitoring should also include urine tests and pill counts when appropriate.

Clinicians must utilize screening and monitoring for all patients on chronic opioid therapy to document patient outcomes and progress toward functional goals. The Pain Assessment and Documentation Tool (PADT) is a practical tool that clinicians can use at each patient visit and incorporate into electronic records (see “Resources” at the end of this course). It offers a simple checklist to monitor the “Five As” of pain management.

THE FIVE As OF PAIN MANAGEMENT	
Analgesia	A reduction in pain
Activities of daily living	Improvement in level of function
Affect	Changes in mood
Adverse effects	Falls, decreased cognitive function, constipation, etc.
ADRBs	Aberrant drug-related behaviors
(Bazzo et al., 2019)	

Periodic monitoring timing will vary with each patient. The CDC (n.d.-a) recommends checking monitoring every three months at the minimum, and before refilling an opioid prescription at any





time. State requirements may vary. The State of West Virginia Office of the Attorney General's "Best Practices for Prescribing Opioids in West Virginia" (2016) follows the exact same periodic monitoring timing as the CDC

## **CDC Clinical Practice Guideline for Prescribing Opioids for Pain**

In 2022, the CDC updated its guidelines for prescribing opioids for the treatment of pain. Whereas the 2016 guideline focused on recommendations for primary care physicians, the newer guideline expands the scope to additional clinicians whose scope of practice includes prescribing opioids (e.g., physicians, nurse practitioners and other advanced-practice registered nurses, physician assistants, and oral health practitioners). The 2022 guidelines address four main issues, including:

- Making a determination about whether or not to initiate opioids for pain
- Selecting the appropriate opioid and determining the dosage
- Deciding the duration of the initial opioid prescription and conducting follow-up
- Assessing the risk and addressing the potential harms of opioid use with the patient

The recommendations in the 2022 guidelines aim to improve communication between clinicians and patients about the risks and effectiveness of pain treatment; improve pain, function, and quality of life for persons with pain; and reduce the risks associated with opioid pain treatment (including opioid use disorder, overdose, and death) as well as with other pain treatment.

The practice guidelines include 12 recommendations for clinicians who are prescribing opioids for outpatients ages 18 years and older with pain that is acute (duration of <1 month), subacute (duration of 1–3 months), or chronic (duration of >3 months), excluding pain management related to sickle cell disease, cancer-related pain treatment, palliative care, and end-of-life care.

1. Nonopioid therapies are at least as effective as opioids for many common types of pain. Maximize the use of nonpharmacologic and nonopioid pharmacologic therapies appropriate for the condition and the patient, and only consider opioid therapy for acute pain if benefits are expected to outweigh risks to the patient. Discuss benefits and risks with the patient prior to prescribing opioid therapy.
2. Nonopioid therapies are preferred for subacute and chronic pain. Maximize use of nonpharmacologic and nonopioid pharmacologic therapies as appropriate for the specific condition and patient. Consider opioid therapy if expected benefits are anticipated to outweigh risks, and work with the patient to establish treatment goals for pain and function. Consider how opioid therapy will be discontinued if benefits do not outweigh risks.
3. When starting opioid therapy for acute, subacute, or chronic pain, prescribe immediate-release opioids instead of extended-release and long-acting (ER/LA) opioids.
4. When opioids are initiated for opioid-naive patients with acute, subacute, or chronic pain, prescribe the lowest effective dosage. If opioids are continued for subacute or chronic



pain, prescribe the lowest effective dosage. Avoid increasing dosage above levels likely to yield diminishing returns in benefits relative to risks.

5. For those patients already receiving opioid therapy, carefully weigh benefits and risks and exercise care when changing opioid dosages. Work closely with patients to optimize nonopioid therapies while continuing opioid therapy. If benefits do not outweigh risk of continued opioid therapy, optimize other therapies and work closely with patients to gradually taper to lower dosages, or appropriately taper and discontinue opioids. Unless there are indications of a life-threatening issue such as warning signs of impending overdose (e.g., confusion, sedation, slurred speech), opioid therapy should not be discontinued abruptly, and clinicians should not rapidly reduce opioid dosages from higher dosages.
6. When opioids are needed for acute pain, prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids.
7. Evaluate benefits and risks with patients within 1–4 weeks of starting opioid therapy for subacute or chronic pain or of dosage escalation. Regularly re-evaluate benefits and risks of continued opioid therapy with patients.
8. Before starting and periodically during continuation of opioid therapy, evaluate risks for opioid-related harms and discuss risks with patients. Work with patients to incorporate into the management plan strategies to mitigate risk, including offering naloxone.
9. When prescribing initial opioid therapy for acute, subacute, or chronic pain, and periodically during opioid therapy for chronic pain, review the patient's history of controlled substance prescriptions using state prescription drug monitoring program data to determine whether the patient is receiving opioid dosages or combinations that put the patient at high risk for overdose.
10. When prescribing opioids for subacute or chronic pain, consider the benefits and risks of toxicology testing to assess for prescribed medications as well as other prescribed and nonprescribed controlled substances.
11. Use particular caution when prescribing opioid pain medication and benzodiazepines concurrently and consider whether benefits outweigh risks of concurrent prescribing of opioids and other central nervous system depressants.
12. Offer or arrange treatment with evidence-based medications for patients with opioid use disorder. Detoxification on its own, without medications for opioid use disorder, is not recommended because of increased risks for resuming drug use, overdose, and overdose death.

(Dowell et al., 2022)



### HOW TO CALCULATE MORPHINE MILLIGRAM EQUIVALENTS PER DAY (MME/DAY)

1. Calculate the total daily amount of opioid the patient is prescribed.
2. Convert each opioid to MMEs by multiplying the daily dosage for each opioid by its specific conversion factor (see table).
3. Add all opioid MMEs together to obtain the patient's MME.

#### OPIOID CONVERSION FACTORS

Opioid (doses in mg/day except where noted)	Conversion Factor*
Codeine	0.15
Fentanyl transdermal (mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone: 1–20 mg/day	4
21–40 mg/day	8
41–60 mg/day	10
≥61–80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3
* Dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.	
(CDC, n.d.-b)	

#### Example:

A patient with chronic back pain for more than 3 years is currently taking oxycodone 30 mg twice daily (BID). Calculate the MME.

1. Calculate the total daily amount the patient is prescribed.

$$30 \text{ mg} \times 2 \text{ times daily (BID)} = 60 \text{ mg/day}$$



2. Multiply the total daily amount by the conversion factor for oxycodone.

$$60 \text{ mg/day} \times 1.5 = 90 \text{ MME per day}$$

### TAPERING OPIOID MEDICATIONS

An opioid-tapering flowchart is available from the U.S. DHHS that is useful in making determinations about ongoing opioid use or cessation. Tapering is recommended when:

- Pain improves
- The patient requests dosage reduction or discontinuation
- Pain and function are not meaningfully improved
- The patient is receiving higher opioid doses without evidence of benefit from the higher dose
- The patient has current evidence of opioid misuse
- The patient experiences side effects that diminish quality of life or impair function
- The patient experiences an overdose or other serious event (e.g., hospitalization, injury) or has warning signs for an impending event such as confusion, sedation, or slurred speech
- The patient is receiving medications (e.g., benzodiazepines) or has medical conditions (e.g., lung disease, sleep apnea, liver disease, kidney disease, fall risk, advanced age) that increase risk for adverse outcomes
- The patient has been treated with opioids for a prolonged period (e.g., years), and current benefit-harm balance is unclear

(U.S. DHHS, 2019)

## West Virginia Safe and Effective Management of Pain (SEMP) Guidelines

In 2016, a diverse panel of West Virginia experts was convened to build upon the 2016 CDC guidelines for prescribing opioids for chronic pain. The panel developed the following Safe and Effective Management of Pain (SEMP) Guidelines for prescribers and dispensers, with a focus on clinical treatment of pain and risk reduction strategies (CDC, 2017; WVEPMP, 2016).

### CLINICAL TREATMENT OF PAIN GUIDELINES

The pain treatment algorithms described in the tables below were developed by the WV SEMP panel to provide the best course of action for progression through escalating levels of pain based



on current evidence and experience. These algorithms are meant to be referred to along with the CDC guidelines (see above).

<b>1st LINE PAIN TREATMENT ALGORITHMS</b>		
<b>Nociceptive Pain</b>	<b>Neuropathic Pain</b>	<b>Mixed Pain</b>
<ul style="list-style-type: none"> <li>• Nonpharmacologic (active &amp; passive)</li> <li>• OTC APAP then +/- NSAID (based on GI/cardio pt. history)</li> <li>• Topical agent (NSAID, lidocaine, or capsaicin)</li> </ul>	<ul style="list-style-type: none"> <li>• Nonpharmacologic (active &amp; passive)</li> <li>• Acute trial of NSAID/APAP (based on GI/cardio pt. history)</li> <li>• Add-on topical agent (lidocaine or capsaicin)</li> <li>• L-methylfolate</li> <li>• Gabapentinoids (gabapentin* or pregabalin) (*abuse potential as a noncontrolled substance)</li> <li>• SNRIs (duloxetine, venlafaxine, etc.)</li> <li>• TCAs (2° class: nortriptyline, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Nonpharmacologic (active &amp; passive)</li> <li>• Acute trial of NSAID/APAP (based on GI/cardio pt. history)</li> <li>• Topical agent (NSAID, lidocaine, or capsaicin)</li> </ul>

<b>2nd LINE PAIN TREATMENT ALGORITHMS</b>		
<b>Nociceptive Pain</b>	<b>Neuropathic Pain</b>	<b>Mixed Pain</b>
<ul style="list-style-type: none"> <li>• SNRIs (duloxetine, venlafaxine, etc.)</li> <li>• TCAs (2° class: nortriptyline, etc.)</li> <li>• Controlled substance class 4 (tramadol or pentazocine/naloxone)</li> <li>• Consider referral to specialist</li> </ul>	<ul style="list-style-type: none"> <li>• Anti-epileptic drugs or AEDs (CBZ*, VPA, lamotrigine, topiramate, etc.) (* trigeminal neuralgia only)</li> <li>• Controlled substance class 4 (tramadol or pentazocine/naloxone)</li> <li>• Consider referral to specialist</li> </ul>	<ul style="list-style-type: none"> <li>• Gabapentinoids (gabapentin* or pregabalin) (*abuse potential as a non-controlled substance)</li> <li>• SNRIs (duloxetine, venlafaxine, etc.)</li> <li>• TCAs (2° class: nortriptyline, etc.)</li> <li>• Controlled substance class 4 (tramadol or pentazocine/naloxone)</li> <li>• Consider referral to specialist</li> </ul>



<b>3rd LINE PAIN TREATMENT ALGORITHMS</b>		
<b>Nociceptive Pain</b>	<b>Neuropathic Pain</b>	<b>Mixed Pain</b>
<ul style="list-style-type: none"> <li>• Combination 1st &amp; 2nd line agents</li> <li>• Acute add-on: muscle relaxer PRN (antispasticity sub-class) (watch for concomitant CNS depression)</li> <li>• Controlled substance class 3 (buprenorphine or APAP/codeine)</li> <li>• Interventional therapy</li> <li>• Controlled substance class 2 (IR)</li> <li>• Referral to specialist needed</li> </ul>	<ul style="list-style-type: none"> <li>• Combination 1st &amp; 2nd line agents</li> <li>• Acute add-on: muscle relaxer PRN (antispasticity sub-class) (watch for concomitant CNS depression)</li> <li>• Controlled substance class 3 (buprenorphine or APAP/codeine)</li> <li>• Interventional therapy</li> <li>• Controlled substance class 2 (IR)</li> <li>• Referral to specialist needed</li> </ul>	<ul style="list-style-type: none"> <li>• Combination 1st &amp; 2nd line agents</li> <li>• Acute add-on: muscle relaxer PRN (antispasticity sub-class) (watch for concomitant CNS depression)</li> <li>• Controlled substance class 3 (buprenorphine or APAP/codeine)</li> <li>• Interventional therapy</li> <li>• Controlled substance class 2 (IR)</li> <li>• Referral to specialist needed</li> </ul>

<b>4th LINE PAIN TREATMENT ALGORITHMS</b>		
<b>Nociceptive Pain</b>	<b>Neuropathic Pain</b>	<b>Mixed Pain</b>
<ul style="list-style-type: none"> <li>• Spinal cord/dorsal root ganglion stimulation</li> <li>• Controlled substance class 2 (ER)</li> <li>• Implantable/intrathecal 1 (IT) morphine/baclofen/ziconotide</li> <li>• Consider clinical trial</li> </ul>	<ul style="list-style-type: none"> <li>• Spinal cord/dorsal root ganglion stimulation</li> <li>• Controlled substance class 2 (ER)</li> <li>• Implantable/intrathecal (IT) morphine/baclofen/ziconotide</li> <li>• Botox injection</li> <li>• Consider clinical trial</li> </ul>	<ul style="list-style-type: none"> <li>• Spinal cord/dorsal root ganglion stimulation</li> <li>• Controlled substance class 2 (ER)</li> <li>• Implantable/intrathecal (IT) morphine/baclofen/ziconotide</li> <li>• Consider clinical trial</li> </ul>
(WVEPMP, 2016)		

## RISK REDUCTION STRATEGIES

The SEMP guidelines provide healthcare professionals with a risk reduction process to improve patient care and minimize provider anxiety. Elements of this risk-reduction strategy include:

1. **Opioid Risk Screenings.** All patients being considered for chronic opioid therapy should be screened for risk of substance misuse before opioids are prescribed. Screening tools include the Opioid Risk Tool (ORT) and the Drug Abuse Screening Test (DAST). Patients who have been on long-term opioid therapy should also be routinely screened for misuse. Screening tools include the Current Opioid Misuse Measure (COMM), Pain



Medication Questionnaire (PMQ), and Prescription Drug Use Questionnaire (PDUQ). (See also “Resources” at the end of this course.)

2. **Drug Interaction and Pharmacologic Review.** Recognizing that genetic variability can alter drug responses for a variety of pain medications, it is suggested that pharmacogenetic testing be used when available and appropriate to the treatment regimen.
3. **Pain Reduction and Function Improvement Goal.** Pain should be thoroughly evaluated before prescribing medications or other pain treatments. Treatment of chronic pain requires a long-term process of monitoring and adjusting treatment as necessary. While severity of pain is important to evaluate, it is equally important to evaluate how pain affects a patient’s functional status and performance of daily activities.
4. **End of Therapy Goal.** An appropriate timeline regarding achieving and maintaining a reduction in pain is necessary. For acute pain treatment, an end of therapy goal for any pain medication should be consistent with the expected timeframe for the healing process. For chronic pain conditions, the elimination of pain may not be realistic. However, there should still be an end of therapy goal for any pharmacologic interventions to reduce unnecessary long-term effects (i.e., adverse effects, dependency, etc.).
5. **Initial and Annual Psychological Evaluations.** Patients who are prescribed opioid medications should have initial psychological evaluations that should be repeated annually. This allows for objective quantification of the benefits of opioid therapy and for reassessment of modifiable risk factors such as depression. The PHQ-2 depression screening instrument is a suggested tool to be used as a first step for depression screening.
6. **Proper Medication Storage and Disposal.** Education about safe use, storage, and disposal of controlled prescription drugs should be part of the conversation between patients and clinicians whenever controlled substances are prescribed. Patients should be reminded that if there are children or individuals with a history of substance abuse in the household, medications should be locked in a safe place. Excess medications should be returned through DEA-sponsored “take-back” programs.
7. **Naloxone Prescribing and Administration.** West Virginia Senate Bill 431, passed in 2016, makes naloxone (an antidote or reversal agent for opioid overdose) available without a prescription. A pharmacist or pharmacy intern who dispenses naloxone must provide education to the patient who receives naloxone, to include: 1) proper administration, 2) importance of contacting EMS after administering naloxone, 3) risks associated with failure to contact EMS following administration of naloxone, and 4) educational material on opioid-related overdose prevention and treatment. (See also “Prescribing and Administration of Opioid Antagonist” later in this course.)
8. **Prescription Drug Monitoring Program (PDMP).** West Virginia Senate Bill 437, passed in 2012, requires healthcare prescribers to utilize the PDMP. All licensees who dispense controlled substances to residents of West Virginia must provide the dispensing information to the WV Board of Pharmacy at least every 24 hours. All licensed prescribers must also check the PDMP at the initiation of opioid therapy and at minimum every year thereafter. (See also “Prescription Drug Monitoring Programs” later in this course.)



9. **Urine Drug Screening/Testing.** Urine drug screening/testing should be utilized to monitor compliance of patients who are prescribed controlled substances. Urine drug screening can help detect use of illicit substances and trigger reassessment of the treatment plan when indicated.
10. **Pill Counts.** Pill counts are one way of improving medication adherence and preventing/detecting diversion of medication. Pill counts can be random or scheduled based on scheduled appointments.
11. **DEA “Red Flags.”** Healthcare professionals have an ethical and legal obligation to both prevent prescription drug diversion and to ensure safe and effective care to patients. The U.S. DEA has provided a number of “red flags” for healthcare professionals to be aware of so that they can report suspected drug diversion by both prescribers or dispensers (see box below).
12. **Patient and Provider Agreements.** Providers and patients should review treatment goals and have realistic expectations of therapy (e.g., pain reduction and improved functional status), and a mutual understanding of elements 1 through 11 above. Patient and provider agreements are an invaluable tool to ensure mutual commitment to the treatment goals. (See also “Sample Patient Agreement Form” earlier in this course.) (WVEPMP, 2016)





**DEA RED FLAGS FOR DRUG DIVERSION****Prescribers**

- Cash-only patients and/or no acceptance of worker's compensation or private insurance
- Prescribing of the same combination of highly abused drugs
- Prescribing the same, typically high, quantities of pain drugs to most or every patient
- High number of prescriptions issued per day
- Out-of-area patient population

**Dispensers**

- Dispensing a high percentage controlled to non-controlled drugs
- Dispensing high volumes of controlled substances generally
- Dispensing the same drugs and quantities prescribed by the same prescriber
- Dispensing to out-of-area or out-of-state patients
- Dispensing to multiple patients with the same last name or address
- Sequential prescription numbers for highly diverted drugs from the same prescriber
- Dispensing for patients of controlled substances from multiple practitioners
- Dispensing for patients seeking early prescription refills

(WVEPMP, 2016)

**PREVENTING PRESCRIPTION DRUG MISUSE AND DIVERSION**

Various actions by healthcare providers can help prevent prescription drug misuse and diversion. These include:

- Educating patients on safe use, storage, and disposal of medications
- Understanding which drugs are commonly misused and/or diverted
- Recognizing aberrant drug-related behaviors (ADRB) (behaviors that may be associated with misuse of prescription opioids)
- Detecting and responding to drug diversion in the workplace



Institutional measures are also an important part of addressing the opioid epidemic, such as:

- Medication formulation and abuse-deterrent formulations
- Prescription drug monitoring programs (PDMPs)
- Surveillance systems

## Teaching Safe Use, Storage, and Disposal of Prescription Medications

Educating patients on safe use, storage, and disposal of medications is an essential part of addressing the opioid and drug diversion epidemic. Nurses and prescribers can address the following points with patients who have been prescribed opioids:

### SAFE USE

- Before you are prescribed opioids, tell your healthcare provider about all other medications and supplements you are taking.
- Tell your healthcare provider if you or your family has a history of alcohol or drug addiction. There are other pain treatment options that are equally as effective as (or more effective than) opioids and don't carry the same risks for addiction and overdose.
- Only take opioids prescribed to you and as directed by your healthcare provider.
- Never accept opioids from anyone else.
- Don't share your medications with others, because they may cause harm to someone else.
- Store prescription opioids in a locked container and out of children's reach (see below).
- Safely dispose of any unused medication when you are not longer using the medication (see below).
- If you've been prescribed opioids, talk to your healthcare provider about your risk for overdose.
- Tell your healthcare provider if you experience changes in your mood, balance, sleep, or pain level, and if you find it difficult to stop or decrease opioid use.
- Discuss with your healthcare provider alternative ways to manage your pain.  
(VA, 2020)

### SAFE STORAGE

Opioids are controlled substances, and their possession and use is regulated by state and federal laws. More than 70% of people who misuse prescription opioids obtain them from family and friends. Therefore, it is important that patients safely store their prescription medications. The CDC also recommends that prescribers discuss risks to household members and other individuals if opioids are intentionally or unintentionally shared with others for whom they are not



prescribed, including the possibility that others might experience overdose at the same or at lower dosage than prescribed for the patient.

- Store opioids in their original packaging inside a locked cabinet, a lockbox, or other secure location.
- Do **not** store opioids in obvious places like bathroom cabinets or on kitchen counters where others might find them.
- Note when and how much medication you take in order to keep track of the amount left. (AAFP, 2021; CDC, 2016; SAMHSA, 2020)

## SAFE MEDICATION DISPOSAL

Prescribers and/or pharmacists often provide specific disposal instructions for unused or expired medicines, and patients are educated to follow those instructions. There are a variety of ways to dispose of medications. The FDA (2020a) outlines three options for drug disposal according to the type of drug: a take-back site, the flush list, or household trash.

### *Take-Back Programs*

The **best way** to dispose of most types of unused or expired medicines (both prescription and over the counter) is to immediately drop off the medicine at a drug take-back site, location, or program. Pharmacies, firehouses, or police departments will often “take back” unused medications, particularly opioids. Some areas have specific dates on which they offer this service; other sites will take back medications at any time.

The Drug Enforcement Agency (DEA) website provides a locator app where the user can search for drug drop-off points within a 10- to 100-mile radius, and each year the DEA sponsors a National Prescription Take Back day (DEA, 2021a). In 2020, West Virginia collected 5,865 pounds of materials at 94 collection sites throughout the state.

(See “Resources” at the end of this course to locate a disposal location.)

### *Flushing Disposal*

If a drug take-back option or DEA-authorized collector is not available and a medication is on the FDA flush list (see table below), the FDA recommends safely flushing such approved medications down the toilet. The medicines on the flush list are those sought after for their misuse and abuse potential or those that can result in death from one dose if inappropriately taken. For these reasons, FDA recommends that patients flush them down the toilet to immediately and permanently remove these risks from their home.

The FDA believes that the risk of harm from accidental exposure to these few select medicines far outweighs any potential risk to the environment that may come from disposal by flushing (Khan et al., 2017).



<b>FDA's FLUSH LIST</b>	
<b>Drug Name</b>	<b>Examples</b>
<b>Drugs That Contain Opioids</b>	
Any drug that contains the word <i>buprenorphine</i>	Belbuca, Buavail, Butrans, Suboxone, Subutex, Zubsolv
Any drug that contains the word <i>fentanyl</i>	Abstral, Actiq, Duragesic, Fentora, Onsolis
Any drug that contains the words <i>hydrocodone</i> or <i>benzhydrocodone</i>	Apadaz, Hysingla ER, Norco, Reprexain, Vicodin, Vicodin ES, Vicodin HP, Vicoprofen, Zohydro ER
Any drug that contains the word <i>hydromorphone</i>	Exalgo
Any drug that contains the word <i>meperidine</i>	Demerol
Any drug that contains the word <i>methadone</i>	Dolophine, Methadose
Any drug that contains the word <i>morphine</i>	Arymo Er, Avinza, Embeda, Kadian, Morphabond ER, MS Contin, Oramorph SR
Any drug that contains the word <i>oxycodone</i>	Codoxy, Combunox, Oxadydo (formerly Oxecta), Oxycet, Oxycontin, Percocet, Percodan, Roxicet, Roxicodone, Roxilox, Roxybond, Targiniq ER, Troxyca ER, Tylox, Xartemis XR, Xtampza ER
Any drug that contains the word <i>oxymorphone</i>	Opana, Opana ER
Any drug that contains the word <i>tapentadol</i>	Nucynta, Nucynta ER
<b>Drugs That Do Not Contain Opioids</b>	
Any drug that contains the term <i>sodium oxybate</i> or <i>sodium oxybates</i>	Xyrem, Xywav
Diazepam rectal gel	Diastat, Diastat Acudial
Methylphenidate transdermal system	Daytrana
(U.S. FDA, 2020b).	

### **Household Trash Disposal**

If a drug take-back program is not available and a medication is not on the flush list, the FDA (2018) provides the following guidance on how to dispose of drugs via household trash:



- Mix medicines (liquid or pills; do not crush tablets or capsules) with an unappealing substance such as dirt, cat litter, or used coffee grounds.
- Place the mixture in a container such as a sealed plastic bag.
- Throw away the container in the household trash.
- Delete all personal information on the prescription label of empty medicine bottles or medicine packaging, then trash or recycle the empty bottle or packaging.

Even after **fantanyl patches** have been used, a degree of medication remains. These patches should be folded over so the adhesive sticks together and no exposed area that contains the drug remains. It should then be flushed or disposed of per the household trash disposal guidelines.

Since **inhalers** are dangerous if punctured or if they come in contact with fire, they must be treated with care. Local trash and recycling facilities typically provide information on how to properly dispose of inhalers in their area.

## Understanding Commonly Abused/Misused Drugs

The Drug Enforcement Administration (2020) recognizes five classes of drugs that are frequently abused: opioids/narcotics, depressants, hallucinogens, stimulants, and anabolic steroids, with opioids being the most commonly misused. The extent to which the drug is reliably capable of producing intensely pleasurable feelings (euphoria) increases the likelihood of that substance being abused.

Three specific classes are most commonly abused and thus most susceptible to diversion for nonmedical use:

- **Pain medications/narcotics.** Opioid pain relievers (narcotics) are the most commonly diverted controlled prescription drugs. Opioid medications are effective for the treatment of pain and have been used appropriately to manage pain for millions of people, however increased rates of abuse and overdose deaths have raised concerns about proper use of these medications in the treatment of chronic pain.
- **Central nervous system (CNS) depressants/sedatives/hypnotics.** CNS depressants slow brain activity and are useful for treating anxiety and sleep disorders. Since many patients with pain also experience anxiety or sleep disturbances, increased prescribing of sedative hypnotics has paralleled the increase in prescribing of opioids. Clinicians who add sedative hypnotics to the treatment plan for chronic pain patients may potentiate the risk for patients who are also prescribed opioid medication.
- **Stimulants.** Stimulants are prescribed primarily for treatment of attention deficit hyperactivity disorder (ADHD) and narcolepsy. They may also be used as an adjunct medication in the treatment of depression. When taken nonmedically, stimulants can induce a feeling of euphoria and thus have a high potential for abuse and diversion. They also have a cognitive enhancement effect that has contributed to non-medical use by professionals, athletes, and other individuals who rely on productivity. Nonmedical use of



stimulants poses serious health consequences, including addiction, cardiovascular events, and psychosis.  
(NIDA, 2020)

<b>PRESCRIPTION DRUGS WITH HIGH POTENTIAL FOR DIVERSION/ABUSE</b>	
<b>Category</b>	<b>Drugs</b>
Opioids	<ul style="list-style-type: none"> <li>• Codeine</li> <li>• Fentanyl</li> <li>• Hydrocodone or dihydrocodeinone</li> <li>• Hydromorphone</li> <li>• Meperidine</li> <li>• Methadone</li> <li>• Morphine</li> <li>• Nalbuphine</li> <li>• Oxycodone</li> <li>• Oxymorphone</li> </ul>
CNS depressants	<ul style="list-style-type: none"> <li>• Barbiturates: pentobarbital</li> <li>• Benzodiazepines: alprazolam, chlordiazepoxide, diazepam, lorazepam, triazolam</li> <li>• Sleep medications (hypnotics): eszopiclone, zaleplon, zolpidem</li> <li>• Ketamine (can be classified as an analgesic, centrally acting nonopioid, anesthetic, or antidepressant depending on how it is used; when used appropriately, its primary purpose is sedation)</li> </ul>
Stimulants	<ul style="list-style-type: none"> <li>• Amphetamines</li> <li>• Methylphenidate</li> </ul>
(NIDA, 2020)	

### **SOURCES FOR MISUSED PAIN RELIEVERS, 2019**

Evidence shows that most people involved in the misuse of prescription pain medication obtained it from family members or friends, whether given intentionally or not.

- 50.8%, free, bought, or taken from a friend/relative
- 35.7%, prescription from one doctor
- 6.2%, bought from drug dealer/stranger
- 1.1% prescriptions from more than one doctor



- 0.8%, stole from doctor's office, clinic, hospital, pharmacy
- 5.5 %, some other way (SAMHSA, 2020)

### COUNTERFEIT PILLS

The U.S. Drug Enforcement Agency (2021b) reported in 2021 that criminal drug traffickers are mass-producing and falsely marketing counterfeit prescription drugs to exploit the opioid crisis and prescription drug misuse in the United States. Approximately 10 million counterfeit pills were seized across all states, which is more than in 2018 and 2019 combined. The number of DEA-seized pills containing fentanyl has jumped over 400% since 2019, corresponding to a drastic increase and the highest-recorded number of overdose deaths, at more than 100,000.

Fake prescription pills are easily accessible and often sold on social media and e-commerce platforms, making them available to anyone. Many counterfeit pills are made to look like prescription opioids such as oxycodone (Oxycontin, Percocet), hydrocodone (Vicodin), and alprazolam (Xanax); or stimulants like amphetamines (Adderall). These pills typically contain fentanyl or methamphetamine.

The DEA warns that the only safe medications are those obtained from licensed and accredited medical professionals and that pills purchased anywhere other than a licensed pharmacy are dangerous and potentially lethal.

(DEA, 2021b)



Left: Authentic oxycodone M30 tablet. Right: Counterfeit oxycodone M30 tablet containing fentanyl. Source: DEA.



## Recognizing Aberrant Drug-Related Behaviors

Some patients who are prescribed opioid pain medication are at increased risk for opioid misuse and diversion. These patients may demonstrate certain misuse behaviors that can provide clues to the clinician. By recognizing what are called *aberrant drug-related behaviors (ADRBs)*, nurses can respond appropriately and help patients to remain safe.

ADRBs may occur because a patient is experiencing poor pain control or has a fear of uncontrolled pain, which can lead to hoarding of medication. The behaviors may also be attributed to elective use of opioid medication for the euphoric effect or for non-pain-related symptoms such as anxiety, depression, insomnia, and stress.

ADRBs in patients who are prescribed opioids should trigger clinicians to the possibility of addiction. Current literature suggests a range of aberrant drug-related behaviors, with some more predictive of addiction than others. Being aware of the behaviors described in the following box can help guide clinicians who are treating and monitoring patients who are receiving prescription opioid therapy for long-term pain management.

### EXAMPLES OF ADRBs

- Altering the mode of administration of drug delivery
- Obtaining prescriptions from nonmedical sources
- Obtaining drugs from other prescribers without informing the clinician
- Stealing or borrowing drugs from others
- Concurrent drug/alcohol use
- Intoxicated/somnolent/sedated
- Occasional impairment
- Pattern of drug-related deterioration
- Medication misuse
- Overdose
- Repeated dose escalations even when warned
- Occasional unsanctioned dose escalation
- Unapproved use of the drug to treat other symptoms





- Unapproved use of drugs to treat nonpainful symptoms
- Repeated resistance to change despite adverse effects
- Noncompliance with therapeutic recommendations
- Increasing pain complaints
- Aggressive complaints about need for more or stronger medication
- Selling prescription drugs
- Prescription forgery
- Inconsistent urine toxicology screen
- Unkempt appearance without other signs of impairment
- Request for early refills
- Request for specific drugs
- Request for refills instead of appointments with clinician
- Emergency department visits for pain medications
- Saving unused drugs for later use
- Canceled clinic visit
- Discharged from practice
- No show or no follow-up

(Maumus et al., 2020)

The presence of aberrant behaviors, however, may indicate a range of problems other than misuse or diversion, and the clinician must explore a **differential diagnosis**. Possible etiologies include addiction, pseudo-addiction, another psychiatric disorder, personality disorder, chronic boredom, mild encephalopathy, withdrawal states, and genuine undertreatment of pain. Therefore, it is important to monitor, document, and communicate any aberrant behaviors using objective means and in a team-based fashion over the patient's entire course of care. This process will also remove any bias on the part of a single provider.

In the hospital setting, monitoring and responding to ADRBs is important in order to:

- Determine the success or failure of treatment
- Help prevent the transition of chronic pain to opioid dependence and SUD
- Help prevent psychiatric disorders such as anxiety and depression
- Identify undiagnosed SUD
- Identify patients at high risk for diversion



- Identify possible complications of opioid therapy (Maumus et al., 2020)

## Drug Diversion in the Workplace

The opportunity for diversion of controlled substances from the workplace exists, and diversion of opioids is seen across all clinical disciplines and all levels of an organization, from management to frontline staff.

Despite a lack of comprehensive studies on the topic, one 2020 analysis of publicly reported diversion incidents involving healthcare workers found that diversion occurred in various settings: hospital/medical center/clinic (32%), practice (26%), long-term care (20%), pharmacy (17%), ambulance services (5%), and other (1%). Data on the diverter's role found doctors to be the most common diverters (36%), followed by nurses (31%), pharmacist/pharmacy tech (13%), executive/owner/operator (9%), paramedic/emergency services (6%), and other (2.5%) (Protenus, 2021). Nurses may be at increased risk for misuse or diversion of prescription medications due to working in environments where frequent and easy access to controlled substances is part of their daily work routine (TJC, 2019; Mumba, 2018).

Diversion may occur with opened or unopened vials, partially used doses of medication that are not wasted, and medication that has been disposed of and left in sharps containers. The drugs most commonly diverted from healthcare settings are opioids, but there is no precise data that defines the extent of drug diversion.

Every nurse plays an important role in drug diversion prevention and should be able to recognize **patterns, trends, and behaviors** associated with drug diversion in the workplace. These may include:

- Consistently arriving early, staying late, or frequently volunteering for overtime
- Frequent breaks or trips to bathroom
- Heavy wastage of drugs
- Drugs and syringes in pockets
- Anesthesia record does not reconcile with drug dispensed and administered to patient
- Patient has unusually significant or uncontrolled pain after anesthesia
- Higher pain score as compared to other anesthesia providers
- Times of cases do not correlate when provider dispenses drug from automated dispenser
- Inappropriate drug choices and doses for patients
- Missing medications or prescription pads
- Drugs, syringes, needles improperly stored
- Signs of medication tampering, including broken vials returned to pharmacy



- Compromised product containers
- Frequent medication losses, spills, or wasting
- Controlled substances removed without a doctor's order
- Controlled substances removed on recently discharged or transferred patient
- Controlled substances removed for a patient not assigned to the nurse
- Medication documented as given but not administered to the patient
- Frequent reports of ineffective pain relief from patients
- Frequent unexplained disappearances from the unit
- Incorrect controlled substance counts
- Consistently documenting administration of more controlled substances than other nurses
- Large amounts of narcotic wastage
- Numerous corrections on medication records
- Offers to medicate coworkers' patients for pain
- Saving extra controlled substances for administration at a later time
- Altered verbal or phone medication orders
- Variations in controlled substance discrepancies among shifts or days of the week (NCSBN, 2018; AANA, 2021; DEA, 2021c; Brummond et al., 2017)

Essential **organizational steps** to address drug diversion in the workplace include:

- **Prevention.** Healthcare facilities must have systems in place to guard against theft and diversion of controlled substances. It is important that all staff understand and comply with these protocols, and act in ways to minimize unauthorized access or opportunities for tampering and misuse.
- **Detection.** Systems can include video monitoring of high-risk areas, active monitoring of pharmacy and dispensing record data, and training staff to be aware of and alert for behaviors and other signs of potential diversion activity.
- **Response.** Appropriate responses include establishing a just culture in which reporting drug diversion is encouraged, assessing harm to patients, consulting with public health officials when tampering with injectable medication is suspected, and promptly reporting to enforcement agencies. (TJC, 2019)

## **Institutional Measures to Prevent Prescription Drug Misuse**

Institutional measures are also an important part of addressing the opioid epidemic. Several such measures are discussed below.



## MEDICATION FORMULATION

Manufacturers of prescription drugs continue to work on new formulations of opioid medications, known as **abuse-deterrent formulations (ADF)**, which include technologies designed to prevent people from misusing them by snorting or injection. Abuse-deterrent formulations have been shown to decrease the illicit value of drugs. Several ADF opioids are on the market, and the FDA has called for the development of ADF stimulants.

Abuse deterrent strategies currently being used include:

- Physical or chemical barriers that prevent the crushing, grinding, or dissolving of drugs
- Agonist/antagonist combinations that cause an antagonist (which will counteract the effect of the drug) to be released if the product is manipulated
- Aversive substances that are added to create unpleasant sensations if the drug is taken in a way other than directed
- Delivery systems such as long-acting injections or implants that slowly release the drug over time
- New molecular entities or prodrugs that attach a chemical extension to a drug that renders it inactive unless taken orally

The development of effective, nonaddicting pain medications is also a public health priority. Researchers are exploring alternative treatment approaches that target other signaling systems in the body, such as the endocannabinoid system, which is also involved in pain (NIDA, 2020).

## PRESCRIPTION DRUG MONITORING PROGRAMS

Prescription drug monitoring programs (PDMPs) are statewide electronic databases that gather information from pharmacies on controlled substances. Growing recognition that PDMPs are a vital tool for clinicians to address the prescription drug epidemic has led to increased public and private funding to support widespread expansion of these programs. All U.S. states, Washington, D.C., and territories have operational PDMPs and share data via the Prescription Monitoring Information Exchange (PMIX) National Architecture (PDMP TTAC, 2021).

West Virginia's PDMP was established in 1995 by the Board of Pharmacy. Data collection occurs weekly. West Virginia requires use of the PDMP by all physicians and other healthcare providers who prescribe opioid medications.

## SURVEILLANCE SYSTEMS

The Prescription Behavior Surveillance System (PBSS) is a public health surveillance system that uses PDMP data to monitor trends in prescribing behaviors for controlled substances at the state or county level. In 2010, PBSS began using PDMP data from participating states to report on a variety of indicators of prescribing behavior, including prescribing rates by patient age, sex, drug type, dose, and source of payment. Although data on clinical indication is not collected, the



system tracks various controlled substance indicators of possible misuse, including cash payment for prescriptions and “multiple-provider episodes,” in which a person uses multiple prescribers and pharmacies within specified periods to obtain controlled substances.

PBSS collects data on prescriptions of controlled substances to provide indicators of possible inappropriate medical use to both federal and state collaborators. PBSS has developed approximately 43 prescription behavior measures, including:

- Prescription rates by drug class and individual drug
- High daily opioid dosages ( $\geq 90$  morphine milligram equivalents [MME]/day)
- Average daily opioid dosage
- Overlapping opioid prescriptions and opioid-benzodiazepine prescriptions
- Multiple-provider episode (MPE) rates by drug schedule or class, payment sources
- Indicators of possible inappropriate prescribing and dispensing

The PBSS database can detect changes in prescribing patterns earlier than other administrative health data (e.g., Medicaid claims data) (Strickler et al., 2020).

#### **WEST VIRGINIA SUBSTANCE USE RESPONSE PLAN (SURP)**

West Virginia continues to update its Substance Use Response Plan due to the complex and ongoing consequences of the opioid epidemic. The 2020–2022 plan promotes strategies to:

- Implement evidence-based prevention methods in schools and local communities
- Ensure West Virginians have prompt access to treatment and support options that suit individual needs
- Provide housing, transportation, employment, and other supports for those in recovery
- Connect the justice-involved population with substance use disorder services and help promote positive behaviors, facilitate community reentry, and reduce recidivism
- Promote, measure, and track prevention, treatment, and recovery outcomes
- Provide public education based on the best available evidence of what is most effective in addressing stigma
- Monitor ongoing initiatives to confirm plan goals are achieved (WV DHHR, 2020)



## PRESCRIBING AND ADMINISTERING OPIOID ANTAGONISTS (NALOXONE)

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Nearly 50,000 people died of opioid-related overdose in 2019 alone, and provisional data indicate a likely increase in that number for 2021 (NIDA, 2021). The availability of the opioid overdose-reversal drug naloxone has been shown to reduce the rate of these overdose deaths, and laws have been enacted in all U.S. states, including West Virginia, to expand access to this life-saving medication (see “West Virginia Laws on Naloxone” below).

### Prescribing Naloxone

Naloxone is an opioid antagonist that blocks opioid receptors. The drug comes in intravenous, intramuscular, and intranasal formulations and is FDA-approved for use in an opioid overdose and for the reversal of respiratory depression associated with opioid use. The CDC (2016) guidelines recommend that naloxone be coprescribed to any individual who is prescribed high-dose opioid therapy ( $\geq 50$  MME per day) or any combination of opioids and benzodiazepines. Recommendations also call for overdose prevention education to both patient and household members.

**Candidates for naloxone** are those who:

- Take high doses of opioids for long-term management of chronic pain
- Receive rotating opioid medication regimens
- Have been discharged from emergency medical care following opioid poisoning or intoxication
- Take certain extended-release or long-acting opioid medication
- Have had a period of abstinence from opioids, including those recently released from incarceration

Pregnant women can be safely given naloxone in limited doses under the supervision of a doctor (SAMHSA, 2021b).

### Patient Education regarding Naloxone Administration

Patient education includes showing patients, their family members, or caregivers how to administer naloxone. The medication can be given by intranasal spray or intramuscular, subcutaneous, or intravenous injection.

Patients given an automatic injection device or nasal spray should keep the item available at all times. The medication must be replaced when the expiration date passes and if exposed to temperatures below 39°F or above 104°F.



Naloxone is effective if opioids are misused in combination with other sedatives or stimulants. It is **not effective** in treating overdoses of benzodiazepines or stimulant overdoses involving cocaine and amphetamines (SAMHSA, 2021b).

### SIGNS OF OPIOID OVERDOSE

Recognizing the signs of opioid overdose can save a life. They include:

- Small, constricted “pinpoint pupils”
- Falling asleep or losing consciousness
- Slow, weak, or no breathing
- Choking or gurgling sounds
- Limp body
- Cold and/or clammy skin
- Discolored skin (especially in lips and nails)  
(CDC, 2021e)

**Side effects** of naloxone may include an allergic reaction from naloxone, such as hives or swelling in the face, lips, or throat, for which medical help should be sought immediately. Use of naloxone also causes symptoms of opioid withdrawal. Opioid withdrawal symptoms include:

- Feeling nervous, restless, or irritable
- Body aches
- Dizziness or weakness
- Diarrhea, stomach pain, or nausea
- Fever, chills, or goose bumps
- Sneezing or runny nose in the absence of a cold

Since naloxone is a temporary treatment and its effects will wear off, medical assistance must be obtained as soon as possible after administering/receiving naloxone (SAMHSA, 2021b).

### Expanding Access to Naloxone

Recommendations regarding increased access to naloxone include:

- Allowing providers to prescribe naloxone to third parties who may witness an overdose (i.e., family and friends of people who use opioids)
- Removing the need for individual prescriptions by allowing naloxone to be dispensed without a patient-specific prescription



- Allowing and equipping law enforcement officers to carry and administer naloxone
- Providing naloxone to people at risk of overdose who are leaving hospital, treatment, or corrections settings
- Permitting local agencies and organizations to distribute naloxone to community members who may be likely to witness an overdose
- Enacting “Good Samaritan” laws that provide immunity to people who experience or witness an overdose to encourage them to call 911 for help without fear of arrest
- Reducing costs for individuals and state governments by mandating public and private insurance coverage and negotiating with manufacturers for lower-cost bulk purchases (PEW, 2020)

### **WEST VIRGINIA LAWS ON NALOXONE**

West Virginia has enacted laws to make opioid antagonists more accessible to individuals most likely to have or encounter an overdose.

- SB 335 (2015) authorizes licensed healthcare providers to prescribe an opioid antagonist to first responders, individuals at risk of having an overdose, and relatives and friends of individuals at risk of having an overdose. Providers dispensing opioid antagonists must provide educational materials on overdose prevention and treatment programs as well as materials on administering opioid antagonists to recipients.
- SB 431 (2016) authorizes pharmacists to dispense an opioid antagonist without a prescription according to an established protocol. A dispenser providing an opioid antagonist without a prescription must provide educational materials and mandatory patient counseling to the individual receiving the opioid antagonist.
- SB 272 (2018) requires local and state government agencies to require first responders to carry opioid antagonists subject to certain conditions as long as there are sufficient supplies and funding. Additionally, the State Health Officer may use standing orders to prescribe an opioid antagonist on a statewide basis to certain recipients.  
(WV OIG, 2019)

Additionally, West Virginia’s “Good Samaritan” law (WV Code §55-7-15) protects both civilians and licensed medical practitioners from civil liability when offering aid in an emergency.





## CONCLUSION

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Currently, there is an epidemic of prescription drug abuse, diversion, and overdose deaths not only in West Virginia but also across the country. The complexity of this crisis creates challenges for federal, state, and local governments as well as nongovernmental partners who must confront the growing impacts on the community.

Overprescribing opioids for more than a decade has contributed to prescription opioid addiction and led to a sharp increase in opioid addiction, which is associated with a significant increase in heroin abuse, health compromise, and overdose deaths. A multifaceted public health approach is necessary in order to effectively reduce opioid-related morbidity and mortality.

The opioid epidemic in this country has evolved and escalated along with an epidemic of chronic pain. With current evidence affirming that less-risky pain alternatives are just as effective as opioids for managing chronic pain, it is clear that there must be a cultural shift away from treating chronic pain with opioid medication.

Nurses are in a unique position to address this dual epidemic with the right clinical skills and knowledge in assessment and management of addiction risk and best practices for safe opioid prescribing. A comprehensive approach that supports safe and effective pain management without increasing patient risk for addiction must be priority in every clinical practice setting.



## RESOURCES

CDC Clinical Practice Guideline for Prescribing Opioids for Pain

[https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm?s\\_cid=rr7103a1\\_w](https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm?s_cid=rr7103a1_w)

Controlled substance public disposal locations search utility

<https://apps2.deadiversion.usdoj.gov/pubdispsearch/spring/main?execution=e1s1>

Drug overdose prevention in States

<https://www.cdc.gov/drugoverdose/states/index.html>

Opioid prescribing guideline resources (CDC)

<https://www.cdc.gov/opioids/providers/prescribing/index.html>

Opioid Risk Tool

<https://www.drugabuse.gov/sites/default/files/OpioidRiskTool.pdf>

Opioid safety: veteran/patient education (Veteran's Administration)

[https://www.va.gov/PAINMANAGEMENT/Opioid\\_Safety/Patient\\_Education.asp](https://www.va.gov/PAINMANAGEMENT/Opioid_Safety/Patient_Education.asp)



Pain Assessment and Documentation Tool (PADT)

<https://www.drugabuse.gov/sites/default/files/PainAssessmentDocumentationTool.pdf>

Risk Assessment and Mitigation Strategy (REMS) sample document

[https://www.accessdata.fda.gov/drugsatfda\\_docs/remss/Zyprexa\\_Relprevv\\_2021\\_04\\_28\\_REMS\\_Document.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/remss/Zyprexa_Relprevv_2021_04_28_REMS_Document.pdf)

Screening and assessment tools chart (National Institute on Drug Abuse)

<https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools>

State prescription drug laws

<https://www.cdc.gov/drugoverdose/policy/laws.html>

West Virginia SEMP Guidelines

<http://sempguidelines.org>

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## TEST

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1. Which is an accurate statement regarding the scope of prescription drug misuse?
  - a. Nearly 10 million Americans ages 12 and older misused prescription pain relievers in 2019.
  - b. In West Virginia, the number of drug overdose-related deaths decreased from 2020 to 2021.
  - c. Deaths due to accidental opioid overdose are second only to deaths due to motor vehicle crashes.
  - d. In 2019, an average of over 10,000 new people ages 26 and older began misusing prescription pain relievers each day.
  
2. When monitoring the “Five As” of pain management, which question will the prescriber ask?
  - a. “Do you have a family history of drug misuse?”
  - b. “Has your level of function improved?”
  - c. “How satisfied are you with me as a prescriber?”
  - d. “Are there problems with your pharmacy filling your prescriptions?”
  
3. Which statement is a part of the 2022 CDC guidelines for prescribing opioids?
  - a. The guidelines apply only to primary care physicians and physician assistants.
  - b. Concurrent use of opioids and central nervous system depressants is always beneficial.
  - c. Assessing the risks and addressing the potential harms of opioid use with the patient is recommended.
  - d. Prescribing long-acting instead of immediate-release opioids when starting opioid therapy is recommended.
  
4. All of the following are recommended risk reduction strategies for preventing drug diversion in West Virginia, except:
  - a. Prescribing opioids only to patients ages 21 and over.
  - b. Requiring urine testing to monitor compliance of patients who are prescribed controlled substances.
  - c. Conducting pill counts on a random or regular basis during scheduled appointments.
  - d. Having an appropriate end-of-therapy goal for pharmacologic interventions.



5. Statistics indicate that the most common source from which individuals obtained prescribed pain medications for misuse was:
  - a. Purchasing from drug dealers.
  - b. Through a prescription from a doctor.
  - c. Free, purchased, or taken from friends or relatives.
  - d. Stealing from a doctor's office, clinic, hospital, or pharmacy.
  
6. Which behavior would a clinician consider to be the most likely example of aberrant drug-related behavior (ADRB) in their patient?
  - a. The patient states that they are still feeling a lot of pain despite beginning opioid therapy last week.
  - b. The patient's partner reports that the patient has been complaining of boredom lately.
  - c. The patient phones the clinic stating that they lost their prescription again and need an early refill.
  - d. The patient's partner reports that the patient has not been taking all of their prescribed pain medication.
  
7. Which behavior is most likely to be associated with drug diversion in the workplace?
  - a. Poor hygiene and disheveled appearance at work
  - b. Sloppy and illegible charting on medication records and nurses' notes
  - c. A pattern of incorrect narcotic counts
  - d. Frequent tardiness and absences from work
  
8. When educating the patient and family regarding the use of naloxone in cases of drug overdose, the clinician states that:
  - a. Naloxone is effective in treating overdoses due to cocaine and amphetamines.
  - b. It is never safe to administer naloxone to pregnant women.
  - c. There are no known side effects from naloxone use.
  - d. Both intranasal spray and parental forms of the drug are available.

