# Opioid Use Disorder and the Criminal Justice System

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## Opioid Use Disorder and the Criminal Justice System

1) What's the problem?
2) How did we get here?
3) What can we do about it?
4) What's next?

## Opioid Use Disorder and the Criminal Justice System

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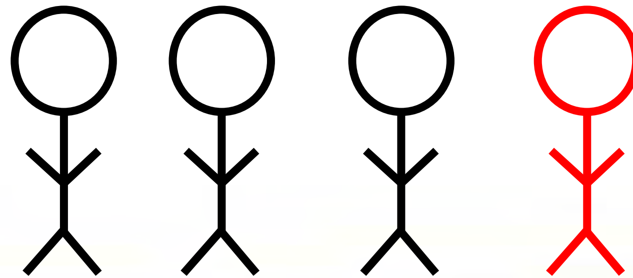
# 1 in 4

drug-related deaths worldwide occur in the U.S.[1]



- The U.S. experiences the highest drug-related mortality worldwide [1]
- Drug overdose is the leading cause of death in the U.S. for those under 50.
  - Exceeds deaths related to firearms, car accidents, homicides [2]

[1]United Nations 2018
[2]CDC 2018

# Opioid Overdose Deaths

8

Number of North Carolinians who died each day from unintentional opioid overdoses in 2019[1]

105,752

Predicted number of people in the US who died from Overdose from October 2020-October 2021[2]

[1]NC Opioid Dashboard 2022
[2]National Center for Health Statistics, 2022

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

Deaths per 100,000 standard population

20
15
10
5
0

1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2020

Synthetic opioids other than methadone[1]
Natural and semisynthetic opioids[2]
Heroin[3]
Methadone[4]

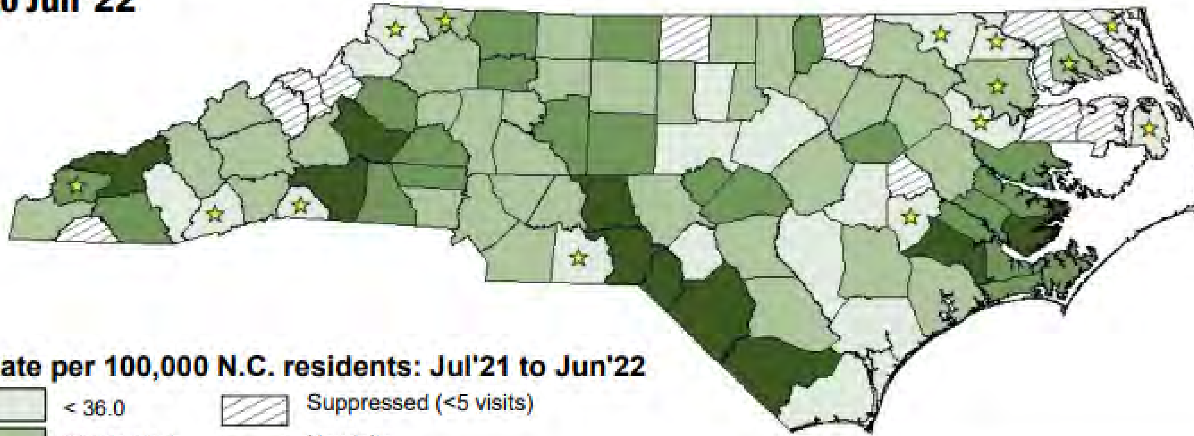
National Vital Statistics System 2021

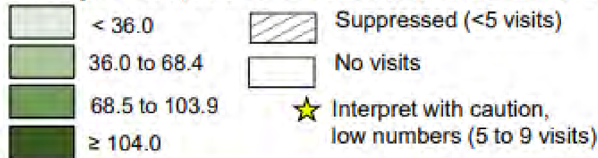
# Age-adjusted rates of drug overdose deaths involving stimulants, by type of stimulant: United States, 1999–2020



National Vital Statistics System 2021

## Last 12 Months Opioid Overdose ED Visits Rate by County of Residence: Jul'21 to Jun'22






*Provisional Data: 2021-2022 ED Visits*

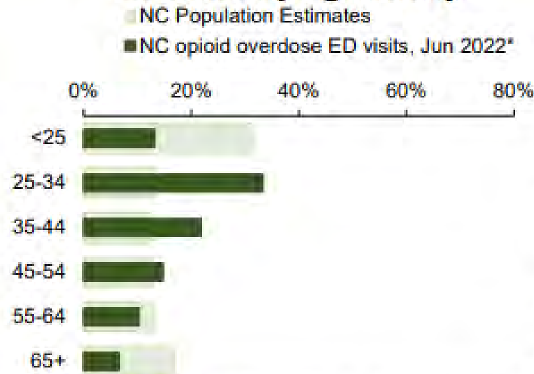
### Highest Rates of Opioid Overdose ED visits among Counties Last 12 Months: Jul'21-Jun'22

| County | Count | Rate^ |
|---|---|---|
| Jones | 17 | 180.5 |
| Montgomery | 47 | 173.0 |
| Pamlico | 20 | 157.2 |
| Richmond | 57 | 127.1 |
| Robeson | 163 | 124.8 |
| Rutherford | 81 | 120.8 |
| Swain | 16 | 112.1 |
| Columbus | 62 | 111.7 |
| Burke | 99 | 109.4 |
| Scotland | 37 | 106.3 |
| **Statewide** | **5,461** | **52.1** |

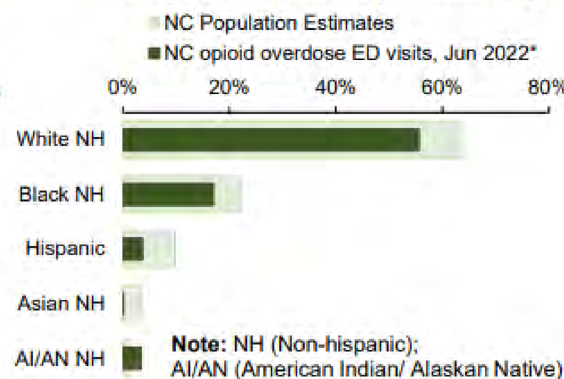
^Please note that rates are calculated using the last 12 months of data and 2020 population estimates. Counties listed in "Highest Monthly Rates of Opioid Overdose ED visits" table will likely change each month.

## Demographics of Opioid Overdose ED Visits Compared to Overall NC Population Estimates

### ED Visits by Age Group

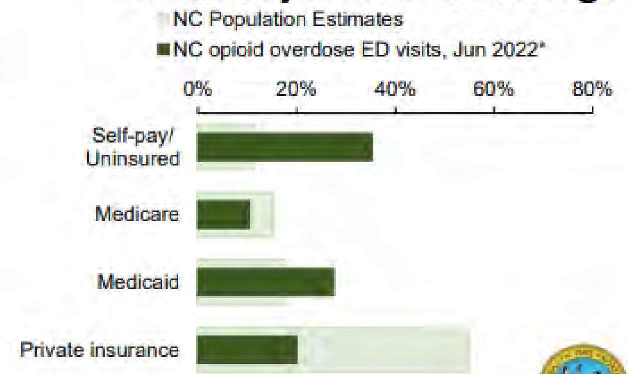



### ED Visits by Race/Ethnicity



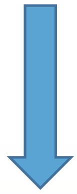

**Note:** NH (Non-hispanic); AI/AN (American Indian/ Alaskan Native)

### ED Visits by Insurance Coverage

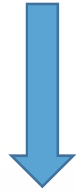



**Data Sources: ED Data**-NC DETECT is North Carolina's statewide syndromic surveillance system. ED visit data from NCDETECT are provisional and should not be considered final. For training on NCDETECT, contact amy_ising@med.unc.edu; **Population Data**-U.S. Census Bureau, http://quickfacts.census.gov; **Insurance coverage Data**-Kaiser Family Foundation estimates based on the Census Bureau's American Community Survey, 2008-2019, www.kff.org/other/state-indicator/total-population.
**Note:** Self-pay ED visits are compared to the uninsured overall population estimate category. *Provisional Data: 2021-2022 ED Visits*

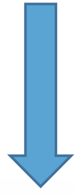
# Trends in North Carolina



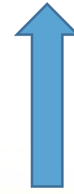
**10%**
reduction in ED visits for opioid related ODs
(2017-2018)



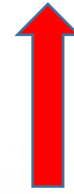
**5%**
decrease in unintentional opioid-related deaths
(2018)



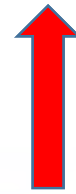
**27%**
reduction in opioid dispensing
(2017-2020)



**15%**
increase in prescriptions for drugs used to treat OUD
(2017-2019)



**5%**
increase in overdose related deaths
(2019)



**40%**
increase in overdose related deaths
(2020)

[1] SAMHSA, 2019
[1]NCDHHS 2018
3.NCDHHS 2020
3.NCDHHS 2021
4. NCDHHS 2022

# Prison System-Involved Overdose Risk[3]

- Over ⅔ of incarcerated individuals meet criteria for substance dependence or abuse [1]
- In NC the likelihood of OD post-release is 40x higher than general population [2]
- **US jails/prisons do not routinely offer MAT to incarcerated people**
- Leads to:

Interruption in treatment during incarceration

High return to use risk post-release

Vastly increased risk of overdose death following incarceration if denied access to MAT

- Stricter drug laws DO NOT improve drug use rates, overdose rates or recidivism, but DO increase costs[3]

[1] NCCHC, 2018
[2] Ranapurwala,2018
[3] Pew, 2018

# Opioid Use Disorder and the Criminal Justice System

1) What's the problem?
2) How did we get here?
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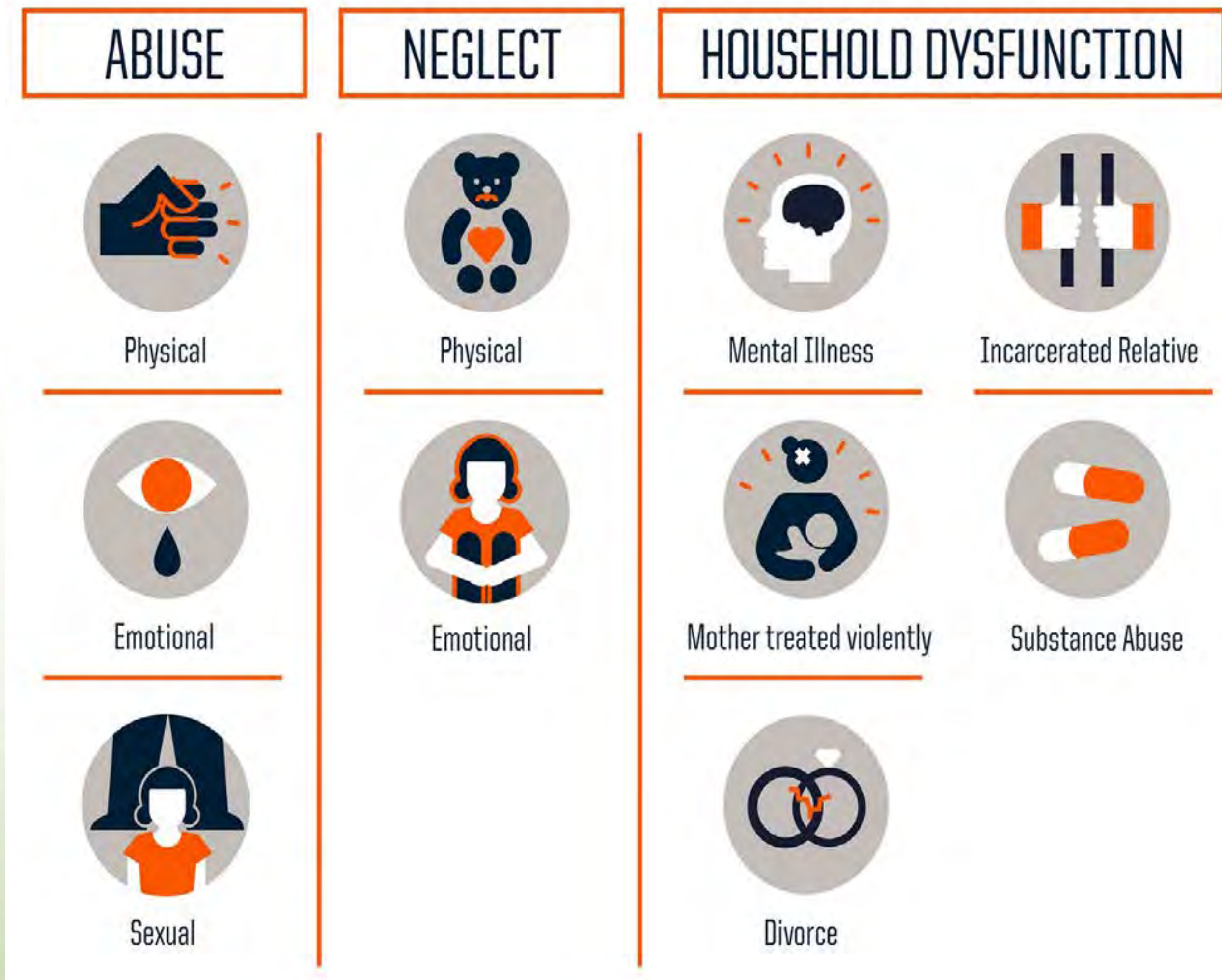
# How does substance use begin?[1-4]

Social, structural, and physiological factors contribute to increased risks for substance use, including:

- Chronic pain
- Behavioral health disorders
- Trauma
- Disenfranchisement (unemployment, poverty, stigma, discrimination, isolation)
- Vulnerability due to family history/life experiences
- **Prescribed or non-prescribed use**

[1]Hatcher A, Mendoza S, Hansen H 2018
[2]Hutchinson E, Catlin M, andrilla C, et al. 2014
[3]Singer M, Ziegler J 2017
[4]Singer M, Page J 2016

# Risk for a use disorder can be increased by traumatic experiences.




$^1/_3$ to $^1/_2$

**of drug use problems could be traced back to Adverse Childhood Experiences (ACEs)[2]**

1. Khoury 2010
2. The Truth About ACEs, Robert Wood Johnson Foundation.

# Why Do People Continue Using?[1]

- Desire to alleviate symptoms of **withdrawal**
  - Severe flu-like symptoms
- Cravings

[1]NIDA 2018
[2]Wise RA, Koob GF 2013

[1]

**DRUG DEPENDENCE**
Cycles of drug intoxication and early symptoms of withdrawal. Increasing allostatic load on Mu-modulated networks opposing primary drug effects.

**WITHDRAWAL**
Symptoms opposite to the acute actions of the opioid and include anxiety, panic attacks and dysphoria. Drug craving is reflective of a learned association between the relief of withdrawal symptoms and opioid drug-taking.

**LIFE STRESSOR**

**RELAPSE**
Triggered by craving induced by memory that relief of anxiety and dysphoria can be achieved by opioids.

Mental State
Mellow/euphoric
Normal
Anxious/Dysphoric

= OPIOID THERAPUTIC
= HEROIN INJECTION

1
10
20
200
205
Days

[1]Evans C, Cahill C 2016

# DSM-5 Criteria for Substance Use Disorders (SUD)

| Loss of control | Physiology | Consequences |
|---|---|---|
| • More than intended<br>  • Amount used<br>  • Time spent<br>• Unable to cut down<br>• Giving up activities<br>• Craving | • Tolerance<br>• Withdrawal | • Unfulfilled obligations<br>• Interpersonal problems<br>• Dangerous situations<br>• Medical problems |

Formerly "dependence" (Loss of control, Physiology)

Formerly "abuse" (Consequences)

# Opioid Use Disorder and the Criminal Justice System

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# Treatment of Opioid Use Disorder in Adults

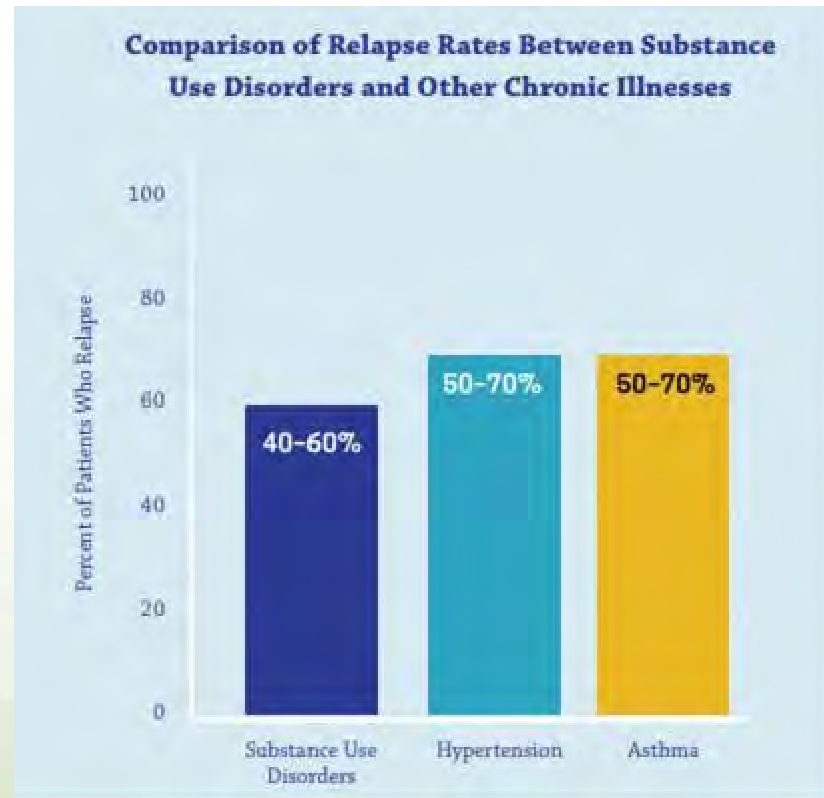
- Detox and abstinence
- Methadone
- Buprenorphine
- Naltrexone injection

# Opioid Use Disorder Treatment Approaches & Rates of Adherence

| Treatment | Rate of Adherence |
| --- | --- |
| Buprenorphine | ~46-54%[1-3] |
| Methadone | ~43-53%[3-4] |
| Naltrexone | ~35%[5] |
| Detox then abstinence | ~7-13%[1,6] |


[1]Weiss R, Rao V 2017
[2]Mintzer Il, Eisenberg M, Terra M, et al. 2007
[3]Potter J, Marino E, Hillhouse M, et al. 2013
[4]Strain E, Stitzer M, Liebson I 1993
[5]Lee J, Nunes E, Novo P, et al. 2018
[6]Tuten M, DeFulio A, Jones H, et al. 2012

# What if We See Substance Use Disorders as a Chronic Illness?[1]




[1]NIDA 2018

# Buprenorphine

***Partial agonist*** at mu receptor

- Comparatively minimal respiratory suppression and no respiratory arrest when used as prescribed

***Long acting***

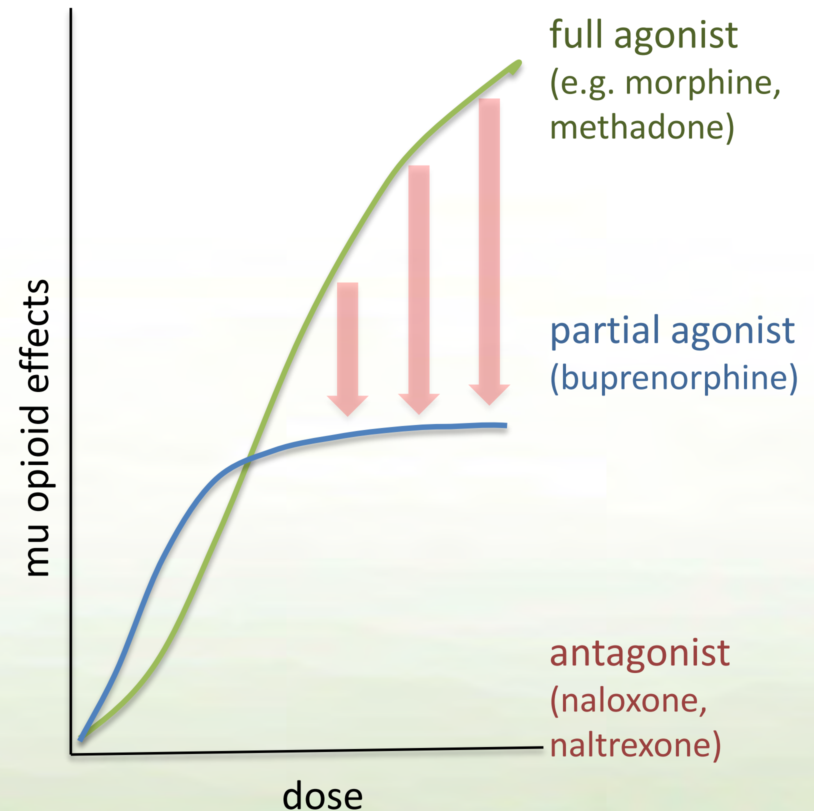
- Half-life ~ 24-36 Hours

***High affinity*** for mu receptor

- *Blocks* other opioids
- *Displaces* other opioids
  - Can precipitate withdrawal

***Slow dissociation*** from mu receptor

- *Stays on receptor for a long time*




[1] SAMHSA 2018
[2] Oman & Keating, 2009

# How Does (Buprenorphine-Naloxone) Work?[1]

- Sublingual
- Partial Agonist
  - Ceiling Effect
  - Most patients on 8 to 16mg/day (dosing different for perinatal)

- What is the maximum mg/day?
  - 24mg/day

- How does the naloxone component in the dual product work?
  - Blocks potential opioid analgesic effects of buprenorphine alone
  - Thought to discourage non-therapeutic/illicit use
  - Thought to reduce diversion of product away from patient to illicit market

[1]National Alliance on Mental Illness 2018

# Methadone

**_Full Agonist_ at mu receptor**

**_Long acting_**

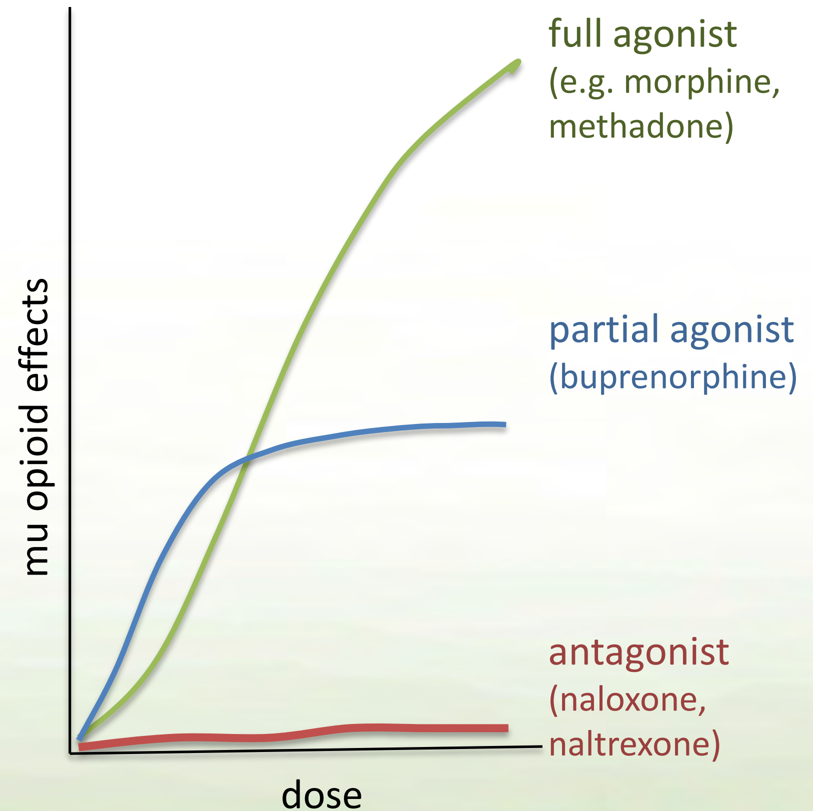
- Half-life ~ 15-60 Hours

**_Weak affinity_** for mu receptor

- *Can be displaced by partial agonists (e,g. burprenorphine) and antagonists (e.g.naloxone, naltrexone),* which can both precipitate withdrawal

**_Monitoring_**

- Significant respiratory suppression and potential respiratory arrest in overdose
- QT prolongation




[1]CSAT 2005

# Naltrexone

***Full Antagonist*** at mu receptor

- Competitive binding at mu receptor

***Long acting***

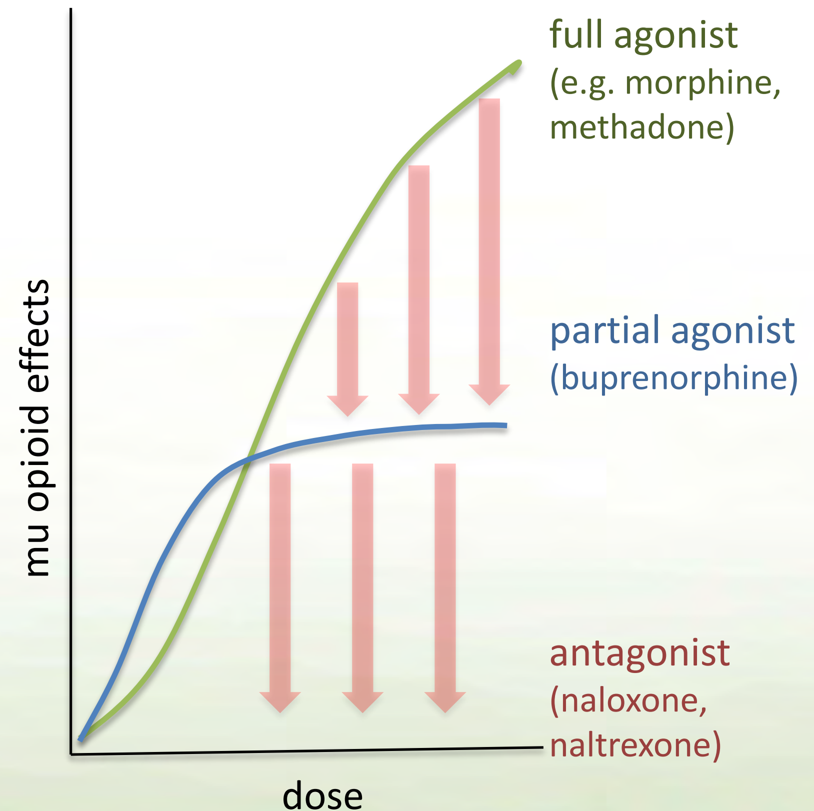
- Half-life:
  - Oral ~ 4 Hours
  - IM ~ 5-10 days

***High affinity*** for mu receptor

- *Blocks* other opioids
- *Displaces* other opioids
  - Can precipitate withdrawal

***Formulations***

- *Tablets: Revia®: FDA approved in 1984*
- *Extended-Release intramuscular injection: Vivitrol®: FDA approved in 2010*




[1]SAMHSA 2018

| Buprenorphine | Methadone | Naltrexone |
| --- | --- | --- |
| • Who are pregnant<br>• Mild to severe OUD<br>• Patients able to attend visits with primary care<br>• Patients on multiple medications (i.e. HIV therapy) | • Who need the structure of daily observed dosing<br>• Who were on very high doses of opioids for long durations of time<br>• Who are pregnant<br>• Moderate to Severe OUD<br>• Patients on high doses of opioids | • Patients off of opioids for 7-10 days<br>• Persons unable to be on agonists (i.e. job requirements such as RN, MD) |

[1]SAMHSA 2018
[2]Providers Clinical Support System 2019

# Why MOUD?

- The use of the opioid agonists methadone and buprenorphine reduces:[1,2]

- Those receiving medications as part of their treatment are **75% less likely to die** due to their addiction than those not receiving medication[2]

[1]NIDA 2018
[2]ASAM 2013
[3]NIDA,2019

# Economic Impact of SUDs

- Treatment is less expensive than alternatives

**Approximate average cost for 1 full year:**

| Buprenorphine treatment | Methadone treatment | Naltrexone treatment | Imprisonmen t |
|---|---|---|---|
| **$6,000** per patient[1] | **$6,500** per patient[1] | **$14,000** per patient[1] | **$36,000** per person[2] |

- Every $1 invested in addiction treatment returns a yield of **$4 to $7** in reducing drug related crimes, criminal justice and theft[3]
  - Not including healthcare costs
- MAT in jails/prisons can improve recidivism, re-incarceration, parole violation, crime, violence and suicide within jail/prison

[1]ASAM 2015
[2]Federal Register 2018
[3]NIDA 2016

# Prescriber Workforce Deficit & Barriers to Care

- In 2017, **70%** of people with an OUD who needed treatment did not get it[1]

[1]SAMHSA 2018

# Common Concerns with MOUD

- "You are just substituting one addiction for another"
- "Addicts are hiding in MOUD programs"
- "Is my loved one going to be on this medication forever?"
- "Patients are abusing methadone/buprenorphine"

# Opioid Use Disorder and the Criminal Justice System

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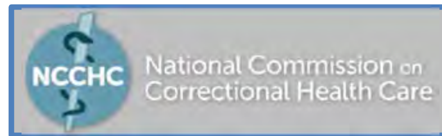
# NCCHC Endorses Use of MOUD in correctional settings

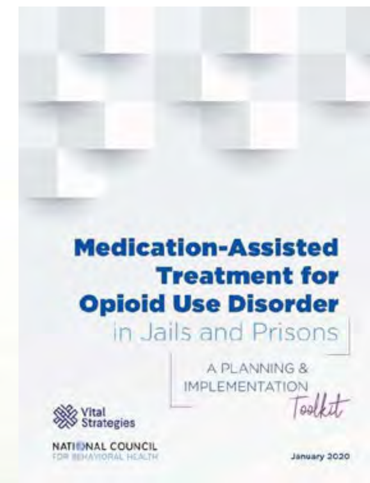



**2016 Position Statement: Substance Use Disorder Treatment for Adults and Adolescents**

- Continuation of opioid agonist treatment treats the physiological and psychological symptoms of dependence and minimizes risk from opioid withdrawal, failure to reinitiate treatment, and relapse due to unexpected inmate release
- Inmates not receiving MAT prior to entry, or whose MAT is discontinued while incarcerated (which is not preferred), should be offered MAT prerelease when postrelease continuity can be arranged

*https://www.ncchc.org/substance-use-disorder-treatment-for-adults-and-adolescents*

*Key Resource*




Medication-Assisted Treatment for Opioid Use Disorder in Jails and Prisons: A Planning & Implementation Toolkit

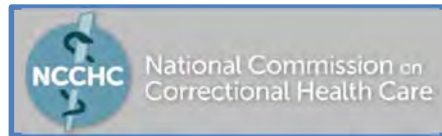
The National Council for Behavioral Health

*https://www.thenationalcouncil.org/wp-content/uploads/2020/09/MAT_in_Jails_Prisons_Toolkit_Final_12_Feb_20.pdf?daf=375ateTbd56*

# MOUD is Effective in Correctional Settings

- After expanding MOUD statewide, the Rhode Island Department of Corrections saw a **61%** reduction in post-correctional overdose death rates in the first year.
- A study of >12,000 people in England found that a prison-based MOUD program was linked with a **75% reduction in all-cause mortality and an 85% reduction in overdose deaths** in the first month after release.
- Another study showed that access to MOUD during the first four weeks in prison, was associated with a **94% reduction in risk of death**, primarily associated with a reduction of suicide deaths among inmates.

# NCCHC Endorses Use of MOUD in correctional settings

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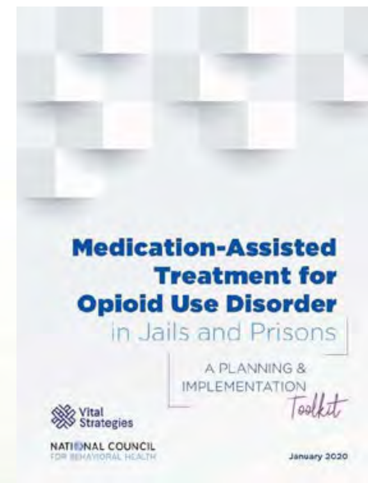


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# What the Literature Shows[1]

Observed decrease in behaviors related to activity in the drug subculture for offenders receiving MAT

The prison MAT program did not cause any pressure within the prison social structure.

Prison officers reported a significantly reduced rate of conflicts amongst participating inmates.

Violence, security breaches, and diversion surrounding the medication did not occur.  In fact, personnel reported MAT participants were easier to handle than non-participants.

The MAT program did not cause non-OUD inmates to demand access to the medication.

[1]Stallwitz 2001

# Naloxone Distribution[1]

- Education about and provision of naloxone to at-risk individuals have been associated with:
- **30% to 45%** decrease in opioid overdose death rates
- Reduction in heroin consumption
- Reductions in opioid-related ED visits

[1]Green T, Case P, Fiske H, et al. 2017

# PEER SUPPORT

Utilizes persons with lived experience to engage with patients with mental health, substance use, or other medical disorders.

Low barrier, interpersonal relationship building, outreach, community resource linkage… and more!

Helps empower those with lived experience as an asset to help others struggling with recovery

Addresses internalized stigma/bias for patients, and addresses cultural stigma/bias for healthcare worker-learners like you!

>50% relative risk reduction of opioid overdose and >50% relative risk benefit of MOUD initiation!

Winhusen T, Wilder C, Kropp F, Theobald J, Lyons MS, Lewis D. A brief telephone-delivered peer intervention to encourage enrollment in medication for opioid use disorder in individuals surviving an opioid overdose: Results from a randomized pilot trial. Drug Alcohol Depend. 2020 Nov 1;216:108270. doi: 10.1016/j.drugalcdep.2020.108270. Epub 2020 Sep 1. PMID: 32911132; PMCID: PMC7462596

# Rates of Use vs. Rates of Incarceration

- More white people use illicit drugs, yet huge disparity in rates of incarceration
  - Nearly **80%** of people in **federal prison** and almost **60%** of people in **state prison** for drug offenses are **black or Latinx**[2]

| Race/ethnicity | Illicit Drug Use in Lifetime among Persons Aged 12 or Older (2018)[1]: | Percentage of US population[3] |
|---|---|---|
| White | 54.5% | 60.4% |
| Black or African American | 45.9% | 13.4% |
| Hispanic or Latinx | 37.7% | 18.3% |

[1] SAMHSA 2019
[2] Drug Policy Alliance 2019
[3] US Census, 2019

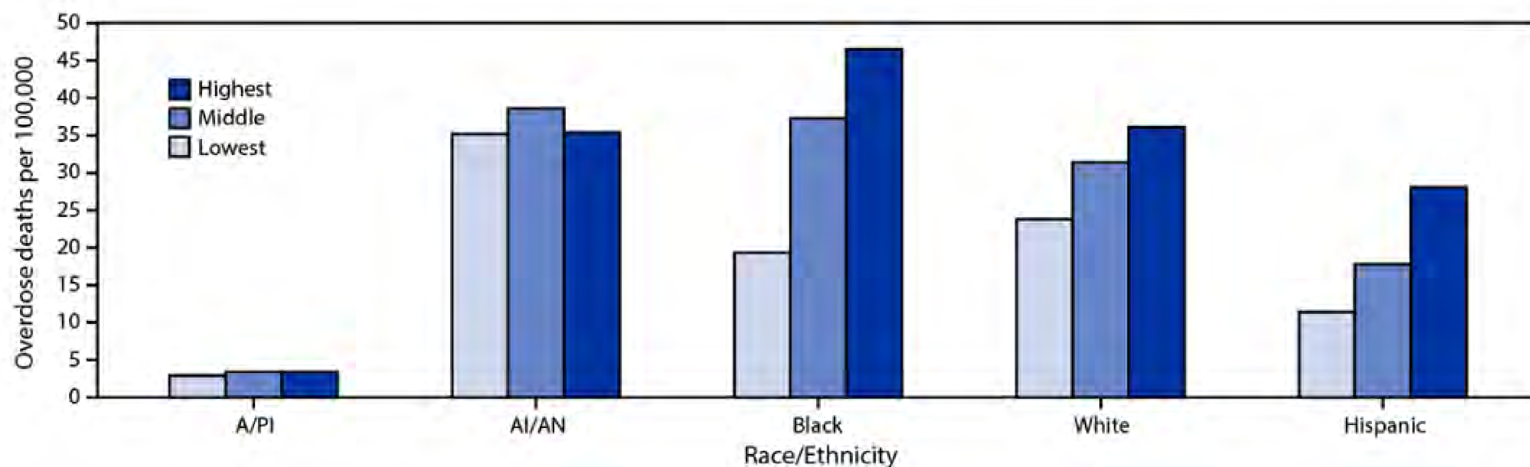
# *Vital Signs*: Drug Overdose Deaths, by Selected Sociodemographic and Social Determinants of Health Characteristics — 25 States and the District of Columbia, 2019–2020

## Results

From 2019 to 2020, overall drug overdose death rates increased in 25 states and DC; the largest increases occurred among certain racial/ethnic minority populations. Relative rate increases were highest among Black (44%) and AI/AN persons (39%) (Table 1). Among White persons, the rate increased by 22%. Within racial/ethnic groups, overdose death rates also varied by age. Black persons aged 15–24 years experienced the largest relative rate increase from 2019 to 2020 (86%). Among AI/AN persons, the highest relative rate increase occurred among those aged 25–44 years (49%). Among White persons, those aged 15–24 years experienced the largest relative rate increase (34%).

When stratified by sex and age group, higher overdose death rates occurred among older Black males, with the highest rate in 2020 among those aged 45–64 years (124.9) (Supplementary Table, https://stacks.cdc.gov/view/cdc/118656). In addition, rates among Black males aged ≥65 years were nearly six times as high as those among White males of the same age in 2019 (35.7 versus 6.2), increasing to nearly seven times as high in 2020 (52.6 versus 7.7). Among AI/AN males, those aged

FIGURE 1. Age-adjusted rates* of drug overdose deaths, by race/ethnicity† and income inequality ratio§ — 25 states and the District of Columbia,¶ 2020



# Safe Prescribing Resources

## Treating Pain Safely | Resources for Providers

Guidelines • Quick Reference Guides • Patient Handouts

We've compiled a list of the best resources in pain management, opioid prescribing, and patient education. Each listing has the authoring body, and the title is a link to a downloadable pdf.

Full permission is granted to make multiple copies of the government publications (CDC and SAMHSA) and the documents created by MAHEC.

### Overview and Guidelines for Providers

- Quality Improvement and Care Coordination: Implementing the CDC Guideline for Prescribing Opioids for Chronic Pain | CDC
- Guidelines for Prescribing Opioids for Chronic Pain | CDC
- Prescribing Opioids for Chronic Pain Pocket Guide | Turn the Tide Rx, CDC
- Assessing Benefits and Harms of Opioid Therapy | CDC
- Information for Prescribers | SAMHSA
- NC CSRS Registration Step by Step Guide | North Carolina Medical Board

### Additional Guidelines prepared by MAHEC

## Caring for Patients with Opioid Use Disorder: Policies, Procedures & Resources Manual

https://pub.mahec.net/sites/MatDownloads/add

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