



MEDICATIONS FOR OPIOID USE DISORDER

Nicole Rodin, PharmD, MBA



ACKNOWLEDGEMENT

The Center for Rural Opioid Prevention, Treatment, and Recovery is supported by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services under award number H79TI082557.

It is financed 100% with federal funds.

The content of this presentation is solely the responsibility of the authors and does not necessarily represent the official views of SAMHSA.



OBJECTIVES

By the end of this presentation, you should be able to:

- Understand how opioids work in the brain
- Describe the body's response to addictive substances
- Detail how Medications for Opioid Use Disorder work
- Understand the role Medications for Opioid Use Disorder (MOUD) have in a patient centered treatment plan

OPIOIDS

Prescription Opioids

Heroin

Fentanyl

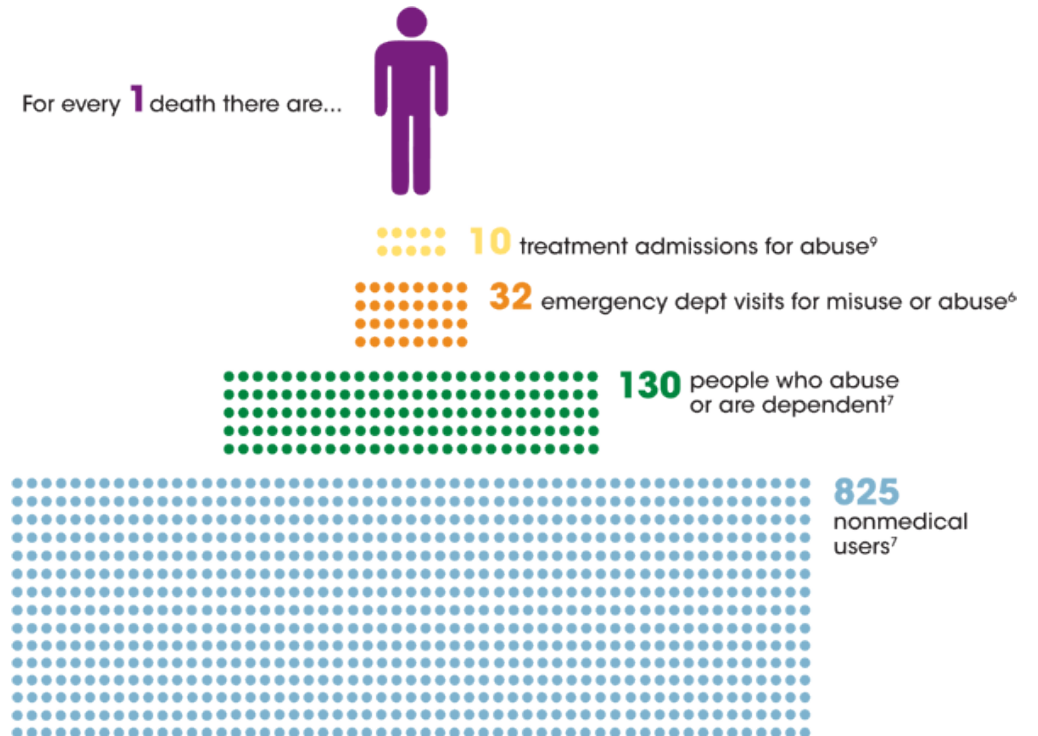
WHAT ARE OPIOIDS?

The class of drugs that are chemically related to opium in addictive properties or physiological effects. All opioids are chemically related and interact with opioid receptors throughout the body.



WHY DOES IT MATTER? ¹

- The United States makes up 2.4% of the world's population, but we consume 80% of the world's supply of opioids and 99% of the world's hydrocodone supply.
- In 2020, 93,000 Americans died from overdose. This was a 29% increase from the previous year.
- With an average of 128 people dying from opioid related deaths every day, the term “opioid epidemic” has become a household phrase in the United States.



RX → HEROIN → FENTANYL

- Fentanyl can be 50 times more potent than heroin³
- Synthetic Fentanyl is not the same as the manufactured drug product.



Illicit

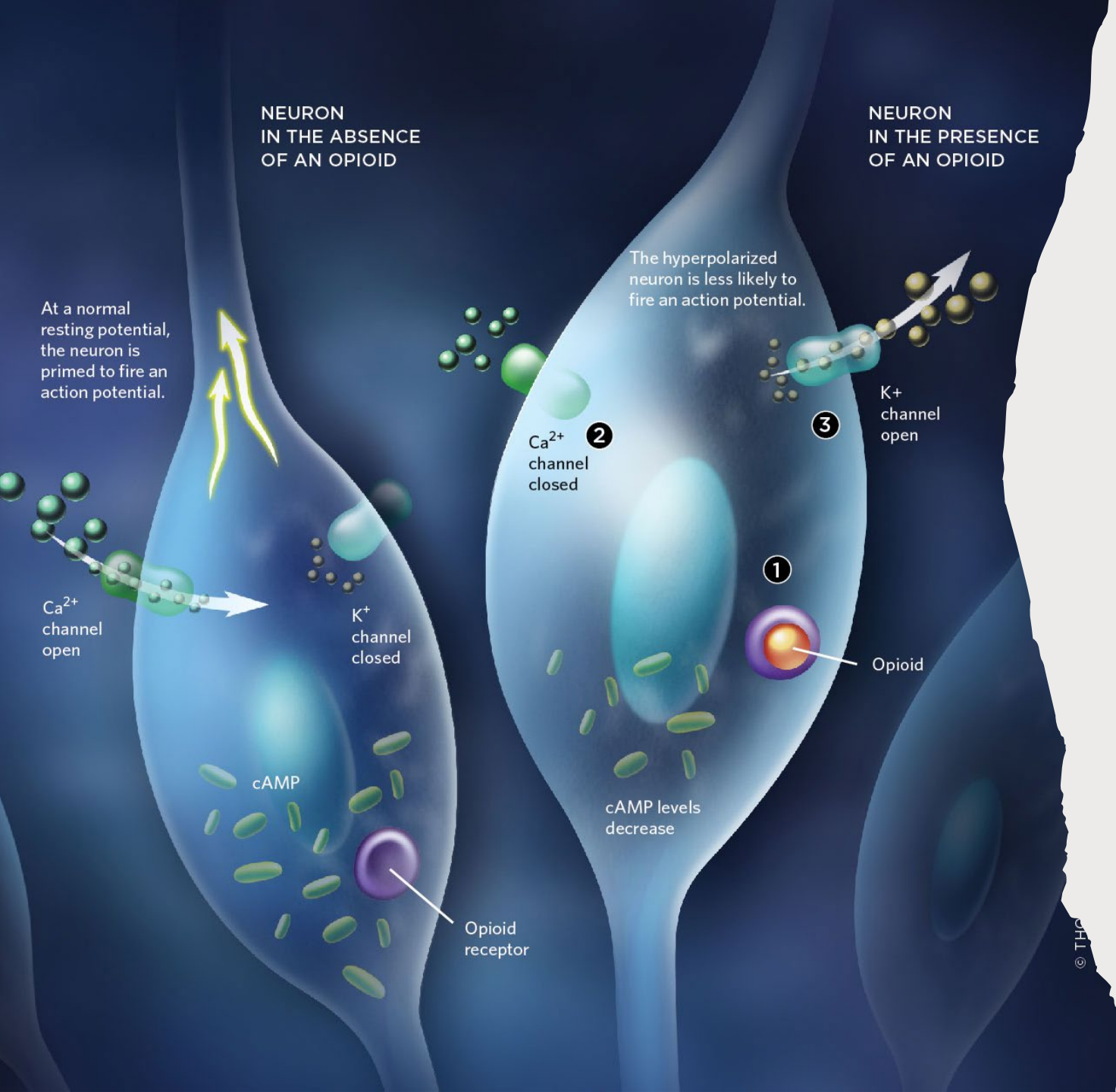


Licit

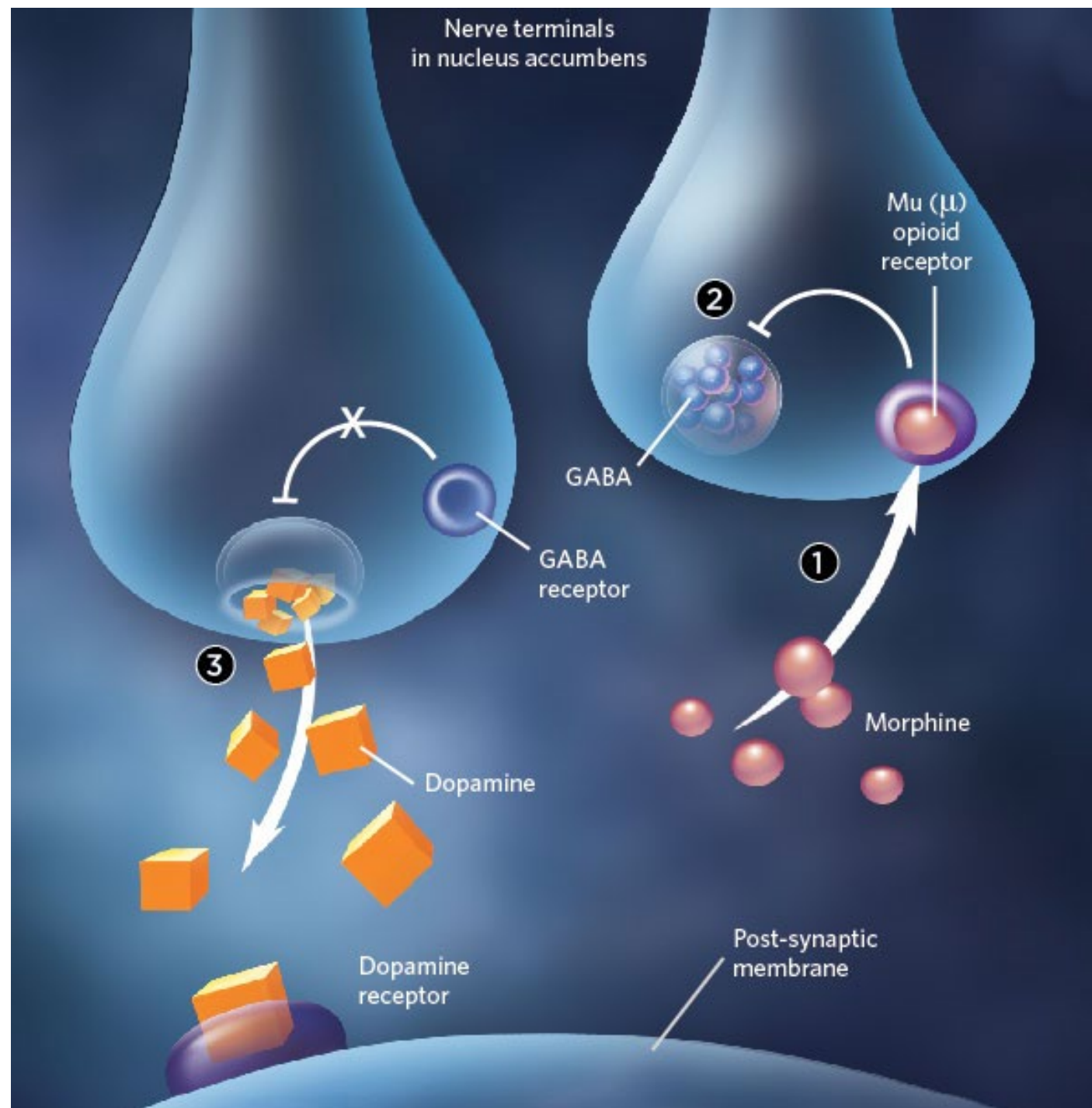


WHAT'S GOING ON IN THE BODY

OPIOID SYSTEM¹²



- Pain
- Thirst
- Mood
- Hunger
- Etc.



TWO FORMS OF DEPENDANCE¹

PHYSICAL

- The body's reaction to sustained exposure to a drug
- Physical and observable withdrawal symptoms
- This process can be painful and consuming

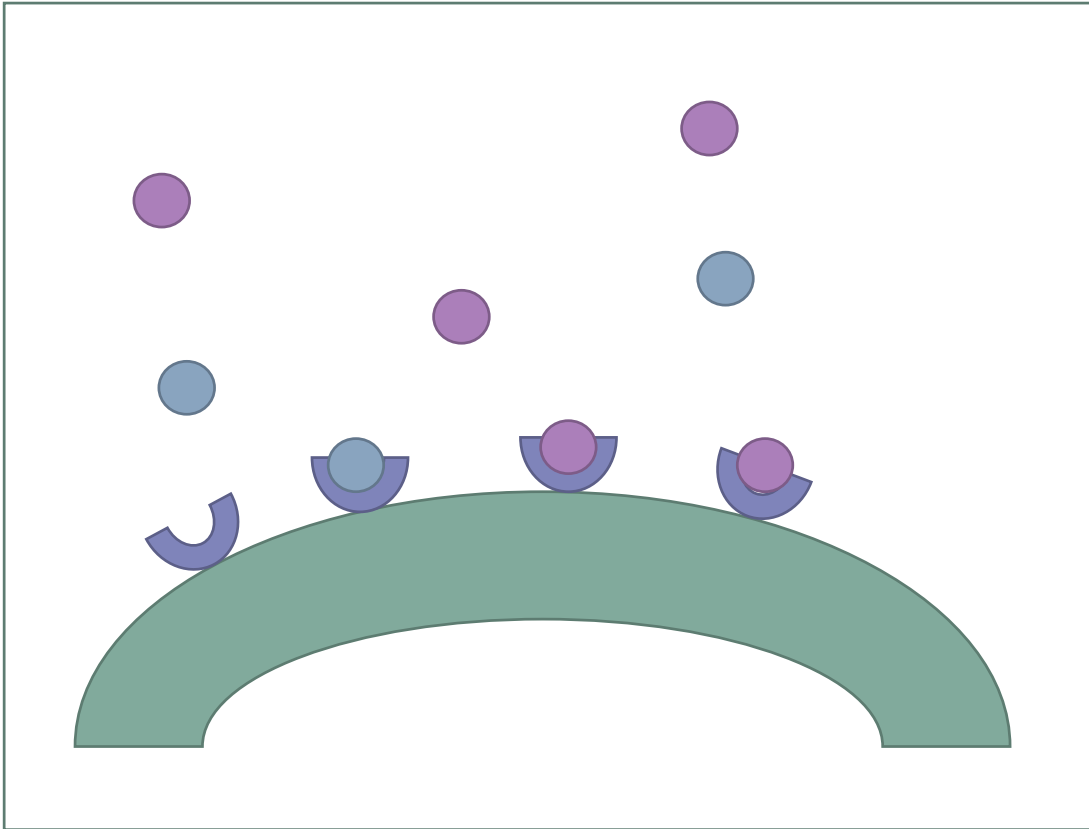
PSYCHOLOGICAL

- Sustained mental need for the drug or substance
- Can occur with essentially any substance
- Hardwiring of the brain- we develop attachments or a need for the substance
- May last longer than a physical dependance

WHAT HAPPENS OVER TIME?¹³

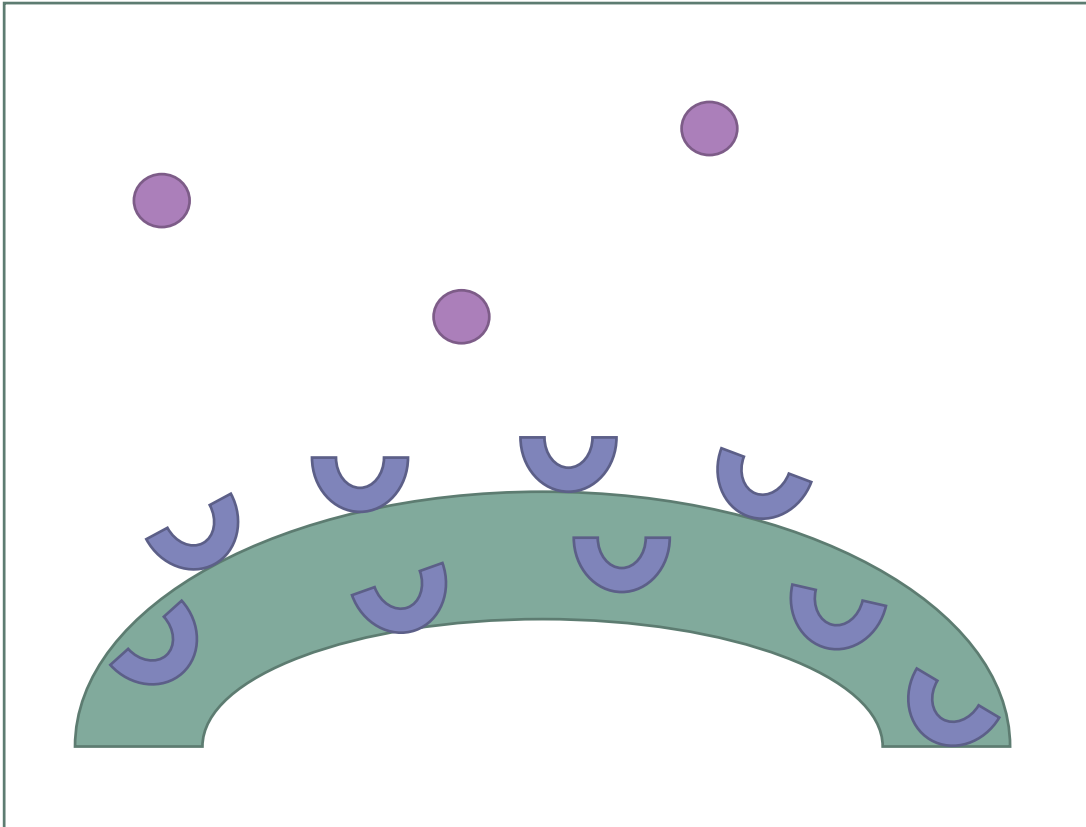
ENDORPHINS ●

OPIOIDS ●



WHAT HAPPENS OVER TIME?¹³

ENDORPHINS ● OPIOIDS ●



Opiate Withdrawal Timeline



Last Dose

Symptoms Begin

6-12 hours

Short-Acting Opiates

30 hours

Long-Acting Opiates



72 hours

Symptoms Peak

- ✓ Nausea
- ✓ Vomiting
- ✓ Stomach Cramps
- ✓ Diarrhea
- ✓ Goosebumps
- ✓ Depression
- ✓ Drug Cravings

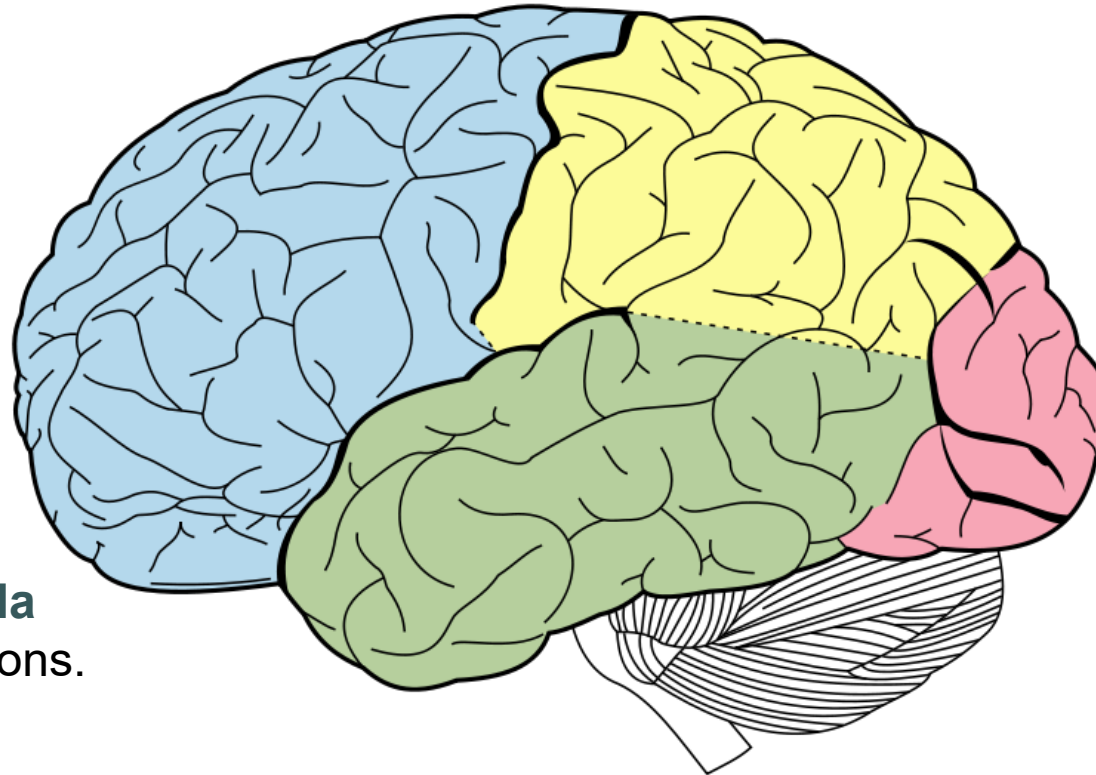


THEN WHAT DOES THAT DO TO THE BRAIN?

The **Cortex**
Helps us make good
choices.

The **Amygdala**
Rules our emotions.

The **Midbrain**
Controls our reward system



SIGNS OF OPIOID USE DISORDER¹

Trying to
decrease use
unsuccessfully

Making
mistakes at
school or work
due to opioids

Opioids causing
relationships
with family and
friends to suffer

Increased
tolerance (to get
high)

Previous
overdose

Psychological
cravings

MEDICATIONS FOR OPIOID USE DISORDER (MOUD)

WHAT IS MOUD? ^{4, 5, 6}

Medication for Opioid Use Disorder

An important piece of the recovery puzzle*

Evidence based treatment

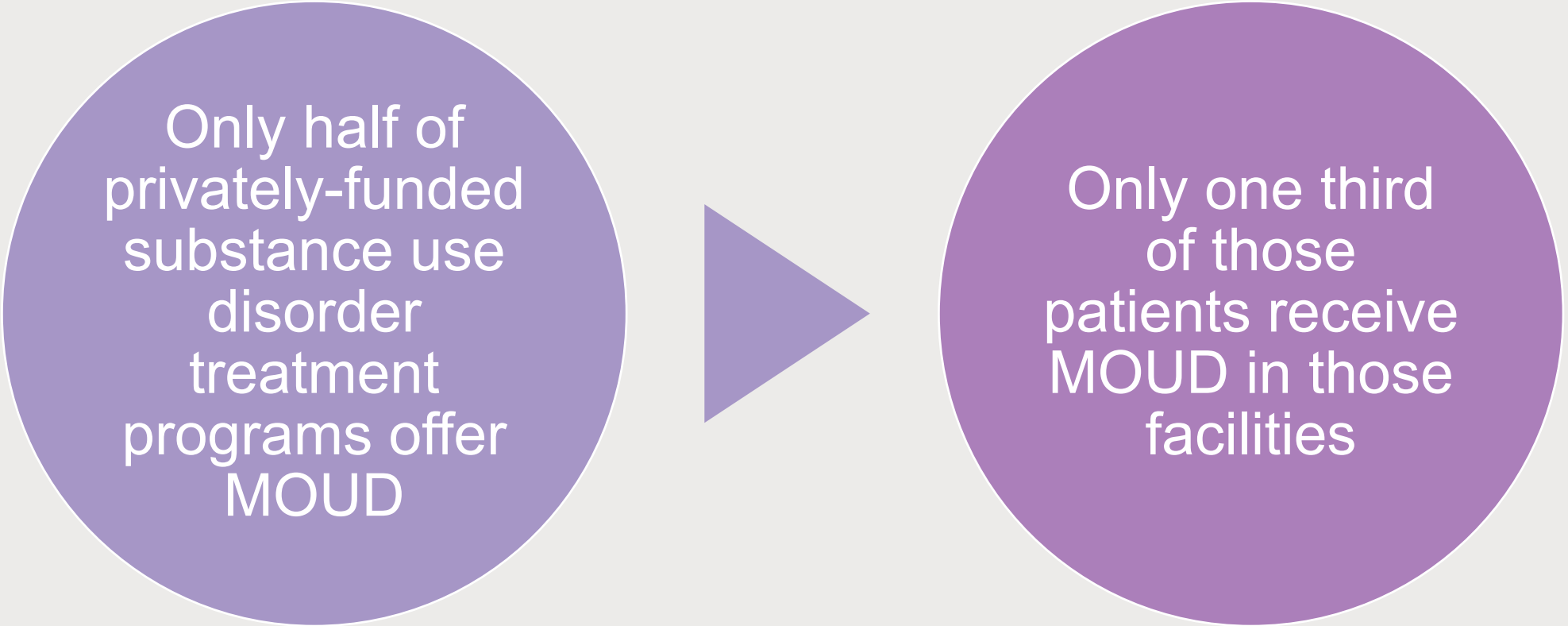
Provides safe, controlled levels of medication

Reduce cravings and withdrawal symptoms

BENEFITS OF MOUD^{4,5,6}

- Improve survival
- Increase functioning and sustainability in treatment
- Decrease opioid use and criminal activity associated with Opioid Use Disorder
- Increase ability to gain and maintain employment
- Improve birth outcomes

WHY?

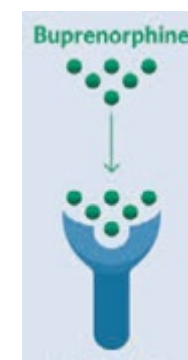
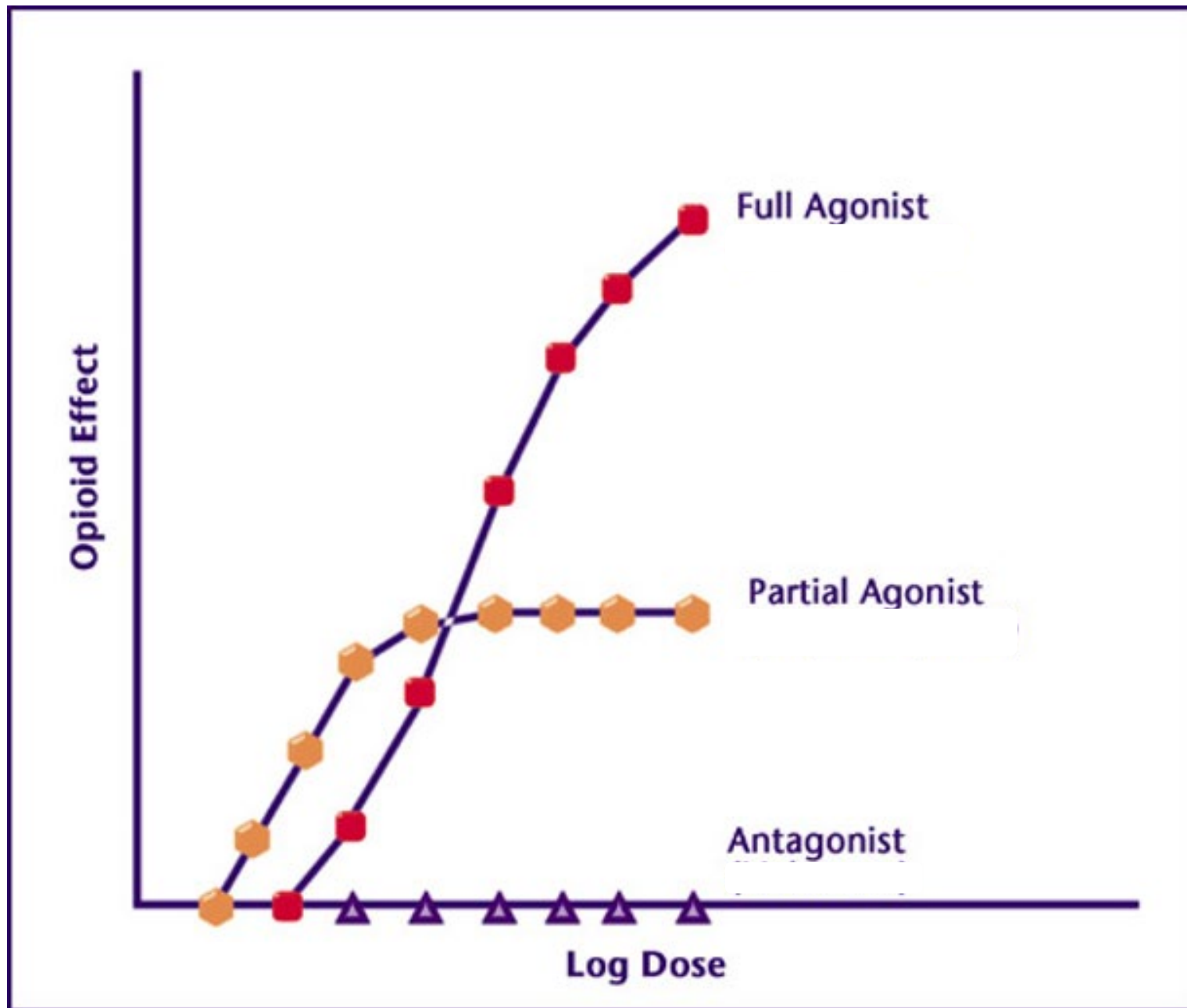


Only half of
privately-funded
substance use
disorder
treatment
programs offer
MOUD






Only one third
of those
patients receive
MOUD in those
facilities

PHARMACOLOGIC TREATMENT^{4,5,8}

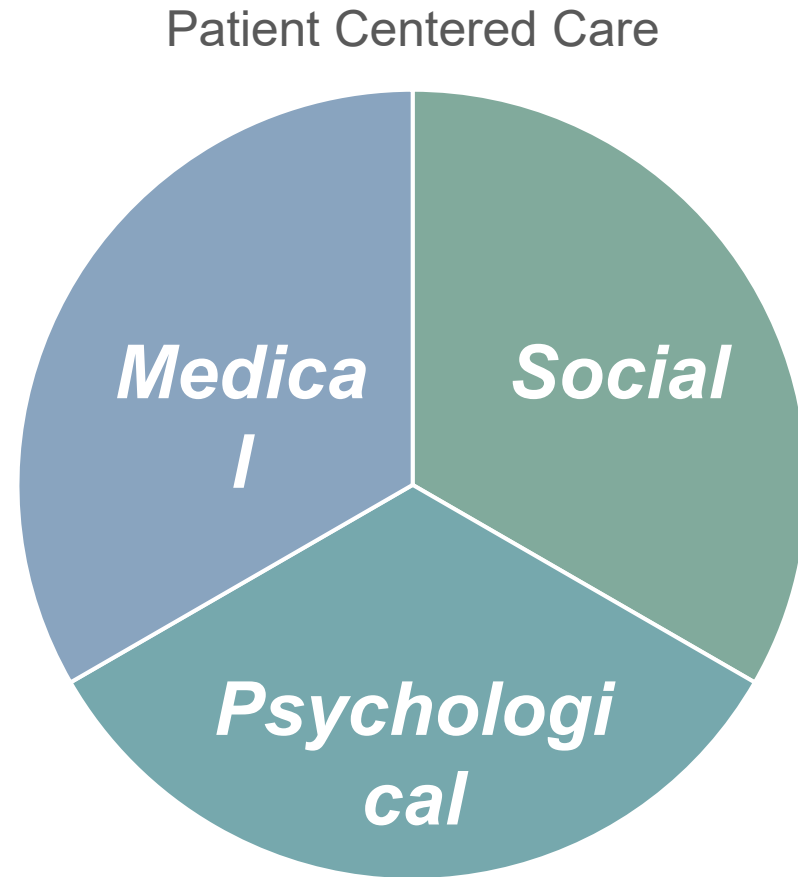
- Full Agonist: Methadone
 - A drug that activates the effector system when it binds to the receptor. A full agonist has high affinity for the receptor.
- Partial Agonist: Buprenorphine
 - A drug that produces less than the full effect even when all receptors are saturated.
- Antagonist: Naltrexone or Naloxone
 - A drug that has affinity to the receptor but does not activate the effector system.



PHARMACOLOGIC TREATMENT

Buprenorphine/ naloxone (Suboxone)	Methadone (Dolipine)	ER Naltrexone (Vivitrol, ReVia)	Buprenorphine (Subutex, Butrans)	Buprenorphine ER (Sublocade)
Partial agonist paired with an antagonist 	Full Agonist 	Full antagonist 	Partial agonist 	Partial agonist 
Half life of 24-42 hours	Half life of 22-48 hours	Time to peak: 2 hours (first peak) and 2-3 days (second peak) Duration of 4 weeks	Half life of 24-48 hours	Half life: 43-60 days
Dosage forms include buccal film, sublingual tablet, and sublingual film	Dosage forms include tablets	Dosage forms include intramuscular injection and tablet	Dosage forms include sublingual tablets	Dosage form: Extended- Release Subcutaneous Injection
FDA indication: Opioid dependence	FDA indication: detox and maintenance of opioid addiction	FDA indication: opioid dependence	FDA indication: opioid dependence	FDA indication: opioid dependance

WHAT ARE THE OTHER PIECES TO THE PUZZLE? ¹⁰



ARE THEY EVIDENCE BASED? ^{8,10,16,1, 18}

Yes!

- Contingency Management (CM)
 - Tangible rewards to reinforce positive behaviors such as decreased use or abstinence. Studies have shown a benefit alone, but also in conjunction with medications and other interventions.
- Cognitive Behavioral Therapy (CBT)
 - Psycho-social technique that is aimed at challenging and changing cognitive distortions and behaviors, improving emotional regulation, and developing personal coping measures. CBT has been shown to have broad application and have shown efficacy alone and in combination with other efforts.
- Peer Support
 - Paid or unpaid individuals that have been successful in the recovery process who help others experiencing similar situations. This can be in a group dynamic or an individual interaction. Peer support has shown to be beneficial in extending the reach of treatment and sustaining treatment.

FACT OR FICTION¹⁴

FICTION

MOUD is replacing one addiction for another.

This is false. Treatment uses longer acting medications that are safer and tailored to the patient to help overcome cravings and withdrawal. Several studies have demonstrated the benefit of using medication as maintenance treatment to reduce all cause mortality.

Comparative Effectiveness of Different Treatment Path- 9 ways for Opioid Use Disorder

Sarah E. Wakeman, MD^{1,2}; Marc R. Larochelle, MD, MPH^{3,4}; Omid Ameli, MD, MPH⁵; [et al](#)

Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies

15

[Luis Sordo](#), assistant professor and research fellow,^{1,2,3} [Gregorio Barrio](#), research associate,⁴ [Maria J Bravo](#), research associate,^{1,2} [B Iciar Indave](#), doctoral candidate,^{1,2} [Louisa Degenhardt](#), Scientia professor and principal research fellow,^{5,6} [Lucas Wiessing](#), principal scientist,⁷ [Marica Ferri](#), head of department,⁷ and [Roberto Pastor-Barriuso](#), research associate^{1,2}

FACT

Medication for opioid use disorder is still effective even if it does not immediately end drug dependence.

- Addiction is a chronic condition affected by genetic makeup, environmental factors, and exposure
- Medical treatment for OUD can be compared to other chronic conditions

FICTION

People can stop using opioids without help from any medications. MOUD is for weaker patients.

- While use disorders can begin with poor decisions, addiction involves physical changes in the brain that are no longer susceptible to the same decision-making pathways
- Some patients are able to end use disorders on their own, however majority of patients will go through lapses and relapses
- MOUD can make this process safer
- Substance use disorder is one of the most stigmatized diseases.
- Addiction is a medical disease. This disease can be caused by a variety of factors that aren't easy to predict. Addiction leads to changes in the brain's opioid receptors. These changes can be treated and managed much like other chronic conditions.

QUESTIONS?

PLEASE TAKE THIS SURVEY:



RESOURCES

1. <https://www.cdc.gov/drugoverdose/epidemic/index.html>
2. <https://www.samhsa.gov/sites/default/files/TTHY-Opioid-Broch-2020.pdf>
3. <https://www.psychiatry.org/patients-families/addiction/opioid-use-disorder/opioid-use-disorder>
4. <https://www.drugabuse.gov/publications/effective-treatments-opioid-addiction>
5. <https://www.samhsa.gov/medication-assisted-treatment>
6. <https://prcp.psychiatryonline.org/doi/full/10.1176/appi.prcp.20180006>
7. <https://www.ncbi.nlm.nih.gov/books/NBK541393/>
8. <https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use-Disorder- Full-Document/PEP20-02-01-006>
9. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2760032>
10. https://www.asam.org/docs/default-source/advocacy/pcoat-brief-final.pdf?sfvrsn=507041c2_2
11. <https://www.doh.wa.gov/Portals/1/Documents/2900/goodsam.pdf>
12. <https://www.the-scientist.com/cover-story/pain-and-progress-38043>
13. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2851054/>
14. <https://pcssnow.org/resource/myths-and-misconceptions-medications-for-opioid-use-disorder-moud/>
15. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5421454/>
16. <https://www.pcori.org/sites/default/files/PCORI-2018-Annual-Meeting-Opioid-Epidemic-Breakout-David-Gastfriend-Presentation-Slides.pdf>
17. <https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addiction-treatment/behavioral-therapies/contingency-management-interventions-motivational-incentives>
18. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2897895/>