# Addiction is a Chronic Disorder: Treat it like One!

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## Disclosure Slide

• I have no actual or potential conflict of interest in relation to this program/presentation





# Objectives

- 1. Reduce the stigma associated with substance use and substance use disorders
- 2. Identify the most salient risk factors for substance use
- 3. Develop an understanding of addiction as a chronic disorder
- 4. Identify community-based policies, practices, and resources that are supportive of people in recovery











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ADULT REHABILITATION CENTER

#### Choice vs. Disease: A False Dichotomy

"Choices do not happen without a brain—it is the mechanism of choice. The quality of a person's choices depends on the health of that mechanism. However much we may wish that a person's choices were free in all instances, it is simply a fact that an addicted person's failures in the realm of choice are the product of a brain that has become greatly compromised..."—Excerpt from "Nora's Blog" (Volkow, 2014)







# Do Drugs Cause Drug Addiction? (Mate, 2008)

#### **Rat Park**



#### Vietnam







## Do Genetics Cause Addiction? (Prescott & Kendler, 1999)

**r(MZ) > r(DZ)** 



(Dr. Andrew McQuillan, University College London)

# **50%** of the variance in addiction is explained by genetics







# What about the other 50%?

• Self-Medication (SAMHSA, 2012) 13.2% (Gen Pop)

VS.

26.7% (Pop with MI)

#### What Other Biological Factors Contribute to Addiction--Comorbidity







# What about the other 50%?

- Trauma (Felitti et al., 1998)
  - ACEs lead to
    - Early initiation of alcohol use
    - Higher risk of MI and SUD
    - Higher Rx use and misuse
    - >6 ACEs = 46x increased likelihood of IV drug use

#### THE 10 ADVERSE CHILD EXPERIENCES

1. Physical abuse2. Emotional abuse3. Sexual abuse4. Physical neglect5. Emotional neglect6. Alcohol or drug abuse by a parent7. Mentally ill parent8. Divorce9. Incarceration of parent10. Childhood Domestic Violence





# What about the other 50%?

- Environment (Merikangas et al., 1998)
  - Children of addicted parents are 8x more likely to develop an SUD
    - Modeling drug use
    - Access to drugs
    - Neglect and abuse







#### **RISK FACTORS**



#### Addiction and the Brain





**VOICES** of HOPE

#### Addiction and the Brain





## Addiction and the Brain: Tolerance







#### Tolerance



Dopamine Down Regulation from Prolonged Drug Use











# **Dopamine D2 Receptors**

[<sup>11</sup>C]raclopride



Control Subjects 2.99 (Sd 0.41) Obese Subjects 2.47 (Sd 0.36)

P < 0.008

Wang et al, Lancet 2001

# Addiction and the Brain: Withdrawal



• Withdrawal symptoms: begin within 24-48 hours, basically the opposite effect of the drug (i.e. opiate withdrawal involves elevated heart rate, blood pressure, respiration, cold sweats nausea, diarrhea, body aches, anhedonia, etc.)





# Why are relapse rates so high?

• After withdrawals: Post acute withdrawal syndrome (PAWS)

• Low dopamine activity long term psychological symptoms (anhedonia, anxiety, depression, lethargy, sleeplessness, sensitivity to stress, etc.)

Early recovery is misery!





Partial Recovery of Brain Dopamine Transporters in Methamphetamine (METH) Abuser After Protracted Abstinence

Normal Control

METH Abuser (1 month detox)

METH Abuser (24 months detox) ml/gm

Source: Volkow, ND et al., Journal of Neuroscience 21, 9414-9418, 2001.

#### Recovery as a Delayed Reward (Lamb et al., 2016)

- Delayed discounting differences
- Food versus remifentanil





#### Recovery Rates (Dennis, Foss, & Scott, 2007)

Percent Sustaining Abstinence



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# A Chronic Condition Requires a Chronic Response









# **Recovery Capital**



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#### Recovery Capital = Nutrients!





# Evolving Approach to Addressing Addiction: A (Really) Short History



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# Bioing Proof Bioing Proof

The Living Proof Scholarship \$1,000 for a student in long-term recovery

#### Living Proof: The Next Generation \$1,000 each for four high school seniors continuing

#### EXPUNGEMENT SESSION

VOICES OF HOPE • WEDNESDAY, APRIL 24 450 OLD VINE ST. STE. 101, LEXINGTON, KY 40507

10:00 AM - 2:00 PM



#### SERVICES INCLUDE:

- Information on offenses that are eligible for expungement
- Copy of your criminal record
- Job training and job search assistance
  Information regarding restoration of voting rights
- Additional community resources
  - For more information, call or email 859-277-3661or ben.haydon@goodwillky.org



#### Voices of Hope RCC

- Recovery Community Centers serve as a hub for recovery resources in the community
- Transplant the treatment environment to the community





#### Language Matters (Boroditsky, Schmidt, & Phillips, 2003)



#### German

- "Key" = der Schlüssel
  - Masculine article
  - Described as "jagged, rough, hard, heavy, metal"
- "Bridge" = die Brücke
  - Feminine article
  - Described as "beautiful, elegant, fragile, peaceful, pretty"

#### Spanish

- "Key" = la clave
  - Feminine article
  - Described as "golden, intricate, little, shiny, tiny, lovely"
- "Bridge" = el Puente
  - Masculine article
  - Described as "big, dangerous, long, strong, sturdy, towering"





#### Destigmatized Language (Kelly & Westerhoff, 2010)

• Substance abuser vs. **Person** with a substance use disorder





#### **Changing the Language of Addiction**



Terms that stigmatize addiction can affect the perspective and behavior of patients, clients, scientists, and clinicians. Clinicians especially need to be aware of person-first language and avoid more stigmatizing terms.

# Terms Not to Use

- addict, abuser, user, junkie, druggie
- alcoholic, drunk
- oxy-addict, meth-head
- ex-addict, former alcoholic
- clean/dirty (drug test)
- addictions, addictive disorders

# **Terms to Use**

- person with a substance use disorder
- person with an alcohol use disorder
- person with an opioid use disorder
- person in recovery
- negative/positive result(s)
- addiction, substance use disorder





#### What is Harm Reduction? (NHRC, 2022)

- hr is a "practical set of strategies aimed at reducing the negative consequences associated with substance use"
- HR is "a movement for social justice, build on the belief in, and respect for, the rights of people who use drugs"







# What is the Value of harm reduction?

#### • For example: SSPs

- Reduce incidence of HIV/Hep C
- Reduce injection frequency and injection-site wound frequency
- Increase entry to treatment, (inpatient, IOP, and MOUD)
- Increase access to physical and mental healthcare
- Reduce the number of improperly discarded syringes
- Reduce first responder needle sticks





#### Medications for Opioid Use Disorder are Effective!

- Starting MOUD prior to prison release substantially reduces overdose deaths
- From 2016-2017 in Rhode Island, new approach to using MOUD in jails/prisons began.
- Results indicate a 60.5% reduction in mortality.
- For every 11 inmates treated with MOUD, 1 death from OD was prevented

(Green et al., 2018)

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Time in Treatment

(Weiss et al., 2019)



Comparative Study JAMA Netw Open. 2020 Feb 5;3(2):e1920622.

doi: 10.1001/jamanetworkopen.2019.20622.

#### HHS Vulnerability Disclosure

#### Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder

Sarah E Wakeman <sup>1</sup><sup>2</sup>, Marc R Larochelle <sup>3</sup><sup>4</sup>, Omid Ameli <sup>5</sup>, Christine E Chaisson <sup>5</sup>, Jeffrey Thomas McPheeters <sup>6</sup>, William H Crown <sup>7</sup>, Francisca Azocar <sup>8</sup>, Darshak M Sanghavi <sup>9</sup>

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Free article

#### Abstract

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**Importance:** Although clinical trials demonstrate the superior effectiveness of medication for opioid use disorder (MOUD) compared with nonpharmacologic treatment, national data on the comparative effectiveness of real-world treatment pathways are lacking.

**Objective:** To examine associations between opioid use disorder (OUD) treatment pathways and overdose and opioid-related acute care use as proxies for OUD recurrence.

**Design, setting, and participants:** This retrospective comparative effectiveness research study assessed deidentified claims from the OptumLabs Data Warehouse from individuals aged 16 years or older with OUD and commercial or Medicare Advantage coverage. Opioid use disorder was identified based on 1 or more inpatient or 2 or more outpatient claims for OUD diagnosis codes within 3 months of each other; 1 or more claims for OUD plus diagnosis codes for opioid-related

**Exposures:** One of 6 mutually exclusive treatment pathways, including (1) no treatment, (2) inpatient detoxification or residential services, (3) intensive behavioral health, (4) buprenorphine or methadone, (5) naltrexone, and (6) nonintensive behavioral health.

**Main outcomes and measures:** Opioid-related overdose or serious acute care use during 3 and 12 months after initial treatment.

**Results:** A total of 40 885 individuals with OUD (mean [SD] age, 47.73 [17.25] years; 22 172 [54.2%] male; 30 332 [74.2%] white) were identified. For OUD treatment, 24 258 (59.3%) received nonintensive behavioral health, 6455 (15.8%) received inpatient detoxification or residential

https://pubmed.ncbi.nlm.nih.gov/32022884/

Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder - PubMed

services, 5123 (12.5%) received MOUD treatment with buprenorphine or methadone, 1970 (4.8%) received intensive behavioral health, and 963 (2.4%) received MOUD treatment with naltrexone. During 3-month follow-up, 707 participants (1.7%) experienced an overdose, and 773 (1.9%) had serious opioid-related acute care use. Only treatment with buprenorphine or methadone was associated with a reduced risk of overdose during 3-month (adjusted hazard ratio [AHR], 0.24; 95% CI, 0.14-0.41) and 12-month (AHR, 0.41; 95% CI, 0.31-0.55) follow-up. Treatment with buprenorphine or methadone was also associated with reduction in serious opioid-related acute care use during 3-month (AHR, 0.42, 0.58-

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3/8/22, 9:15 AM

The doctor coming back into the room after you asked him to help with your opiate addiction















I woulked by storing straight onto the sidewalk unable to left my head of IF I would nodding of barely able to wat my hand from the drogs I was so down hopele I didn't feel human enough to warra look another homan being







# Questions or Comments?

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