# **Opioid Response Network**

Care and Management of the Patient with Chronic Pain & Opioid Dependence (CPOD)

Craig J. Uthe, MD FAAFP ASAM
May 16, 2024





- 1. Prevent unintended opioid overdose deaths
- 2. Provide appropriate opioid use disorder services
- 3. Provide adequate pain relief... using opioids
- 4. Mitigate misuse/abuse of prescribed opioids



### The Opioid Epidemic – 1990s



doctor. It may mean that your regular dose of OxyContin\* (oxycodone HCl controlled-release) Tablets needs to be increased. It's a good idea to keep a diary of how many times a day you use your rescue medication and what caused the pain. Also, remember that increasing pain does not necessarily mean your condition is getting worse. Sometimes other treatments for disease may cause pain. Sometimes it's caused by factors totally unrelated to the disease. Regular communication with your doctor will help keep your questions answered and put your fears to rest.

Remember: When your doctor prescribes medication for breakthrough pain:

- · Be sure that you understand how to use it.
- Use your breakthrough doses only as your doctor has instructed.
- · Write down how many times you take it: every day. Your doctor can use this information to decide when to adjust your regular dose of OxyContin\* Tablets.
- . Do not use your OxyContin\* Tablets for your breakthrough pain.

PP 00539

Will it be easy to take OxyContin® Tablets?

OxyContin® Tablets are small (see actual size below) which makes them easy to swallow. They are also color-coded according to their strength. This is helpful for you and your physician.

OxyContin\* Tablet Strengths



OxyContin® 80 mg and 160 mg Tablets for use only in opioid-tolerant patients requiring daily oxycodone equivalent dosages of 160 mg and 320 mg respectively.

Aren't opioid pain medications like OxyContin\* **Tablets** "addicting?" Even my family is concerned about this.

Drug addiction means using a drug to get "high" rather than to relieve pain. You are taking opioid pain medication for medical purposes. The medical purposes are clear and the effects are beneficial, not harmful. If you or your family have concerns about addiction, please talk to your doctor or another member of your healthcare team. This fear should not stand in the way of relief from your pain.

What are the most important things to remember while I'm taking OxyContin\* Tablets for my pain?

The single most important thing for you to remember is that you are the authority on your pain. Nobody else feels it for you so nobody else can describe how much it hurts, or when it feels better. Your healthcare team is there to help, but they need your help, too. Be sure to talk to them, ask them questions, tell them how you feel - whether that is better or worse. Together you can be Partners Against

Additional Reminders

#### Make sure you always have enough medication.

OxyContin\* Tablets require a written prescription, so your doctor cannot call it into your pharmacy. Call or see your doctor at least one week before you run out of medication. Ask a family member to help you keep track if necessary.

PP 00540









# The Opioid Epidemic – 1990s





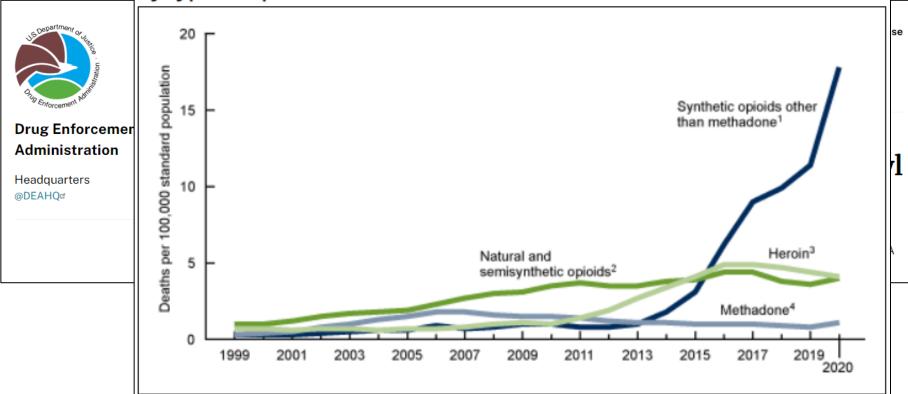
### The Opioid Epidemic – 1990s





### The Opioid Epidemic – 2020s

Figure 4. Age-adjusted rates of drug overdose deaths involving opioids, by type of opioid: United States, 1999–2020





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- 2. Provide appropriate opioid use disorder services
- 3. Provide adequate pain relief... using opioids
- 4. Mitigate misuse/abuse of prescribed opioids



#### **OBJECTIVES:**

- 1. Be able to identify the three health conditions that merit attention at every encounter for the patient with chronic pain & opioid dependence (CPOD)
- Know how to establish a plan of action that includes a benefit-risk assessment with a timeline for the patient with chronic pain & opioid dependence (CPOD)
- Be familiar with different treatment strategies for patients with different pain scenarios: acute pain, post-op pain, and chronic pain.





#### **Words Matter**

Terms to Use and Avoid When Talking About Addiction

#### Avoid using the terms...

**Addict** 

User

Substance or drug abuser

Junkie

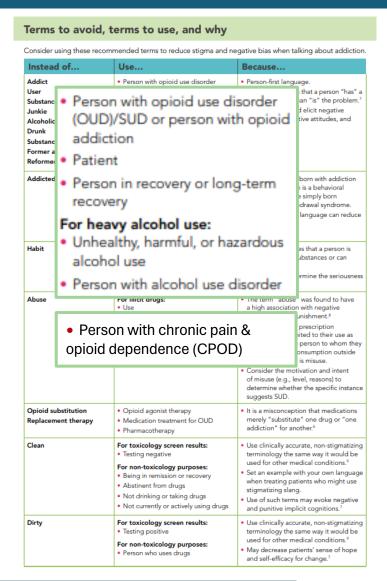
**Alcoholic** 

**Drunk** 

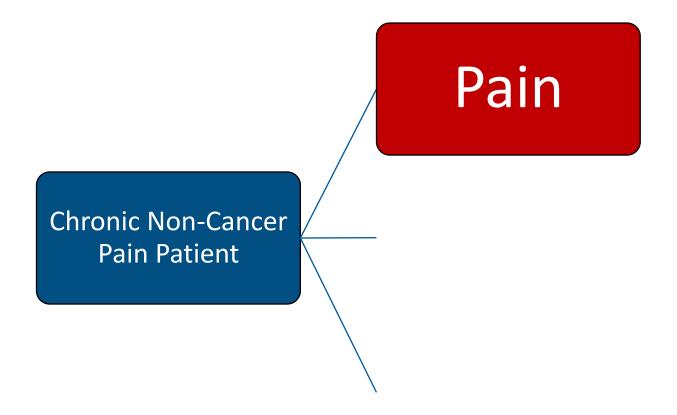
Substance dependence

Former addict

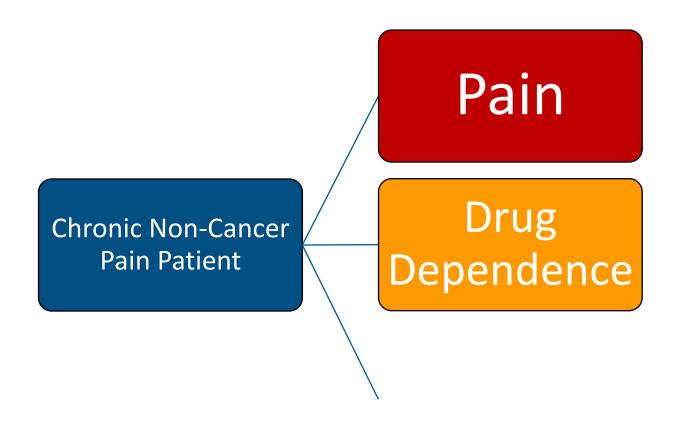
Reformed addict



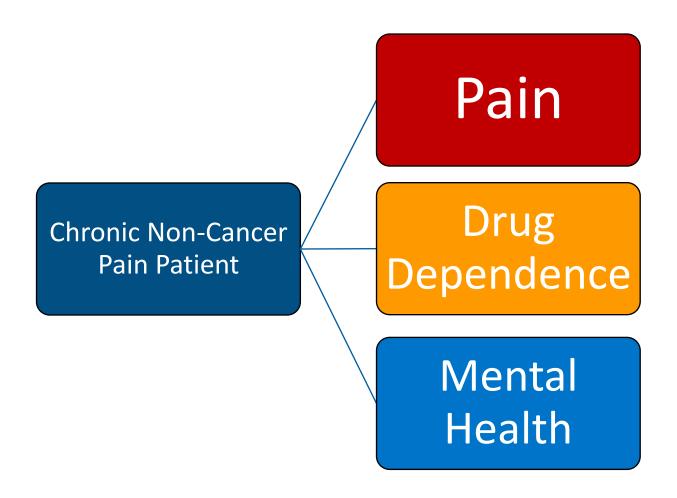














# Pain

Chronic Non-Cancer
Pain Patient

Chronic Pain is ongoing or recurrent pain, lasting beyond the usual course of acute illness or injury healing, *more than 3 to 6 months*, and which adversely affects the individual's well-being.

Another definition for chronic or persistent pain is *pain that continues when it should not.* 



#### THREE MAIN TYPES OF PATHOPHYSIOLOGY

can be considered to result in chronic pain<sup>1</sup>

Pain related to damage of somatic or visceral tissue, due to trauma or inflammation

#### NOCICEPTIVE PAIN

Examples:

Rheumatoid arthritis. osteoarthritis, gout

Pain related to damage of peripheral or central nerves

#### NEUROPATHIC PAIN

Examples:

Painful diabetic peripheral neuropathy, postherpetic neuralgia

Pain without identifiable nerve or tissue damage, hypothesized to result from persistent neuronal dysregulation-may be called

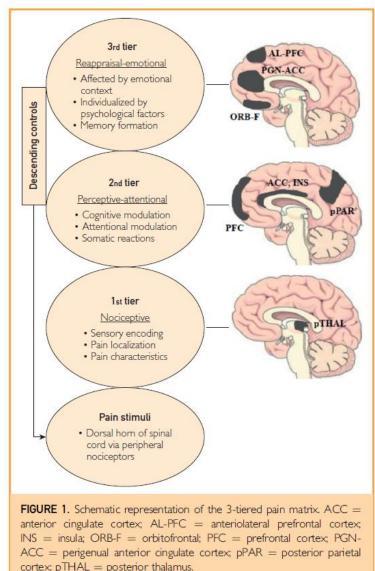
SENSORY HYPERSENSITIVITY

> Example: Fibromyalgia

More than 1 type of pain may be present in a given patient

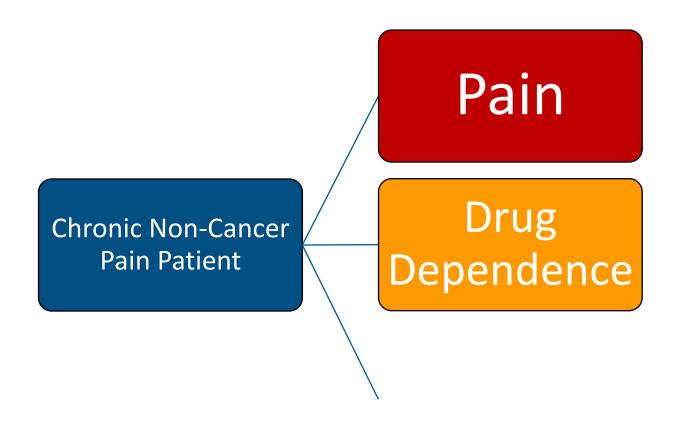


The 3-tiered pain matrix:





cortex; pTHAL = posterior thalamus.





# Natural (Opiates):

- Morphine
- Codeine

# Semi-Synthetics (Opioids):

- Hydrocodone
- Hydromorphone
- Oxycodone
- Oxymorphone
- Buprenorphine
- Heroin

# Synthetics (Narcotics):

- Meperidine
- Methadone
- Fentanyl
- Tramadol



OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in 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

Morphine Milligram Equivalents (MME) Morphine is the standard from which all other opioids are measured.



#### <u>Hydrocodone : Morphine (1:1)</u>

(Lortab, Norco, Vicodin)

Hydrocodone 5 mg = a Morphine 5 mg (5 MME)

Hydrocodone 7.5mg = Morphine 7.5mg (7.5 MME)

Hydrocodone 10 mg = Morphine 10 mg (10 MME)

#### <u>Hydromorphone</u>: Morphine (4:1)

#### (Dilaudid, Exalgo)

Hydromorphone 2 mg = Morphine 8 mg (8 MME)

Hydromorphone 4mg = Morphine 16 mg (6 MME)

Hydromorphone 8 mg = Morphine 32 mg (32 MME)

Hydromorphone 16 mg = Morphine 64 mg (64 MME)

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in 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

# Oxycodone: Morphine (1.5:1) (OxyContin, OxyIR, Percocet, Percodan)

Oxycodone 5 mg = Morphine 7.5 mg (7.5 MME)

Oxycodone 7.5mg = Morphine 11.25mg (11.25 MME)

Oxycodone 10 mg = Morphine 15 mg (15 MME)

Oxycodone 20 mg = Morphine 30 mg (30 MME)



OPIOID (doses in mg/day except will noted)
Codeine

Rx Only

Promethazine HCl and Codeine Phosphate Oral Solution



WARNING: ULTRA-RAPID METABOLISM OF CODEINE AND OTHER RISK FACTORS FOR LIFE-THREATENING RESPIRATORY DEPRESSION IN CHILDREN and RISKS FROM CONCOMITANT USE WITH BENZODIAZEPINES OR OTHER CNS DEPRESSANTS

# <u>Ultra-Rapid Metabolism of Codeine and Other Risk Factors for Life-Threatening</u> <u>Respiratory Depression in Children</u>

Life-threatening respiratory depression and death have occurred in children who received codeine. Most of the reported cases occurred following tonsillectomy and/or adenoidectomy, and many of the children had evidence of being an ultra-rapid metabolizer of codeine due to a CYP2D6 polymorphism. Promethazine HCl and Codeine Phosphate Oral Solution is contraindicated in children younger than 12 years of age and in children younger than 18 years of age following tonsillectomy and/or adenoidectomy (see

41 – 60 mg/da ≥ 61 – 80 mg/ Morphine Oxycodone

Oxymorphone

Postmarketing cases of respiratory depression, including ratanties have been reported with use of promethazine in pediatric patients. Children may be particularly sensitive to the additive respiratory depressant effects when promethazine is combined with other respiratory depressants, including codeine. (See WARNINGS – Promethazine and Respiratory Depression in Children).

Risks from Concomitant Use with Benzodiazepines or Other CNS Depressants
Concomitant use of opioids with benzodiazepines or other central nervous system (CNS) depressants, including alcohol, may result in profound sedation, respiratory depression, coma, and death (see WARNINGS, PRECAUTIONS - Drug Interactions). Avoid use of opioid cough medications in patients taking benzodiazepines, other CNS depressants, or alcohol.

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#### The DSM-5 states the following:

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#### DSM-5 <u>Substance Use Disorder</u>: (11 Criteria)

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- 1. Taking the substance in larger amounts or for longer than you're meant to.
- 2. Wanting to cut down or stop using the substance but not managing to.
- 3. Spending a lot of time getting, using, or recovering from use of the substance.
- 4. Cravings and urges to use the substance.
- Not managing to do what you should at work, home, or school because of substance use.

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- 6. Continuing to use, even when it causes problems in relationships.
- Giving up important social, occupational, or recreational activities because of substance use.
- 8. Using substances again and again, even when it puts you in danger.
- Continuing to use, even when you know you have a physical or psychological problem that could have been caused or made worse by the substance.
- 10. Needing more of the substance to get the effect you want (tolerance).
- Development of withdrawal symptoms, which can be relieved by taking more
  of the substance.

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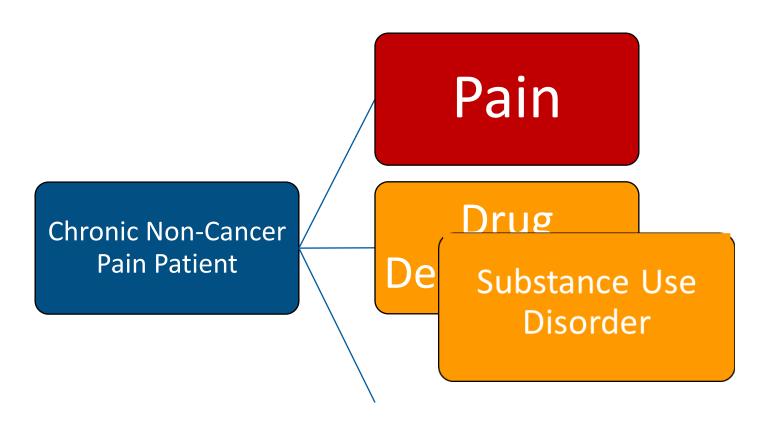
#### The DSM-5 states the following:

The appearance of normal, expected <u>pharmacological tolerance and withdrawal</u> during the course of medical treatment has been known to lead to an erroneous diagnosis of "addiction," even when these were the only symptoms present.

Symptoms of tolerance and withdrawal occurring during appropriate medical treatment with prescribed medications (e.g., opioid analgesics, sedatives, stimulants) are specifically <u>not</u> counted when diagnosing a <u>substance use disorder</u>. Individuals whose *only* symptoms are those that occur as a result of medical treatment (i.e., <u>tolerance</u> and <u>withdrawal</u> as part of medical care when the medications are taken as prescribed) should not receive a diagnosis <u>solely</u> on the basis of these symptoms.

An appropriate definition of their medical condition under these circumstances is **OPIOID DEPENDENCE** and should be included in the patient's problem list.





However, prescription medications may be used inappropriately (misused, abused).

**Substance Use Disorder** can be correctly diagnosed when other characteristics and symptoms are present, as noted in the eleven characteristics of Substance Use Disorder as defined in the DSM-5.



#### DSM-5 **Substance Use Disorder**: (11 Criteria)

- 1. Taking the substance in larger amounts or for longer than you're meant to.
- 2. Wanting to cut down or stop using the substance but not managing to.
- 3. Spending a lot of time getting, using, or recovering from use of the substance.
- 4. Cravings and urges to use the substance.
- 5. Not managing to do what you should at work, home, or school because of substance use.
- 6. Continuing to use, even when it causes problems in relationships.
- 7. Giving up important social, occupational, or recreational activities because of substance use.
- 8. Using substances again and again, even when it puts you in danger.
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- 3. Spending a lot of time getting, using, or recovering from use of the substance.
- 1 Cravings and urgas to use the substance

An **Opioid Use Disorder (SUD)** can be correctly diagnosed when **other symptoms**, **characteristics**, **& behaviors** are present among the eleven criteria of Substance Use Disorder DSM-5 in addition to tolerance and withdrawal.

Users (may) substitute one drug for another, trying to regulate their use by finding a new substance that allows for better control: Xanax for alcohol, Ritalin for cocaine, methadone for heroin.

- problem that could have been caused or made worse by the substance.
- 10. Needing more of the substance to get the effect you want (tolerance).
- 11. Development of withdrawal symptoms, which can be relieved by taking more of the substance.



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- 2. Wanting to **cut down or stop using** the substance but not managing to.
- 3. Spending a lot of time getting, using, or recovering from use of the substance.
- 4. Cravings and urges to use the substance.
- 5. Not managing to do what you should at work, home, or school because of

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There are 11 criteria for determining SUD with 4 groupings:

• 1 - 4. Impaired Control.

• 5 - 7. Social Problems.

• 8 - 9. Risky Use.

8. Us

• 10 - 11. Physical Dependence.
```

- 9. Continuing to use, even when you know you have a physical or psychological problem that could have been caused or made worse by the substance.
- 10. Needing more of the substance to get the effect you want (tolerance).
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- 4. Cravings and urges to use the substance.
- 5. Not managing to do what you should **at work, home, or school** because of substance use.
- 6. Continuing to use, even when it causes problems in relationships.
- 7. Giving up important **social**, **occupational**, **or recreational activities** because of substance use.
- 8. Using substances again and again, even when it puts you in danger.
- 9. Continue of the problem of the pr



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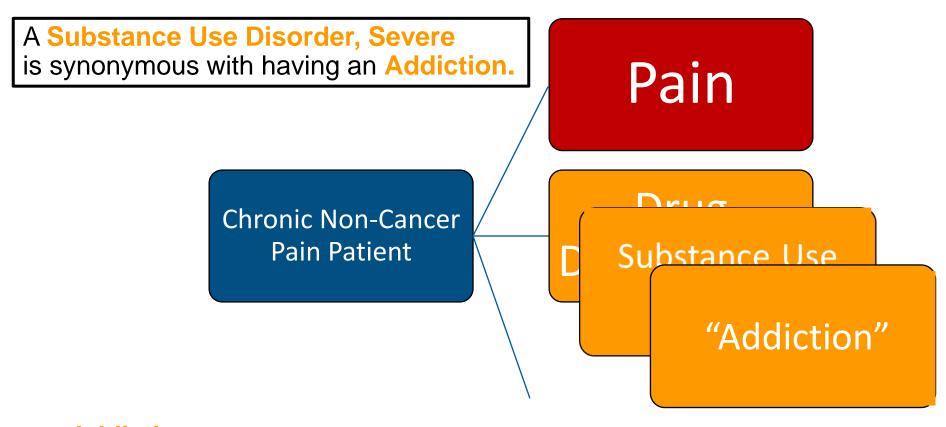
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#### **Severity of Substance Use Disorders:**

- Mild: Presence of 2-3 symptoms
- **Moderate:** Presence of **4-5** symptoms
- **Severe:** Presence of **6 or more** symptoms



more



Addiction is defined as a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences.



It is considered a brain disease because drugs change the brain; they change its structure and how it works. These brain changes can be long lasting and can lead to many harmful, often self-destructive, behaviors.

Patients with chronic pain have a >50% prevalence rate for a co-occurring mental health disorder.

Pain

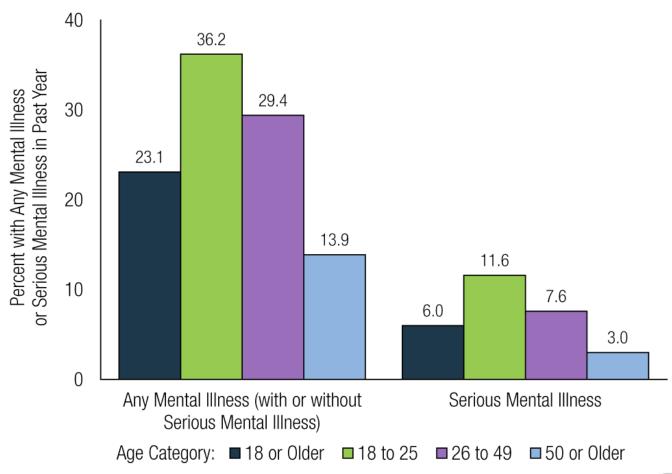
Chronic Non-Cancer
Pain Patient

Drug Dependence

> Mental Health



# Any Mental Illness or Serious Mental Illness in the Past Year: Among Adults Aged 18 or Older; 2022

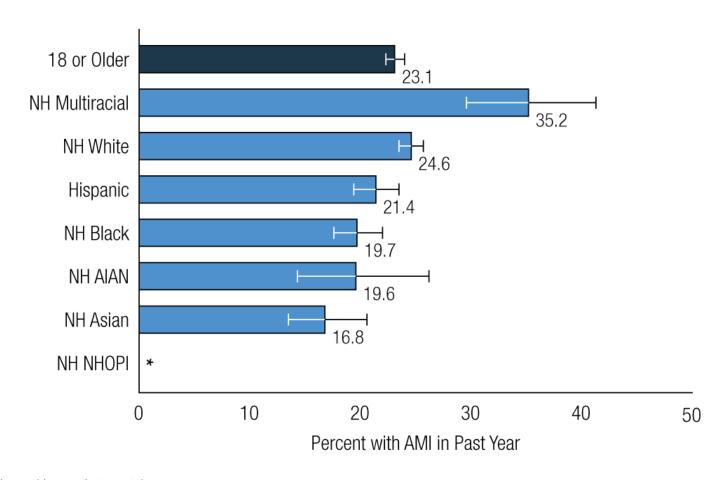






#### Any Mental Illness (AMI) in the Past Year: Among Adults Aged 18 or Older; by Race/Ethnicity, 2022

**NNR.42** 



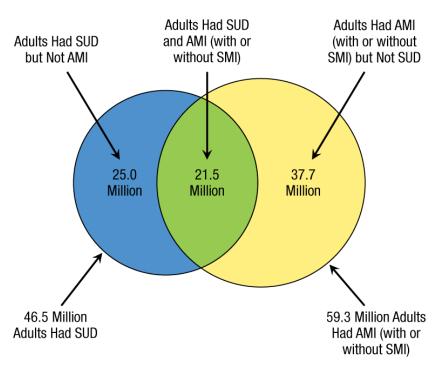
<sup>\*</sup> Low precision; no estimate reported.

AIAN = American Indian or Alaska Native; Black = Black or African American; Hispanic = Hispanic or Latino; NH = Not Hispanic or Latino; NHOPI = Native Hawaiian or Other Pacific Islander

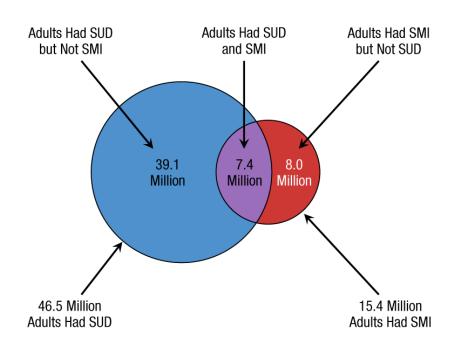




# Any Mental Illness (AMI), Serious Mental Illness (SMI), or Substance Use Disorder (SUD) in the Past Year: Among Adults Aged 18 or Older; 2022



84.2 Million Adults Had Either SUD or AMI (with or without SMI)



54.4 Million Adults Had Either SUD or SMI



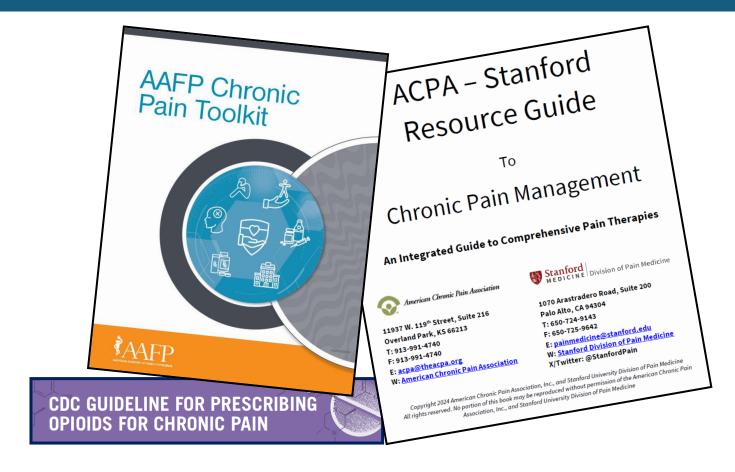


#### **OBJECTIVES:**

- 1. Be able to identify the three health conditions that merit attention at every encounter for the patient with chronic pain & opioid dependence (CPOD)
- Know how to establish a plan of action that includes a benefit-risk assessment with a timeline for the patient with chronic pain & opioid dependence (CPOD)
- Be familiar with different treatment strategies for patients with different pain scenarios: acute pain, post-op pain, and chronic pain.



# Chronic Pain and Opioid Dependence (CPOD) – Treatment Strategy



https://www.aafp.org/dam/AAFP/documents/patient\_care/pain\_management/cpm-toolkit.pdf

https://www.acpanow.com/uploads/9/9/8/3/99838302/acpa\_stanford\_resource\_guide\_2024.pdf



https://www.cdc.gov/drugoverdose/pdf/Guidelines\_At-A-Glance-508.pdf

### Chronic Pain and Opioid Dependence (CPOD) -**Treatment Strategy**

**Note: What should be included** in the encounter problem list?

**Chronic Non-Cancer** 

Pain Patient

Pain

Drug 100% Dependence

> Mental Health

50%

100%

Pay close attention to the *first thing* the patient states at their CPOD visit.



## Chronic Pain and Opioid Dependence (CPOD) – Treatment Strategy

#### PLAN OF ACTION:

For CHRONIC PHYSICAL PAIN COMPONENT OF CARE:

Further diagnostic workup as a result of today's evaluation includes \*\*\*

Outcome goal: \*\*\*

Timeline for review: \*\*\*

#### For **OPIOID DEPENDENCE** COMPONENT OF CARE:

Medication review: {opioid list:47657}

Risk/Benefit Management Plan:

Identified Benefits: \*\*\*

Identified Risks: {medication side effects:51001} {opiateadverse:44248}

Opioid prescribing recommendations: \*\*\*

Non-opioid resources recommendations: {Opioid Alternatives:37648}

Outcome goal: \*\*\*

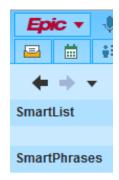
Timeline for review: \*\*\*

#### For **MENTAL HEALTH** COMPONENT OF CARE:

For {Mental Health History:43162}, recommend \*\*\*

Outcome goal: \*\*\*

Timeline for review: \*\*\*



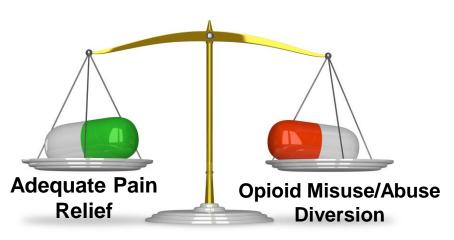
EPIC SmartPhrase – CPOD3PLAN [953852]

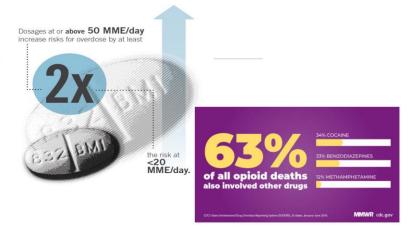
In every encounter, address *risks and benefits* of opioids and document how this influenced your decision in the *plan of action*.

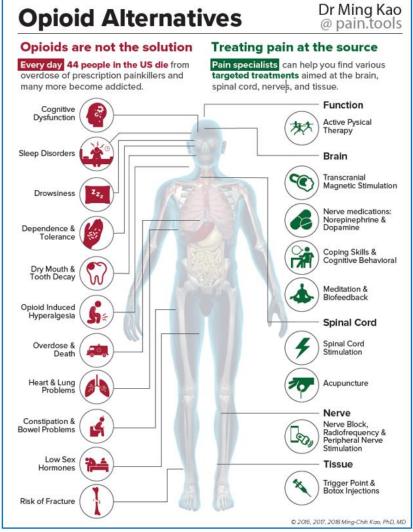


Document the *timeline* for your current plan and determine *follow-up date*.

### Chronic Opioid Use - Benefits vs Risks

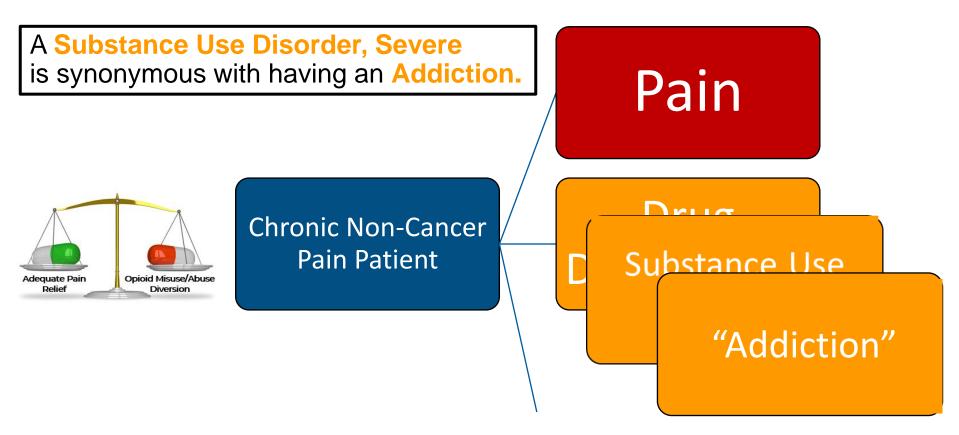








# Chronic Pain and Opioid Dependence (CPOD) – Treatment Strategy



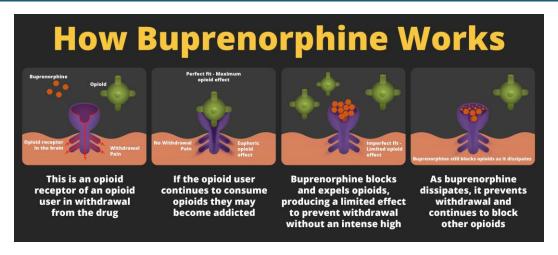
**Continue Chronic Opioid Prescribing?** 

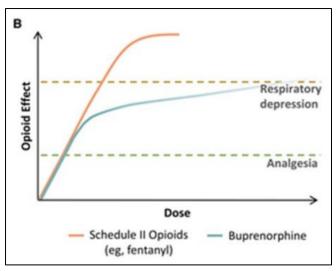
or switch to

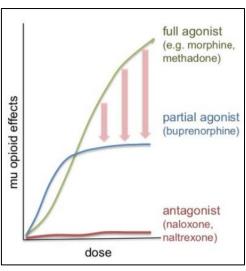
**Medication for Opioid Use Disorder \*(MOUD)?** 



# Chronic Pain and Opioid Dependence (CPOD) – Treatment Strategy









## Chronic Pain and Opioid Dependence (CPOD) – Treatment Strategy

# When should MOUD be considered as a treatment option?

### Buprenorphine Partial opioid agonist

Methadone
Full opioid agonist

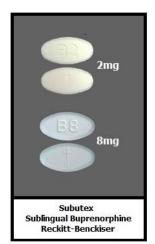
Naltrexone Full opioid antagonist

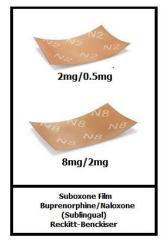
- When high risk for unintended opioid overdose death
- With increasing Morphine Milligram Equivalent per Day (MMED)
   Consider for MMED ≥ 90 in healthy individuals
   Consider for MMED ≥ 50 in individuals with co-morbidities
- When long-term risk of opioid side effects exceeds the benefits
- of long-term opioid
- With increasing DSM-5 criteria OUD classification Opioid Use Disorder, Moderate and Opioid Use Disorder, Severe



# Chronic Pain and Opioid Dependence (CPOD) – Treatment Strategy







#### **Buprenorphine:**

- Semi-synthetic partial opioid agonist
- 2002: Opioid Replacement Therapy for persons addicted to opioids
- Much higher affinity for brain µ receptor
- Some significant euphoria first few doses
- Some "upper"-like effect
- Some addicts take to prevent extremely uncomfortable symptoms of withdrawal
- Will cause "precipitated withdrawal" in person with notable opioid in system

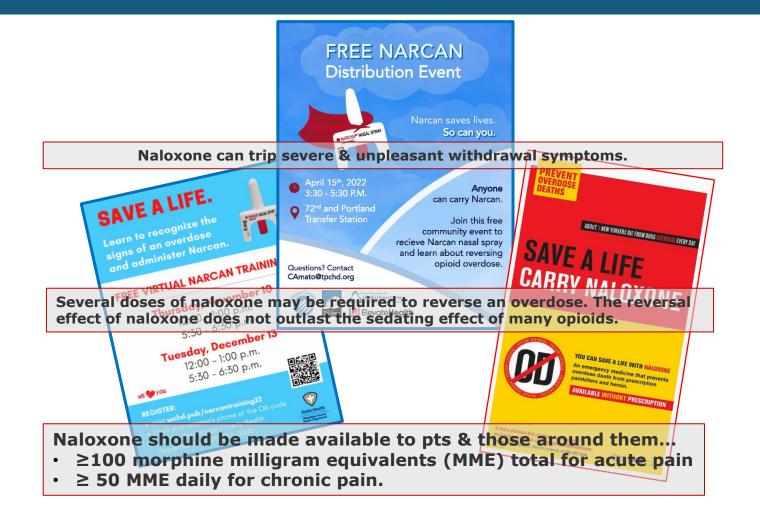








#### **Naloxone and Naltrexone**





Note: Naloxone is the "rescue drug" and Naltrexone is the MOUD drug

### The Opioid Crisis: Four Major Themes

- 1. Prevent unintended opioid overdose deaths
- 2. Provide appropriate opioid use disorder services
- 3. Provide adequate pain relief... using opioids
- 4. Mitigate misuse/abuse of prescribed opioids



#### **OBJECTIVES:**

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**Chronic Pain:** measure opioids in total MMEs per day.

Recommend < 50 MME/day in total Rx

**Acute Pain:** measure opioids in total MMEs per prescription.

Recommend ≤ 100 MME in total prescription (Rx)

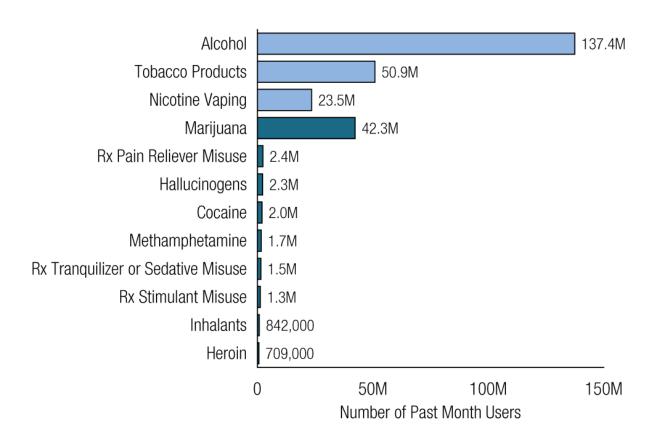
<u>Post-op Pain</u>: measure opioids in total MMEs per prescription based upon a tiered system for severity of pain.

Recommend ≤100 MME total Rx in Tier 1 surgeries;

**≤200 MME total** Rx in Tier 2 surgeries



#### Past Month Substance Use: Among People Aged 12 or Older; 2022



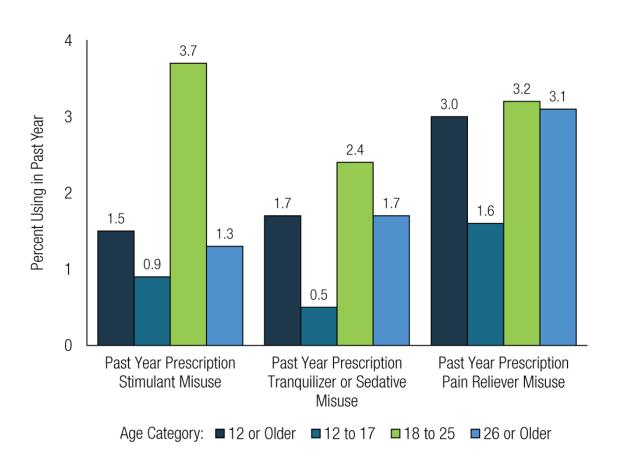
Rx = prescription

Note: The estimated numbers of current users of different substances are not mutually exclusive because people could have used more than one type of substance in the past month.





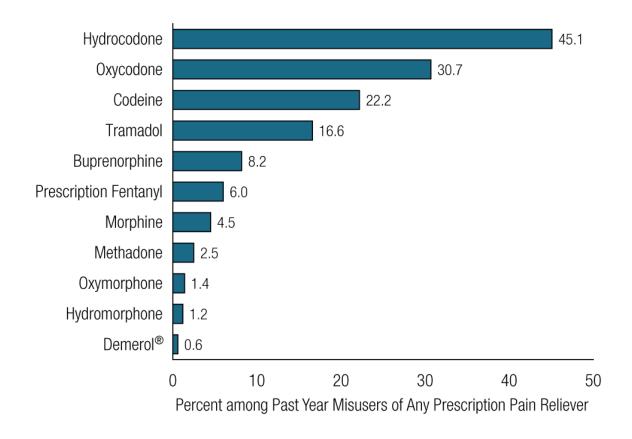
**NNR.20** 







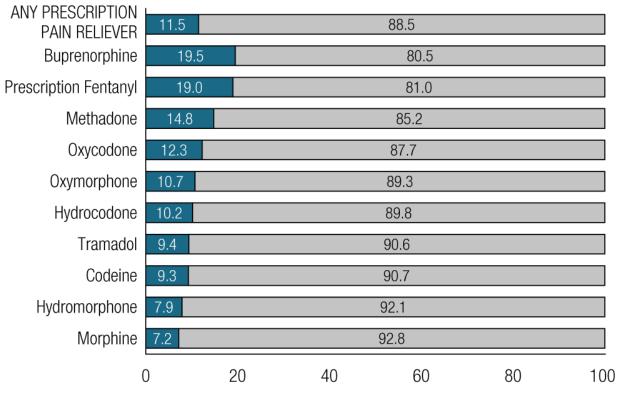
### Past Year Prescription Pain Reliever Subtype Misuse: Among People Aged 12 or Older Who Misused Any Prescription Pain Reliever in the Past Year; 2022







# Past Year Prescription Pain Reliever Subtype Misuse: Among All Past Year Users of Prescription Pain Reliever Subtypes Aged 12 or Older; 2022



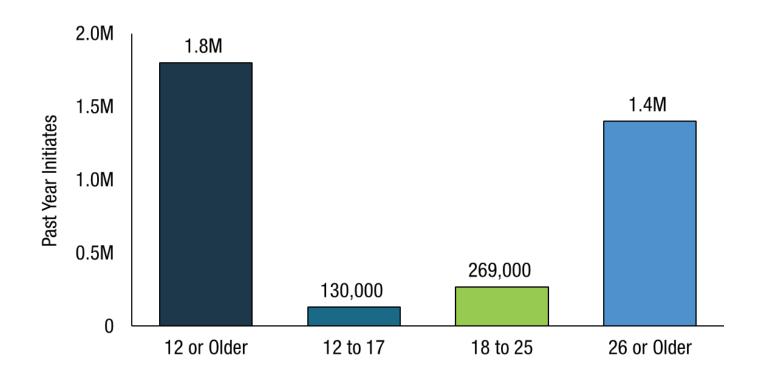
Percent among Past Year Users of the Specific Prescription Pain Reliever Subtype

■ Past Year Misuse ■ Past Year Use but Not Misuse



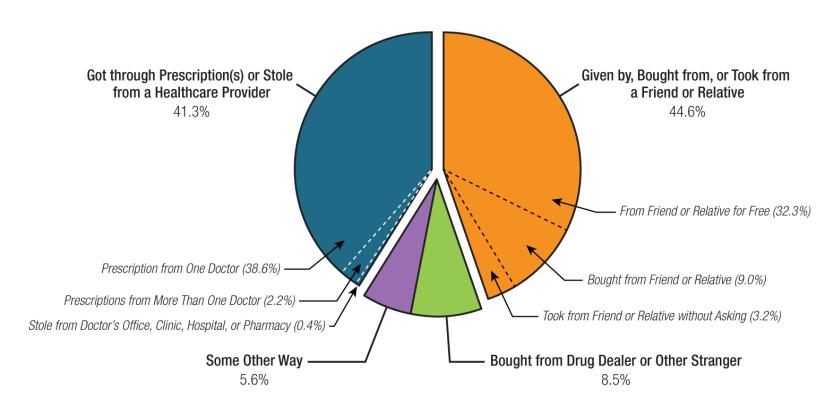


## Past Year Prescription Pain Reliever Misuse Initiates: Among People Aged 12 or Older; 2021





### Source where Prescription Pain Relievers Were Obtained for Most Recent Misuse: Among People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year; 2022

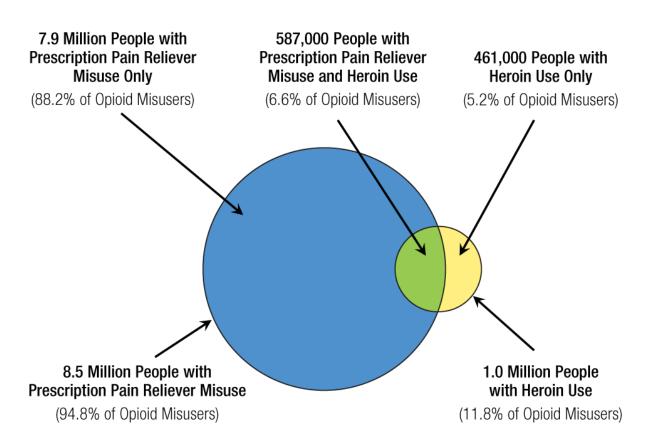


8.5 Million People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year





## Type of Past Year Opioid Misuse: Among Past Year Opioid Misusers Aged 12 or Older; 2022



8.9 Million People Aged 12 or Older with Past Year Opioid Misuse

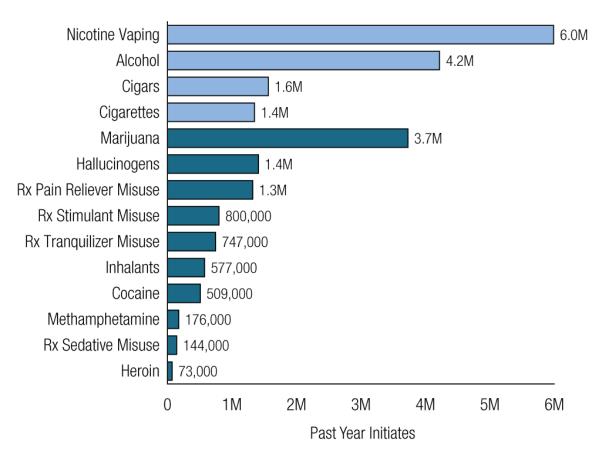


**NNR.24** 



## Past Year Initiates of Substances: Among People Aged 12 or Older; 2022

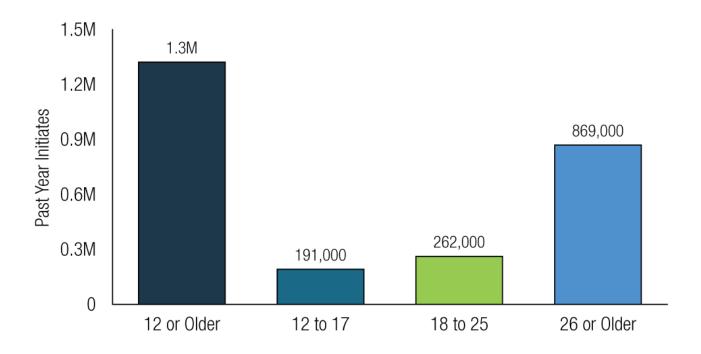
**NNR.26** 







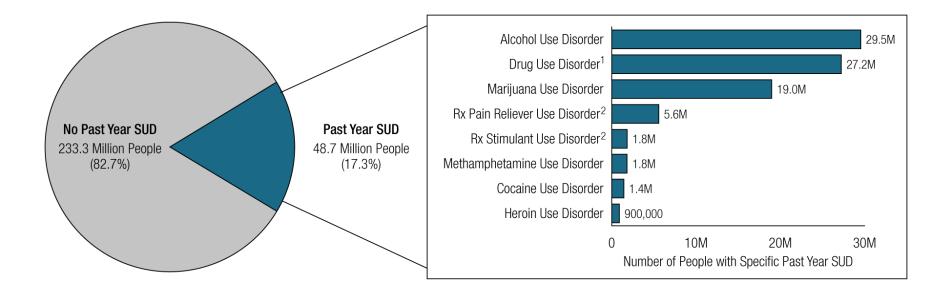
## Past Year Prescription Pain Reliever Misuse Initiates: Among People Aged 12 or Older; 2022







## Past Year Substance Use Disorder (SUD): Among People Aged 12 or Older; 2022



Rx = prescription.

Note: The estimated numbers of people with SUDs are not mutually exclusive because people could have use disorders for more than one substance.



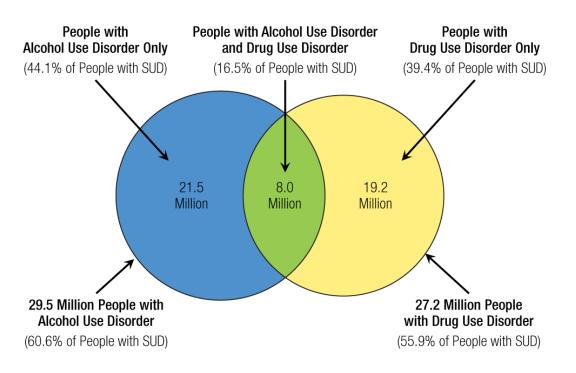


<sup>&</sup>lt;sup>1</sup> Includes data from all past year users of marijuana, cocaine, heroin, hallucinogens, inhalants, methamphetamine, and prescription psychotherapeutic drugs (i.e., pain relievers, tranquilizers, stimulants, or sedatives).

<sup>&</sup>lt;sup>2</sup> Includes data from all past year users of the specific prescription drug.

#### NNR.32

# Alcohol Use Disorder or Drug Use Disorder in the Past Year: Among People Aged 12 or Older with a Past Year Substance Use Disorder (SUD); 2022



48.7 Million People Aged 12 or Older with Past Year SUD

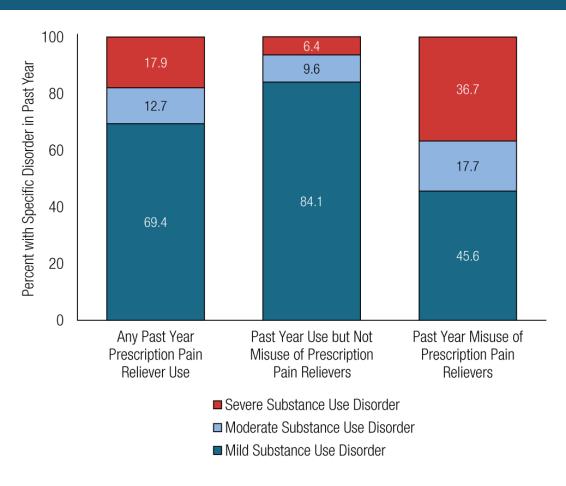
Note: Drug Use Disorder includes data from all past year users of marijuana, cocaine, heroin, hallucinogens, inhalants, methamphetamine, and prescription psychotherapeutic drugs (i.e., pain relievers, tranquilizers, stimulants, or sedatives).





#### NNR.37

#### Prescription Pain Reliever Use Disorder Severity Level in the Past Year: Among People Aged 12 or Older with a Prescription Pain Reliever Use Disorder; 2022



Note: The percentages may not add to 100 percent due to rounding.

Note: The number of criteria for pain reliever use disorder differed for people who misused prescription pain relievers in the past year or who used but did not misuse them. Regardless of the total number of criteria used for classifying people as having a prescription pain reliever use disorder, people who meet two or three criteria are considered to have a "mild" disorder, those who meet four or five criteria are considered to have a "severe" disorder. and those who meet six or more criteria are considered to have a "severe" disorder.





#### **Acute Pain vs Chronic Pain**

Table C. Management Considerations Based on Pain Type: Acute vs. Chronic Pain				
Characteristics	Acute Pain	Chronic Pain		
Duration	Normal healing duration; <3-6 months	Prolonged duration >6 months		
Function	Physiologic (protective)	Pathologic (non-protective)		
Cause	Acute illness, injury, trauma, surgery or other medical procedure	Injury, chronic illness, cancer, may have no indefinable pathology		
Characteristics	Usually nociceptive; sharp, localized, sudden/gradual onset	Usually a combination of nociceptive and neuropathic, dull, aching, generalized, persistent		
Treatment options (non-inclusive list no in any particular order)	Nonsteroidal anti-inflammatory drugs (NSAIDS), acetaminophen, opioids, nerve bocks, ketamine, muscle relaxants, pain-reducing modalities (e.g., immobilization, heat/cold, and elevation), graded exercise of the affected body area, physical therapy.  Opioids are not recommended for acute low back pain.	Non-opioid analgesics, physical therapy, cognitive behavioral therapy, rehabilitation, exercise, integrative medical therapies (e.g., yoga, relaxation, tai chi, massage, and acupuncture), opioids on a case-by-case basis		
Goals of treatment	Pain Resolution + Resolve underlying cause: - Facilitate recovery - Reduce pain - Minimize side effects - Prevent chronic pain	Pain Control + Restore function: - Restore function (physical, emotional, social) - Decrease pain (e.g., treat underlying cause, minimize medication use) - Correct secondary consequences (e.g., maladaptive behavior)		



**Chronic Pain:** measure opioids in total MMEs per day.

Recommend < 50 MME/day in total Rx

**Acute Pain:** measure opioids in total MMEs per prescription.

Recommend ≤ 100 MME in total prescription (Rx)

<u>Post-op Pain</u>: measure opioids in total MMEs per prescription based upon a tiered system for severity of pain.

Recommend ≤100 MME total Rx in Tier 1 surgeries;

**≤200 MME total** Rx in Tier 2 surgeries



Surgical Grouping: Gynecology Procedure Description	# procedures	# Rx	% Rx	Benchmark (2018 25th Percentile MME) MAX	2018 Mean MME	Minimu m/Maxim um MME
Colporrhaphy	43	26	60%	100	144	30-450
Conization Of Cervix	231	28	12%	55	86	30-225
Endometrial Ablation	30	10	33%	45	72	23-160
Excision of Ovary/Ovarian Duct	218	184	84%	90	128	25-300
Hysterectomies	1003	846	84%	113	158	25-440
Hysteroscopy with Treatment	535	285	53%	50	78	15-270
Incision and Drainage of Bartholin's Gland Abscess	55	8	15%	63	93	45-150
Ligation of Fallopian Tube	277	185	67%	113	172	38-1200
Removal of Ovary/Ovarian Duct	329	275	84%	75	133	23-1800
Stress Incontinence Repair	122	103	84%	75	106	25-240
Cesarean Section**				100		
Vaginal Delivery **				0		

<sup>\*\*</sup> Benchmark derived from literature and expert opinion.

(Bateman, 2017, Emerson 2017, Osmundson, 2018, Prabhu, 2017, Prabhu, 2018)

Surgical Grouping: Orthopedic Procedure Description	# procedures	# Rx	% Rx	Benchmark (2018 25th Percentile MME) MAX	2018 Mean MME	Minimum/ Maximum MME
Bilateral Knee Replacement Surgery	33	24	73%	300	392	90-1050
Carpal Tunnel Surgery	888	670	75%	50	105	15-1800
Joint Replacements (Hip)	766	600	78%	240	335	50-1500
Joint Replacements (Knee Revision)	58	41	71%	320	443	140-1200
Joint Replacements (Knee)	1136	945	83%	300	411	75-2250
Other Knee Arthroscopy with Treatment	379	340	90%	150	197	38-1350
Other Open Surgery of The Knee	184	161	88%	280	361	90-1050
Scopes (Knee Ligament Repair)	314	297	95%	225	304	70-675
Scopes (Knee Meniscectomy)	1311	1121	86%	100	160	38-1500
Therapeutic Arthroscopy of The Hip	138	121	93%	225	288	53-990
Scopes (Rotator Cuff)	670	625	92%	300	348	30-1250
Scopes (Shoulder)	508	468	88%	225	318	25-1050
Total Shoulder Replacement	106	89	84%	240	332	40-1050
Other Knee Arthroscopy with Treatment	65	61	94%	100	176	50-450
Scopes (Knee Ligament Repair)	104	97	93%	200	276	60-585
Scopes (Knee Meniscectomy)	40	36	90%	100	124	38-225
Scopes (Shoulder)	31	29	94%	150	252	68-750
Therapeutic Arthroscopy of The Hip	30	29	97%	210	306	150-600

Clinical team data analysis is used for best practice clinical guideline strategy regarding acute pain & post-op opioid prescribing recommendations.



#### Hydrocodone : Morphine (1:1)

(Lortab, Norco, Vicodin)

Hydrocodone 5 mg = a Morphine 5 mg (5 MME)

Hydrocodone 7.5mg = Morphine 7.5mg (7.5 MME)

Hydrocodone 10 mg = Morphine 10 mg (10 MME)

#### **Hydromorphone: Morphine (4:1)**

#### (Dilaudid, Exalgo)

Hydromorphone 2 mg = Morphine 8 mg (8 MME)

Hydromorphone 4mg = Morphine 16 mg (6 MME)

Hydromorphone 8 mg = Morphine 32 mg (32 MME)

Hydromorphone 16 mg = Morphine 64 mg (64 MME)

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR		
Codeine	0.15		
Fentanyl transdermal (in 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		

Oxycodone: Morphine (1.5:1) (OxyContin, OxyIR, Percocet, Percodan)

Oxycodone 5 mg = Morphine 7.5 mg (7.5 MME)

Oxycodone 7.5mg = Morphine 11.25mg (11.25 MME)

Oxycodone 10 mg = Morphine 15 mg (15 MME)

Oxycodone 20 mg = Morphine 30 mg (30 MME)



### The Opioid Crisis: Four Major Themes

- 1. Prevent unintended opioid overdose deaths
- 2. Provide appropriate opioid use disorder services
- 3. Provide adequate pain relief... using opioids
- 4. Mitigate misuse/abuse of prescribed opioids

Questions and Comments...

