



Promoting Wellness and Recovery

John R. Kasich, Governor  
Terry J. Pfeuck, Director

## Medication Assisted Treatment (MAT) and the Drug Court

The Supreme Court Of Ohio Specialized  
Dockets Annual Conference  
October 27, 2016

Justin J. Trevino, MD- Asst. Medical Director

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## What are Substance Use Disorders (Addictions?)

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### Addiction- Definition

- Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. (American Society of Addiction Medicine, 2010)
- A neurological or neurochemical disorder characterized by chronic physiological changes to brain regions governing motivation, learning, attention, judgment, insight, and affect regulation. (National Assoc. of Drug Court Professionals, 2011)




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### Addiction: The ABCDEs

**Addiction** is characterized by:

- Inability to consistently **A**bstain;
- Impairment in **B**ehavioral control;
- **C**raving; or increased “hunger” for drugs or rewarding experiences;
- **D**iminished recognition of significant problems with one’s behaviors and interpersonal relationships; and
- A dysfunctional **E**motional response.




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### Addiction: Neurobiology and contributing factors

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### Addictive drug neurochemistry: fundamentals

- All addictive drugs work on our endogenous neurotransmitter systems and mimic their activities in some manner.
- All addictive drugs have effects on our biological reward centers, which gives them their reinforcing effects.
- These reward centers are the same areas that are activated when we engage in activities that are required for survival and pleasurable activities.
- Drugs of abuse “trick” us into believing their use is necessary for survival.




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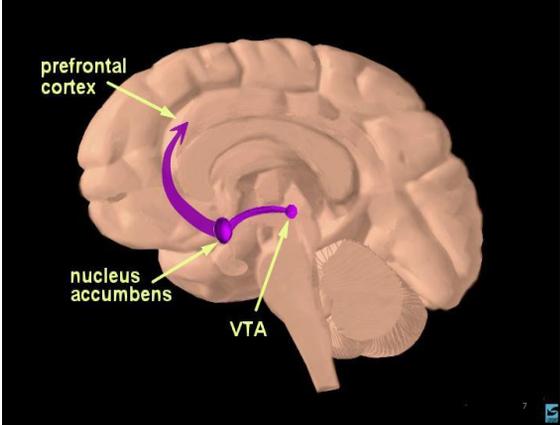
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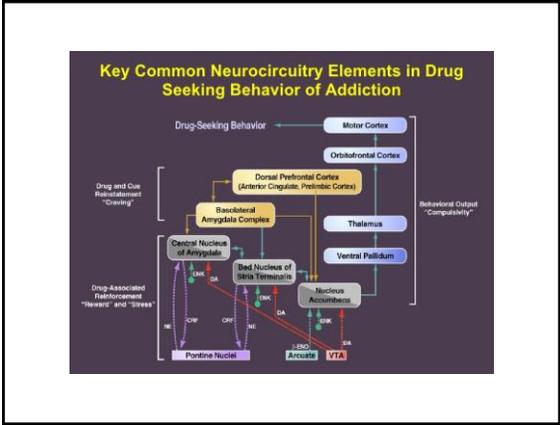
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### Factors that contribute to addiction vulnerability

- Genetics
- Environment and life experiences
  - Exposure to potentially addictive substances (especially early in life)
  - Early life trauma
  - Life stress
- Other Predisposing conditions
  - Mental Illness
- Potency of the addictive drug




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## Opioid- related overdose deaths

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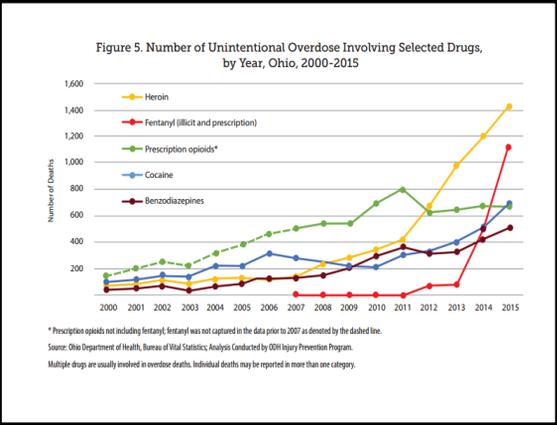
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## Medication Assisted Treatment (MAT) of Opioid use disorders

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## Opioids

- Effects are mediated through endogenous opioid receptors:
  - Mu (primary importance to most therapeutic effects): Analgesia, euphoria, respiratory depression, dependence
  - Kappa: Sedation, diuresis
  - Sigma: Dysphoria, hallucinations
  - Delta: Cardiovascular effects, analgesia
- Tolerance and cross-tolerance to opioids develop
  - Loss of tolerance occurs with opioid use cessation




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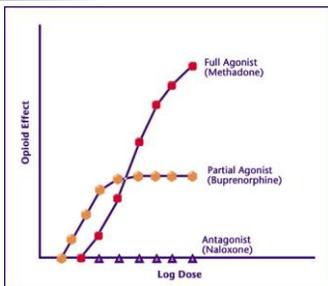
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## Effects at opioid receptors



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## Why Choose Medication Assisted Treatment (MAT) for Opioid use disorders?

- Relapse rate without MAT is exceedingly high (up to 90% over the first year)
  - Exposure to behavioral cues (reminders of use), stress, opioids prescribed for legitimate purposes (pain relief) can rekindle addiction.
- MAT is an evidence- based treatment with widespread support for its use (NIDA, WHO, NASADAD, NADCP)
  - Despite this WIDESPREAD support, a 2013 survey of U.S. drug courts indicated 50% of the Courts not offering MAT to opioid dependent participants.
- Cravings and preoccupation with opioid use limit the ability of patients to develop coping skills and make necessary lifestyle changes.
- Addition of psychosocial treatment(s) to MAT leads to improved long- term outcomes.




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### Goals of MAT

- Primary Goals
  - Improve odds of becoming abstinent from illicit opioid use
  - Decrease morbidity/mortality associated with relapse
  - Reduce cravings and preoccupation
  - Retain patients in treatment. Treatment retention is the best predictor of good outcome.
- Secondary Goals
  - Decrease criminal behaviors associated with addiction.
  - Decrease addiction related consequences: unemployment, broken relationships, homelessness, incarceration




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### All MATs improve abstinence rates

Medication	With MAT (% Opioid Free)	Without MAT (% Opioid Free)	NNT
Naltrexone ER	36 %	23 %	7.7
Buprenorphine	20-50 %	6%	7.1-2.3
Methadone	60 %	30 %	3.3

NOTES:  
 • COMPARATIVE CONCLUSIONS CANNOT BE DRAWN FROM THIS  
 • ALL MAT WAS PROVIDED IN CONJUNCTION WITH RELAPSE PREVENTION COUNSELING

References: Krupitsky 2011, Mattick 2009, Fudala 2003, Weiss, 2011




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### Methadone

- Full opioid agonist, 24 hour half- life
- Schedule II- use for MAT limited to Federally licensed Opioid Treatment Programs (OTP)
- Best studied and longest used medication for treatment of opioid addiction.
  - Every \$1 spent on ongoing methadone treatment yields \$38 in benefits in terms of reduced crime, improved health, and increased rates of employment (Zarkin, et.al. *Health Economics*, 2005)
- Risk of overdose in high doses, especially if mixed with sedatives/alcohol.




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### Buprenorphine (Suboxone/Subutex)

- Opioid partial agonist.
- Usually dispensed in combination with naloxone to decrease risk of injection (Suboxone)
- Prescribing physician must be specifically certified (DATA 2000 waiver). Can be provided in medical office setting (Office- Based Opioid Treatment- OBOT) or OTP.
- More expensive medication than methadone.
- NEW FORM: Probuphine is a long-acting (6 months) implant minimizing diversion risk. Used for those on a stable dose of oral buprenorphine.
- Rarely causes problems with respiratory suppression or cardiac problems.




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### Naltrexone

- Pure opioid antagonist (blocker).
  - No abuse, no high, no pain relief.
- Oral (24-72 hours) and long-acting injection (Vivitrol-4 weeks).
- FDA approved for use in opioid dependence (2010); also FDA approved for treatment of Alcohol Dependence (2006).
- Can be provided by healthcare practitioner in clinic or office settings, no special training required for prescription
- Must be fully detoxed (up to 7-10 days) before starting due to precipitating withdrawal.
- Study evidence of effectiveness in reducing relapse to opioid use in individuals involved with criminal justice system (Covello, et.al., *Substance Abuse*, 2012).




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### MAT Comparisons: Prescribing Considerations

	Extended-Release Injectable Naltrexone	Buprenorphine	Methadone
Frequency of Administration	Monthly	Daily	Daily
Route of Administration	Intramuscular injection in the gluteal muscle by healthcare professional.	Oral tablet or film is dissolved under the tongue. Can be taken at a physician's office or at home. NEW FORM: IMPLANTABLE	Oral (liquid) consumption usually witnessed at an OTP, until the patient receives take-home doses.
Restrictions on Prescribing or Dispensing	Any individual who is licensed to prescribe medicine (e.g., physician, physician assistant, nurse practitioner) may prescribe and order; administration by qualified staff.	Only licensed physicians who are DEA registered and either work at an OTP or have obtained a waiver to prescribe buprenorphine may do so.	Only licensed physicians who are DEA registered and who work at an OTP can order methadone for dispensing at the OTP.
Abuse and Diversion	No	Yes	Yes
Overdose Potential	N/A	Low	Moderate
Additional Requirements	None; any pharmacy can fill the prescription.	Physicians must complete limited special training to qualify for the DEA prescribing waiver. Any pharmacy can fill the prescription.	For opioid dependence treatment purposes, methadone can only be purchased by and dispensed at certified OTPs or hospitals
Outcomes	Improved social functioning; may reduce criminal activity more than other drugs; evidence of benefits for criminal justice populations	Improved social functioning; good drug for client retention at adequate doses; suppresses illicit opiate use at adequate doses	Improved social functioning; best drug for client retention; suppresses illicit opiate use; highly cost-effective

Source: Center for Substance Abuse Treatment

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### Nine Components of Successful MAT Programs (Legal Action Center- NY State)

- 1. Counseling and other services—plus medication—are **essential**.
- 2. Courts are selective about treatment programs and **private prescribing physicians**.
- 3. Courts develop strong relationships with treatment **programs and require regular communication regarding participant progress**.
- 4. Screening and assessment must consider all clinically **appropriate forms of treatment**.
- 5. Judges rely heavily on the clinical judgment of **treatment providers as well as the court's own clinical staff**.



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### Nine Components of Successful MAT Programs (Legal Action Center- NY State)

- 6. Endorsement of medication-assisted treatment by all **members of the drug court team is the goal, but not a prerequisite**.
- 7. Monitoring for illicit use of medication-assisted **treatment medication is a key component of the program and can be accomplished in different ways**.
- 8. Medications for medication-assisted treatment are **covered through government and/or private insurance programs**.
- 9. Medication-assisted treatment operates very similarly to **other kinds of treatment**.



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## Addiction as a chronic disease state

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### Characteristics of chronic diseases

- Disordered functioning of a part of the body from one or more causes (etiology).
- Continues over a long period or recurs.
- Characteristic symptoms.
- Characteristic signs.
- Predictable course.
- Known outcomes.
- Identified treatments.




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### Treating chronic diseases

Type of treatment	Cardiac Disease	Addiction
"Old" (acute care)	<ul style="list-style-type: none"> <li>• Patient has heart attack</li> <li>• Treated in hospital</li> <li>• Sometimes lives</li> <li>• Discharged to home with no further treatment</li> <li>• Return of symptoms: go back to hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Patient has addiction-related crisis</li> <li>• "Minnesota Model"</li> <li>• Fixed length treatment</li> <li>• Accelerated 12-step program</li> <li>• Discharged to home with AA follow-up</li> <li>• Return of symptoms: go back to treatment</li> </ul>
"New" (chronic care)	<ul style="list-style-type: none"> <li>• Patient has heart attack</li> <li>• Revascularization</li> <li>• Usually lives</li> <li>• Cardiac rehab, diet changes, stop smoking, etc.</li> <li>• Medications to prevent relapse</li> <li>• Return of symptoms: increase intensity of treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Patient has addiction-related crisis</li> <li>• Assessment determines type and intensity of care</li> <li>• Counseling, 12-step therapy, MH treatment, as indicated</li> <li>• Medications to prevent relapse</li> <li>• Return of symptoms: increase intensity of treatment</li> </ul>

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### Comprehensively addressing chronic disease

	Cardiac Disease	Addiction
Prevention	<ul style="list-style-type: none"> <li>• Know family history</li> <li>• Don't smoke</li> <li>• Exercise</li> <li>• Follow a prudent diet</li> <li>• Stress management</li> <li>• Decrease early life trauma</li> </ul>	<ul style="list-style-type: none"> <li>• Know family history</li> <li>• Delay/eliminate exposure to drugs that can cause addiction</li> <li>• Stress management</li> <li>• Decrease early life trauma</li> <li>• "Start Talking" and other interventions</li> </ul>
Early intervention	<ul style="list-style-type: none"> <li>• Treat Diabetes, hypertension, elevated lipids</li> <li>• Smoking cessation, exercise,</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and treat mental illness</li> <li>• SBIRT</li> </ul>
Treatment	<ul style="list-style-type: none"> <li>• Utilize modern evidence-based approaches for treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize modern evidence-based approaches for treatment</li> </ul>
Life-saving measures	<ul style="list-style-type: none"> <li>• CPR</li> <li>• Wide availability of defibrillators</li> </ul>	<ul style="list-style-type: none"> <li>• Wide availability of naloxone and individuals trained to administer</li> </ul>

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### Recovery Oriented System of Care (ROSC)

- The central focus of a ROSC is to create an infrastructure or 'system of care' with the resources to effectively address the full range of substance use problems within communities.
- A ROSC encompasses a menu of individualized, person-centered, and strength-based services within a self-defined network
- A fundamental value of a ROSC is the involvement of people in recovery, their families, and the community to continually improve access to and quality of services.




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### Recovery Support Services (RSS)

- RSS are non-clinical services that assist individuals and families working towards recovery from substance use disorders.
- RSS include social supports, linkage to and coordination among allied service providers, and other resources to improve quality of life for people seeking recovery and their families.
- Child care and transportation are two of the most commonly recognized RSS. Housing, life skills training, help with employment readiness, and legal consultation are other examples of RSS.




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### Recovery Management

- Recovery management engages individuals with chronic substance use conditions and assists their efforts to achieve long-term recovery.
- Recovery management is often described as typifying the shift from an acute care model, which treats medical conditions in an intensive short-term manner, to a chronic care approach reflecting a service commitment to long-term supports and wellness.




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### Treatment Motivation

- The approach of Motivational Interviewing (MI) focuses on four key processes: engaging, focusing, evoking, and planning.
- Five key communication skills are utilized in MI: asking open questions, affirming, reflecting, summarizing, and providing information and advice with permission.
- Reference: Miller, W.R., Rollnick, S. (2013). *Motivational Interviewing: Helping People Change*, 3<sup>rd</sup> Ed. New York: Guilford Press.




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### Treating a biobehavioral disorder like addiction must go beyond just medication

**We Need to Treat the Whole Person!**



Pharmacological Treatments (Medications)      Behavioral Therapies

Medical Services      Social Services

**In Social Context**




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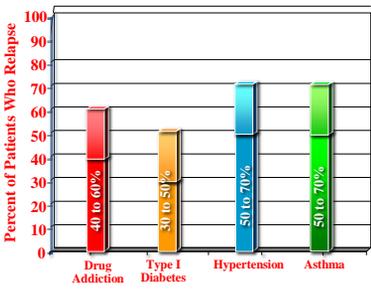
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### Relapse Rates are Similar for Addiction and Other Chronic Illnesses



Condition	Relapse Rate Range
Drug Addiction	40 to 60%
Type I Diabetes	30 to 50%
Hypertension	50 to 70%
Asthma	50 to 70%

McLellan et al., JAMA, 2000.

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## Conclusions

- Opioid use disorder is a neurobiological condition.
- MAT is an evidence-based treatment for opioid use disorder that improves odds of treatment success.
- Drug court practices to enhance the effectiveness of MAT have been identified.
- Addiction is a chronic condition requiring multimodal, active treatment for extended periods plus Recovery-oriented supports.



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