Introduction to Opioid Use Disorder (OUD) and Medications for Opioid Use Disorder (MOUD)

An Acute Care Perspective

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Objectives

- Increase awareness and recognition of OUD.
- Review OUD/addiction physiology and disease characteristics.
- Discuss MOUD pharmacology and indications.

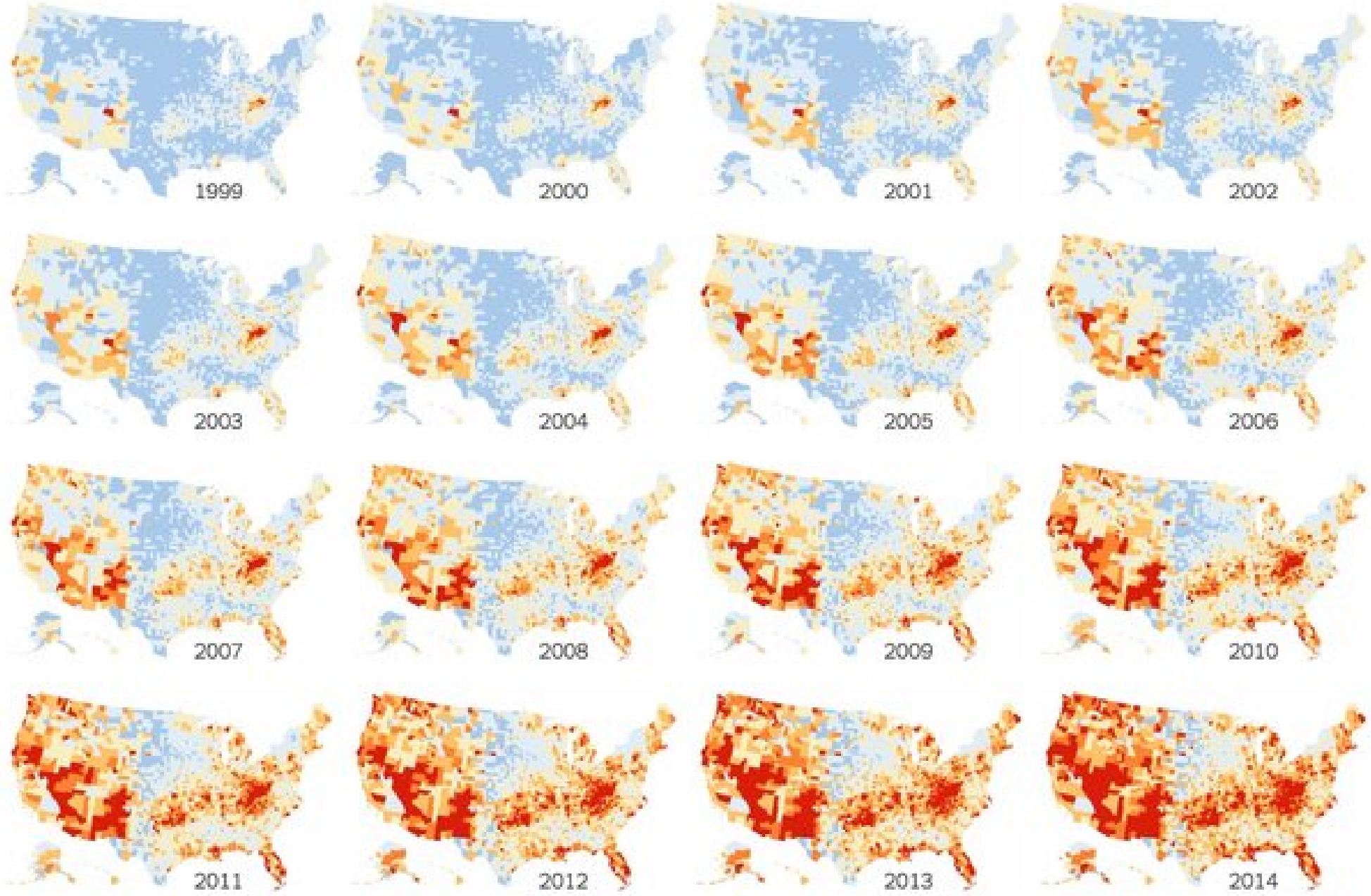
Background and Impact

In 1996, the American Pain Society declared that pain should be assessed "with the same zeal (as) other vital signs....”

In 1999, the VA Hospital System declared pain as "the fifth vital sign."

JCAHO followed suit and educated health professionals to perform consistent assessment and treatment of pain, as well as mandated the documentation of pain scores.

The Federation of State Medical Boards also released a pain control policy that encouraged the use of opioids in the treatment of chronic pain.


1999
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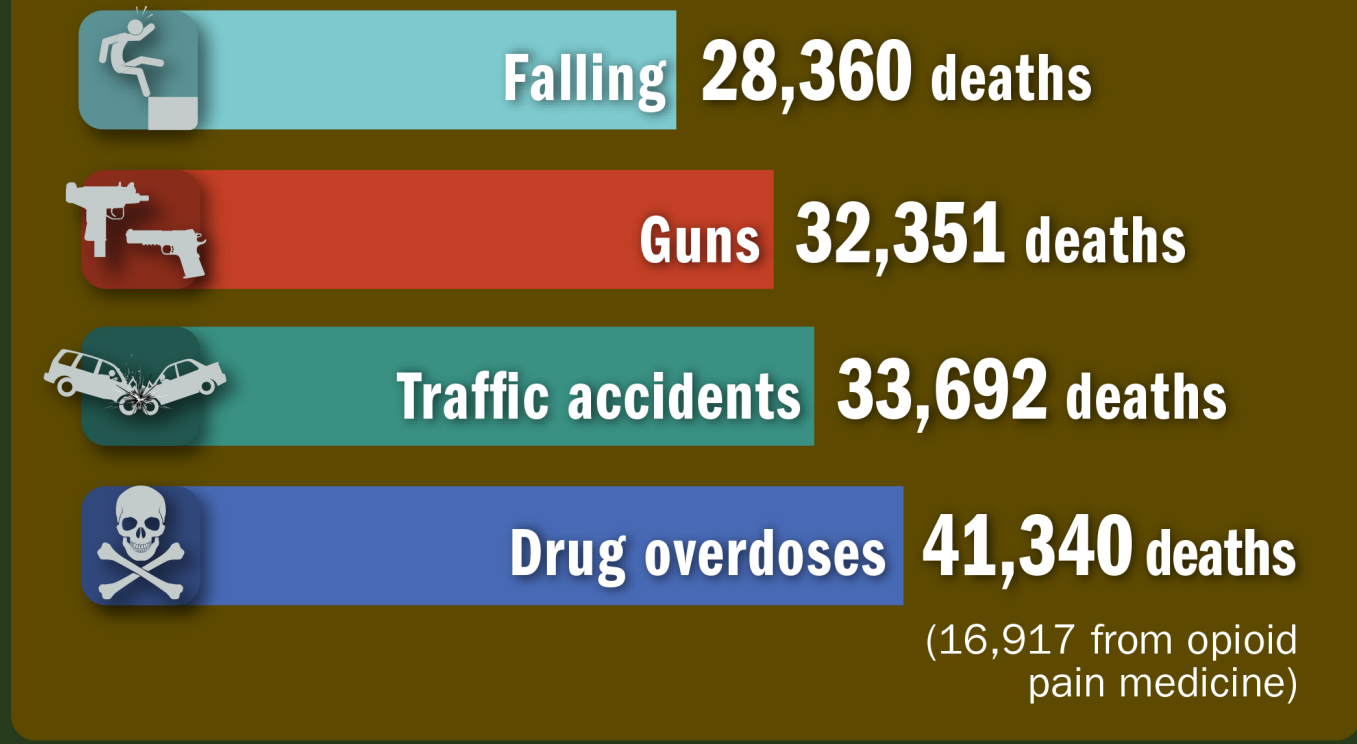
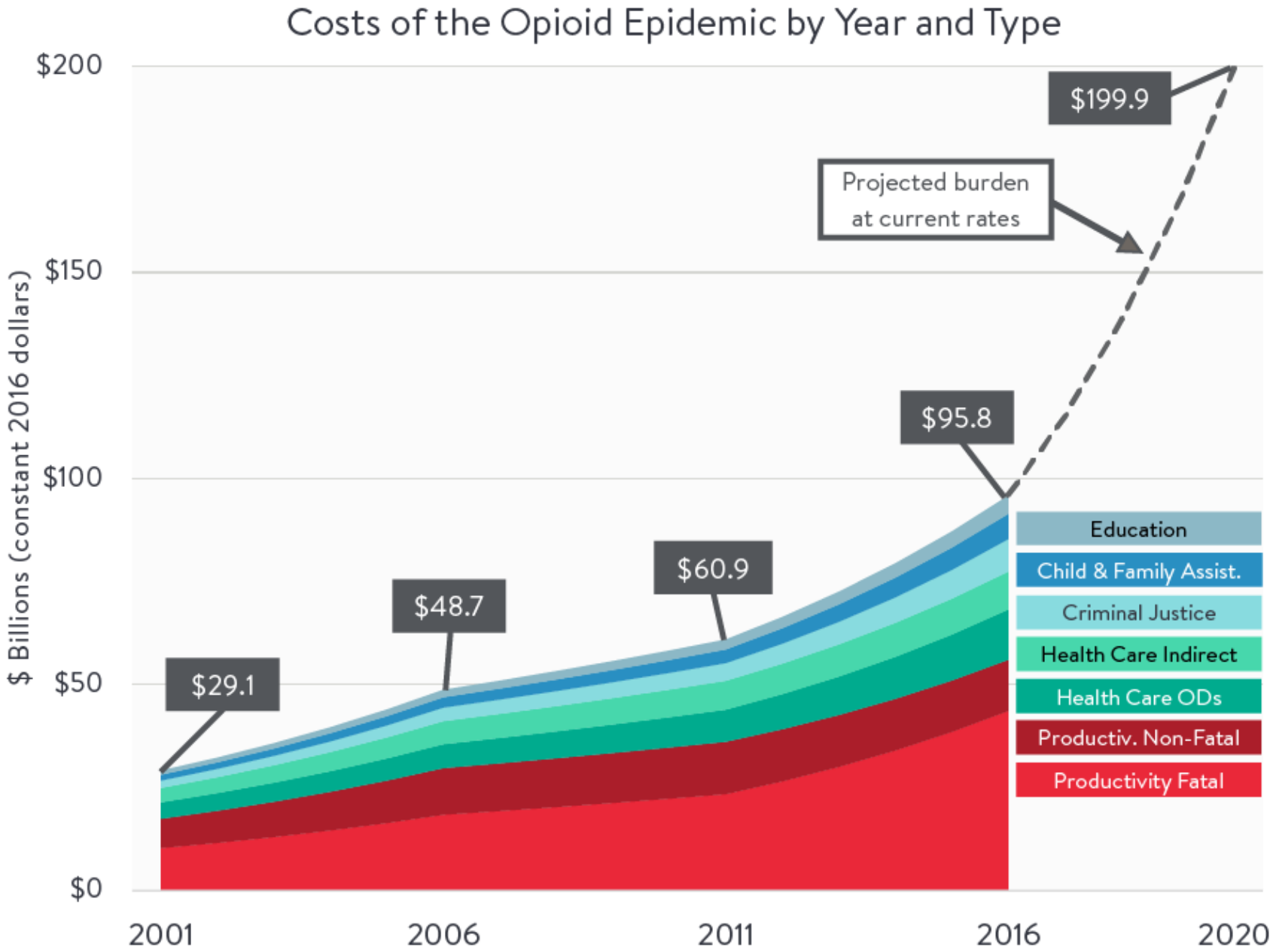
DRUG OVERDOSES

KILL MORE

THAN CARS, GUNS, AND FALLING.

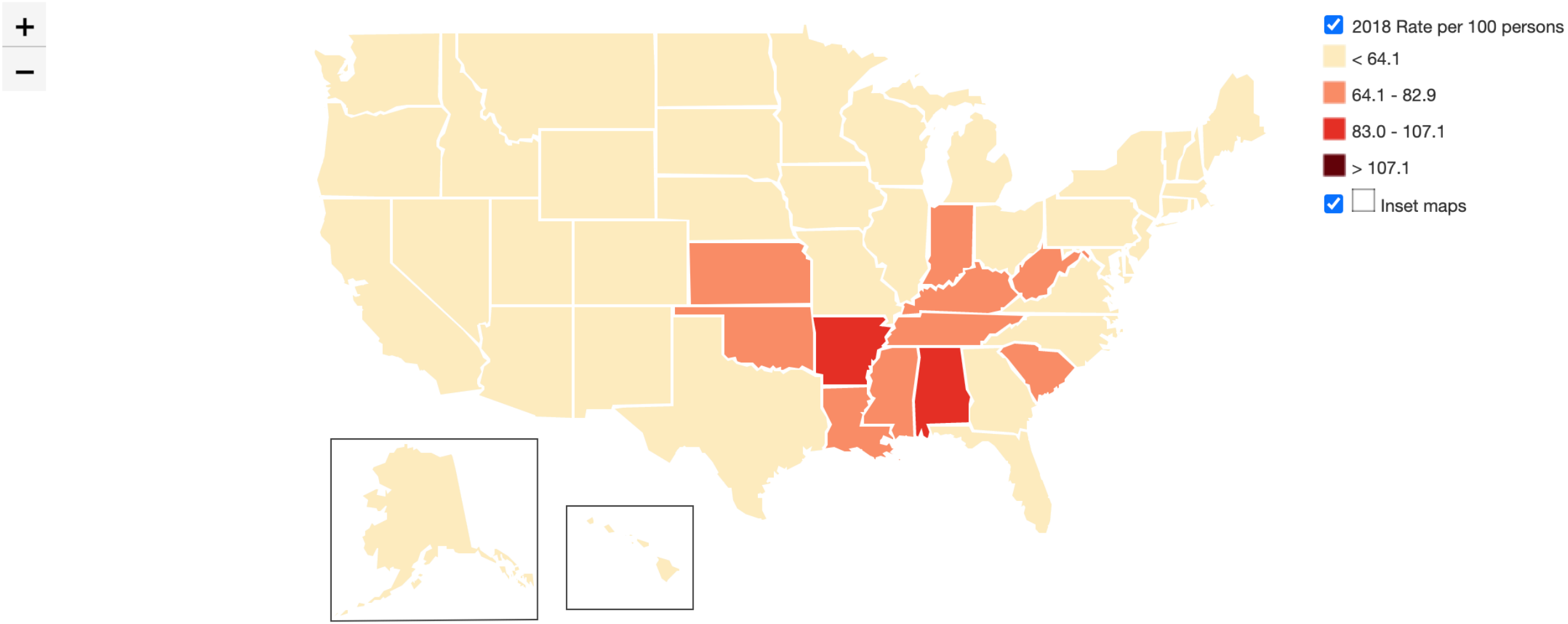


Source: CDC Wide-ranging OnLine Data for Epidemiologic Research (WONDER) on Mortality: http://wonder.cdc.gov/mortsql.html (2011)


Costs of the Opioid Epidemic by Year and Type
$200
$150
$100
$50
$0
$ Billions (constant 2016 dollars)
$29.1
$48.7
$60.9
$95.8
$199.9
Projected burden at current rates
Education
Child & Family Assist.
Criminal Justice
Health Care Indirect
Health Care ODs
Productiv. Non-Fatal
Productivity Fatal
2001
2006
2011
2016
2020
* Data between labeled estimates interpolated using constant growth rates

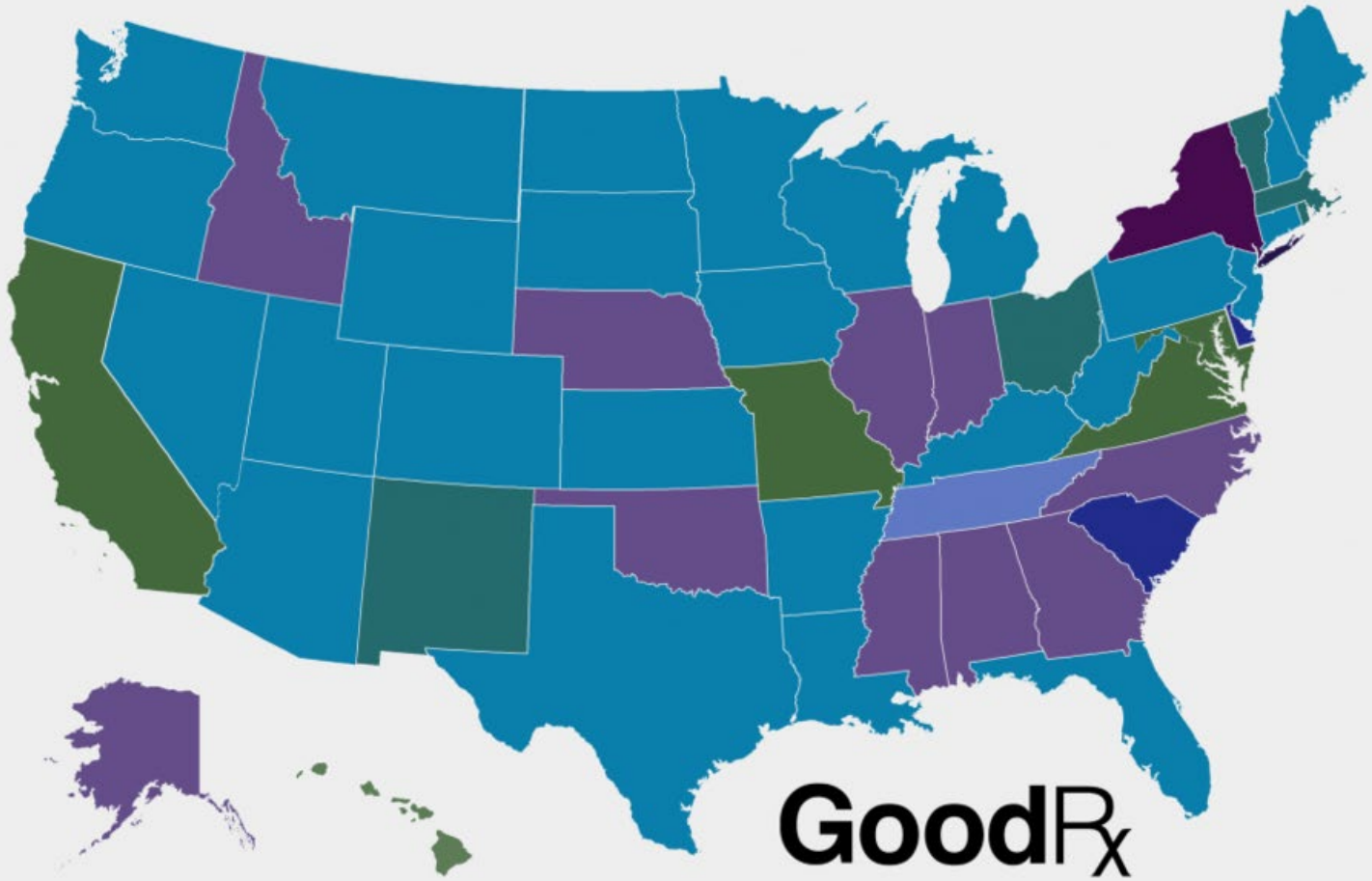
U.S. State Prescribing Rates, 2018

< U.S. State Prescribing Rates, 2017 U.S. Prescribing Rate Maps



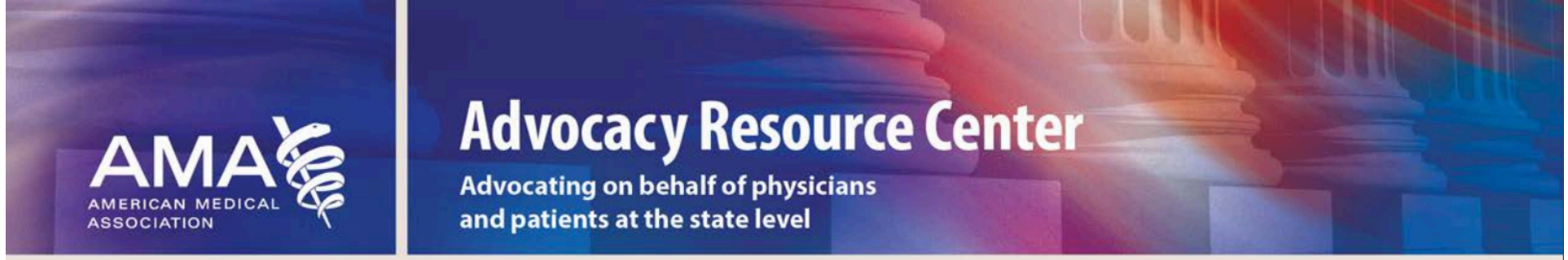
The United States of Drugs

The most prescribed medication in each of the 50 states (2018)



Levothyroxine (Synthroid)
Hydrocodone / Acetaminophen (Norco, Vicodin)
Atorvastatin (Lipitor)
Lisinopril (Prinivil, Zestril)
Amphetamine salt combo (Adderall)
Amlodipine (Norvasc)
Buprenorphine / Naloxone (Suboxone)

Data represents volume of US prescriptions by state filled at pharmacies during 12 months ending February 2018. Data comes from several sources, including pharmacies and insurers, and provides a representative sample of nationwide US prescription drug volume. For more info, visit goodrx.com/blog



Issue brief: Reports of increases in opioid- and other drug-related overdose and other concerns during COVID pandemic

***Updated October 6, 2020**

In addition to the ongoing challenges presented by the COVID-19 global pandemic, the nation's opioid epidemic has grown into a much more complicated and deadly drug overdose epidemic. The AMA is greatly concerned by an increasing number of reports from national, state and local media suggesting increases in opioid- and other drug-related mortality—particularly from illicitly manufactured fentanyl and fentanyl analogs. The media reports below cite data from multiple and varied sources, including national, state and local public health agencies, law enforcement, emergency medical services, hospitals, treatment centers, research journals and others.

More than 40 states have reported increases in opioid-related mortality as well as ongoing concerns for those with a mental illness or substance use disorder. This issue brief underscores the need to remove barriers to evidence-based treatment for those with a substance use disorder as well as for harm reduction services, including sterile needle and syringe services and naloxone.

The AMA is pleased that the U.S. Substance Abuse and Mental Health Services Administration and U.S. Drug Enforcement Administration (DEA) have provided increased flexibility for providing buprenorphine and methadone to patients with opioid use disorder. The AMA is further pleased at increased flexibility provided by the DEA to help patients with pain obtain necessary medications.

Opioid Use Disorder (OUD)

What is Opioid Use Disorder (OUD)?

- Opioid addiction
- DSM-5 diagnosis
- Affects 2.1 million Americans
- Only about 20% receive treatment

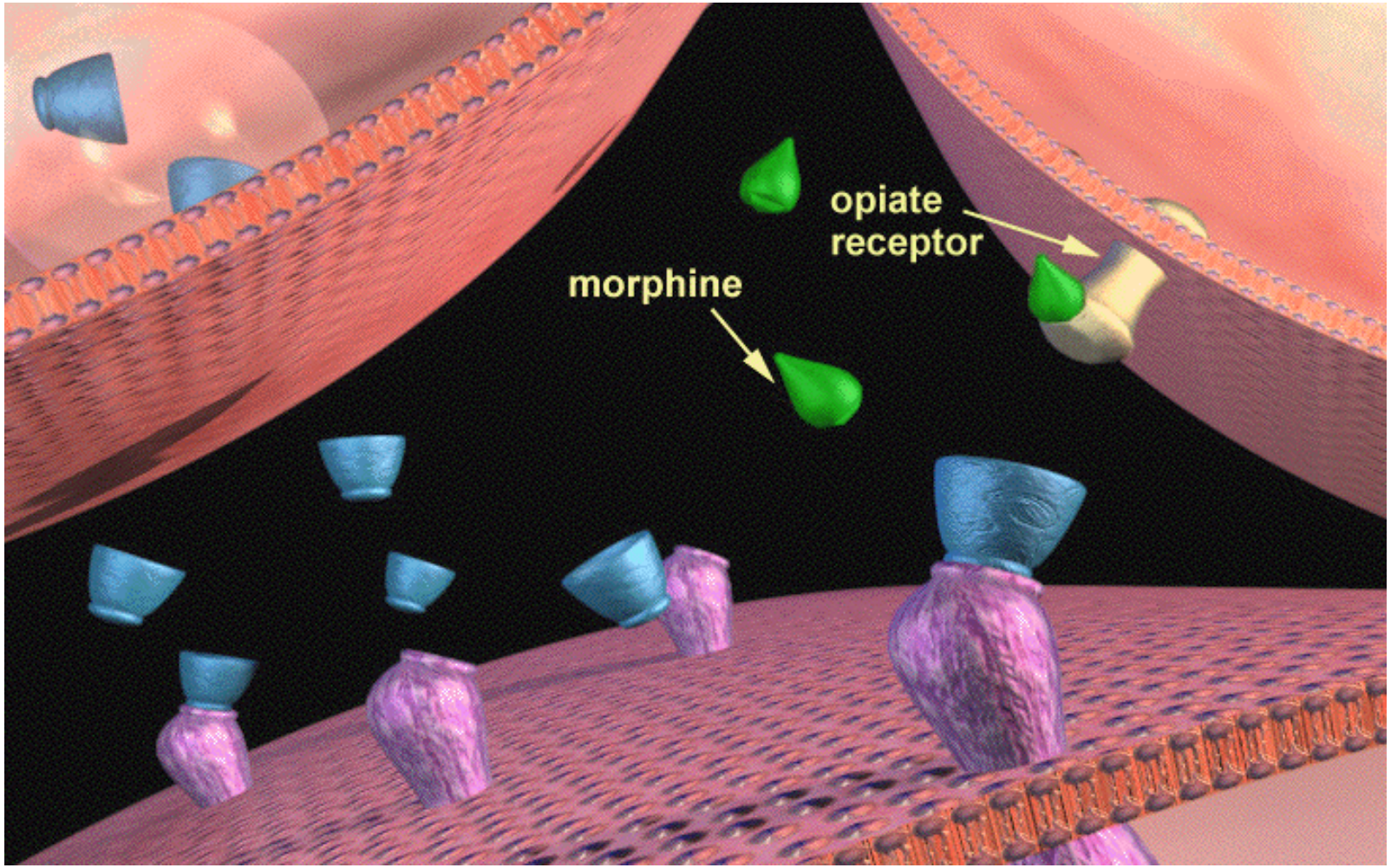
DSM-5 Diagnostic Criteria for OUD

- **In order to confirm a diagnosis of OUD, at least two of the following should be observed within a 12-month period:**
  - Opioids are often taken in larger amounts or over a longer period than was intended.
  - There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
  - A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
  - Craving, or a strong desire or urge to use opioids.
  - Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.
  - Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
  - Important social, occupational, or recreational activities are given up or reduced because of opioid use.
  - Recurrent opioid use in situations in which it is physically hazardous.
  - Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
  - Exhibits tolerance.
  - Exhibits withdrawal.

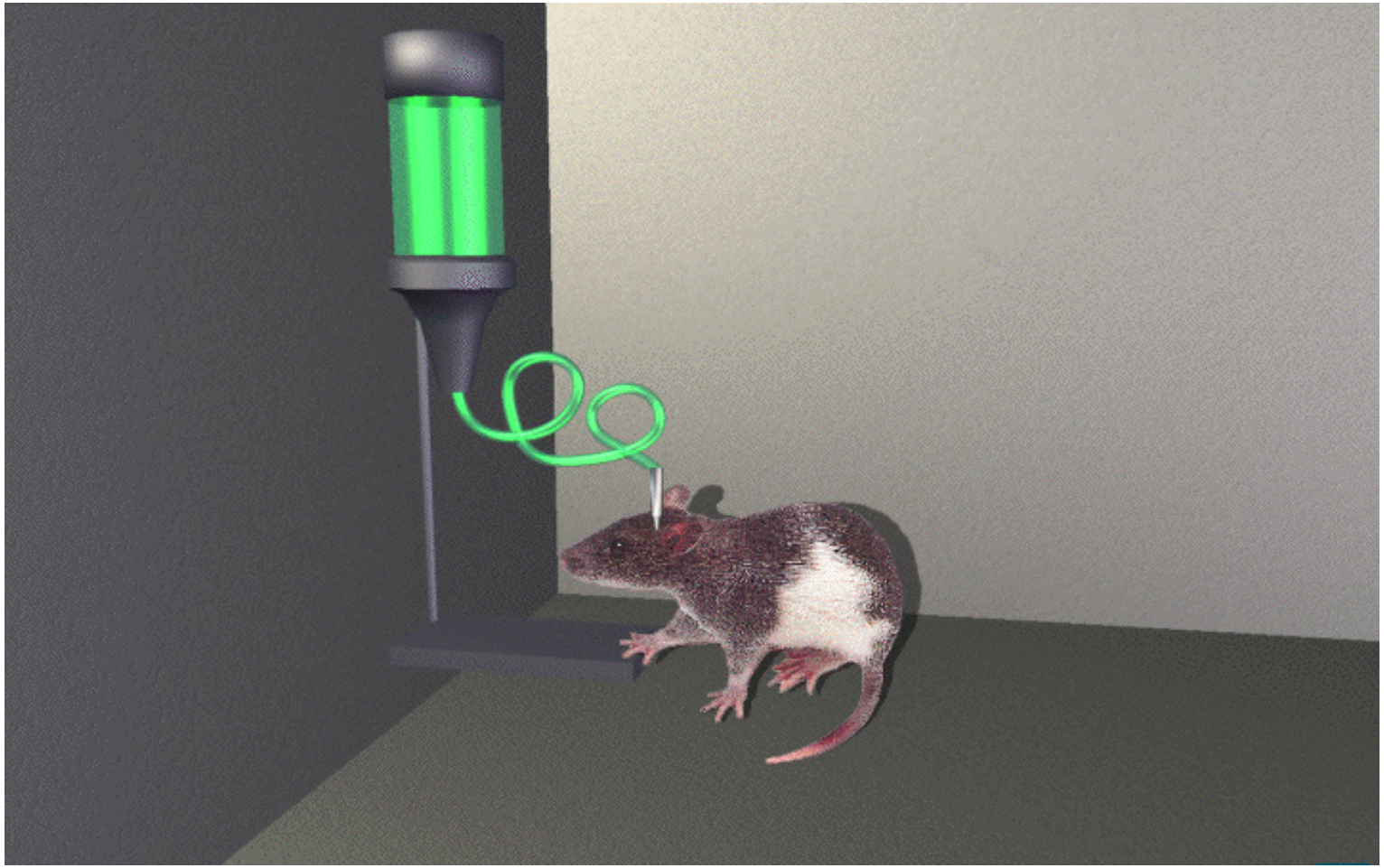
An estimated **1.9M**
AMERICANS
have OUD related to
opioid painkillers;
589K, related to
heroin.[2]

Physiology of Opioid Addiction

Mu Opioid Receptors



Positive reinforcement of reward pathway

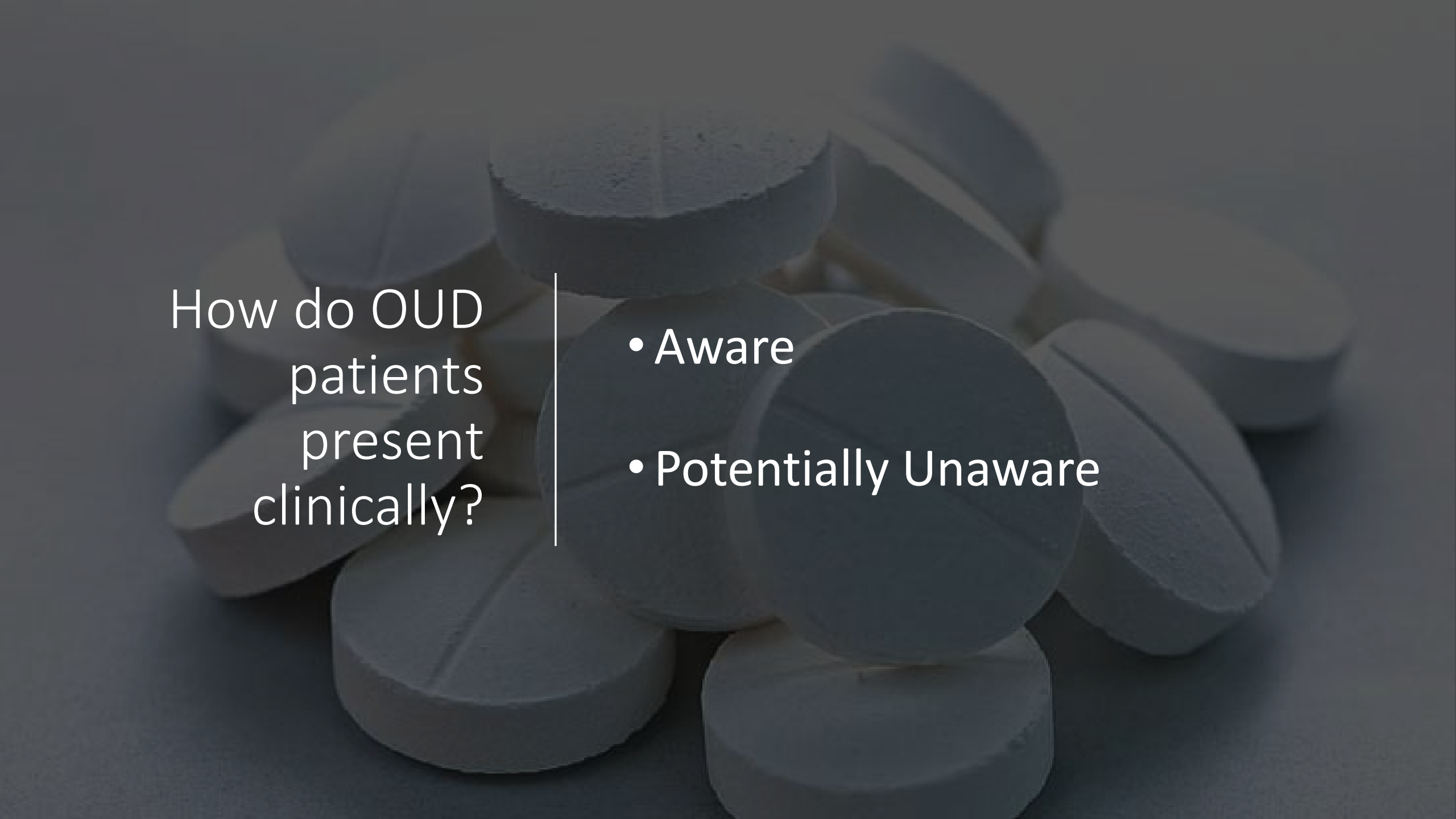


Tolerance

It takes a higher dose of a drug to achieve the same level of response achieved initially.

Dependence

When you need a drug to function normally



How do OUD patients present clinically?

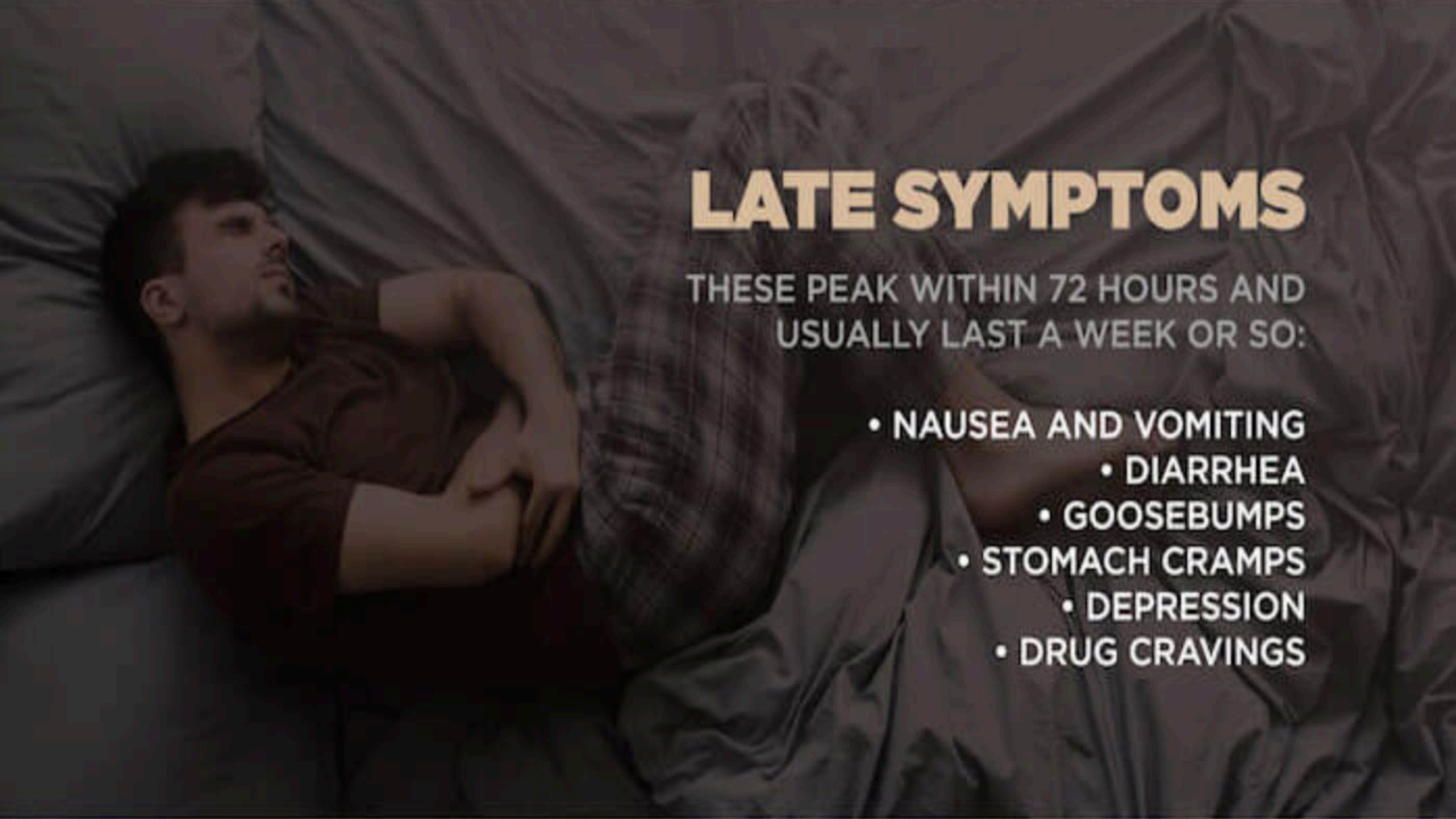
- Aware
- Potentially Unaware

Opioid Withdrawal

EARLY SYMPTOMS

THESE USUALLY START WITHIN 6-12 HOURS FOR SHORT-ACTING OPIATES, AND THEY START WITHIN 30 HOURS FOR LONGER-ACTING ONES:

- TEARING UP
- MUSCLE ACHES
- AGITATION
- TROUBLE FALLING AND STAYING ASLEEP
- EXCESSIVE YAWNING
- ANXIETY
- NOSE RUNNING
- SWEATS
- RACING HEART
- HYPERTENSION
- FEVER

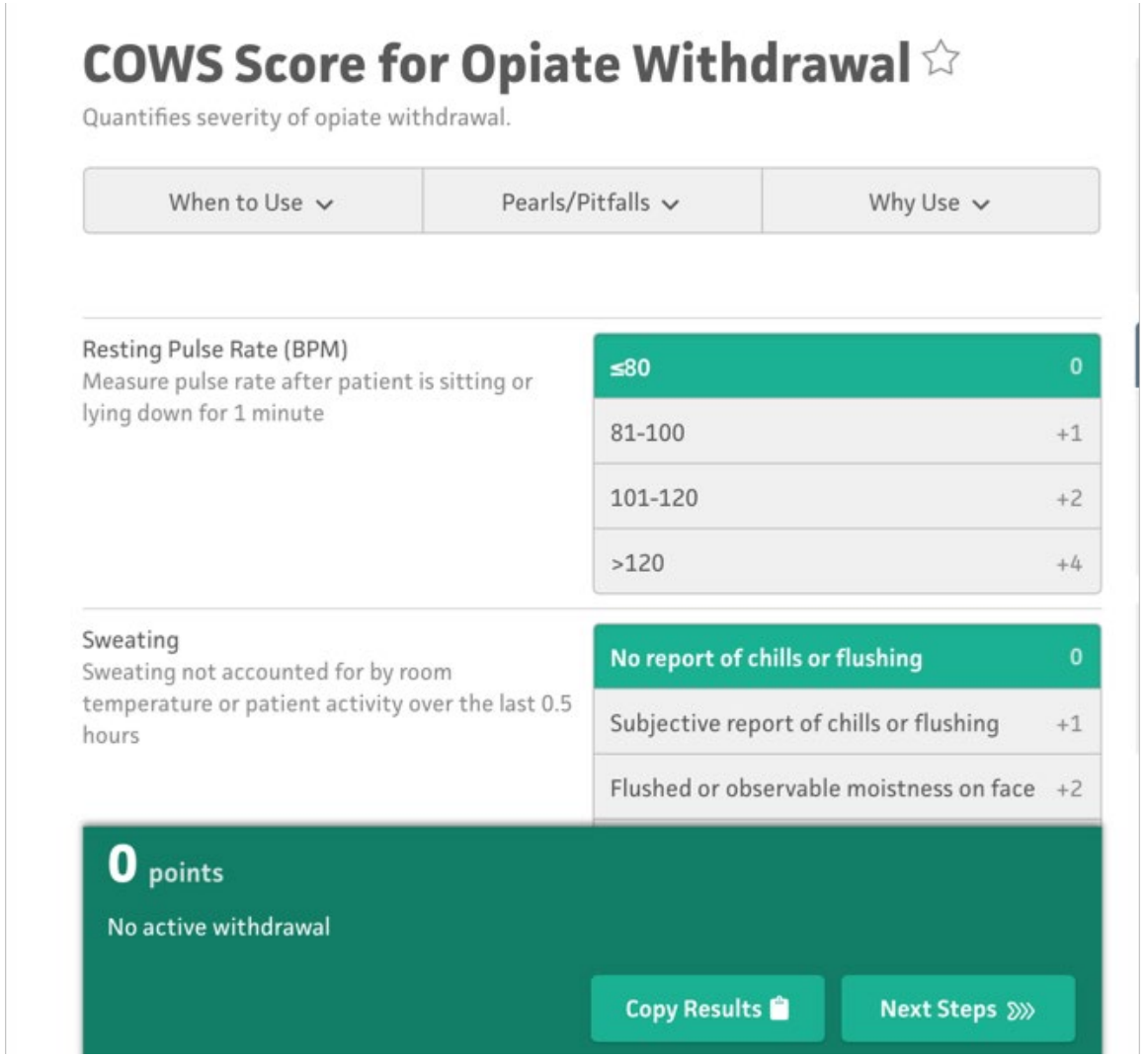


LATE SYMPTOMS

THESE PEAK WITHIN 72 HOURS AND USUALLY LAST A WEEK OR SO:

- NAUSEA AND VOMITING
- DIARRHEA
- GOOSEBUMPS
- STOMACH CRAMPS
- DEPRESSION
- DRUG CRAVINGS

Clinical Opiate Withdrawal Scale (COWS)



COWS Clinical Opiate Withdrawal Scale

Wesson & Ling, J Psychoactive Drugs. 2003 Apr-Jun;35(2):253-9.

Resting Pulse Rate: _____beats/minute *Measured after patient is sitting or lying for one minute* 0 Pulse rate 80 or below 1 Pulse rate 81-100 2 Pulse rate 101-120 4 Pulse rate greater than 120	GI Upset: *over last 1/2 hour* 0 No GI symptoms 1 Stomach cramps 2 Nausea or loose stool 3 Vomiting or diarrhea 5 Multiple episodes of diarrhea or vomiting
Sweating: *over past 1/2 hour not accounted for by room temperature or patient activity.* 0 No report of chills or flushing 1 Subjective report of chills or flushing 2 Flushed or observable moistness on face 3 Beads of sweat *on* brow or face 4 Sweat streaming off face	Tremor *observation of outstretched hands* 0 No tremor 1 Tremor can be felt, but not observed 2 Slight tremor observable 4 Gross tremor or muscle twitching
Restlessness *Observation during assessment* 0 Able to sit still 1 Reports difficulty sifting still, but is able to do so 3 Frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	Yawning *Observation during assessment* 0 No yawning 1 Yawning once or twice during assessment 2 Yawning three or more times during assessment 4 Yawning several times/minute
Pupil size 0 Pupils pinned or normal size for room light 1 Pupils possibly larger than normal for room light 2 Pupils moderately dilated 5 Pupils so dilated that only the rim of the iris is visible	Anxiety or irritability 0 None 1 Patient reports increasing irritability or anxiousness 2 Patient obviously irritable anxious 4 Patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 Not present 1 Mild diffuse discomfort 2 Patient reports severe diffuse aching of joints/ muscles 4 Patient is rubbing joints or muscles and is unable to sit still because of discomfort	Gooseflesh skin 0 Skin is smooth 3 Piloerrection of skin can be felt or hairs standing up on arms 5 Prominent piloerrection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 Not present 1 Nasal stuffiness or unusually moist eyes 2 Nose running or tearing 4 Nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment:_____

Score: 5-12 mild; 13-24 moderate; 25-36 moderately severe; more than 36 = severe withdrawal

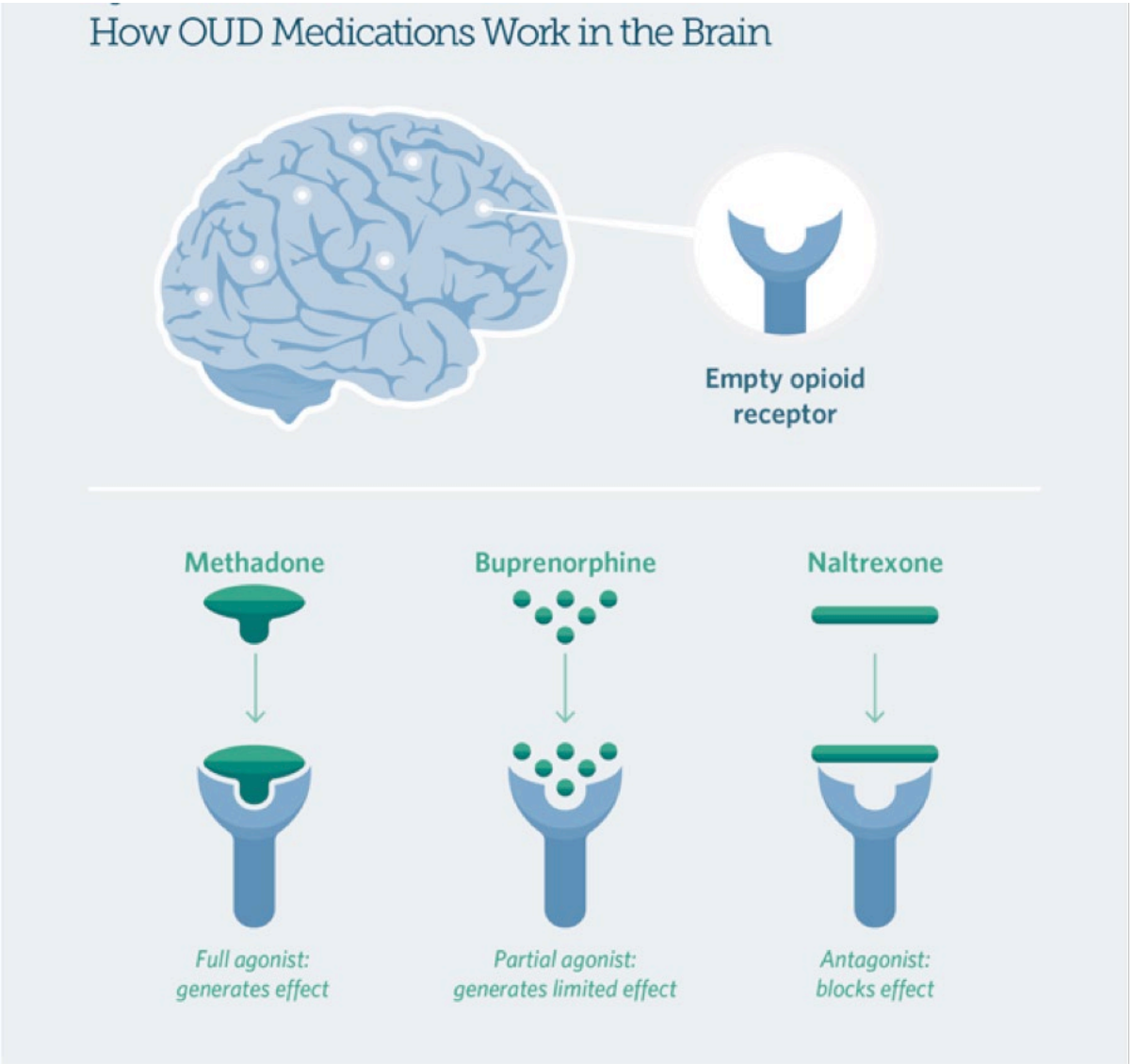
Medications for OUD (MOUD)

MEDICATION ASSISTED TREATMENT

‘Flavors’ of MOUD/MAT

- Methadone
- Buprenorphine (with or without naloxone)
- Naltrexone

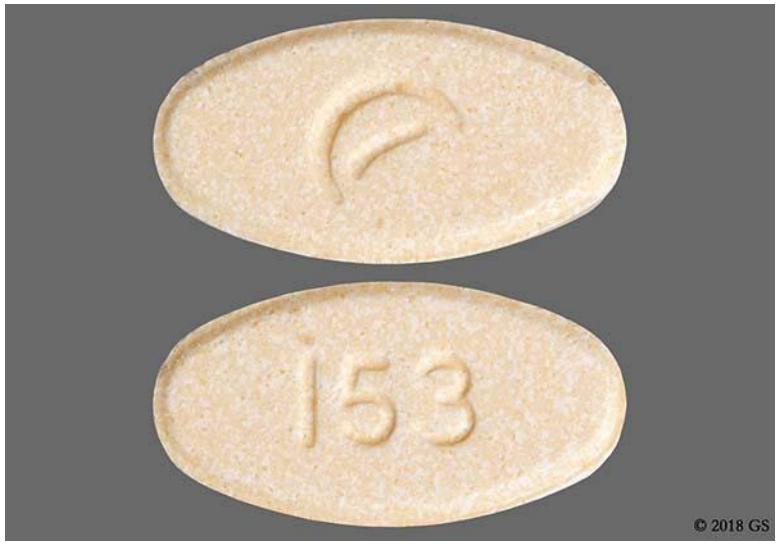
Opioid Receptor Physiology in MOUD



MOUD

	Methadone	Buprenorphine (Oral)	Naltrexone (IM)
Mechanism of Action	Full Agonist on Opioid Receptor	Partial Agonist on Opioid Receptor	Antagonist on Opioid Receptor
Dosing	80mg-100mg (Usual Dose)	4-32mg	380mg Depot Injection
Advantages	▪ Provided in a highly structured supervised setting where additional services can be provided on-site and diversion is unlikely ▪ Maybe effective for individuals who have not benefited sufficiently from partial agonists or antagonists	▪ Improved safety due to partial agonism ▪ Availability in office-based settings	▪ No addictive potential or diversion risk ▪ Available in office-based settings ▪ Option for individuals seeking to avoid any opioids

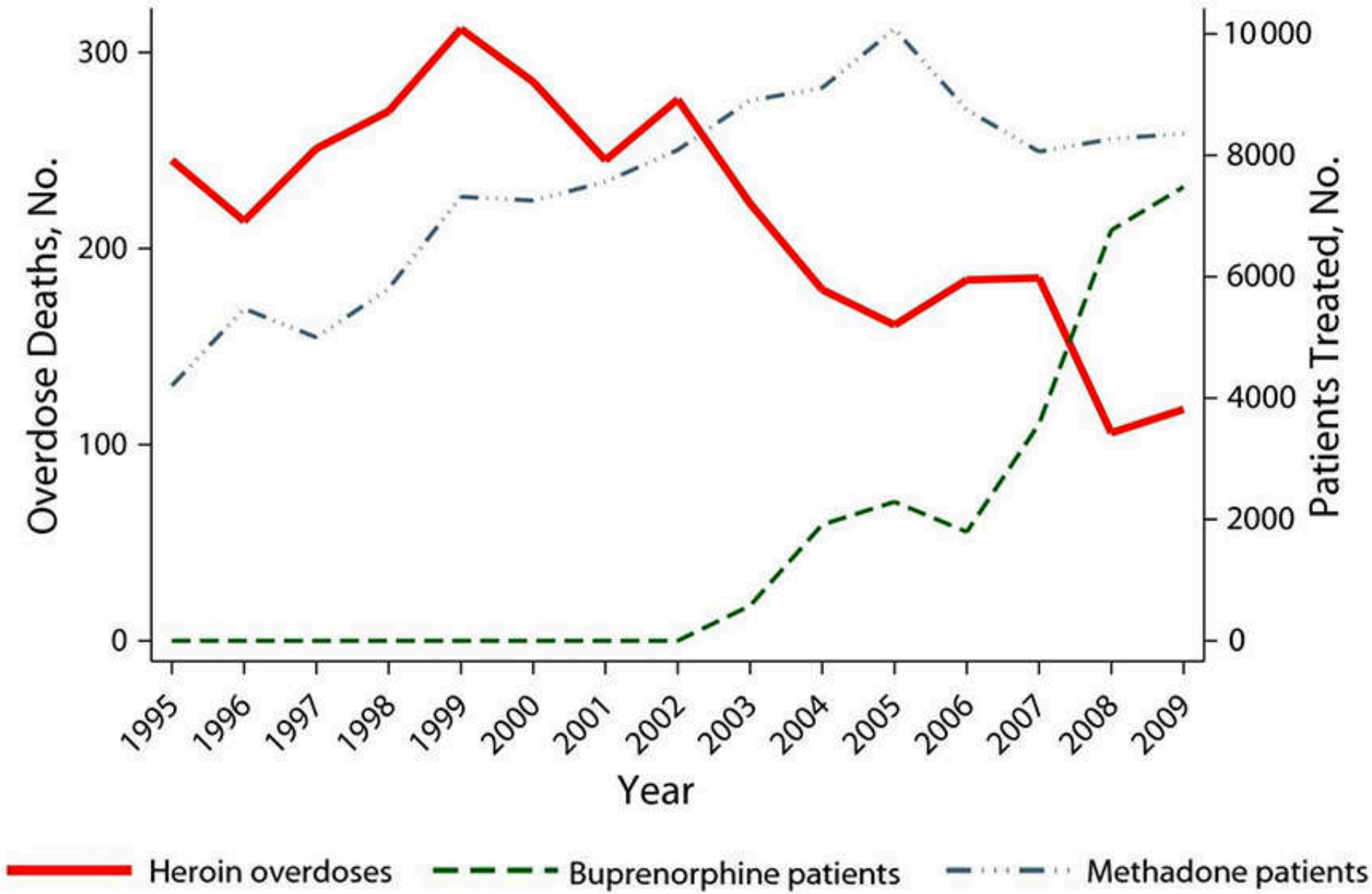
Schuckit, 2016



Suboxone – Buprenorphine/Naloxone

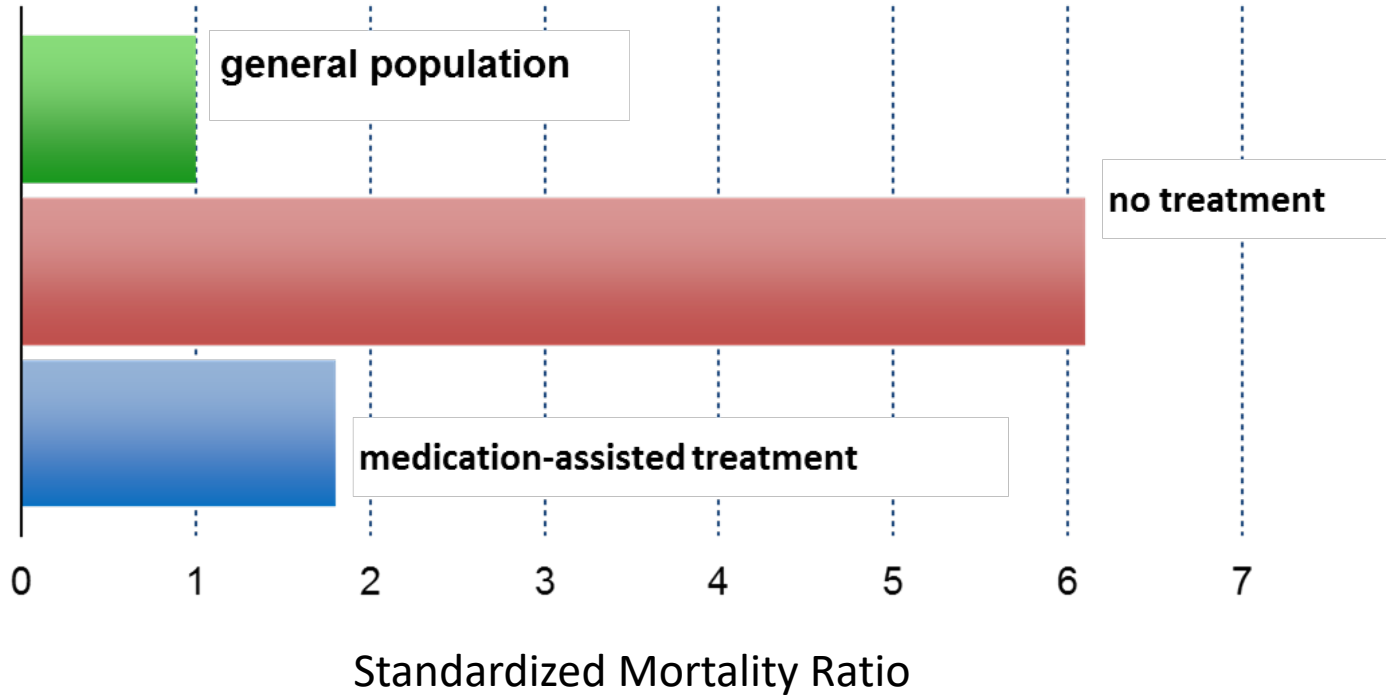
- Schedule III controlled substance
- Combination drug
- Sublingual film
- Not to be confused with *Subutex* pill

MAT REDUCES HEROIN OD DEATHS



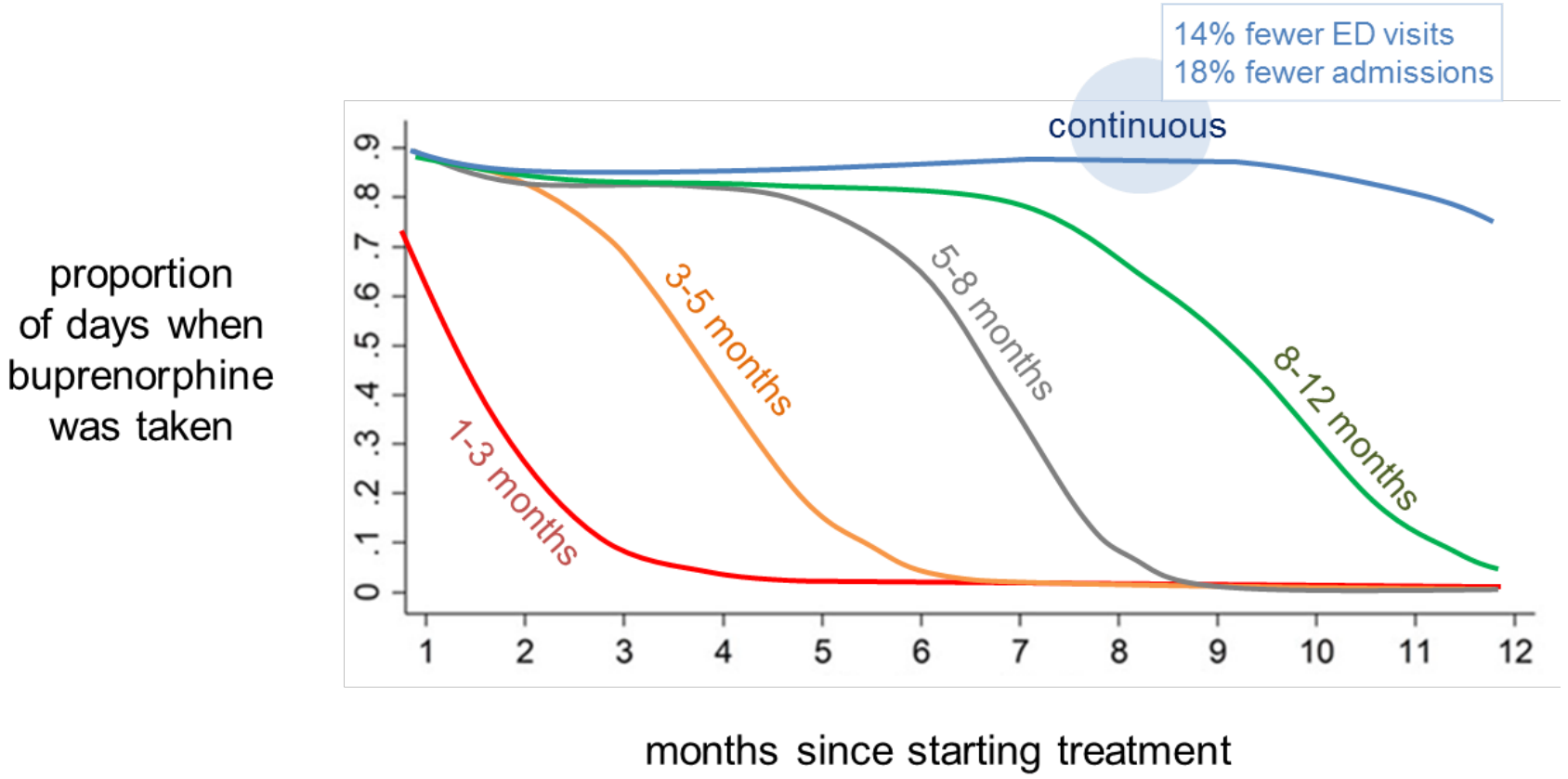
Benefits of MAT/MOUD: Decreased Mortality

Death rates:



Dupouy et al., 2017
Evans et al., 2015
Sordo et al., 2017

Optimal Duration of MAT/MOUD



Lo-Ciganic et al., 2016

Who can prescribe Buprenorphine?

- Physicians/APPs
- DEA License
- CME training

Buprenorphine/Naloxone FAQs

1. How do I take it?
2. Can I inject it?
3. Why use suboxone instead of methadone? Is it safer?
4. Can I get a suboxone prescription if I also use meth, or alcohol or take regular benzos?
5. Does Suboxone impair function? Can patients use it on the job or driving?

What is the key to Initiating Buprenorphine/Naloxone?

When it might not work.....

- Long acting opioids on board (e.g. methadone)
- Rule of thumb
  - Short acting – wait 12 hrs
  - Intermediate acting – wait 24hrs
  - Long-acting – wait 72hrs

Which patients get Suboxone?

Motivated

Adhere to medication

Medically and psychiatrically stable

Willing to connect to treatment center

Who should **NOT** receive Suboxone?

- Pregnant patients
- Allergic reaction to Suboxone
- Active liver disease

Suboxone Induction

Recognize	Recognize OUD (Aware and Potentially Unaware)
Assess	Assess for withdrawal - COWS score >8
Initiate	Initiate Suboxone (if not pregnant), 4-8mg SL tab
Repeat	Repeat in 60 min if needed to control symptoms
Connect	Connect to treatment center and provide 7 day prescription

Talking points for home induction

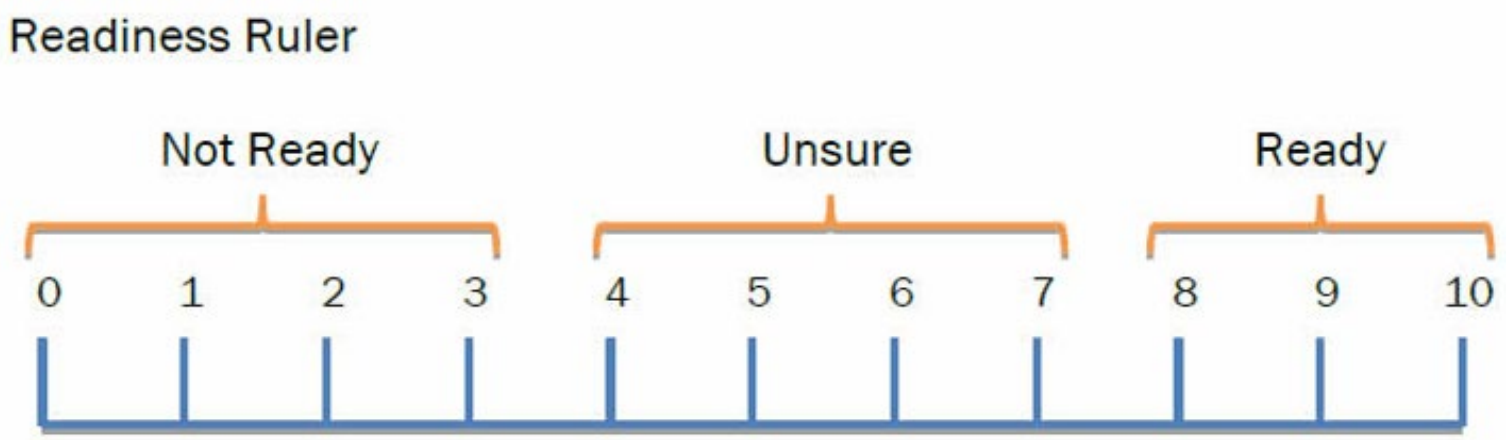
- Patients are experts at titrating
- Discuss when to start
- Connect them to Treatment
- Provide Narcan

Comfort Medications

- Zofran for nausea
- Tylenol or ibuprofen for myalgias
- Hydroxyzine or Ambien for insomnia
- Imodium for diarrhea

How do I approach the OUD patient who isn't asking for detox?

How do I approach the addicted patient who isn't asking for detox?



- Establish rapport
- Connect their ED presentation to their medication use
- Assess readiness and boost motivation
- Introduce the idea of treatment and provide referral

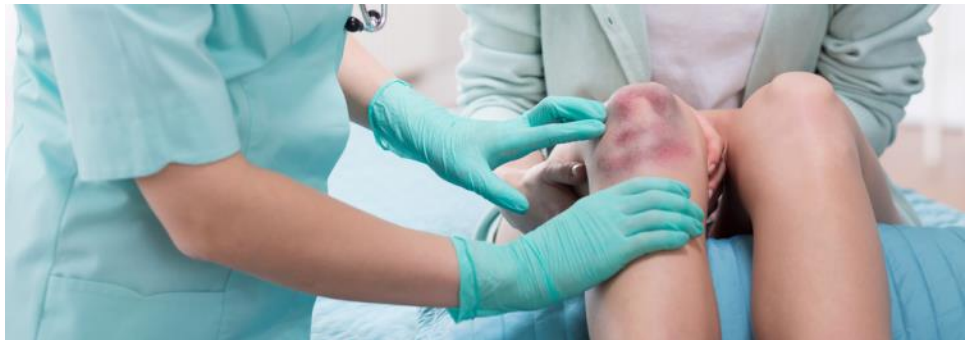
The Stages of Change

verywell

Additional Considerations in OUD/ MOUD

Acute Pain Management in Buprenorphine Maintained Patients

- **Different Approaches:**
  - Initially try non-opioid analgesics (ketorolac or NSAIDs)



  - Continue same buprenorphine maintenance dose but add non-opioid analgesics
  - Stop buprenorphine and initiate full agonist therapy

- **To note**:
  - Buprenorphine's analgesic duration is only a few hours
  - Patient's acute pain will not be treated by their daily maintenance dose of buprenorphine.


Recovery
Relapse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2. (pl. -ta ['st
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Jesus at His

Partner with your community

Medication-Assisted Treatment

MAT Medications, Counseling, and Related Conditions

Find Medication-Assisted Treatment

Become a Buprenorphine Waivered Practitioner

Become a Buprenorphine Waivered Practitioner

Learn how to become a buprenorphine waivered practitioner to treat opioid use disorder (OUD).

Qualified practitioners can offer buprenorphine, a medication approved by the Food and Drug Administration (FDA), for the treatment of opioid use disorders (OUD). The Drug Addiction Treatment Act of 2000 (DATA 2000) and the Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities or SUPPORT for Patients and

MAT for your ED

UAB Department of Emergency Medicine

MAT Induction Pathway
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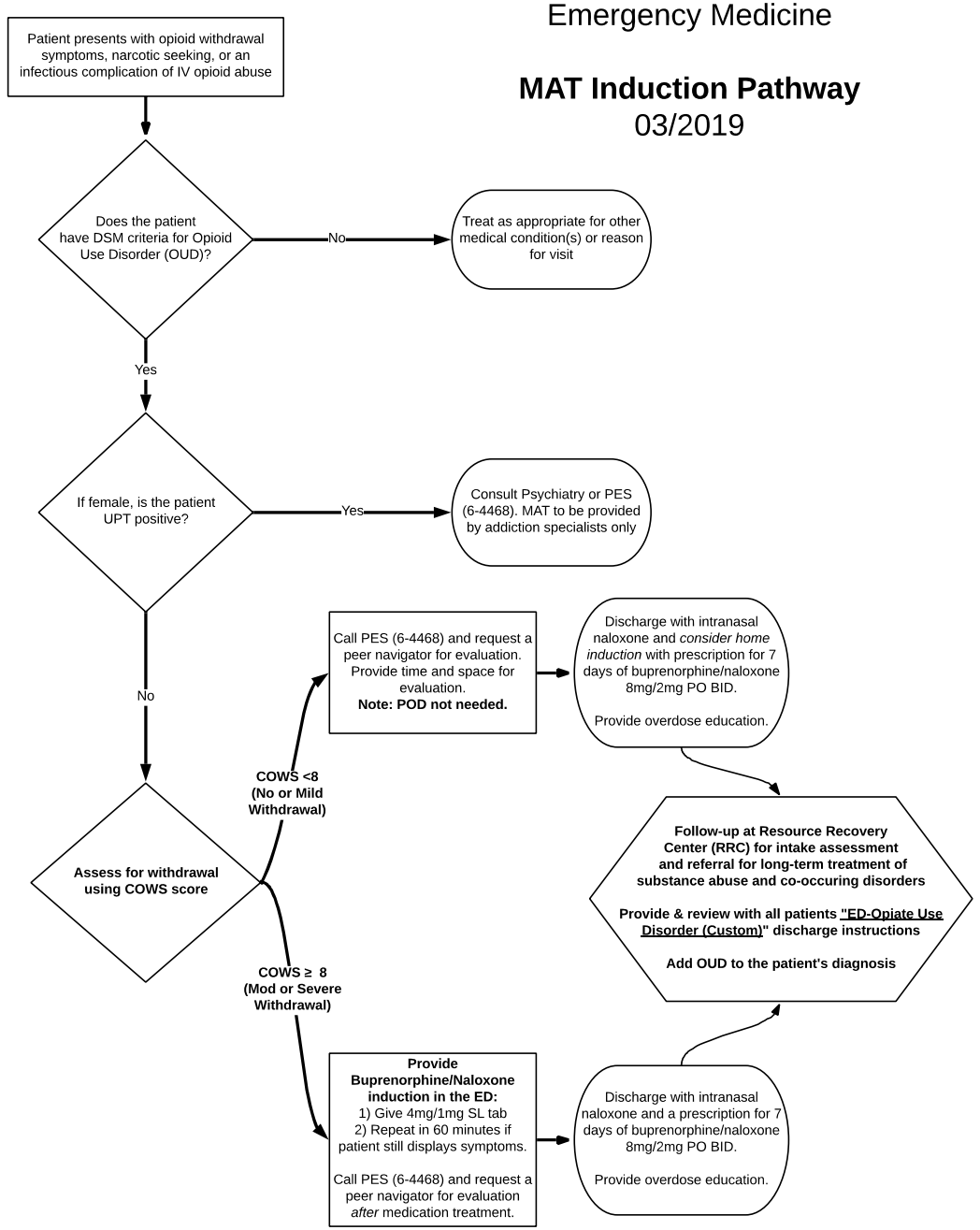

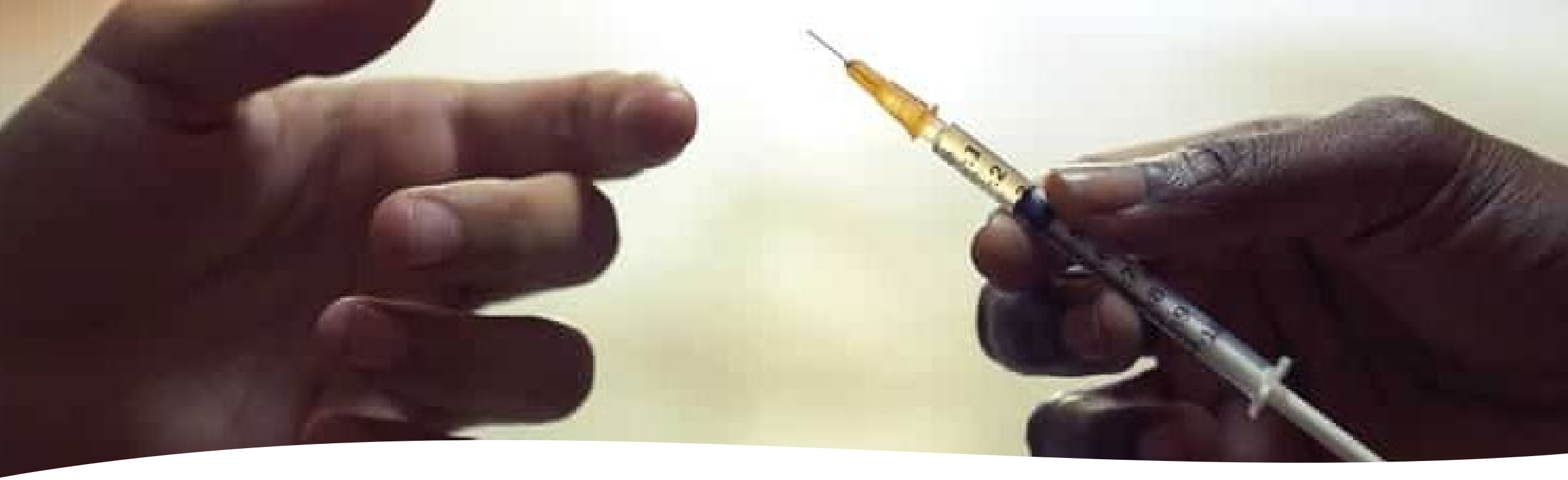

Key Points

- The opioid crisis is real and has outgrown Addiction Medicine subspecialty capacity. Engagement of all medical providers is needed.
- MOUD for OUD is effective.
- You can play a significant role in screening, treatment, and/or referral.