ORDER OF THE PRESENTATION

- Neurobiology of Addiction
- Action of Opioids in the Brain
- Strategies for Effective Clinical Intervention
Addiction is a habitual repetition of excessive behavior that a person is unable or unwilling to stop, despite its harmful consequences.

Article Source: http://EzineArticles.com/336806
Definition of Addiction (Cont’d)

- Addiction has evolved to include a wide and complex range of behaviors including commonly known chemical dependence on alcohol, tobacco and other drugs (ATOD) and associations with food, exercise, work, and relationships with others (codependency).

- Source: Gale Encyclopedia of Psychology, 2nd edition
• Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

• Source: American Society of Addiction Medicine (ASAM, 2011)
ADDICTION IS...

- Primary
- Chronic
- Progressive
- Relapsing
- Fatal (if left untreated)
ADDITION IS A BRAIN DISEASE

- "The disease creates distortions in thinking, feelings and perceptions, which drive people to behave in ways that are not understandable to others around them,“ "Simply put, addiction is not a choice. Addictive behaviors are a manifestation of the disease, not a cause."

- Dr. Raju Hajela, former president of the Canadian Society of Addiction Medicine and chair of the ASAM committee on addiction’s new definition.

- Source: Livescience, August 15, 2011 *Addiction Now Defined As Brain Disorder, Not Behavior Problem*
HALLMARKS OF ADDICTION: THE FOUR Cs

• Loss of control of the urge
• Compulsive use
• Cravings
• Continued use despite negative consequences

• Source: Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs, 7th edition (Cohen & Inaba, 2011)
SIGNS & SYMPTOMS OF ADDICTION

• **Drug tolerance.** The individual needs to use more of the drug to experience the same effects they attained with smaller amounts.

• Source: helpguide.org
“When I first started, I remember having a huge reaction to a small amount of speed. Inside of a year, I could shoot a spoon of it easily, which is a pretty fair amount, and it finally got to the point where I couldn’t even sleep unless I’d done some.”

- 34-year-old recovering meth user

Source: *Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs, 7th edition* (Cohen & Inaba, 2011)
The individual takes drugs to avoid or relieve withdrawal symptoms. If the person goes too long without drugs, he/she experiences symptoms such as nausea, restlessness, insomnia, depression, sweating, shaking, and anxiety.

Source: helpguide.org
“Your muscles are like wrenching; your entire digestive tract is going crazy. Stomach cramps, diarrhea…everything that can go wrong with your intestinal tract happens. Your legs, you kick constantly at night; that’s why I think they call it kicking. Your legs will jerk and kick uncontrollably. You have insomnia. You vomit, sweat—what else? And, oh yeah, the craziness and delirium.

23-year-old recovering heroin addict

Source: *Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs, 7th edition* (Cohen & Inaba, 2011)
SIGNS & SYMPTOMS OF ADDICTION

• The individual has lost control over their drug use. He/she often does drugs or uses more than he/she planned, even though they told themselves that they wouldn’t. He/she may want to stop using, but they feel powerless to do so.

  • Source: helpguide.org
IN THEIR OWN WORDS…

• “Crack tastes like ‘more’; that’s all I can say. You take one hit, it’s not enough, and a thousand is not enough. You just want to keep going on and on because it’s like a 10-second head rush right after you let the smoke out, and you don’t get that effect again unless you take another hit.”

• 32-year-old recovering crack addict

• Source: Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs, 7th edition (Cohen & Inaba, 2011)
SIGNS & SYMPTOMS OF ADDICTION

- The individual’s life revolves around drug use. He/she spends a lot of time using and thinking about drugs, figuring out how to get them, and recovering from the drug’s effects.

- Source: helpguide.org
IN THEIR OWN WORDS…

Who is an addict?

Most of us do not have to think twice about this question. We know! Our whole life and thinking was centered in drugs in one form or another—the getting and using and finding ways and means to get more. We lived to use and used to live. Very simply, an addict is a man or woman whose life is controlled by drugs. We are people in the grip of a continuing and progressive illness whose ends are always the same: jails, institutions, and death.

Source: *Who, What, How, and Why*

Reprinted from the White Booklet, *Narcotics Anonymous*
The individual has abandoned activities they used to enjoy, such as hobbies, sports, and socializing, because of their drug use.

Source: helpguide.org
IN THEIR OWN WORDS...

• “The impact of that drug, the impact of that sensation and how it immobilized me and made me incapable of dealing with the simplest realities of walking to the bus, of going into my office, of getting on the phone, and of picking up my children, was so frightening to me that I did not want to repeat it. I was however, very compelled to repeat the use of methamphetamine, which I did for years.

• 34-year-old female recovering meth user

• Source: Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs, 7th edition (Cohen & Inaba, 2011)
SIGNS & SYMPTOMS OF ADDICTION

• The individual continues to use drugs, despite negative consequence. It’s causing major problems in his/her life—blackouts, infections, mood swings, depression, paranoia—but they continue to use anyway.

• Source: helpguide.org
IN THEIR OWN WORDS...

• “My brain was constantly saying, ‘just another hit, just another hit,’ and it scared me. Here I was, pregnant, big, giant belly, waddling around, and I wanted a hit of dope.”

• 36-year-old female recovering meth addict

• Source: *Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs, 7th edition* (Cohen & Inaba, 2011)
ACTION OF OPIOIDS IN THE BRAIN

- PBS Newshour “Why the Brain Loves Opioids”
  - https://www.youtube.com/watch?v=fVdXlB89QOA&feature=youtu.be

- STAT “The Science of Opioid Withdrawal”
  - https://www.youtube.com/watch?v=CduCr-kJXtk
CLINICAL STRATEGIES

- Medication-Assisted Treatment (MAT)

Medication-Assisted Treatment (MAT) is the use of medications, in combination with counseling and behavioral therapies, to provide a “whole-patient” approach to the treatment of substance use disorders. Research shows that a combination of medication and therapy can successfully treat these disorders, and for some people struggling with addiction, MAT can help sustain recovery.

Source: [https://www.samhsa.gov/medication-assisted-treatment/treatment](https://www.samhsa.gov/medication-assisted-treatment/treatment)
MEDICATIONS USED IN MAT: METHADONE

- Agonist
- Administered as a pill, liquid, or wafer
- Studied for decades and proven safe for use of weeks, months, or a lifetime
- 12 months is the recommended minimum treatment (NIDA Principles of Drug Abuse Treatment: A Research Based Guide-2012)
- Can only be administered by Opioid Treatment Program (OTP)
- Only medication approved for use in pregnant and breastfeeding women

Source: https://www.samhsa.gov/medication-assisted-treatment/treatment/methadone
MEDICATIONS USED IN MAT: BUPRENORPHINE

- Partial opioid agonist
- Approved since 2002
- Prescribed in office settings or OTPs
- Administered as tablets or sublingual film
- Produces a “ceiling effect” at moderate and higher doses
- Contains naloxone to decrease likelihood of diversion and misuse

Source: [https://www.samhsa.gov/medication-assisted-treatment/treatment/buprenorphine](https://www.samhsa.gov/medication-assisted-treatment/treatment/buprenorphine)
MEDICATIONS USED IN MAT: NALTREXONE

- Opioid antagonist
  - Blocks the euphoria and sedative effects of opioids and the feeling of intoxication from ETOH
- Approved by the FDA to treat OUD and AUD
- Administered as a pill (taken daily) or an injectable (Vivitrol) given monthly
- Recent research indicates effectiveness equal to buprenorphine
- Requires abstinence from opioids for a minimum of 7-10 days to avoid precipitated withdrawal

Source: [https://www.samhsa.gov/medication-assisted-treatment/treatment/naltrexone](https://www.samhsa.gov/medication-assisted-treatment/treatment/naltrexone)
OPIOID OVERDOSE MEDICATION: NALOXONE

- FDA-approved to prevent opioid overdose
- Binds to opioid receptors and reverses the effects of the drug
- Administered as a nasal spray, IM injection, subcutaneous injection, or IV injection
  - Source: [https://www.samhsa.gov/medication-assisted-treatment/treatment/naloxone](https://www.samhsa.gov/medication-assisted-treatment/treatment/naloxone)
- LA Standing order
- Attorney General’s Office
- OBH State-Targeted Response to the Opioid Crisis
• Continue to educate yourself and your colleagues on MAT in the treatment of OUD
  • Endorsed by the CDC, NIDA, and WHO
  • Considered the gold standard in treatment of OUD
  • Cuts mortality rate in half
    or more
    http://www.bmj.com/content/357/bmj.j1550
  • MAT is not “trading one addiction for another” (Is it trading one drug for another? Sorta kinda)
• Address your biases, whether personal or professional
• Do not perpetuate stigma with your language
RESOURCES

- MAT SAMHSA  https://www.samhsa.gov/medication-assisted-treatment
- Facing Addiction https://www.facingaddiction.org/
- Behavioral Health Collaborative
WHAT QUESTIONS DO YOU HAVE?

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