

Addressing Opioid Use Disorders in Criminal Justice: Medication- Assisted Treatment

Lily Gleicher, MS, PhDc

Research Analyst, Illinois Criminal Justice
Information Authority

Key Topics

- Defining Substance Use Disorders (SUDs) & Opioid Use Disorders (OUDs)
- Discussing Stigma
- Medication-Assisted Treatment (MAT)
- MAT Efficacy (Justice-Involved Populations)
- MAT Challenges and Concerns

First...

TEXT ICJIACIC194 TO 22333 TO JOIN

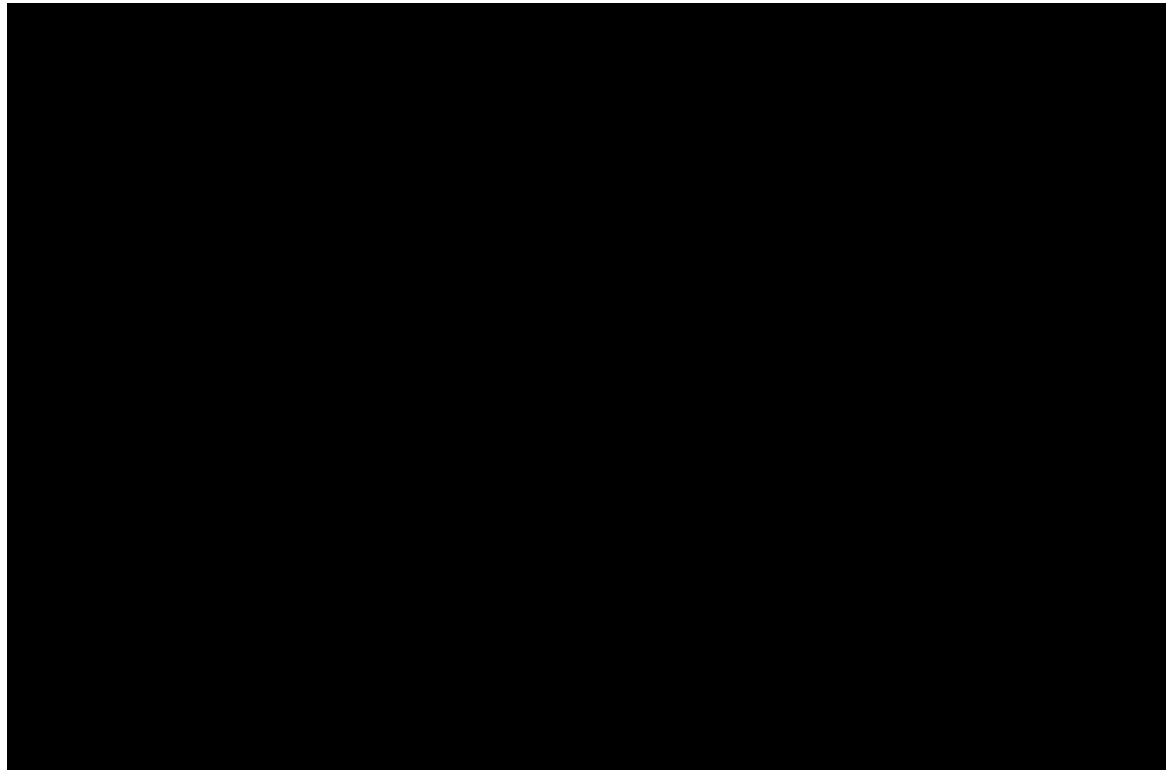
USED TO POLL AUDIENCE ABOUT DIFFERENT
TOPICS THROUGHOUT THE PRESENTATION

ANONYMOUSLY.

Opioid use disorder (OUD) is a moral **FALSE!** issue.

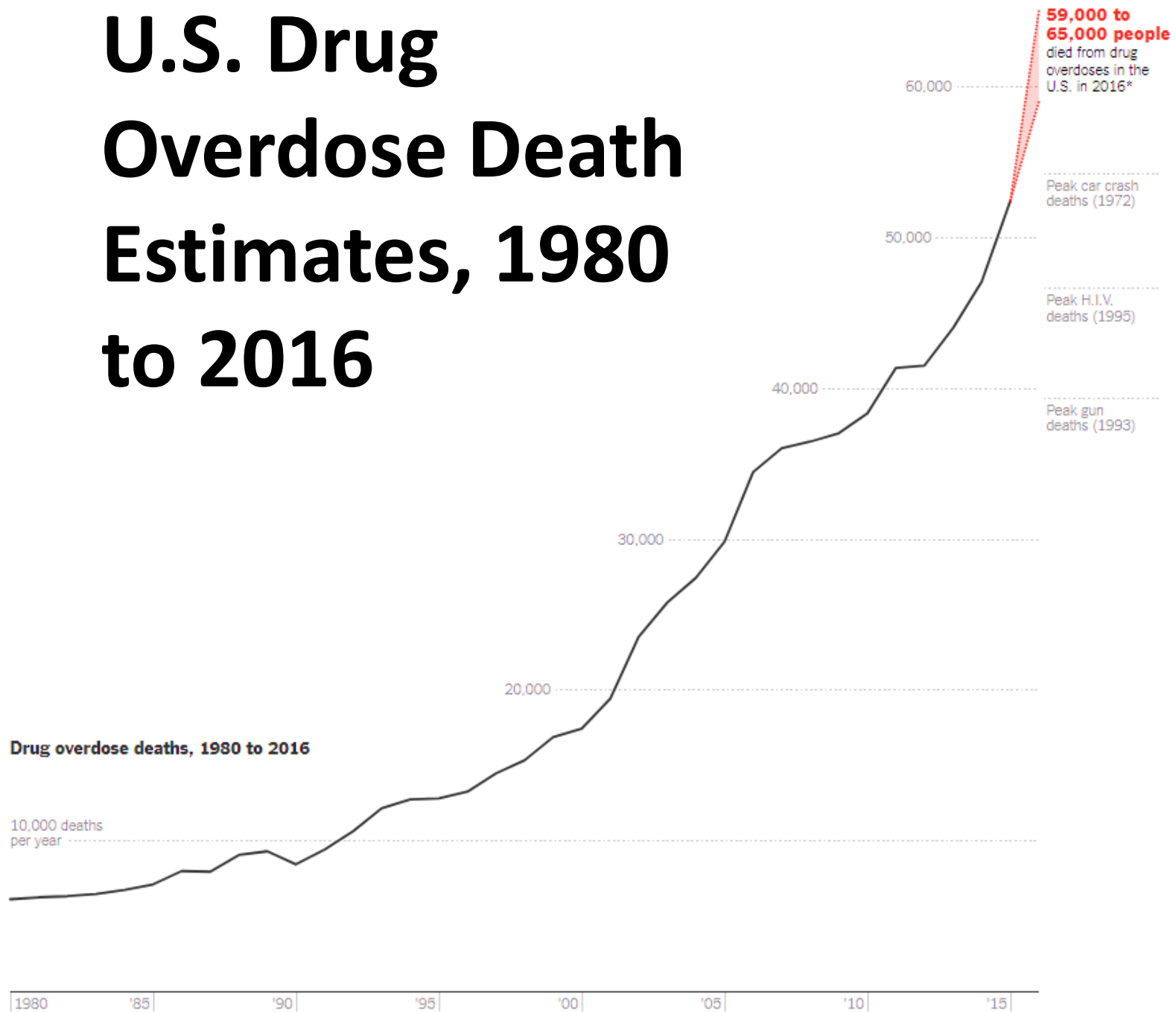
- **Chronic, relapsing condition**
- Despite negative consequences feel **compelled** to continue
- **Brain disease**—affects brain's anatomy and chemistry
- Risk factors—genetic, environmental, and behavioral

Examining Our Biases



SAMHSA (2018)

U.S. Drug Overdose Death Estimates, 1980 to 2016



Drug overdose deaths, 1980 to 2016

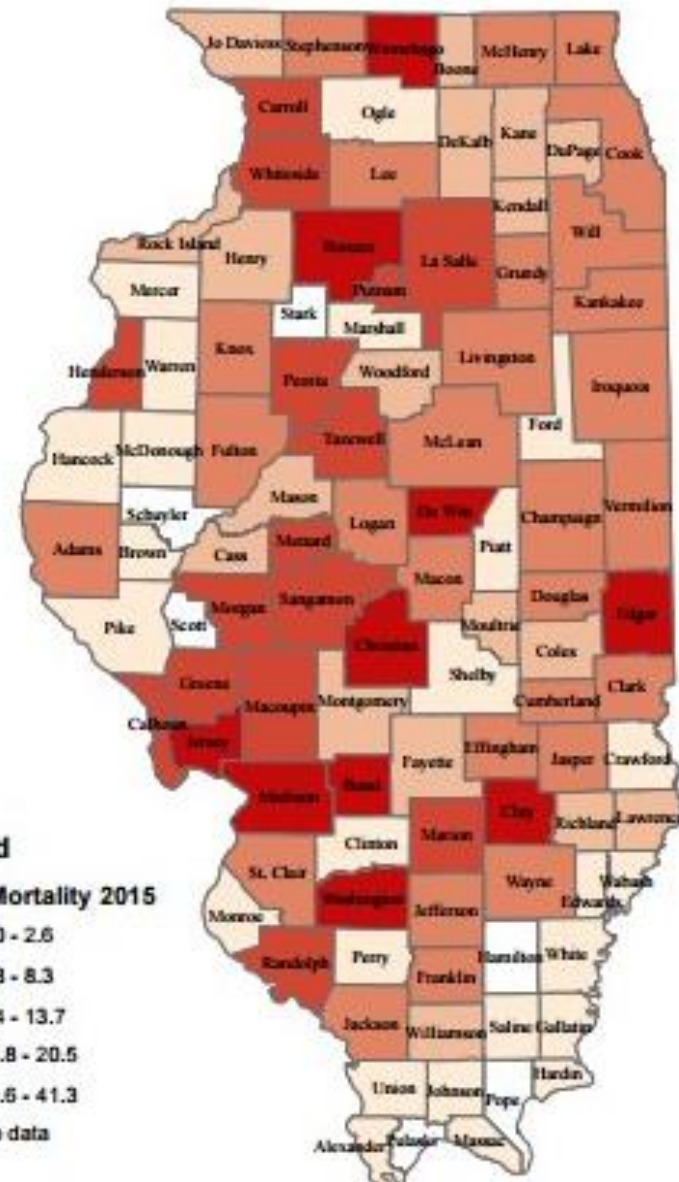
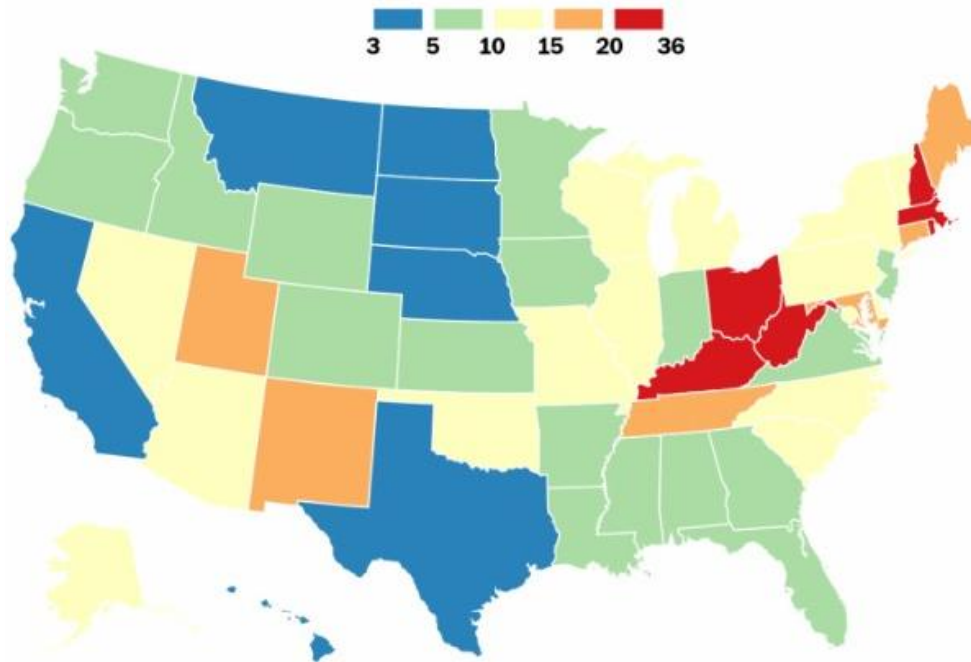
10,000 deaths
per year

*Estimate based on preliminary data

Source: NYT 2017

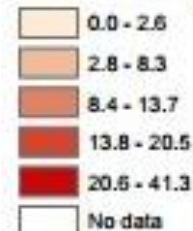
Opioid Death Rate, 2015

Per 100,000 pop.



Legend

Crude Mortality 2015





WHAT ARE SUBSTANCE USE DISORDERS AND OPIOID USE DISORDERS?

Substance Use Disorders

... “occur when the recurrent use of alcohol and/or drugs causes **clinically and functionally significant impairment...**” (SAMHSA, 2015)

- impaired control
- social impairment
- risky use
- pharmacological criteria

SUDs are characterized by...

- Inability to consistently Abstain
- Impairment in Behavioral control
- Craving or increased “hunger for drug or rewarding experience
- Diminished recognition of one’s behavior and impact on self and others
- Dysfunctional Emotional response

ASAM

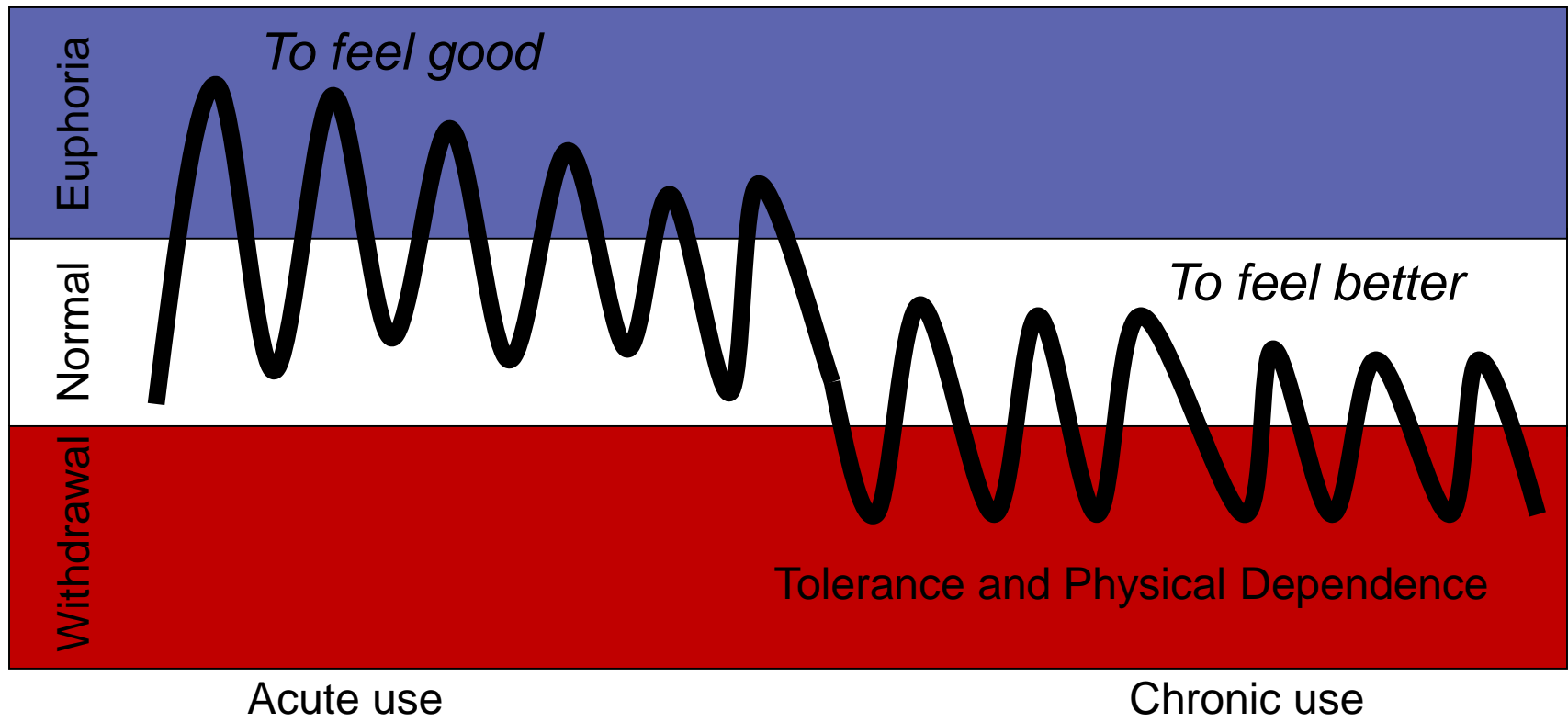
Continued regular use of opioids will lead to...

- **Tolerance** or diminished effects of same dose of drug over time
- **Physical dependence-** withdrawal symptoms upon abrupt cessation of use

With high-dose opioid use, some may be at risk for:

- **Opioid use disorders** diagnosed by a set of behaviors as outlined by clinical diagnostic criteria

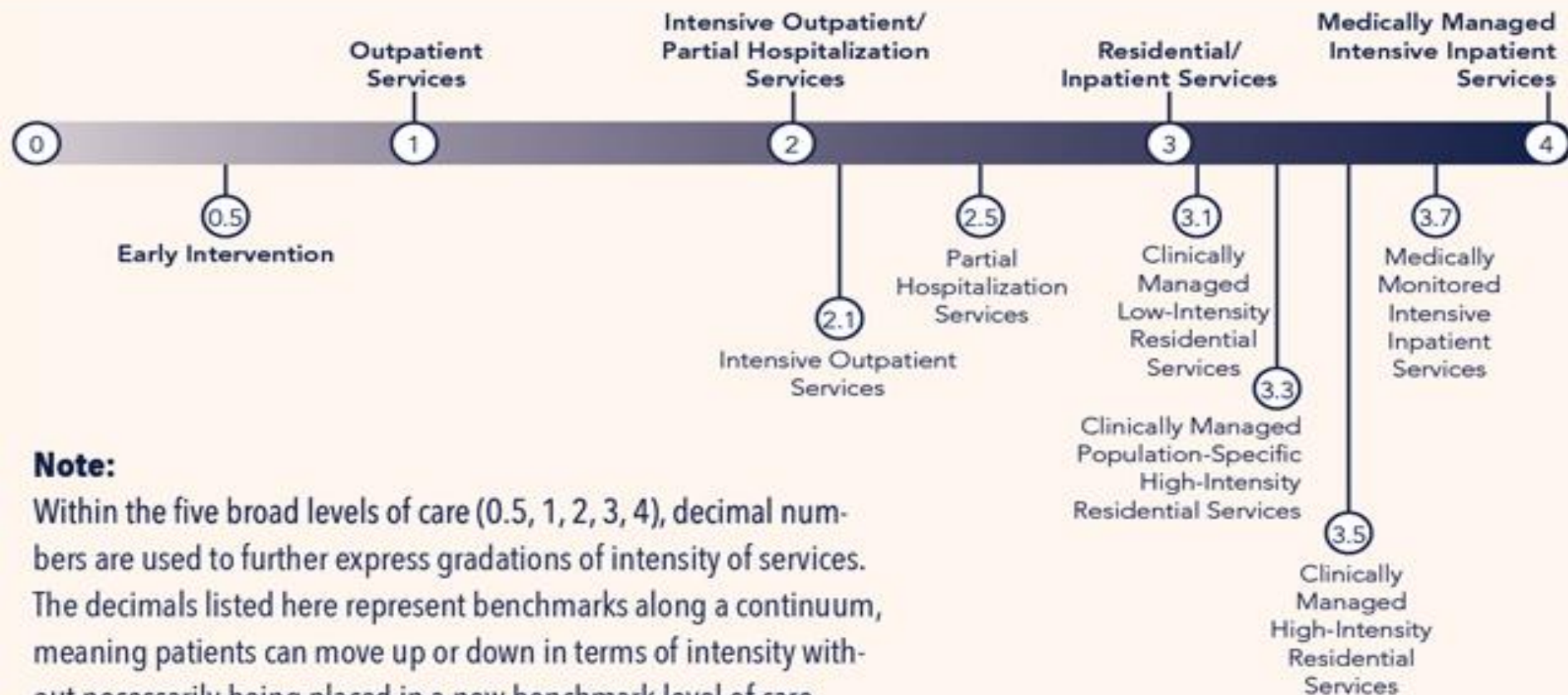
Chronic Opioid Use



Source: SAMHSA

ASAM Level of Care

REFLECTING A CONTINUUM OF CARE



Note:

Within the five broad levels of care (0.5, 1, 2, 3, 4), decimal numbers are used to further express gradations of intensity of services. The decimals listed here represent benchmarks along a continuum, meaning patients can move up or down in terms of intensity without necessarily being placed in a new benchmark level of care.









Important to note...

Detox is **NOT** treatment and actually **increases risk** of overdose without linkage to next level of care

Public Health Approach

- Addressing frequent, recurring problem throughout population
- Can be:
 - Prevented
 - Treated
 - Managed
- Based on scientific evidence
- Patient-centered care

Evidence-Based Addiction Treatment: National Principles of Care

	1	Universal screening for SUDs across medical care settings
	2	Rapid access to appropriate SUD care
	3	Personalized diagnosis, assessment, and treatment
	4	Continuing long-term outpatient care
	5	Concurrent, coordinated care for physical and MH
	6	Access to fully trained BH professionals
	7	Access to FDA-approved medications
	8	Access to non-medical recovery support services

WHAT IS MEDICATION-ASSISTED TREATMENT (MAT)?

Using medication for OUD is just replacing one drug with another.

FALSE!

- Buprenorphine (e.g. Suboxone) and methadone are *highly studied, validated medical therapies*
- All major health organizations support, acknowledge methadone and buprenorphine (Suboxone) as the “gold standard” for treating OUDs (and AUDs)
 - WHO, SAMHSA, NIDA, UNODC, UNAIDS, CDC
 - WHO indicates methadone and buprenorphine on its list of essential medicines for adults
- Dosage does not result in a “high”

WHO (2009); D'Annu et al. (2014); Bellin et al. (1999); ASAM (2015)

Abstinence is the **FALSE!** only option for successful or “real” recovery.

- Treatment and recovery should be an **individualized** process
- **Most effective** OUD treatment includes:
 - Medication
 - Behavioral therapy (CBT), individual counseling
 - Peer recovery support*
- Not all individuals will want to use medication—this is okay!
 - Decision should be individualized; medication type should too, in collaboration with medical provider

Schuckit (2016); Pierce et al. (2015); Mattick et al. (2009); WHO (2009); Gibson et al. (2008)

Medication to treat OUD should only be used for a short or limited amount of time.

FALSE!

- **Fewer than 90 days** is **not** associated with positive outcomes
- Long enough to produce **stable behavioral change**
- Services should be **tailored** to the individuals
- Individuals on maintenance treatment **longer** are **less likely** to relapse

SAMHSA (2012); Gibson et al. (2008); Amato et al. (2005)

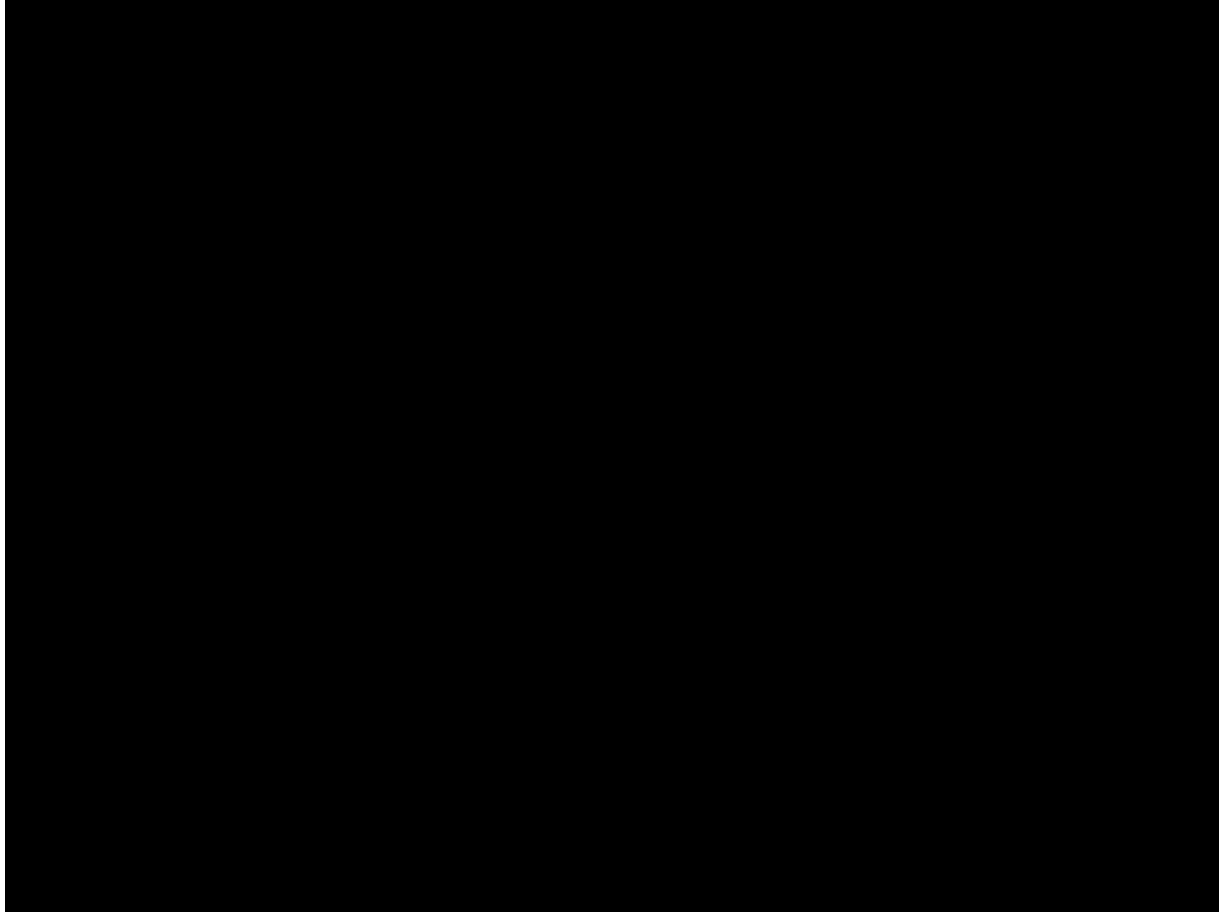
Medications like methadone and buprenorphine (Suboxone) are commonly diverted.

FALSE!

- Diversion more common among prescription pain relievers
- Buprenorphine
 - **Less than 2%** of all reported drug-related incidents in 2016 in U.S. (DEA-NFLIS)
- Methadone
 - **Less than 1%** of all reported drug-related incidents in 2016 in the U.S.
- Diversion may signal need for MAT; self-treating
 - Withdrawal sickness
 - Weaning off opioids
 - Dependence, pain, depression
- For jails/prisons—largely driven by supplies smuggled in by friends, family, or correctional staff

DEA-NFLIS 2016 (2017); Tompkins et al. (2009)

Medication-Assisted Treatment



Have you worked with clients who follow an abstinence-based treatment program?

Yes

No

Have you worked with clients who use methadone or buprenorphine (Suboxone) as part of treatment?

Yes

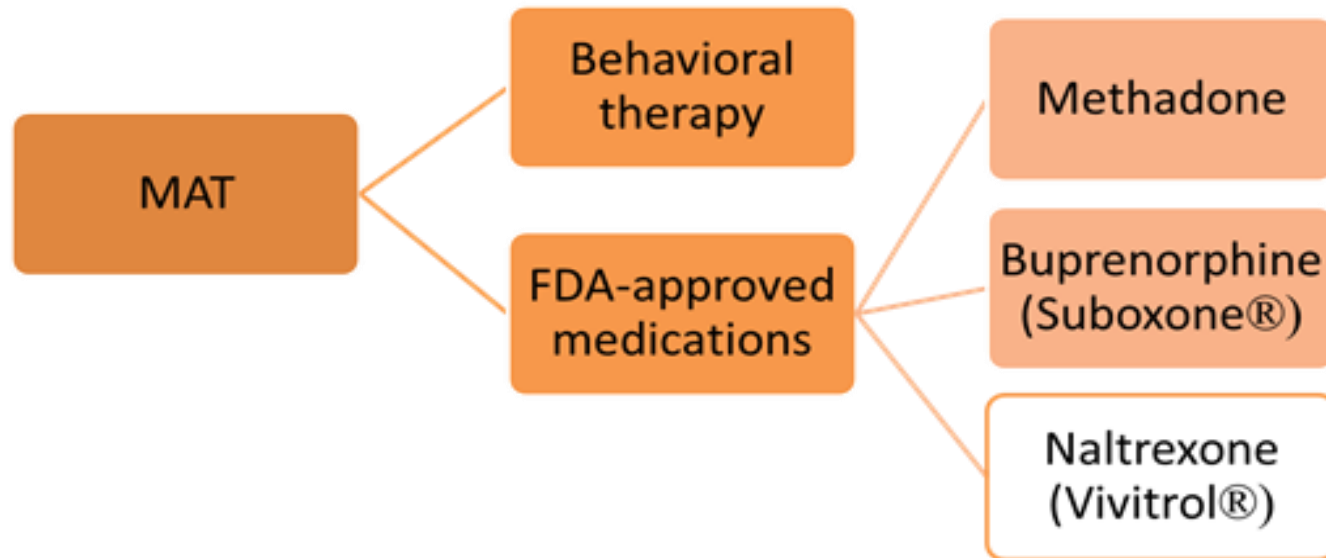
No

Have you worked with clients who use naltrexone (Vivitrol) for their treatment program?

Yes

No

Medication-Assisted Treatment



MAT \neq Medically managed withdrawal or detoxification

Source: ICJIA

Medication Types

Medication	Mechanism	Formulations	Regulations/Availability
Methadone	Agonist	Oral -wafer, pill, liquid	Designated, federally regulated Opioid Treatment Programs (OTPs)
Buprenorphine	Partial agonist	-Sublingual tablets or film -Buccal film -Subdermal implant -1-month injection	Requires waiver; Office-based treatment
Naltrexone	Antagonist	Intramuscular -1-month injection	Office-based treatment, no regulations

Figure 1

How OUD Medications Work in the Brain



Methadone



*Full agonist:
generates effect*

Buprenorphine



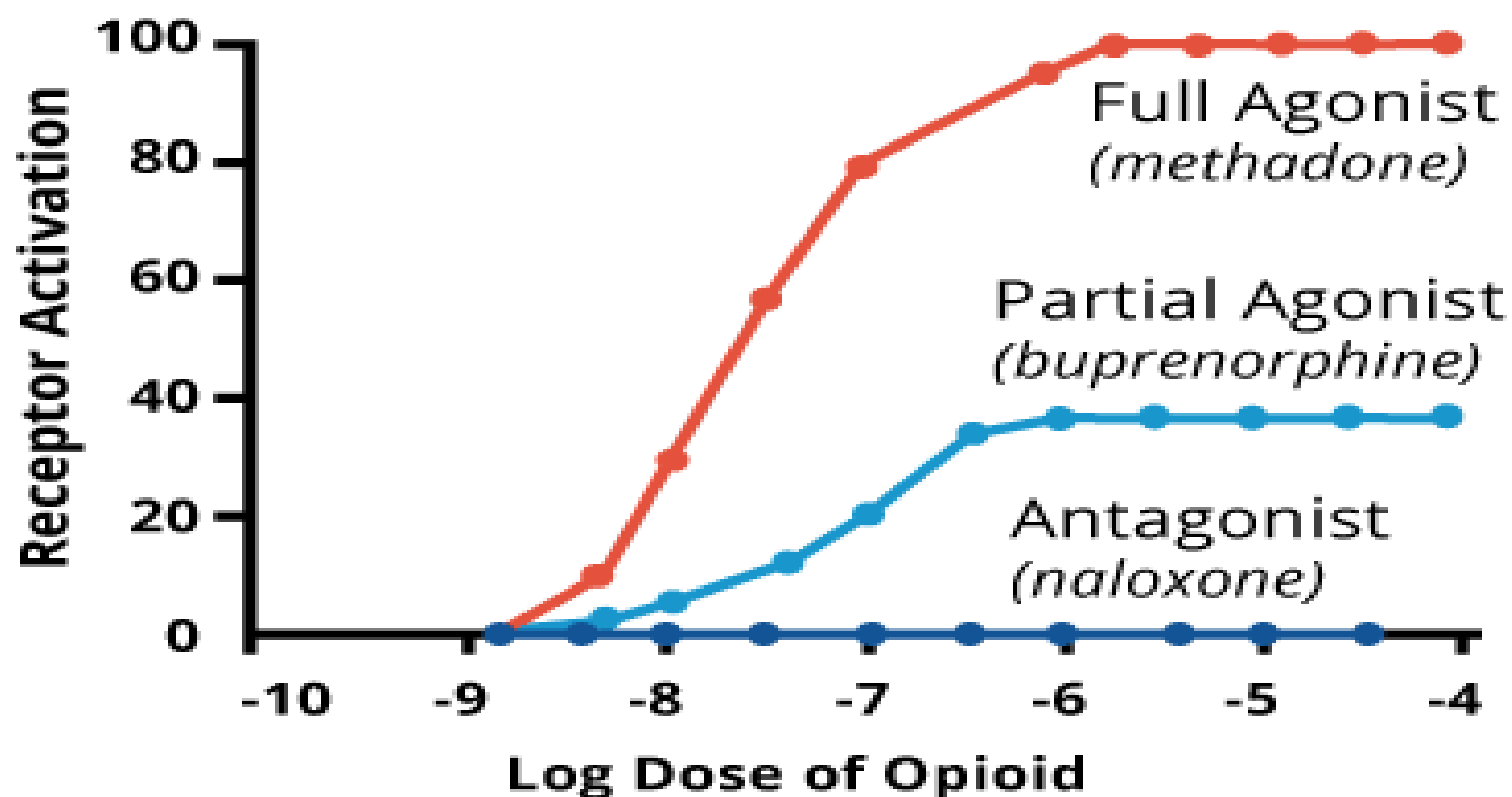
*Partial agonist:
generates limited effect*

Naltrexone



*Antagonist:
blocks effect*

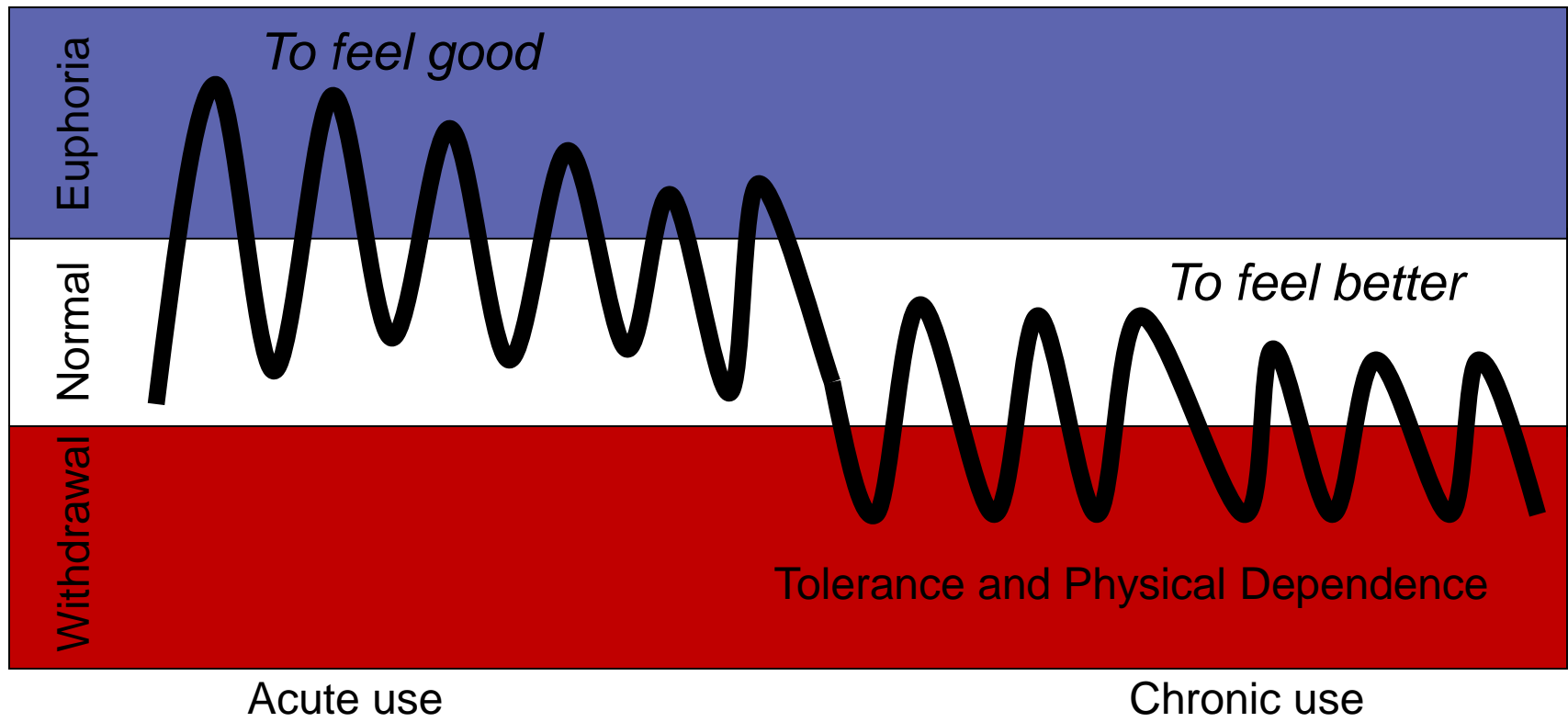
Receptor Activation Full Agonist, Partial Agonist, Antagonist



© Clinical Tools, Inc

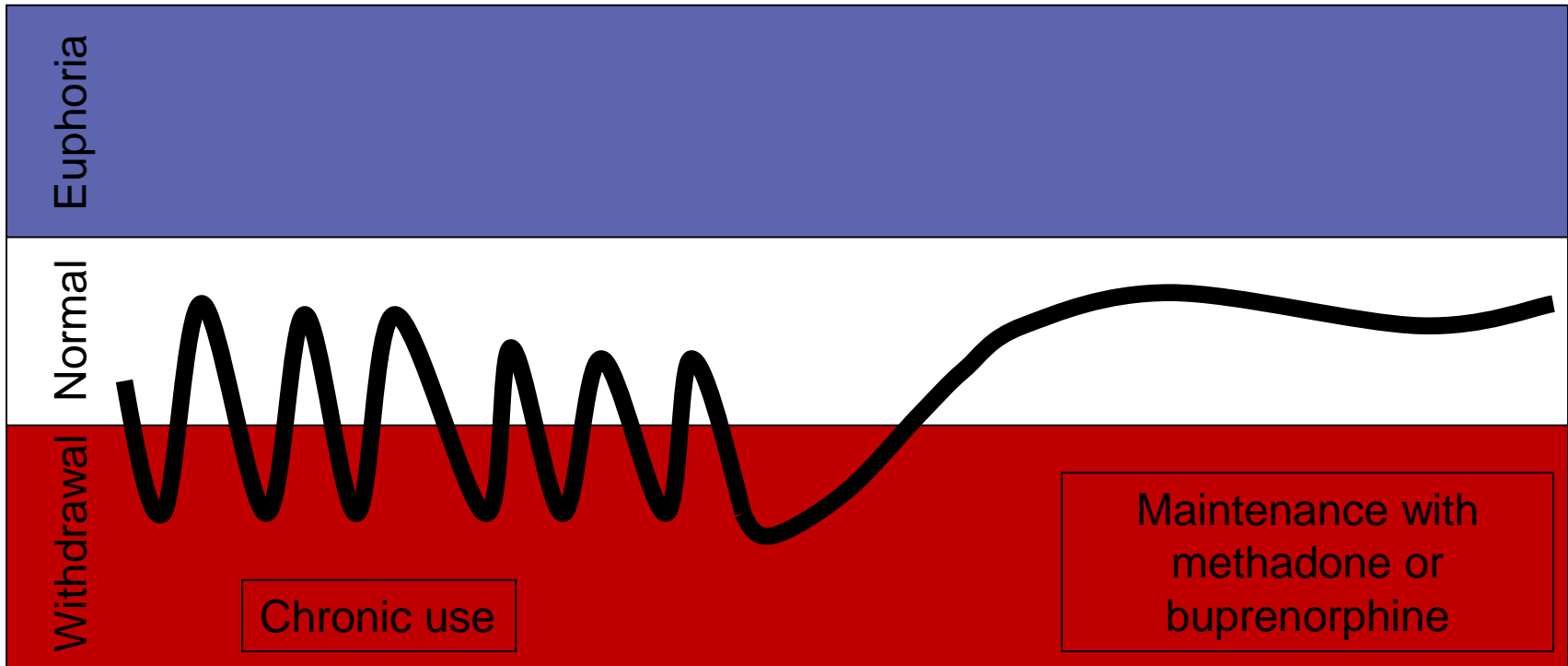
Source: SAMHSA, 2001

Chronic Opioid Use



Source: SAMHSA

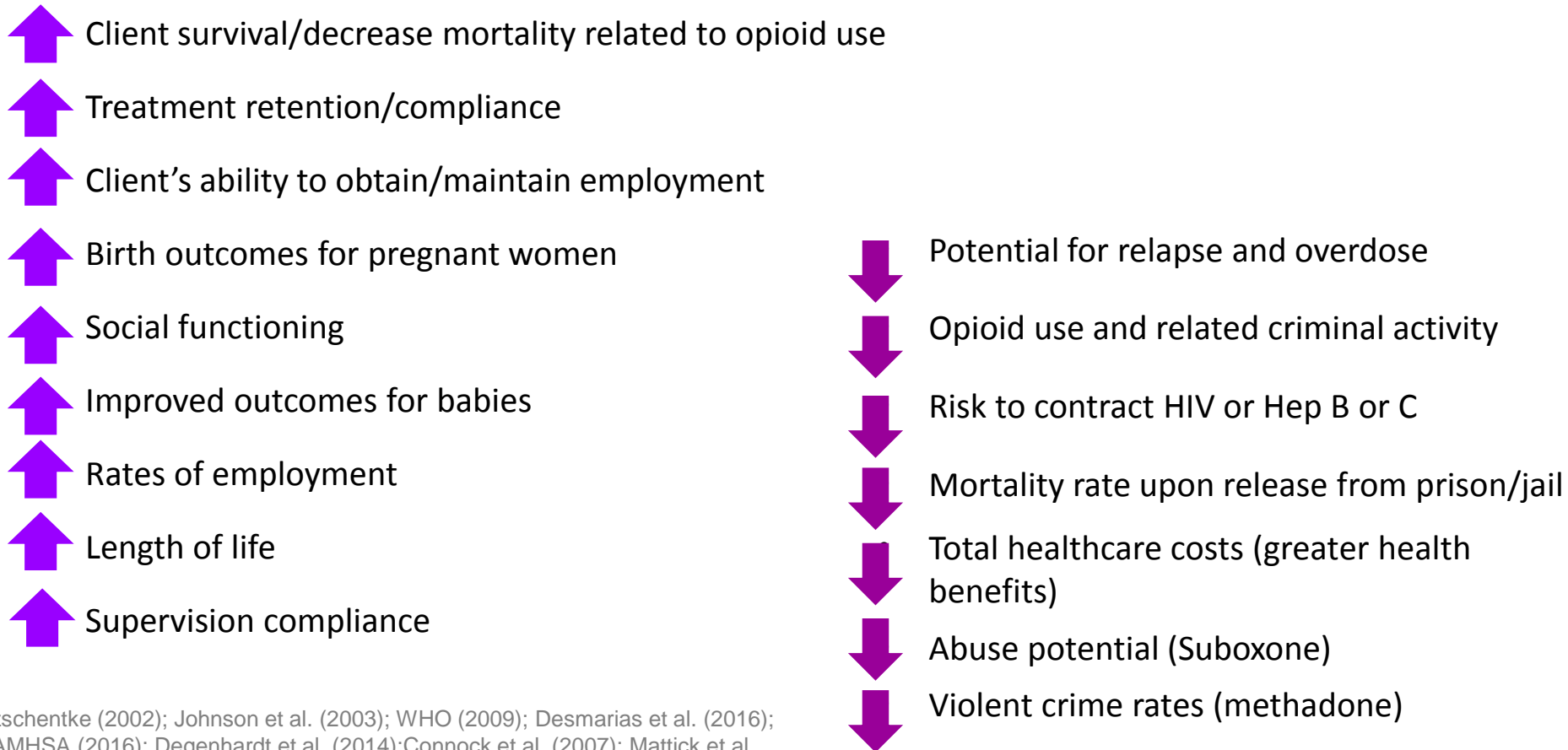
Maintenance Therapy



Source: SAMHSA

IS IT EFFECTIVE?

Benefits of Methadone & Buprenorphine



Tzschentke (2002); Johnson et al. (2003); WHO (2009); Desmarais et al. (2016); SAMHSA (2016); Degenhardt et al. (2014); Connock et al. (2007); Mattick et al. (2009); Fiellin et al. (2006); Clark et al. (2014)

Benefits of Naltrexone



Days abstinent



Treatment retention



Rate of relapse over 24-weeks



Cravings*

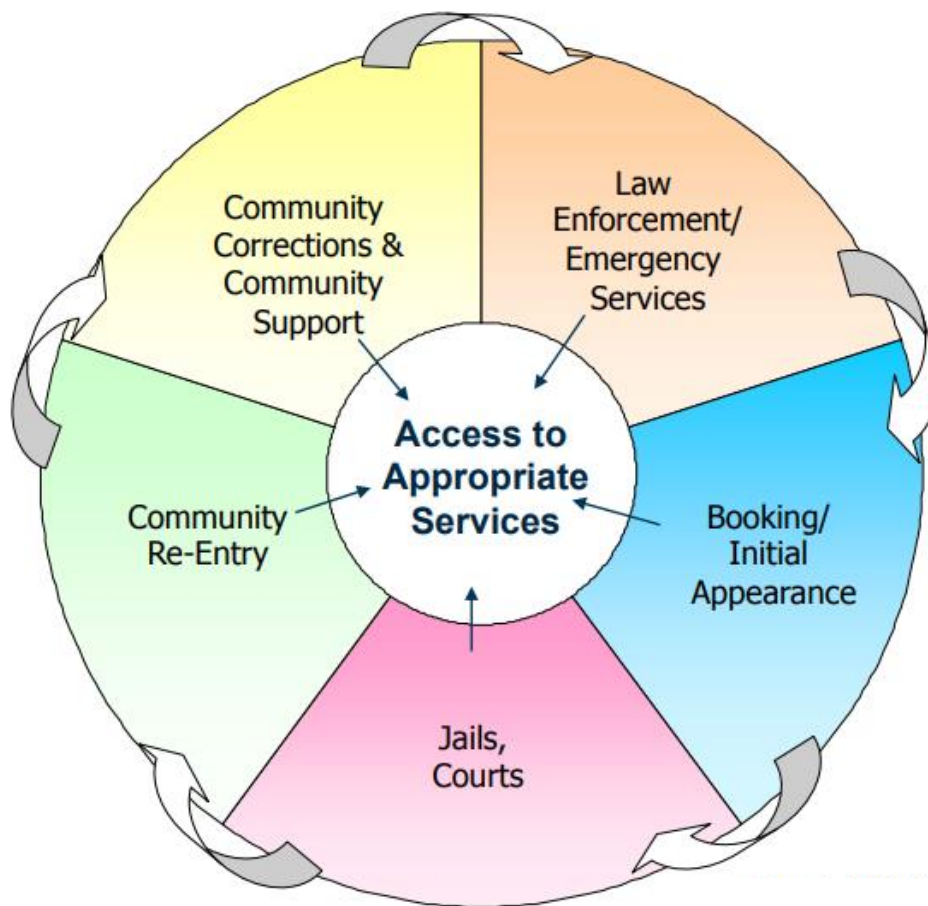


Reactivity to drug-conditioned cues

Fewer studies, particularly long-term, related to naltrexone (Vivitrol)

SAMHSA (2016); Lee et al. (2017)

Sequential Intercept Model



Source: Munetz & Griffin (2006)

Who would you need to collaborate with in your jurisdiction to connect individuals to medication-assisted treatment programs?

CHALLENGES AND CONCERNS

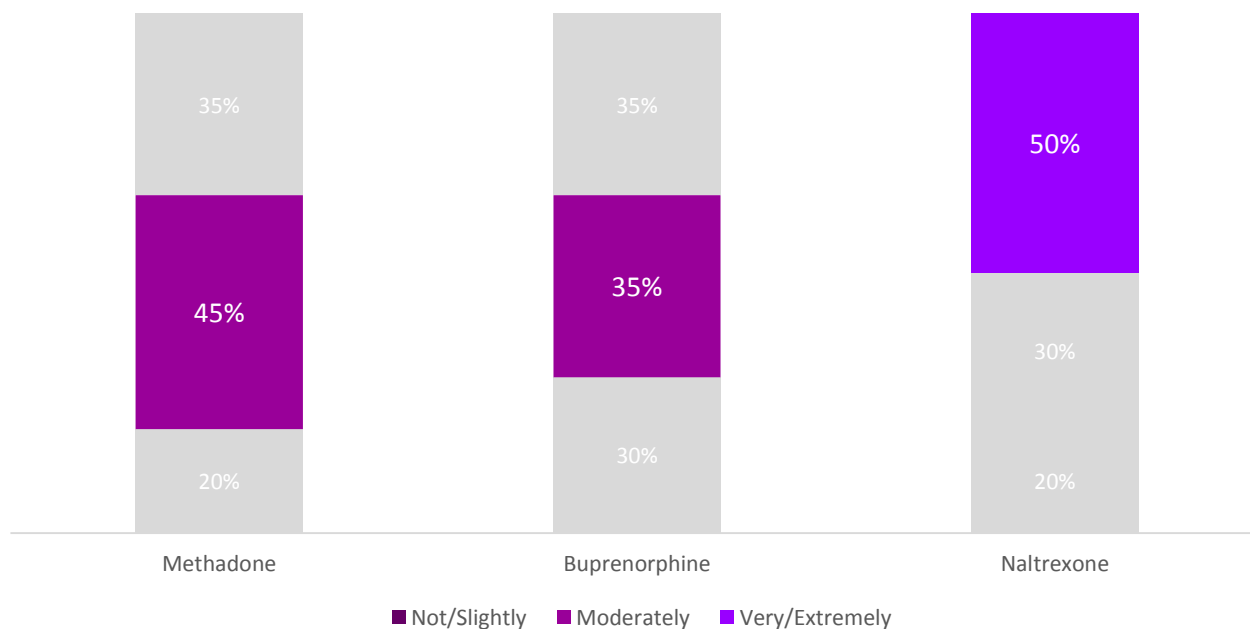
CJ-DATS Survey of Community Corrections on MAT

- Factors other than affordability and availability impact connection to MAT
 - **Individual**
 - Beliefs, experiences, knowledge, perceived roles, attitudes towards EBPs, medication, and etiology of OUDs/SUDs
 - **System**
 - Judge mandates, agency guidelines, interagency agreements for services, conflicting goals
- General limited understanding of SUDs and MAT

Mitchell et al. (2016); Clark et al., (2014); Gordon et al. (2015); Gryczynski et al. (2012)

Preliminary ICJIA Study on MAT: Probation (N=20)

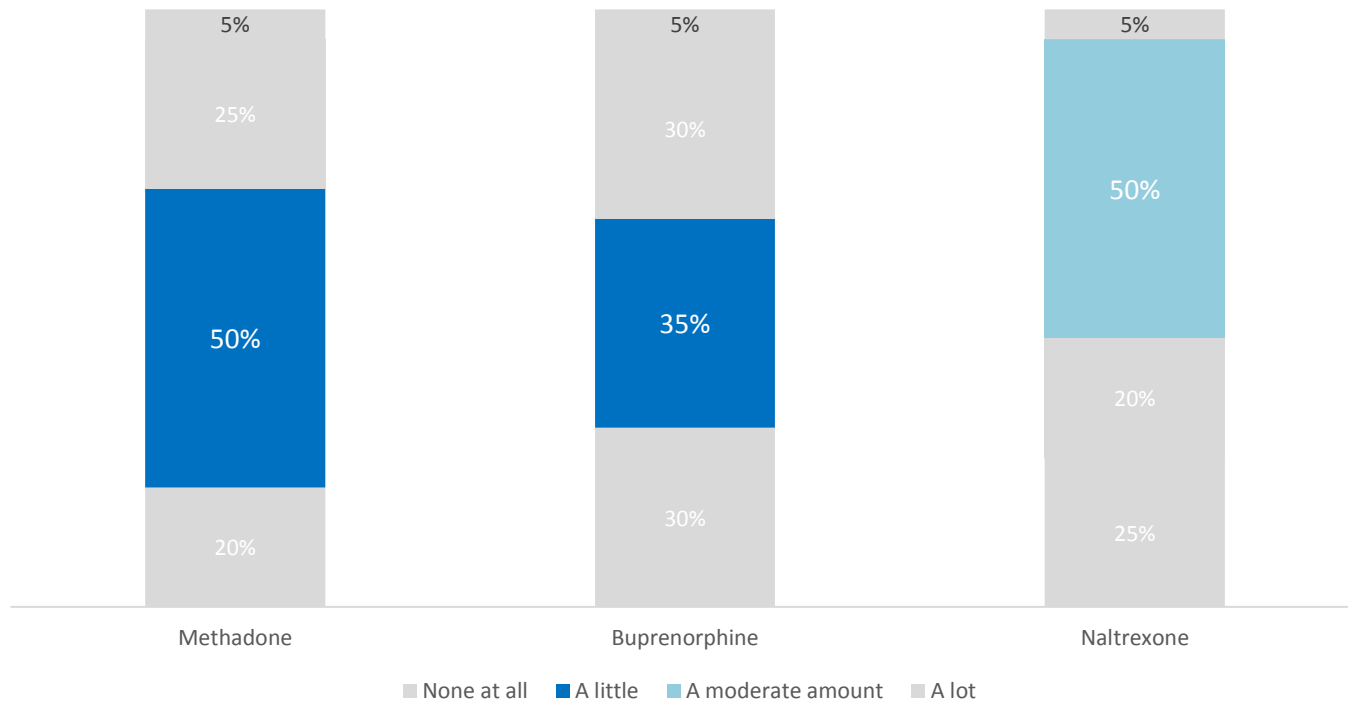
Familiarity with Medications



May equal >100% due to rounding

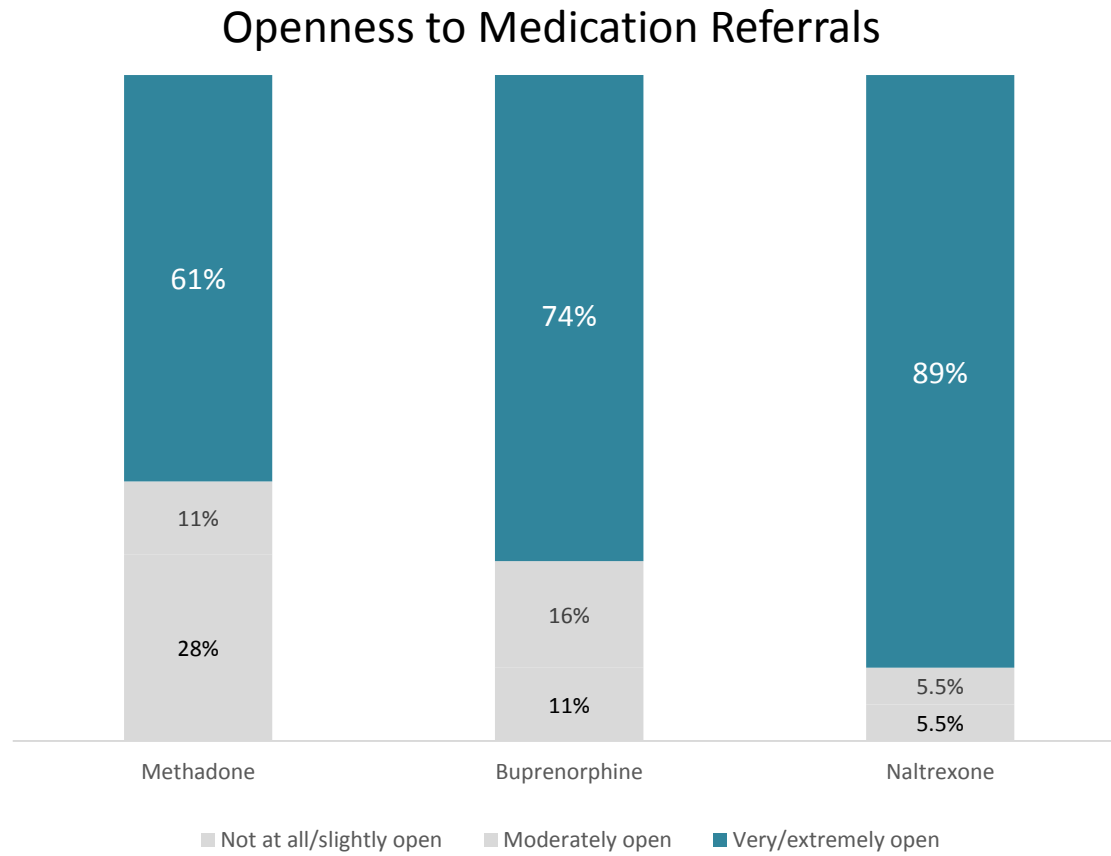
Preliminary ICJIA Study on MAT: Probation

Training on Medications



May equal >100% due to rounding

Preliminary ICJIA Study on MAT: Probation



May equal >100% due to rounding

**What are some challenges,
concerns, questions you have
about MAT within your
jurisdiction?**

Challenges & Concerns

- Funding
- Resources
 - Qualified providers, OTPs
- Buy-in
- Stigma
- Medication diversion
- Rejection* by 12-step
- Insurance coverage (or lack)
- Conflicting goals
- Individual factors
- Agency policies
- Stigma
- Diversion/misuse

Treatment Gap

- **23%** of publicly funded treatment programs indicated offering *any* FDA-approved medications to treat SUDs, including OUDs
 - **Less than half** of private sector treatment reported physician prescribing
- ACA mandates OUD coverage; does not specify which benefits covered
 - Medicaid coverage for buprenorphine predictor of adoption by community-based treatment

Knudsen et al. (2011); PEW (2016); Ducharme & Abraham (2008)

Diversion

- Predominant reasons for buprenorphine and methadone diversion:
 - Self-medicate **withdrawal sickness**
 - **Self-weaning** off opioids
 - **Self-treating** opioid dependence, pain, depression
- **Lack of access** to buprenorphine provider; inattentive providers (methadone, buprenorphine)
- **Decrease** in illicit use with **increase** in legal access (70%)
 - Also why dosing is important—possible under dosing
- Sharing norms among the opioid-using community

Cicero et al. (2014); Schuman-Olivier et al. (2009); Feroni et al. (2005)

Stigma

- **Reduces help-seeking behaviors**
- Results in non-evidence-based policies and practices
- Associated with drug use and SUDs
- Associated with discrimination and social disapproval
- Can create ambivalence toward treatment and sanctions against continued use
- Negative attitudes of health professionals can impact care

Richter et al. (2018) Rx summit presentation; Shatterproof.org

Solutions to Consider

- Telehealth models
- Reconsidering agency, state policies to align with EBPs of OUDs
- Educational training for staff
- Connection/discussion with local health department(s)
- Enhance prevention efforts—education, awareness
- Modification of legal/regulatory restrictions
- MAT provider training and support
- Work with local ERs, urgent care; med schools
- Work with local jails to incorporate MAT
- More wraparound services/collaboration between service providers
- Accountability for quality

MAT is **not** a panacea!

It is **what works best** for most people.

There will, unfortunately, be individuals who **misuse** medications or who are **non-compliant**.

But the number of those that **benefit** **outweigh this cost**.

I would highly recommend accessing this resource from SAMHSA for more information and research on MAT:

<https://store.samhsa.gov/shin/content//SMA18-5063FULLDOC/SMA18-5063FULLDOC.pdf>

Questions

Can you identify any resources where you may be able to refer clients for MAT?

- What about resources that you may be able to collaborate with to acquire those resources?
- What questions do **you** have about OUD and MAT?

OPIOIDS IN ILLINOIS

EFFORTS TO INFORM & ASSIST THE CRIMINAL JUSTICE SYSTEM



RESEARCH & EVALUATION

- Overview of opioid crisis in Illinois
- Pre-arrest diversion and deflection programs
- Evidence-based practices for substance use disorders
- Medication-assisted treatment for criminal justice populations
- Post-overdose responses for first responders
- Self-reported prescription drug use among Illinois prisoners
- Illinois Drug Threat Assessment
- Drug trends and distribution in Illinois

COLLABORATION

- State of Illinois Opioid Plan
- State Opioid Use Disorders in Corrections Working Group
- Summit: Pre-diversion strategies
- Conference: Criminal Justice Response to Opioid Crisis

FUNDING

- Police deflection/diversion programs
- Multi-jurisdictional drug task forces
- Prescription drug disposal
- Prison-based treatment

RESEARCH AND ANALYSIS UNIT

Dr. Megan Alderden, Associate Director

The ICJIA Research and Analysis Unit serves as Illinois' Statistical Analysis Center (SAC). State SACs provide objective analysis of criminal justice data to inform statewide policy and practice. The Illinois SAC features four research centers and acts as a liaison between state agencies and the U.S. Department of Justice.

CENTER FOR JUSTICE RESEARCH AND EVALUATION

- Applied research
- Program evaluation
- Technical reports and articles
- Policy analysis
- Technical assistance for local and state agencies
- Collaboration with criminal justice practitioners and academics
- Criminal justice forums and events
- National and state presentations

Jessica Reichert, Manager
jessica.Reichert@Illinois.gov

CENTER FOR CRIMINAL JUSTICE DATA AND ANALYTICS

- Data collection and analysis
- Distribution of crime and risk factor information
- Data management and visualization
- Dissemination of state criminal history record information (CHRI) data for research purposes
- Technical assistance in statistical methods, database design, data analysis, and data presentation

Christine Devitt Westley, Manager
Christine.Devitt@Illinois.gov

CENTER FOR SPONSORED RESEARCH AND PROGRAM DEVELOPMENT

- Support for selected experts in the field who conduct research and evaluate programs
- Selection of programs viable for evaluation and further research
- Technical assistance to programs supported with ICJIA-administered grant funds

Tracy Hahn, Manager
Tracy.Hahn@Illinois.gov

CENTER FOR VICTIM STUDIES

- Research examining the nature and scope of victimization in Illinois
- Evaluation of programs that address victim needs
- Technical assistance to victim service programs
- Management of InfoNet System, a web-based data collection and reporting service for standardized victim service data

Jaclyn Houston-Kolnik, Manager
Jaclyn.Kolnik@Illinois.gov

Contact Information



**ILLINOIS
CRIMINAL JUSTICE
INFORMATION AUTHORITY**

300 West Adams, Suite 200
Chicago, Illinois 60606 | 312.793.8550
TDD: 312.793.4170 | Fax: 312.793.8422
Lily.Gleicher@illinois.gov
icjia.org

Lily Gleicher, M.S.
Research Analyst
Center for Justice Research and Evaluation

1. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Arlington, VA: American Psychiatric Publishing.
2. National Institute on Drug Abuse. (2012). *Principles of drug addiction treatment: A research-based guide (3rd ed.)*. Washington, DC: National Institute on Health, U.S. Department of Health and Human Services. Retrieved from <https://www.drugabuse.gov/publications/principles-drug-addictiontreatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addictiontreatment/pharmacotherapies>.
3. Connock, M., Juarez-Garcia, A., Jowett, S., Frew, E., Liu, Z., Taylor, R. J., . . . Taylor, R. S. (2007). Methadone and buprenorphine for the management of opioid dependence: A systematic review and economic evaluation. In: NIHR Health Technology Assessment programme: Executive Summaries. Southampton, UK: *NIH Journals Library*.
4. Strain, E. C., Bigelow, G. E., Liebson, I. A., & Stitzer, M. L. (1999). Moderate- vs. high-dose methadone in treatment of opioid dependence. *JAMA*, 281(11), 1000-1005.
5. Gryczynski, J., Kinlock, T. W., Kelly, S. M., O'Grady, K. E., Gordon, M. S., & Schwartz, R. P. (2012). Opioid Agonist Maintenance for Probationers: Patient-Level Predictors of Treatment Retention, Drug Use, and Crime. *Substance Abuse*, 33(1), 30–39. <https://doi.org/10.1080/08897077.2011.616816>
6. Vorma, H., Sokero, P., Aaltonen, M., Turtiainen, S., Hughes, L. A., & Savolainen, J. (2013). Participation in opioid substitution treatment reduces the rate of criminal convictions: Evidence from a community study. *Addictive Behaviors*, 38(7), 2313–2316. <https://doi.org/10.1016/j.addbeh.2013.03.009>
7. Perry, A. E., Neilson, M., Martyn-St James, M., Glanville, J. M., Woodhouse, R., Godfrey, C., & Hewitt, C. (2015). Pharmacological interventions for drug-using offenders. *Cochrane Database of Systematic Reviews*. <https://doi.org/10.1002/14651858.CD010862.pub2>
8. Desmarais, S. L., Gray, J. S., Rade, C. B., Cohn, A. M., Doherty, S., & Knight, K. (2016). Medication-assisted treatment and violent outcomes in community-based offenders with alcohol and drug use problems. *Psychology of Violence*, 6(3), 378–389. <https://doi.org/10.1037/vio0000047>
9. Farabee, D. (2017). Current and Promising Pharmacotherapies for Substance Use Disorders among Justice-Involved Populations. *European Journal on Criminal Policy and Research*. <https://doi.org/10.1007/s10610-017-9349-y>
10. Coviello, D. M., Cornish, J. W., Lynch, K. G., Boney, T. Y., Clark, C. A., Lee, J. D., ... O'Brien, C. P. (2012). A Multisite Pilot Study of Extended-Release Injectable Naltrexone Treatment for Previously Opioid-Dependent Parolees and Probationers. *Substance Abuse*, 33(1), 48–59. <https://doi.org/10.1080/08897077.2011.609438>
11. Cropsey, K. L., Lane, P. S., Perkins, A. C., Clark, C. B., Hardy, S., McCullumsmith, C., & Stitzer, M. L. (2013). Buprenorphine and Medication Management in a Community Corrections Population: A Pilot Study. *Journal of Addiction Medicine*, 7(3), 210–215. <https://doi.org/10.1097/ADM.0b013e31828e6b21>
12. Mitchell, S. G., Willet, J., Monico, L. B., James, A., Rudes, D. S., Viglioni, J., ... Friedmann, P. D. (2016). Community correctional agents' views of medication-assisted treatment: Examining their influence on treatment referrals and community supervision practices. *Substance Abuse*, 37(1), 127–133. <https://doi.org/10.1080/08897077.2015.1129389>
13. Schuckit, M. A. (2016). Treatment of Opioid-Use Disorders. *New England Journal of Medicine*, 375(4), 357–368. <https://doi.org/10.1056/NEJMra1604339>

14. Douaihy, A. B., Kelly, T. M., & Sullivan, C. (2013). Medications for Substance Use Disorders. *Social Work in Public Health*, 28(3–4), 264–278. <https://doi.org/10.1080/19371918.2013.759031>
15. Substance Abuse and Mental Health Services Administration. (2014). Adult drug courts and medication-assisted treatment for opioid dependence. *In Brief*, 8(1), 1-9.
16. Kelly, S. M., O’Grady, K. E., Jaffe, J. H., Gandhi, D., & Schwartz, R. P. (2013). Improvements in Outcomes in Methadone Patients on Probation/Parole Regardless of Counseling Early in Treatment: *Journal of Addiction Medicine*, 7(2), 133–138. <https://doi.org/10.1097/ADM.0b013e318284a0c1>
17. Degenhardt, L., Larney, S., Kimber, J., Gisev, N., Farrell, M, Dobbins, T., ... Burns, L. (2014). The impact of opioid substitution therapy on mortality post-release from prison: Retrospective data linkage study. *Addiction*, 109(8), 1306-1317.
18. D’Annu, T., Pollack, H. A., Frimpong, J. A., & Wuchiett, D.(2014). Evidence-based treatment for opioid disorders: A 23-year national study of methadone dose levels. *Journal on Substance Abuse Treatment*, 47, 245-250.
19. American Society of Addiction Medicine. (2015). *National practice guideline for the use of medications in the treatment of addiction involving opioid use*. Chevy Chase, MD: Author.
20. Fiellin, D.A., Pantalon, M.V., Chawarski, M.C., Moore, B.A., Sullivan, L.E., O’Connor, P.G., & Schottenfeld, R.S. (2006). Counseling plus buprenorphine–naloxone maintenance therapy for opioid dependence. *The New England Journal of Medicine*, 355, 365-374.
21. Substance Abuse and Mental Health Services Administration. (2016). *Buprenorphine*. Washington, DC: Department of Health and Human Services. Retrieved from <http://www.samhsa.gov/medication-assisted-treatment/treatment/buprenorphine>
22. Substance Abuse and Mental Health Services Administration. (2016). *Naltrexone*. Washington, DC: Department of Health and Human Services. Retrieved from <https://www.samhsa.gov/medication-assisted-treatment/treatment/naltrexone>.
23. Lee, J. D., Friedmann, P. D., Kinlock, T. W., Nunes, E. V., Boney, T. Y., Hoskinson, R. A., ... O’Brien, C. P. (2016). Extended-Release Naltrexone to Prevent Opioid Relapse in Criminal Justice Offenders. *New England Journal of Medicine*, 374(13), 1232–1242. <https://doi.org/10.1056/NEJMoa1505409>
24. Havnes, I., Bukten, A., Gossop, M., Waal, H., Stangeland, P., & Clausen, T. (2012). Reductions in convictions for violent crime during opioid maintenance treatment: A longitudinal national cohort study. *Drug and Alcohol Dependence*, 124(3), 307–310. <https://doi.org/10.1016/j.drugalcdep.2012.02.005>
25. World Health Organization. (2009). Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence. Switzerland: Author.
26. Havnes, I., Clausen, T., & Middelthon, A.-L. (2013). 'Diversion' of methadone or buprenorphine: 'harm' versus 'helping'. *Harm Reduction Journal*, 10(1), 24. <https://doi.org/10.1186/1477-7517-10-24>
27. Schuman-Olivier, Z., Albanese, M., Nelson, S. E., Roland, L., Puopolo, F., Klinker, L., & Shaffer, H. J. (2010). Self-treatment: Illicit buprenorphine use by opioid-dependent treatment seekers. *Journal of Substance Abuse Treatment*, 39(1), 41–50. <https://doi.org/10.1016/j.jsat.2010.03.014>
28. Belenko, S., Hiller, M., & Hamilton, L. (2013). Treating Substance Use Disorders in the Criminal Justice System. *Current Psychiatry Reports*, 15(11). <https://doi.org/10.1007/s11920-013-0414-z>

29. Friedmann, P. D., Wilson, D., Knudsen, H. K., Ducharme, L. J., Welsh, W. N., Frisman, L., ... Vocci, F. J. (2015). Effect of an Organizational Linkage Intervention on Staff Perceptions of Medication-Assisted Treatment and Referral Intentions in Community Corrections. *Journal of Substance Abuse Treatment*, 50, 50–58. <https://doi.org/10.1016/j.jsat.2014.10.001>
30. Cicero, T. J., Ellis, M. S., Surratt, H. L., & Kurtz, S. P. (2014). Factors contributing to the rise of buprenorphine misuse: 2008–2013. *Drug and Alcohol Dependence*, 142, 98–104. <https://doi.org/10.1016/j.drugalcdep.2014.06.005>
31. Feroni, I., Peretti-Watel, P., Paraponaris, A., Msuit, A., Ronfle, E., Mabriez, J. C. et al. (2005). French general practitioners' attitudes and prescription patterns toward buprenorphine maintenance treatment: Does doctor shopping reflect buprenorphine misuse? *Journal of Addictive Diseases*, 24, 7-22.
32. Clark, C. B., Hendricks, P. S., Lane, P. S., Trent, L., & Cropsey, K. L. (2014). Methadone maintenance treatment may improve completion rates and delay opioid relapse for opioid dependent individuals under community supervision. *Addictive Behaviors*, 39, 1736-1740.
33. U.S. Department of Health and Human Services (HHS), Office of the Surgeon General. (2016). *Facing addiction in America: The Surgeon General's report on alcohol, drugs, and health*. Washington, DC: U.S. Department of Health and Human Services.
34. Substance Abuse and Mental Health Services Administration. (2015). *Medication and counseling treatment*. Rockville, MD: Department of Health and Human Services. Retrieved from <https://www.samhsa.gov/medication-assisted-treatment/treatment#medications-used-in-mat>
35. Bellin, E. Wesson, J., Tomasino, V., Nolan, J., Glick, A. J., & Oquendo, S. (1999). High dose methadone reduces criminal recidivism in opiate addicts. *Addiction Research and Theory*, 7(1), 19-29.
36. Salsitz, E. A. (n.d.). *Stigma in methadone and buprenorphine maintenance treatment*. Module for Providers' clinical Support System (PCSS) for Medication Assisted Treatment. Retrieved from <http://pcssmat.org/stigma-in-methadone-and-buprenorphine-maintenance-treatment/>.
37. White, W. L. (n.d.). *Long-term strategies to reduce the stigma attached to addiction, treatment, and recovery within the city of Philadelphia (with particular reference to medication-assisted treatment/recovery)*. Philadelphia, PA: Chestnut Health Systems, Philadelphia Department of Behavioral Health and Mental Retardation Services. Retrieved from <http://californiamethadone.org/wp-content/uploads/2012/03/stigma-william-white-101309.pdf>
38. National forensic Laboratory Information System. (2017). *2016 annual report*. Washington, DC: U. S. Department of Justice, Drug Enforcement Administration, Diversion Control Division.
39. Tompkins, N. M., Wright, J., Waterman, M. G., Sheard, L., & Bound, N. (2009). Exploring buprenorphine misuse in prisons: A qualitative study of former prisoners. *International Journal on Prisoner Health*, 5, 71-87.
40. Ahern, J., Stuber, J., & Galea, S. (2007). Stigma, discrimination and the health of illicit drug users. *Drug and Alcohol Dependence*, 88(2-3), 188-196).
41. Link, B. G., Struening, E. L., Rahav, M., Phelan, J. C., & Nuttbrock, L. (1997). On stigma and its consequences: Evidence from a longitudinal study of men with dual diagnosis of mental illness and substance abuse. *Journal of Health and Social Behavior*, 38, 177-190.