Finding recovery in the face of a national crisis:

The use of FDA-approved medications in the treatment of opioid use disorder

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After this webinar, participants will be able to...

1. Describe the three FDA-approved medications for opioid use disorder and list their similarities and differences

2. Explain the damaging effects of chronic use of short-acting opioids on the brain and how the use of medication-assisted treatment (MAT) can facilitate the healing of the brain’s endogenous opioid system

3. Provide a description of how MAT in a comprehensive treatment environment addresses all aspects of opioid use disorder as a bio-psychosocial disease

4. Explain how the use of MAT fits into a recovery-oriented focus of treatment while describing the importance of individualized pathways to recovery
Opioids are a class of drugs that include the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers available legally by prescription, such as oxycodone (OxyContin®), hydrocodone (Vicodin®), codeine, morphine, and many others. These drugs are chemically related and interact with opioid receptors on nerve cells in the body and brain.

Regular use—even as prescribed by a doctor—can lead to dependence and, when misused, opioid pain relievers can lead to overdose incidents and deaths.

An opioid overdose can be reversed with the drug naloxone when given right away.

(NIDA, n.d.)
WHAT IS OPIOID USE DISORDER?

- The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition, (DSM-5) no longer uses the term substance abuse and substance dependence, rather it refers to substance use disorders, which are defined as mild, moderate, or severe to indicate the level of severity, which is determined by the number of diagnostic criteria met by an individual.

- Symptoms of Opioid Use Disorders include....
  - Strong desire for opioids
  - Inability to control or reduce use
  - Continued use despite interference with major obligations or social functioning
  - Use of larger amounts over time
  - Development of tolerance
  - Spending a great deal of time to obtain and use opioids
  - Withdrawal symptoms occur after stopping or reducing use

(SAMHSA, 2015)
In 2017...

▪ 11.4 million people misused prescription opioids

▪ 2 million people misused prescription opioids for the first time

▪ 11.4 million people misused prescription opioids

▪ 47,600 people died from overdosing on opioids

▪ 2.1 million people had an opioid use disorder

(HHS, 2019)
In 2017 (con’t)...  

▪ 886,000 people used heroin  
▪ 28,466 deaths attributed to overdosing on synthetic opioids other than methadone (9,580 in 2015)  
▪ 81,000 people used heroin for the first time  
▪ 15,482 deaths attributed to overdosing on heroin (12,989 in 2015)  
▪ $78.5 \textit{Billion} in economic costs (2013 data)  

(HHS, 2019)
THE OPIOID EPIDEMIC in the UNITED STATES

THE OPIOID EPIDEMIC BY THE NUMBERS

130+ People died every day from opioid-related drug overdoses

11.4 m People misused prescription opioids

47,600 People died from overdose on opioids

2.1 million People had an opioid use disorder

886,000 People used heroin

81,000 People used heroin for the first time

15,482 Deaths attributed to overdosing on heroin

28,466 Deaths attributed to overdosing on synthetic opioids other than methadone

2 million People misused prescription opioids for the first time

Sources:
2. NCHS Data Brief No. 293, December 2017
Support *evidence-based* interventions and practices!

Evidence-based practice (EBP) is, “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research” (Duke University, n.d., as cited in Sackett, 2002).
Nutrition and Health

As part of a comprehensive treatment program, MAT with methadone and buprenorphine is an effective treatment for heroin and prescription opioid addiction when measured by...

- Reduction in the use of illicit drugs
- Reduction in criminal activity
- Reduction in needle sharing
- Reduction in HIV infection rates and transmission
- Cost-effectiveness
- Reduction in commercial sex work
- Reduction in the number of reports of multiple sex partners
- Improvements in social health and productivity
- Improvements in health conditions
- Reduction in suicide AND reduction in lethal overdose

(Marsch, 1998 & Mattick et al., 2003)
Medication-Assisted Treatment (MAT) is a form of pharmacotherapy and refers to any treatment for a substance use disorder that includes a pharmacologic intervention as part of a comprehensive substance abuse treatment plan with an ultimate goal of the persons’ recovery with full social function.”

(SAMHSA, n.d.)
Medication-Assisted Treatment (MAT)

- When utilizing medications such as methadone or buprenorphine in the treatment of opioid addiction, it is CRITICAL that patients have access to comprehensive psychosocial support and counseling services.

- Patients receiving MAT exhibit reductions in illicit opioid use that are directly related to the medication dosage, **the amount of psychosocial counseling**, and the period of time that patients stay in treatment.

- MAT as evidence-based practice is significantly more than just providing a prescription of medication!

(Strain et al., 1999)
Why MAT?

THE SCIENCE BEHIND MEDICATION-ASSISTED TREATMENT FOR OPIOID USE DISORDERS
Advances in Science

• Like most chronic medical conditions, we could treat addiction before we understood it.

• Now we know why medications work.

• More importantly, we know addiction is a medical condition and a treatable disease.
To be more specific...

- Addiction is a Chronic Disease of the Brain that is expressed through Compulsive Behavior within a Social Context.

- A **bio-psycho-social** disorder
Why is it so hard to believe Opioid Use Disorder is a disease?

1. Appearance
2. Expressed by behavior (do it to self)
3. Misunderstood (prejudice, racism)
4. Victims are criminalized
5. Victims are dehumanized
6. A little over 100 years ago we thought psychosis was possession by demons
A Complex Behavioral and Neurological Disorder

Who is Vulnerable?
Science has come a long way in helping us understand how drugs of abuse effect the brain.
Your Brain on Drugs Today

ELEVATED GLUCOSE METABOLISM IN ANTERIOR CINGULATE GYRUS

Control  Opiate-Dependence: Agonist Therapy  Opiate-Dependence: Sustained Remission

(Galenker et al., 2000)
What Happens To The Brain

- In the 1970’s endorphins were discovered—the brain’s own opiate system.

- Endorphins are important in maintaining the body’s homeostasis—regulating the body’s internal equilibrium by adjusting its physiological processes.

- Endorphins also are involved in the modulation of many of the brain’s systems involved in behavior.
Endorphins Are The Key!

- Endorphins work by releasing the endorphin and attaching to what is called a receptor.
- Think of it like a lock and a key – endorphins are the key and receptors the lock.
Metabolic Disorder of the Brain...

NOT just because of lower endorphins.

Long term use of (usually) short acting opioids seems to damage the endorphin system and the body can not maintain basic functions like body temperature.

Endorphins’ ability to regulate some important functions are also damaged like immune and hormone function.
Addiction is really a Complex Medical Condition.

Like many other chronic conditions, it takes time to understand it.

Advances in neuroscience have helped to move things forward.

Now we know why methadone (and buprenorphine) work.

They are not a substitute but a medication that normalizes a system that has been damaged by drug use.
Buprenorphine and methadone are prescribed or administered under monitored, controlled conditions and are safe and effective for treating opioid addiction when used as directed.

These medications are administered orally or sublingually (i.e., under the tongue) in specified doses, and their effects differ from those of heroin and other abused opioids.

- Heroin, for example, is often injected, snorted, or smoked, causing an almost immediate “rush,” or brief period of intense euphoria, that wears off quickly and ends in a “crash.” The individual then experiences an intense craving to use the drug again to stop the crash and reinstate the euphoria.

- The cycle of euphoria, crash, and craving – sometimes repeated several times a day – is a hallmark of addiction and results in severe behavioral disruption. These characteristics result from heroin’s rapid onset and short duration of action in the brain.

(NIDA, 2012)
• IN CONTRAST, methadone and buprenorphine have gradual onsets of action and produce stable levels of the drug in the brain. As a result, patients maintained on these medications do not experience a rush, while they also markedly reduce their desire to use opioids.
• MAT patients do not experience the physiological or behavioral abnormalities from rapid fluctuations in drugs levels associated with short-acting opioid use.
• MAT saves lives! MAT helps to stabilize individuals, allowing treatment of their medical, psychological, and other problems so they can contribute effectively as members of families and of society.
• These medications NORMALIZE a dysfunctional brain.

(NIDA, 2012)
Methadone & Buprenorphine – Effectiveness

▪ In a comprehensive review of methadone effectiveness, published in *Psychiatric Services* in 2013, the authors conclude:
  ▪ “Overall, there is a high level of evidence for the effectiveness of MMT in improving treatment retention and decreasing illicit opioid use.”

  (Fullerton et al., 2014)

▪ In a comprehensive review of buprenorphine effectiveness published in *Psychiatric Services* in 2014, the authors conclude:
  ▪ “Overall, a high level of evidence was found for the effectiveness of BMT in improving treatment retention and decreasing illicit opioid use.”

  (Thomas et al., 2014)

▪ Medication-Assisted Treatment for opioid use disorders with methadone or buprenorphine is the textbook definition of an evidence-based practice.
What about naltrexone?

- Used since the 80’s in oral form with little effectiveness due to poor compliance...recent approval of an extended-release injectable form

- Unlike methadone & buprenorphine, naltrexone is an antagonist (vs. agonist)

- Naltrexone does not mimic the natural opioids (endorphins) and may also block the brain’s natural opioids

- Individual must be fully detoxed from all opioids before starting

- Often appropriate for a small, specialized population (i.e. individuals recently released from penal institutions)

- May be used after a methadone or buprenorphine medically-supervised withdrawal
Language Matters!

RECOVERY: WHO'S IN? WHO'S OUT? WHAT DOES IT MEAN?
What is RECOVERY?

- No clinical definition of recovery
- Patient term with varying meanings and applications
- Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services’ “Working Definition” of Recovery:

  "A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential."
What is RECOVERY?

▪ MAT patients’ often surprised they COULD be in recovery per SAMHSA

▪ An individual’s choice of treatment has NOTHING to do with recovery

▪ Methadone or Buprenorphine can help foster a life in recovery
Let's be extremely clear:

What matters is someone's *life* and his/her *quality of life* - *not* whether or not he/she happens to take a *legitimate, legal* and *efficacious medication* under a physician's *direction* once or twice a day.
"The stigma associated with substance use and dependence can prevent individuals from seeking treatment, and can prevent adequate policies regarding prevention and treatment from being implemented."

-World Health Organization (WHO)
"No other medication in the history of modern medicine has been so unjustly maligned. The stigma that methadone patients feel is a real phenomenon and in comparison with other social stigmas appears to be entrenched in the collective social consciousness of the country at every level of society."

-Dr. Herman Joseph
Stigma Attached to MAT is Painful for Patients...

- Can be as painful as the stigma of being an active heroin user
- Many patients feel they must remain silent about the treatment that has saved their life and the accomplishments made during treatment
- Often told “you are not clean”
- Cannot speak at many 12 step meetings
- STIGMA can be one of the largest barriers to recovery for MAT patients
All the while, MAT is evidence-solid...

- Zarkin et al. (2005) suggests from developing a lifetime simulation model of analysis that every dollar invested in methadone treatment yields $38 in economic benefits to society with less crime and greater employment.

- Barnett and Hui (2000) conclude from their study that methadone treatment is more cost effective than many widely used medical therapies and should be included in formularies of health plans.

- Stigma, misinformation, and a lack of understanding medication-assisted treatment leads to drug courts and other criminal justice systems to discriminate against a proven effective treatment approach, further discouraging individuals suffering from opioid use disorders from seeking evidence-based treatments.
▪ Judges, probation, and parole officers have the power to issue orders to a defendant to taper from methadone or buprenorphine without any knowledge of opioid use disorders and contrary to medical advice.

▪ The Nassau County Felony Treatment Court (NY) does not allow defendants to enroll or remain in methadone or buprenorphine treatment upon threat of incarceration.

(video on next slide)
The results of STIGMA can be deadly...

VIDEO:

MAT: A substitute and a crutch?

Medication-Assisted Treatment founder and pioneer Dr. Vincent Dole responded to criticism that methadone, particularly, is nothing more than a substitute and a crutch in 1996 when he said:

“That seems like a vague charge that has no answer. A crutch is not a bad thing if you have only one leg, yet it’s not nearly as good a solution as it would be if you could re-grow your missing leg. Since we can’t regenerate a leg, why not use the crutch to get about and lead more normal lives?”
Others think MAT should only last for a short period of time...

“Strict discontinuance of opioid maintenance therapy solely on the basis of duration of treatment is not clinically justifiable at this time. Individualization of treatment for opioid addiction with methadone or buprenorphine by qualified specialists is necessary for many suffering patients, in conjunction with counseling, community support, and/or behavioral interventions.”

-Dr. Michael G. O’Neil, PharmD
Professor, Department of Pharmacy Practice;
Consultant, Drug Diversion and Substance Abuse
South College School of Pharmacy
Knoxville, Tennessee
What if it were any other metabolic disorder?

- How would we react to a treatment that was working for any other illness?
- How do we think of other maintenance medications for other chronic diseases?
- How do we speak about other chronic diseases? What language do we use?
  - “Twinkie Police”
- Do we have strong opinions about other medical treatments for other chronic illnesses? Or do we defer to the medical specialists?
We All Have a Role to Play in Ending Stigma!

- The opioid addiction and overdose epidemic demands that we educate ourselves on proven treatment interventions and harm reduction methods.
- We must learn about and carry naloxone to help folks stay alive – and then we must encourage folks to seek *truly* evidence-based treatment.
- Staying stigma and spreading the TRUTH about this epidemic and its proven treatments will save lives!
- Easy for the public to allow “the 10%” to spoil views of MAT patients.
- Remember the 90%.
- Ending Stigma Starts with YOU!


