

IT MATTTRs

Implementing Technology,  
Medication Assisted Treatment Team Training,  
and Resources

PRIMARY CARE PRACTICE TEAM TRAINING

Module 1  
Opioids, Receptors, and You

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What is IT MATTTRs™ Team Training?

- Evidence-based training and facilitation support resource for the *entire practice team* in treatment with buprenorphine for opioid dependence and opioid use disorder (OUD)
- Over the course of 5 modules, Team Training covers:
  - Module 1: Why we're here; what opioids are and how do they work; tolerance, dependence, and addiction; and an introduction to buprenorphine
  - Modules 2 and 3: Steps involved with providing medication assisted treatment (MAT)/medication for opioid use disorder (MOUD) with buprenorphine – what your patients experience and what practices need to implement to provide buprenorphine for opioid use disorder
  - Module 4: Stabilization and maintenance treatment activities; how MAT with buprenorphine works in special populations (youth, pregnant women, people with comorbidities)
  - Module 5: Methamphetamines and treatment in primary care

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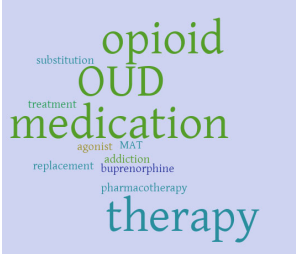
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Where is your practice in regards to MAT for opioid use disorder? What could you use help with?

Start the presentation to see live content. For screen share software, share the entire screen. Get help at [polltv.com/app](https://polltv.com/app)

Treatment for Opioid dependence and use disorder: What's in a name?

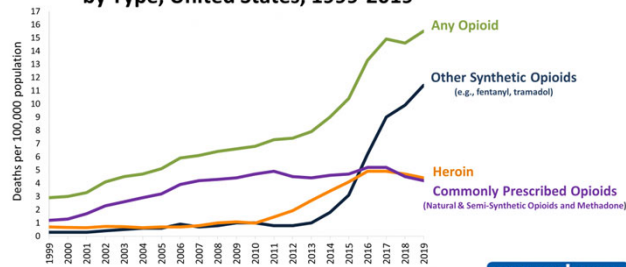
Be aware of terms that contribute to misconceptions about addiction and stigmatization.



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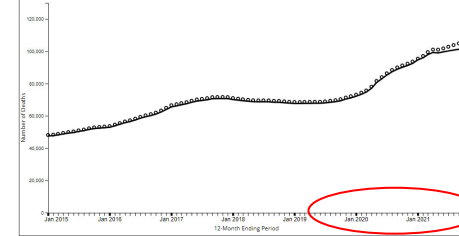
### Overdose Death Rates Involving Opioids, by Type, United States, 1999-2019



### 12 Month-Ending Provisional Number and Percent Change of Drug Overdose Deaths

Based on data available for analysis on: 06-Mar-22

Figure 1a. 12 Month-Ending Provisional Counts of Drug Overdose Deaths: United States



- Over 70% of deaths involve opioids.
- Does not reflect estimated 20 times as many nonfatal overdoses.

April 14, 2021

**Overdose Deaths Have Surged During the Pandemic, C.D.C. Data Shows**

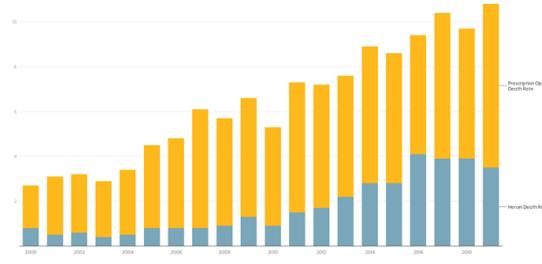
The latest numbers compare with the yearly toll during the height of the opioid epidemic and mark a reversal of progress against addiction in recent years.



Photograph and graphics created by a graphic designer for the University of Colorado at Boulder. Photo: Getty Images

### Why are we here?

Figure 3: Prescription Opioid- and Heroin-Related Death Rates Per 100,000 People in Colorado, 2000-2019



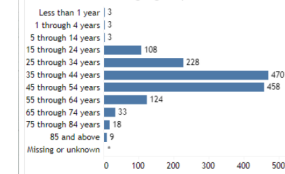
In Colorado (2019):

- 644 deaths from prescription opioids or heroin
- 596 deaths from car crashes
- 468 deaths from the flu

Chart: Colorado Health Institute. Source: Colorado Department of Public Health and Environment

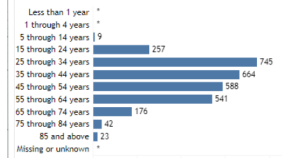
### Drug overdose death rates in Colorado

#### Age groups



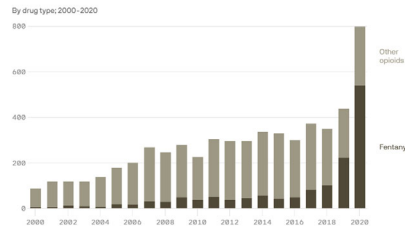
Colorado Department of Public Health and Environment

#### Age groups



## Fentanyl Use and Overdose

Annual opioid overdose deaths in Colorado



Data: Colorado Department of Public Health and Environment; Chart: Avoca Visuals

Colorado Department of Public Health and Environment

- Preliminary 2021 data suggests a 42% increase in fatal fentanyl overdose deaths over 2020.

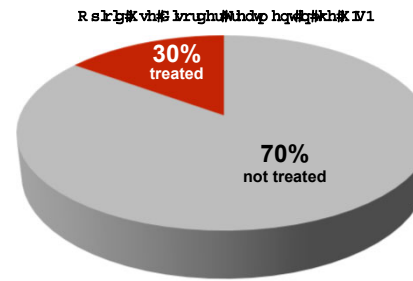
- What can we do?

Some efforts include free fentanyl test strips and training in using Naloxone, the opiate overdose reversal drug (e.g., in Denver area)

How about reducing the chance of someone seeking fentanyl?

## Why are we here? Treatment gap

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*For what other condition is this acceptable?*



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## Why are we here? Because you can change this

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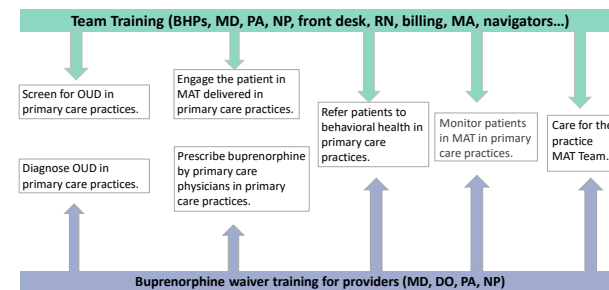
- Not only about mortality. Quality of life, crime rates, employment – all affected by opioid epidemic.
- There are effective, evidence-based tools for treatment for use in primary care – such as MAT – but they are severely under-used.
- Legislation in 2021 eliminated the previously required training for physicians, nurse practitioners, physician assistants (**treating less than 30 patients in a given time**). (Waiver is still required.)
- As a result of COVID-19, multiple factors associated with risk for substance abuse are now much more prevalent in our country.
- You can change this treatment gap! But it takes a team...**



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## Creating the practice environment conducive to care for OUD using MAT

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## Resources

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- IT MATTTRs Team Training and facilitated implementation support
- IT MATTTRs MATERIALS Resource Toolkit
  - Hard copy and online at:  
<https://medschool.cuanschutz.edu/itmatttrs/materials>
- Practice Innovation Program - Opioid Management:
  - Colorado MAT Virtual Help Desk
  - MAT Consultant Panel (clinicians, staff, and others with MAT expertise)
  - MAT Forums (twice a month, online, with Consultant Panel)



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## Practice Team Training Modules

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1. **Opioids, Receptors, Colorado, and You**
2. The Patient: *Your role preparing the patient for MAT with buprenorphine*
3. The Practice: *Supporting and providing MAT*
4. Stabilization and Maintenance and Special Populations
5. Methamphetamines and Treatment in Primary Care



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## MODULE 1

### OPIOIDS, RECEPTORS, AND YOU

- **Epidemiology:** Opioid and heroin misuse
- **Legislation:** Drug Addiction Treatment Act (DATA 2000)
- **Opioid Pharmacology:** What are opioids? Mu receptors?
- **Neurobiology of Opioid Use Disorders:** Tolerance, Dependence, Cycle of Addiction
- **Treatment with buprenorphine:** What is buprenorphine? How does it work? How effective is it? Is it safe?



Jan Knappe, Burlington, CO

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### David

52 year old male former oil field worker, now on disability for back injury. Placed on fentanyl patch by worker's comp, began buying additional short-acting opioids from others to supplement. Workers Compensation physician learned of purchases and discontinued opioids. David now self-medicating by purchasing pills and smoking heroin.



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Lauren

[illegible]

## QUESTIONS

- Duh#dyg#r#Ddxhg#hghik#j#urp #s#r#y#B
- Z kdv#uh#k#h#u#v# #frq#w#x#j#s#r#y#B
- Duh#k#uh#l#g#l#t#h#k#d#y#r#B#G#r#k#h#  
frq#w#k#h#d#v#h#g#l#r#h#B



## OPIOID PHARMACOLOGY

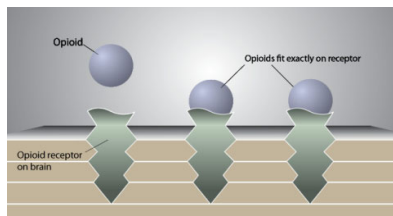
## What are opioids?

- **Drugs that bind to the opioid receptors in our bodies:**  
Mu, Kappa, Delta receptors
- **Can be naturally-occurring or a derivative**
  - Morphine, Codeine
  - Heroin: 10x more potent than morphine
- **Can be synthetic**
  - Methadone
  - Fentanyl: 100x more potent than morphine



## Mu receptors receive the opioid and facilitate the opioid's effects

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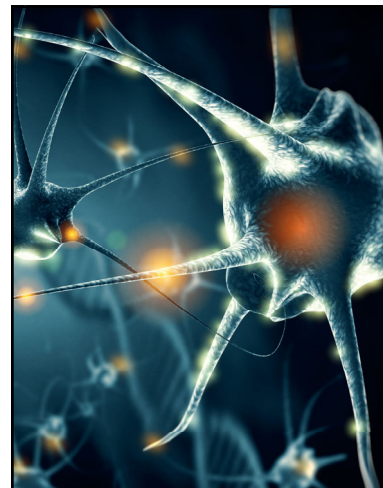
- Mu receptor triggers:
  - Euphoria
  - Sedation
  - Relaxation
  - Pain relief
  - Anxiety relief
  - Sleepiness
- Opioids affect the central nervous system and:
  - Block pain
  - Slow breathing
  - Create a calming, anti-depressing effect
- Chemical opioids stimulate Mu receptor much more powerfully than the body's natural opioids



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## NEUROBIOLOGY OF OPIOID USE DISORDERS

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## Opioid tolerance & physical dependence

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Erk#rduqf#bqg#k|vfdghshqghqf#bu#  
sk|vkrjlddgdswlrqv#Ekrqf#srbh{srvxh

### TOLERANCE

- Increased dosage needed to produce specific effect
- Develops readily for central nervous system and respiratory depression

### PHYSICAL DEPENDENCE

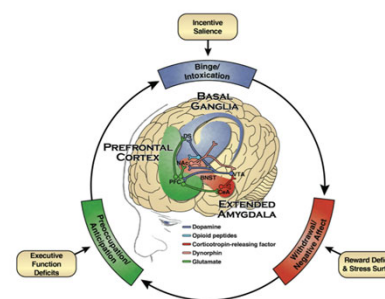
- Signs and symptoms of withdrawal by abruptly stopping the opioid, rapid dose reduction, or administration of antagonist



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## The cycle of addiction

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- **Dependence** = biology (happens at a biological level)
- **Addiction** = dependence + behaviors to avoid withdrawal

*All chemical opioids may cause physical dependence and addiction.*

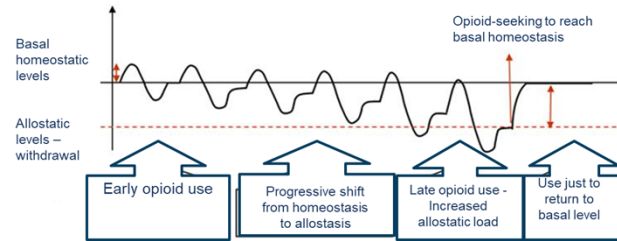
Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health, Nov 2016



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## How addiction hijacks the brain

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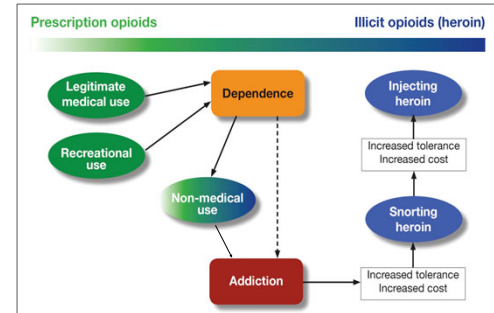
Koob GF. European Neuropsychopharmacology. 2003.

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## Why do some turn to heroin?

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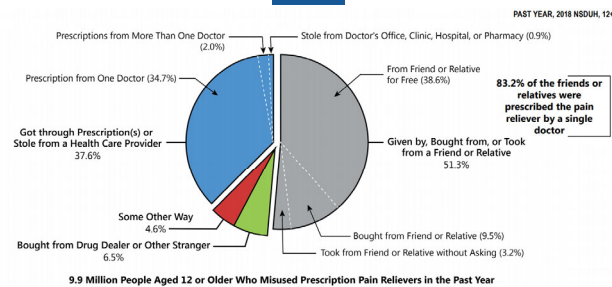


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## Sources of diverted opioids

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Substance Abuse and Mental Health Services Administration

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## Primary care practice team members

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Clipboard with a checklist:

- ☒ Use
- ☒ Addiction
- ☐ Treatment – in primary care, with buprenorphine


- Help identify patients with an opioid **dependence** (think of your patients with long-term, high-dose opioid use) and opioid **use disorder**
- Offer treatment initiation (called induction) or refer your patients for induction and behavioral health care
- If you refer for induction, **KNOW** what your patients will and are going through in treatment
- Provide stabilization and maintenance care


Be Proactive

Be the Medical Home


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## Treatment




### Medication Options

**"M" is for Medication: Three Types**


Type	How it's taken	What it does	How often it's taken	Where it's available
Methadone	Liquid, edible wafer, or tablet	Long-acting opioid medication that reduces symptoms of withdrawal and blocks euphoric effects of other opioids	Daily	Certified Opioid Treatment Program (OTP), also known as methadone clinic
Buprenorphine	Tablet, oral dissolving strip, or implant	An opioid medication that weakens euphoric effects of many opioids until the effects eventually level off	<ul style="list-style-type: none"> <li>Tablet or strip: daily</li> <li>Implant: every six months</li> </ul>	Doctor, nurse practitioner, or physician assistant with training to prescribe in office-based setting or some OTPs
Naltrexone	Tablet or injection	After mandatory seven- to ten-day withdrawal from all opioids, this non-opioid drug blocks effects of opioids and reduces cravings	<ul style="list-style-type: none"> <li>Tablet: everyone one to three days</li> <li>Injection: monthly</li> </ul>	Doctor or pharmacist



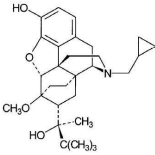
Website: <https://www.practicalpainmanagement.com/treatments/pharmacological/opioids/office-based-treatment-opioid-dependence>  
 Email: [practicalpainmanagement@practicalpainmanagement.com](mailto:practicalpainmanagement@practicalpainmanagement.com) | 834.1.1




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### Buprenorphine partial agonist




- Partial Agonist ★
- Elimination
  - Excreted in feces (70%) and urine (30%)
  - Mean elimination half-life = 37 hours ★
- Does NOT show as opiate positive on standard drug screen ★






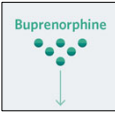
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### How does buprenorphine work?



Full agonist:  
generates effect



Partial agonist:  
generates limited effect




Antagonist:  
blocks effect

**Affinity** = how tightly a chemical binds the Mu receptor

**Activity** = What does the chemical do – activate (agonist) or block (antagonist)?

Practical Pain Management <https://www.practicalpainmanagement.com/treatments/pharmacological/opioids/office-based-treatment-opioid-dependence>



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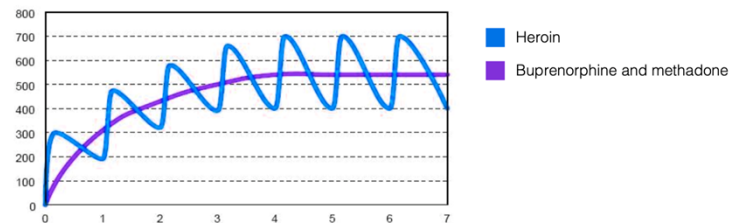


## Opioid levels over time

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### Steady State Simulation – Methadone Maintenance

Steady State attained after 4-5 half-lives – 1 dose every half-life



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## Buprenorphine efficacy summary

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- Approved and effective for moderate to severe OUD
- Equally effective to methadone on primary outcomes of:
  - Abstinence from illicit opioid use
  - Retention in treatment
  - Decreased opioid craving

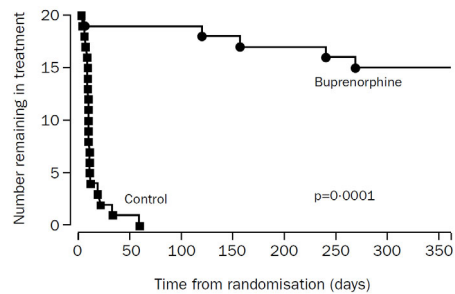
Johnson et al. NEJM 2000; Fudala PJ et al. NEJM 2003; Kalko J et al. Lancet. 2003; Mattick RP et al. Cochrane Database Syst Rev. 2014.



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## Buprenorphine maintenance vs. taper Method (heroin use disorder)

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### Results

#### Completion 52 week trial:

- Taper method = 0%
- Maintenance = 75%

#### Mortality:

- Taper method = 20%
- Maintenance = 0%

p=0.0001

Kalko J et al. Lancet. 2003.



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## Why use medications?

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### Because they work!

- Increased treatment retention
- 80% decrease in drug use, crime
- 50% decrease in mortality from OUD
- 70% decrease in death from any cause

NIH Consensus Statement et al. JAMA. 1998



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## Why use medications?

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## MODULE 1 WRAP UP

- The opioid use disorder is an extraordinary public health risk.
- Addiction has a neurobiological basis. It is a chronic disease – not simply a lack of willpower or a personal weakness.
- Federal law allows office-based therapies, which are supported by decades of high quality evidence.
- Buprenorphine is the most effective treatment available to primary care providers and practices.
- And...it takes a team to support patients.



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## MODULE 2 Sneak Preview

THE PATIENT

- There is a standard process for identifying and diagnosing patients (just like diabetes).
- What does your patient experience on buprenorphine?
- How does the practice want to define success? Like diabetes, treatment is a lifetime.



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The IT MATTTRs Primary Care and Behavioral Health Team Training curricula were created with support from the Agency for Healthcare Research and Quality (grant number 5R18HS025056-02).



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