Opiate Use Disorder
Science and Treatment

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Disclosure

• I have no financial relationship or affiliation with any commercial interest

• I have no unapproved or investigational use of any product or device
Opiate Use Disorder-Science and Treatment

Learning Objectives

1. Neurobiology of Addiction
2. Addiction, a Choice or Genetics?
3. Medication Assisted Treatment- what types of treatments are available
4. What are some of the challenges to treatment
5. Goals of Therapy
Definitions

Addiction: A Chronic Relapsing Disorder

“Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry.”

- ASAM
Definitions:
Opiates

- Morphine
- Codeine
- Opium
- Thebaine

Opiates – substances naturally present in the opium poppy plant (Papaver Somniferum)

Nushtar or "nishtar" (from Persian, meaning a lancet)
Definitions: Opioids

• Opioids are not found occurring in nature.
• Two “types” of opioids
  Synthetic
  Semisynthetic
Synthetic Opiates

- Manufactured in chemical laboratories with a similar chemical structure to the milk of the poppy plant and are completely man-made to work like opiates
  - Fentanyl
  - Methadone
  - Dilaudid
  - Norco
  - Lortab
- “Game of Thrones”
  - Milk of the poppy plant is also commonly used throughout the Seven Kingdoms in the Game of Thrones for those who have suffered severe injuries.
Semi-synthetic opiates

• Combinations of natural opiates and synthetics
  • Heroin
    • Derived from: morphine (a naturally-occurring substance in the poppy plant)
  • Oxycodone (Oxycontin)
    • Derived from: thebaine (a naturally-occurring substance in the poppy plant)
  • Hydromorphone (Dilaudid)
    • Derived from morphine (a naturally-occurring substance in the poppy plant)
  • Oxymorphone (Opana)
    • Derived from: morphine (a naturally-occurring substance in the poppy plant)
  • Hydrocodone (Vicodin, Lorcet)
    • Derived from: codeine (a naturally-occurring substance in the poppy plant)
  • Buprenorphine (Subutex, Suboxone)
    • Derived from: thebaine (a naturally-occurring substance in the poppy plant)
Relative Potency

• 5 mg tablet of Vicodin or Hydrocodone = 5 mg MSO4

• Heroin = 4-5  X  1 mg of MSO4

• Fentanyl = 100  X  5 mg tablets

• Sufentanyl = 1000  X  5 mg tablets

• Carfentanil = 100,000  X  5 mg tablets

• The difference between getting "high" and dying from carfentanil is 1 grain of sand and 3 grains of sand
Comparison of estimated lethal doses of heroin, fentanyl and carfentanil
History of Opiates
Opium-An Ancient Medicine

• Opium is mentioned in the most important medical texts of the ancient world
  • Ebers Papyrus
  • Galen
  • Avicenna

• Opium was known to ancient Greek and Roman physicians as a pain reliever, and used to induce sleep and to give relief for abdominal pain

• Opium was thought to protect the user from being poisoned.

• Opium’s pleasurable effects were also described.
Opium’s cultivation spread along the Silk Road, from the Mediterranean through Asia and finally to China.
HISTORY HEROIN

Technical name
\[ \text{C}_{21}\text{H}_{23}\text{NO}_5 \]
diamorphine
diacetylmorphine
HISTORY

HEROIN

1874- heroin developed from morphine

1898- heroin marketed by Bayer as a “safe” pediatric cough suppressant

"In the cough of phthisis minute doses [of morphine] are of service, but in this particular disease morphine is frequently better replaced by codeine or by heroin, which checks irritable coughs without the narcotism following upon the administration of morphine."
This is not the first Opiate Epidemic!

1. Late 1800s: Morphine
   - Mainly middle class
   - Female > Male

2. Early 1900s: Heroin (pharmaceutical grade)
   - First generation Italians, Jews, Irish
   - Male > Female

3. 1950s-1970s- Heroin (illicit)
   - African American/Latinos
   - Male > Female
The Current Opioid Crisis
Scope of the Problem

Every **16 minutes**, a person in the United States **dies** from an opioid overdose.

**900**

OD’s Per Day
From Heroin, Fentanyl, and Prescription Opioids

Anne Case & Angus Deaton, Princeton University
Scope of the Problem

• PRESCRIPTION OPIOID OVERDOSE, MISUSE, AND DEPENDENCE COST THE U.S.

>$78 BILLION / YEAR IN HEALTH CARE, CRIMINAL JUSTICE, AND LOST PRODUCTIVITY COSTS.

“Each year, more Americans die from drug overdoses than in traffic accidents. >3/5 of traffic fatalities involve an opioid.

In one year, drug overdoses killed more Americans than the entire Vietnam War.
Staggering Statistics!!

• From 2000 - 2017
  • >600,000 people died from drug overdoses.

• 2017
  • >72,000 persons died from drug overdoses – more than in any year on record before.

• The majority of drug overdose deaths (more than 6 out of 10) involve an opioid.

National Center for Health Statistics at the Centers for Disease Control and Prevention
NCHS Data Brief No. 294, December 2017
National Center for Health Statistics
Benzodiazepines are gaining ground!
The yellow line represents the number of benzodiazepine deaths that also involved opioids.

The orange line representing benzodiazepine deaths that did not involve opioids.

2002-2016
Benzodiazepine deaths involving opioids increased 6X more than those not involving opioids.
Fentanyl Death Rates

National Overdose Deaths
Number of Deaths Involving Other Synthetic Opioids (Predominately Fentanyl)

Source: National Center for Health Statistics, CDC Wonder
Staggering Statistics!!

- West Virginia (52.0 per 100,000)
- Ohio (39.1)
- New Hampshire (39.0)
- District of Columbia (38.8)
- Pennsylvania (37.9)

Highest observed age-adjusted drug overdose death rates in 2016
US rate is 19.8/100,000

Maryland’s drug overdose death rate: 33.2/100,000
• Drug overdose death rates - males > females.
  • Males - the rate increased (4X) 1999 - 2016.
  • Females - the rate increased (3X) 1999 - 2016.

SOURCE: NCHS (National Center for Health Statistics), National Vital Statistics System, Mortality
At least 50% of all opioid overdose deaths involve a prescription opioid!
• 24.6 million adults age 12+ live with a SUD (Substance Use Disorder)

• Only 10% or 1 out of 10 individuals sought or received treatment for their addiction

ASAM, Opioid Addiction Disease, 2015 Facts and Figures
Street Economics
Pills to Fentanyl - 2 Easy Lessons

$1.00/ mg
Oxycontin 80 mg tablets
2 Pills = $160
vs
4 Caps Heroin = $40

1 kg H = $50,000
vs
1 kg F = $3,250
Use of opioids* in 2010 (or latest year available)

We’re #2!

Charles “Buck” Hedrick
DEA Intelligence Program
Baltimore, MD
Heroin Source Regions

Mexico/South America/Middle East/Southeast Asia
THE US IS NUMBER 1

!!!!!!!
Consumption
U.S. has 4.6% of the world’s population but, U.S. residents consume 80% of world's oxycodone
Consumption
And 99% of the world’s hydrocodone (vicodin)!!
### Consumption
**Fentanyl by country**
**2016**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>29.3%</td>
</tr>
<tr>
<td>Germany</td>
<td>23.7%</td>
</tr>
<tr>
<td>Spain</td>
<td>6.5%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4.9%</td>
</tr>
<tr>
<td>France</td>
<td>4.3%</td>
</tr>
<tr>
<td>Canada</td>
<td>3.9%</td>
</tr>
<tr>
<td>Italy</td>
<td>3.8%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.4%</td>
</tr>
<tr>
<td>Belgium</td>
<td>2.2%</td>
</tr>
<tr>
<td>Australia</td>
<td>2%</td>
</tr>
<tr>
<td>Other countries</td>
<td>17%</td>
</tr>
</tbody>
</table>

*Percentage of consumption*
Speaking of “Consumption”
The Other National Epidemic
Obesity
Pain

• “If you are distressed by anything external, the pain is not due to the thing itself, but to your estimate of it; and this you have the power to revoke at any moment.”

Marcus Aurelius, Meditations

150 AD
Beginnings

1990s

Opioid crisis begins due to regulations, policies, and practices which focused on opioid medications as the primary treatment for many types of pain

Pain, the 5th Vital Sign

- American Pain Society 1996 Guidelines
Prevalence of Opioid Use Disorder in Patients with Chronic Pain

• Originally thought to be rare (<1%)

The real prevalence of OUD is thought to be in the range of 20-25%

NIDA August 2016- https://www.drugabuse.gov/publications/research-reports/misuse-prescription-drugs/
SAMHSA- National Survey on Drug Use and Health: Misuse of Prescription Pain Relievers 2015
Sources of Prescription Drugs

- 53% - Free from a friend or relative
- 21.2% - one doctor
- 14.6% - purchasing from friend
- 4.3% - fake prescription/theft
- 4.3% - drug dealer
- 2.6% - multiple doctors
- 0.1% - online
Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009

1999 (range 1 - 50)

- < 8
- 8 - 14
- 15 - 18
- 19 - 44
- 45 or more
- Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009

2001
(range 1 – 71)

< 8
15 - 18
19 - 44
Incomplete data
45 or more

8 - 14

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009

2003 (range 2 – 139)

- < 8
- 15 - 18
- 19 - 44
- 45 or more
- Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009
Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009

2007 (range 1 – 340)

< 8
8 - 14
15 - 18
19 - 44
45 or more
Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
Primary Non-Heroin Opiates/Synthetics Admission Rates by State per 100,000 Population Aged 12 and Over 1999-2009

2009 (range 1 – 379)

- < 8
- 8 - 14
- 15 - 18
- 19 - 44
- 45 or more
- Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.
July 2016 - September 2017

• Emergency department visits for opioid overdoses increased 30% in 45 states
Study: Despite decline in prescriptions, opioid deaths skyrocketing due to heroin and synthetic drugs

By Katie Zezima

April 10, 2018
Figure 2. Number of Opioid-Related Deaths Occurring in Maryland from January through September of Each Year.*

*2017 counts are preliminary.
Figure 3. Number of Heroin-Related Deaths Occurring in Maryland from January through September of Each Year.*

*2017 counts are preliminary.
Figure 4. Number of Fentanyl-Related Deaths Occurring in Maryland from January through September of Each Year.*

*2017 counts are preliminary.
Figure 5. Number of Carfentanil-Related Deaths Occurring in Maryland from January through September of Each Year.*

*2017 counts are preliminary.
** Screening for Carfentanil began in 2016, first detected in 2017
Figure 6. Number of **Prescription Opioid-Related** Deaths Occurring in Maryland from January through September of Each Year.*

*2017 counts are preliminary.
Age-adjusted drug overdose death rates, by opioid category:
United States, 1999–2016

NCHS Data Brief No. 294, December 2017
National Center for Health Statistics
Opioid Epidemic Fallout

• Increases in Acute Hepatitis C Virus Infection Related to a Growing Opioid Epidemic and Associated Injection Drug Use, United States, 2004 to 2014

• Jon E. Zibbell PhD, Alice K. Asher PhD, Rajiv C. Patel MPH, Ben Kupronis MPH, Kashif Iqbal MPH, John W. Ward MD, and Deborah Holtzman PhD Author affiliations, information, and correspondence details
Unintended “fallout” from Overdose Deaths

Organ Donation
From Overdose Patients
Unintended “fallout”- Endocarditis

2016 -Tufts University study found hospitalizations due to injectable drug-related endocarditis more than doubled between 2000 and 2013 to more than 8500 cases.

The study also found a rising proportion of those cases were found in young adults ages 15 to 34.
This is your brain,
this is drugs,
this is your brain on drugs.
Any questions?

Partnership For A Drug-Free America
Addiction

A Disease, A Choice, or Genetics?
So, What is Addiction??

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuits. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. i.e. pts pathologically pursue reward and/or relief by substance use and other behaviors.
Symptoms of SUDs (Substance Use Disorders)

- Excessive amounts used
  - Excessive time spent using/obtaining

- Craving or urges to use
  - Unsuccessful attempts to cut down

- Tolerance
  - Withdrawal

- Hazardous use despite
  - Health problems
  - Missed obligations
  - Interference with activities
  - Personal problems

- Missed obligations
- Interference with activities
- Personal problems
Like other chronic diseases, addiction often involves cycles of relapse and remission.

Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.
## Compliance & Chronicity

<table>
<thead>
<tr>
<th>Chronic Illness</th>
<th>Medication Compliance</th>
<th>Relapse within 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>&lt;60%</td>
<td>30 – 50%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>&lt;40%</td>
<td>50 – 70%</td>
</tr>
<tr>
<td>Asthma</td>
<td>&lt;40%</td>
<td>50 – 70%</td>
</tr>
<tr>
<td>Diet or Behavioral Changes</td>
<td>&lt;30%</td>
<td></td>
</tr>
<tr>
<td>Addiction</td>
<td>&lt;70%</td>
<td>40 – 60%</td>
</tr>
</tbody>
</table>

McLellan AT, Lewis DC, O'Brien CP, Kleber HD; Drug Dependence, A Chronic Medical Illness, JAMA, Oct 4, 2000
Predictive Factors of RELAPSE For Diabetes, HTN, Asthma, OUD

Low socioeconomic status

Low family support

Psychiatric co-morbidity

Lack of adherence to diet, medications, or behavioral change

McLellan AT, Lewis DC, O'Brien CP, Kleber HD; Drug Dependence, A Chronic Medical Illness, JAMA, Oct 4, 2000
FACT

ADDITION
IS NOT A
WEAKNESS.
IT IS A
DISEASE.
Genetic and Environmental Contributions to Substance Use Disorder
Inheritance of Addictive Disorders

Heritabilities range from 40-70% for all substances

The highest numbers are for heroin & cocaine abuse

From Goldman, Oroszi & Ducci (2005)
The Environment

“What is inherited is the manner of reaction to a given environment”

- Dr. Elmer G. Heyne (1912 – 1997), Wheat Geneticist
Environmental Influences

• Chaotic home / abuse
• Parental use and attitudes
• Peer influences
• Community/ social attitudes
• Poor school achievement
Risk Factors

- Biology/Genes
  - Genetics
  - Gender
  - Mental Disorders

- Environment
  - Chaotic home / abuse
  - Parental use and attitudes
  - Peer influences
  - Community attitudes
  - Poor school achievement

- DRUG
  - Route of Administration
  - Effect of drug
  - Early use
  - Cost

- Addiction

"THE PERFECT STORM"
Gene–Environment Interaction
Factors that reduce the genetic risk of SUD

– Religiosity
– Rural settings, neighborhoods with less migration
– High parental monitoring
– Legislative restrictions
– Social restrictions
Addiction is a Developmental Disease

As we mature, the pre-frontal cortex is the last area for the synaptic connections to coalesce.

This is the area most highly associated with the ability to format/understand consequences of our actions.

Opiate Addiction interrupts these final synaptic connections.
Neurobiology of Addiction

Activation of the reward pathway by addictive drugs

Pre-frontal Cortex
Thalamus
Nucleus Accumbens
Ventral Tegmental Area (VTA)
Neurobiology of Addiction
Prescription Opioids and Heroin

- Prescription opioids and heroin are chemically similar and work through the same mechanism of action.
- Both Heroin and prescriptions work at the Mu (µ) opioid receptors
- Prescription opioids are similar to and act on the same brain systems affected by heroin

www.drugabuse.gov accessed 10/17/16
Prefrontal Cortex

Binding to the $\mu$ receptors in the thalamus produces - analgesia
Binding to the $\mu$ receptors in the cortex produces - impaired thinking
Binding to the $\mu$ receptors in the Ventral tegmental area (VTA)/ nucleus accumbens (Nac) produces- euphoria or “high”

The VTA-Nac is the major reward pathway that is responsible for the reinforcing effect leading to addiction
Neurobiology of Addiction

• The neurocircuitry disrupted in addiction, includes circuits that:
  • mediate reward and motivation
  • executive control
  • emotional processing

• This has allowed an understanding of the aberrant behaviors displayed by addicted individuals and has provided new targets for treatment.
Reward Pathways

• Reward pathways are very old from an evolutionary point of view.
  • They evolved to mediate an individual’s response to natural rewards, such as food, sex, and social interaction.

• Drugs of abuse activate these reward pathways with a force and persistence that is not seen under ordinary conditions.
Reward Pathways

• Repeated drug exposure causes adaptations in the brain’s reward pathways.
  • During active drug use or shortly after stopping drug intake
    • The ability of natural rewards to activate the reward pathways is diminished
    • The individual experiences depressed motivation and mood.
    • Taking more drugs is the quickest, easiest way for an individual to feel “normal” again.
Reward Pathways

• Drug use causes long-lasting memories related to the drug experience.

Even after prolonged periods of abstinence (months/years), stressful events or exposure to drug-associated cues can trigger intense cravings and relapse, in part by activating the brain’s reward pathways.
Disruption of Executive Control and Emotional Processing

• Where do we see this most commonly?
  • Disruptions of an individual’s ability to prioritize behaviors that result in long-term benefit over those that provide short-term rewards.
    • Increased difficulty exerting control over these behaviors even when associated with catastrophic consequences

• The individual pathologically pursues reward and/or relief by substance use and other behaviors.
Natural History of Opioid Use Disorder
Treatment of OUD
Treatment of Substance Use Disorder

Nutritional deficits
- Rx
  - Dietary improvements and supplementation

Neurobiological dysregulation
- Rx
  - Pharmacotherapy

Dysfunctional behavior
- Rx
  - Psychosocial interventions
Substances for which Pharmacotherapy is Available

• Opioids
• Alcohol
• Benzodiazepines
• Tobacco (nicotine dependence)

Substances for which Pharmacotherapy is not available

• Cocaine
• Methamphetamine
• Hallucinogens
• Cannabis
• Solvents/Inhalants
Full agonist (ex: heroin, oxycodone) binding activates the $\mu$ opioid receptor

- Highly reinforcing
- Most abused opioid type
Brief Pharmacology Overview:

μ opiate receptor antagonist

Antagonist (ex: naloxone, naltrexone) binds to μ opioid receptor without activating

Is not reinforcing

Blocks access by opioids
Treatment Options for Opioid Use Disorder

• Self-help groups

• Detoxification +/- Medication Assisted Treatment (MAT)

• Outpatient treatment +/- MAT

• Residential treatment +/- MAT
Traditional 12 Step Drug Treatment

Accepting powerlessness
Disease identification
Surrender to a Higher Power
Commitment to AA/NA
Commitment to **abstinence**
Sober social support
Intention to avoid high-risk situations
What is MAT?

• MAT (Medicated Assisted Treatment)
  • FDA-APPROVED MEDICATION + BEHAVIORAL THERAPY

• FDA-approved medications include:
  • buprenorphine, methadone, naltrexone

• Behavioral therapies include:
  • counseling
  • family therapy
  • peer support programs
Rationale for MAT (Medication Assisted Treatment)

• Reduce/Eliminate opioid use

• Stabilize neuronal circuitry with $\mu$ occupation/blockade

• Protect against opioid-related overdoses

• Prevent withdrawal and craving

• Reduce criminal behavior

• Extinguish compulsive behavior

• Prevent spread of HIV and Hepatitis C
OTP (Opioid Treatment Program)

- Any treatment program for opioid addiction certified by SAMHSA (Substance Abuse and Mental Health Services Administration)
- OTP’s provide counseling and MAT for individuals who are opioid-dependent

OTPs are regulated by SAMHSA and FDA, DEA, State Methadone Authority
Each MAT includes medication and recovery work with intensive psychosocial and behavioral therapy.

Patients benefit from MAT with a minimum of 1-2 years of sobriety before attempting to taper, with frequent dosing reassessments.
There is no evidence for a pre-determined length of treatment!!!

Longer Retention = Better Outcomes!!
To Taper or to Maintain, That is the Question…

No question, actually…..

- Longer treatment, better outcomes

- Consistent with chronic disease model
  - Think DM, CAD, COPD

- As with any medication – no set limit

- Minimum of 12-24 months, but longer durations = better outcomes

- Continually reassess and individualize
Tapering

• Typically patients with continuous sobriety for 1-2+ years have the best outcomes
  • Treatment <6 months = worse outcomes

• There is no evidence to support stopping MAT
  • 95% of methadone patients do not achieve abstinence when attempting to taper off (Nosyk, et al. 2013)
  • Over 90% of buprenorphine patients relapse within 8 weeks of taper completion
    • (Weiss, et al. 2011)

• Successful patients are commonly maintained on
  • Methadone or Buprenorphine for > 2 years
  • Vivitrol (? time)
MAT: Medication Assisted Treatment for Opioid Use Disorder (OUD)

Medications used in MAT

- Methadone (schedule II)
- Buprenorphine (schedule III)
- Naltrexone (not controlled)
Methadone Myths-”Urban Legends”

- “Liquid handcuffs”
- “All you’re do’in is substituting one drug for another”
- Prevents true recovery
- Should not be used long term
- Rots your teeth
- Damages bones-”Gets into your bone marrow!”
- Turns people into “zombies”
Methadone Maintenance Therapy

• Full agonist with long elimination half-life
• Once daily dispensing in a federally-qualified methadone clinic
• Reduces euphoria of subsequent opioid use
• Specific Eligibility Criteria (> 1 year of documented OUD)
• Typical effective dose range - 60-120mg/day*
  • *HIGHER FOR PREGNANT PATIENTS
• Integrated with individual and group counseling
Methadone Pros

- Increased retention time in treatment
- Decreased opioid use
- Highly structured treatment
- Gold standard for OUD in Pregnancy
- Some analgesic benefit
- Cheap

- Reduced criminality
- Improved health (reduced utilization of health care)
- Improved functioning
- Public health gains (HIV, Hepatitis, etc.)
- Overall health care cost savings
Methadone Cons

- Daily dosing
- QTc prolongation
- High overdose risk
- Many drug-drug interactions
  - BZD
  - HIV meds
  - Seizure meds
Buprenorphine
(subutex™)/naloxone (Suboxone™) (4:1 combination)

- Partial opioid agonist
- Long half-life
- Typically once daily, but BID or TID is safe
- 16mg usually the highest effective dose
- Paired with antagonist (naloxone) to prevent abuse through injection
- Office based prescribing with DEA waiver or “X license”
  - Treat up to 30 patients first year, then up to 100 patients then a 250 patient waiver
Buprenorphine - Pros

• Increased retention in treatment
• Low overdose risk
• Office Based Opiate Agonist Treatment (OBOT)
• Minimal drug interactions
  • Except Benzos, ETOH
• No cardiac toxicity
• Less neonatal abstinence syndrome compared to methadone
• Less euphoric effect
• Less respiratory depression
Buprenorphine- Cons

• Training required to prescribe
• Expensive!!- $150.00/week
• Can complicate pain treatment
• Potential for precipitated withdrawal
• Can be diverted
Methadone and Buprenorphine Save Lives

Naltrexone: opioid antagonist

Two formulations approved in US:
- Oral Naltrexone (Revia) (1984), 50mg once daily

- Blocks all opioid receptors
- Not a controlled medication
- Blocks euphoric effects of opioids
- Also treats alcohol dependence
- ER Naltrexone used in criminal justice
Naltrexone pros

- Not a controlled medication
- MD’s, PA’s and NP’s can prescribe
- Lasts 28 days
- Treats ETOH and opioid use disorders
- No euphoria with opioids
- Few drug interactions
Naltrexone cons

• Must be opioid free for 5-7 days
  • Methadone free for 14 days

• Can complicate pain treatment

• Pain at injection site

• Very expensive!!! - $1,500.00/injection

• Overdose risk when dose wears off
“Tell me another area of medicine where willingness to use an FDA-approved medication is a bad idea.”

Dr. Thomas McLellan

Former: Deputy Director of the Office of National Drug Control Policy

Founder, Treatment Research Institute, Chairman of the Board of Directors
Access to Treatment – Gap

• 2.5 million Americans 12 and over have opioid use disorders
• 90-120 people a day die of substance related overdoses
• Fewer than 1 million received treatment
• We let people “hit rock bottom”

WHY?
Imagine Sobriety…

• After multiple detoxes, long term programs, losses, overdoses….
  • You achieve sobriety
  • You are engaged in counselling
  • You are engaged in a treatment community
  • You are exercising and eating healthfully
  • You are in college or have a job
  • You have your family back
  • You feel “normal”
• Because you are on agonist therapy/medication
  – You are told by your support network that you are not sober
  – You are “trading one addiction for another,” using a “crutch”
  – You are told you cannot engage in peer support groups that bolster your sobriety
  – You are badgered by your insurance company for repeated authorizations as to why you need it
  – You are asked by your family and doctors when you are going to get off of the medication
Medication is an Effective Tool

“Access to medication – assisted treatment can mean the difference between life or death.”

Michael Botticelli, October 23, 2014
Director, White House Office of National Drug Control Policy
Overdoses Are Symptomatic of Untreated Disease

“A key driver of the overdose epidemic is underlying substance use disorder.

Consequently, expanding access to addiction-treatment services is an essential component of a comprehensive response. ”

Overdoses Are Symptomatic of Untreated Disease

However!

- Only 50% of addiction treatment centers offer medication
- <38% of eligible patients are offered medications
- <5% of physicians are waived to prescribe buprenorphine
Treatment Barriers

STIGMA

• Often associated with substance use disorders—driven by perceptions that they are moral failings rather than chronic diseases—can exacerbate treatment barriers.
• “Stigma has created an added burden of shame that has made people with substance use disorders less likely to come forward and seek help.”

Facing Addiction in America:
The Surgeon General’s Report on Alcohol, Drugs, and Health 2016
Treatment Barriers
NEGATIVE ATTITUDES

- **Negative attitudes** among health care professionals toward people with OUD can contribute to a reluctance to treat these patients.
Treatment Barriers
MISUNDERSTANDING

• Negative attitudes and misunderstandings about addiction medications held by the public, providers, and patients.

  “Medicated Assisted Treatment merely replaces one addiction or drug with another.”
Treatment Barriers

• Paucity of trained prescribers

• Many treatment-facility managers and staff favor an abstinence model

• Prescription of inadequate doses further reinforces the lack of faith in MATs, since the resulting return to opioid use perpetuates a belief in their ineffectiveness.

Nora D. Volkow, M.D., Thomas R. Frieden, M.D., M.P.H., Pamela S. Hyde, J.D., and Stephen S. Cha, M.D.

Policy and Regulatory Barriers

Utilization Management

• Limits on dosages prescribed
• Limits on annual or lifetime medication
• Initial authorization and reauthorization requirements
• Minimal counseling coverage
• “Fail first” criteria requiring that other therapies be attempted first

Although these policies may be intended to ensure that MAT is the best course of treatment, they may hinder access and appropriate care.

www.asam.org/docs/advocacy/Implications-for-Opioid-Addiction-Treatment
Closing the treatment gap

Increase access to MAT

Increase state and federal funding to expand access to OUD treatment.

Public and private insurers

Cover all medications and behavioral health services recommended by clinical guidelines for the treatment of OUD.

Reduce stigma by education

Law enforcement
Health Providers
Care Providers
On the Horizon...

• Vaccines
• Injectable suboxone- ”Sublocade”
• Newer and better agonists, antagonists
• Genetic analysis
OPIOID USE IN VETERANS

Stephanie O’Connell, LCSW-C
Program Manager of Addiction Treatment Services
Baltimore VA Medical Center
How does opioid use in Vets compare to the general population?

• A study published this year in The American Journal of Addictions examined disorder rates, socio-demographics, co-morbidities, and quality of life among male veterans and non-veterans with opioid use disorder*

• Findings.....
  • Veterans of a racial minority group are more likely to have an OUD than non-veterans of the same racial minority
  • Veterans with OUD are significantly more likely to have co-morbid psychiatric diagnoses and SUD that veterans without OUD (this is the same for non veterans also)
  • Quality of life rated equally poor by Veterans and non-veterans with OUD. Significantly lower than those without OUD

CONCLUSIONS

• Veterans and non-Veterans experience similar risk of OUD
• Comparable vulnerability of Veterans to non-veterans in both the risk of OUD and poor quality of life indicators
• OUD not related to any distinctive feature of military service
• Increase in OUD in Veterans is likely due to the general expansion of prescription opioid use (as also seen in the general US population)
• Treatment shown to be successful with the general population with OUD would be applicable with Veterans as well
But wait, this is different than previous data...

• Previous data on Veterans with OUD was collected by VHA, therefore only veterans seeking treatment at a VA facility was collected

• This new study is population based

• We do see a significant difference in the Veterans getting OUD treatment at the VA in Baltimore. These patients are:
  • Much older
  • Significant medical/pain issues
  • Co-morbid psychiatric issues
  • Low income
  • Homeless
  • Lack of other health resources (VHA benefits only)
VA supports MAT

• OATP at Baltimore VA Medical Center
• OBOT (expand into primary care, psychiatry, etc)
• Location limitations....use of telemental health
• Residential treatment
• IOP
• Access to medical treatment, housing, psychiatry, etc
• Contingency Management
  • Increase in cocaine related overdose deaths due to fentanyl in the cocaine
Oh the bureaucracy.....

• If you are working with a Veteran who would like to access treatment at the VA we can help! (no really, we can!)
• We also like to contract with community programs to give Veterans more treatment options
• Kara Boyd – Intake Coordinator 410-605-7404
• Or call me, Stephanie O’Connell, 410-605-7000 ext 55539