



‘You Just Need to Stop’: **Stigma, Neurobiology & Treatment of Addiction**



Lipi Roy, MD, MPH, FASAM

Addiction Medicine Physician | Speaker | Founder, SITA MED
Former Chief of Addiction Medicine | Rikers Island jail
Media Medical Commentator (MSNBC, CNN, Forbes)

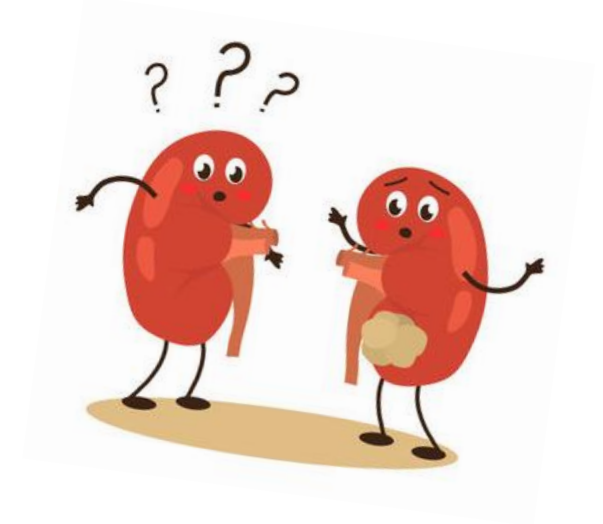
  LipiRoy |   LipiRoyMD |  YouTube Show Host



Laughter is the Best Medicine



Why do medical students hate exams on kidney stones?



They're the hardest to pass!! 😊

LEARNING OBJECTIVES

1. Define addiction as a chronic medical disease of the brain
2. Describe the neurobiology of addiction including three key parts of the brain involved in addiction
3. Recognize the role of stigma as a barrier to treatment for individuals with addiction



OUTLINE

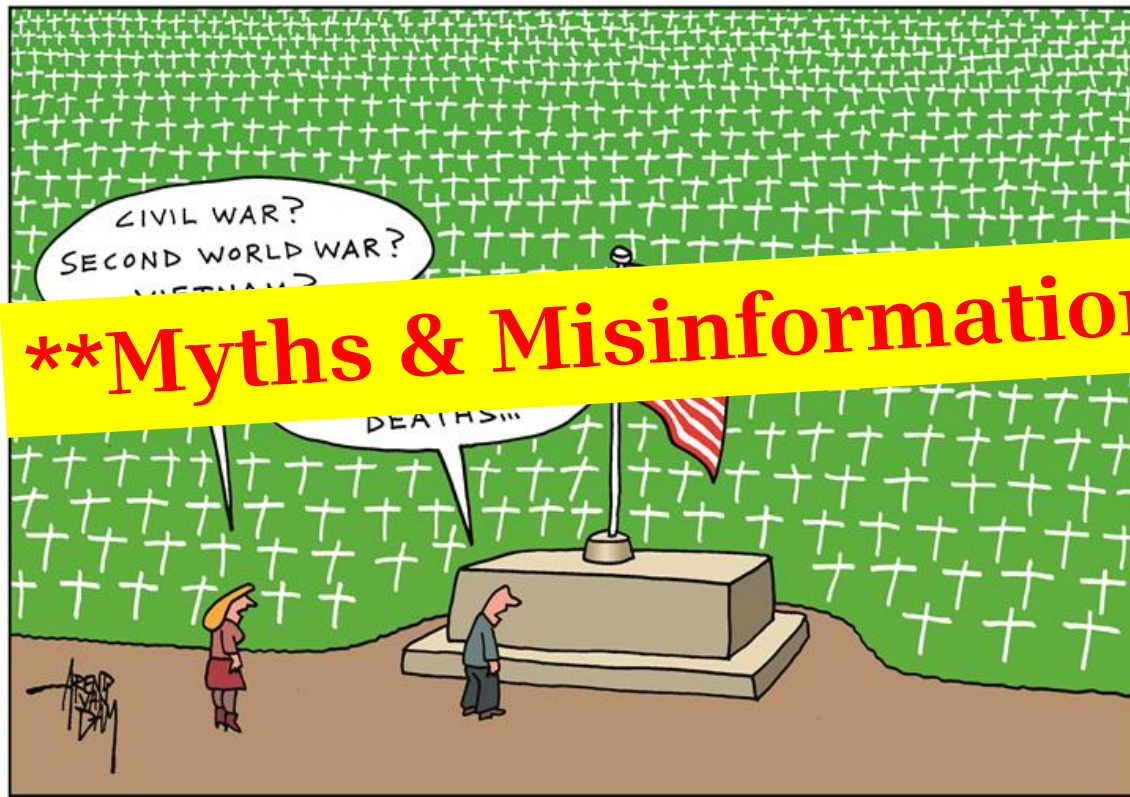
- ❑ Colliding Epidemics: COVID-19 + SUD
- ❑ Addiction & Popular Culture
- ❑ Alcohol & Opioids
- ❑ Addiction – Epidemiology, Background
- ❑ Behavioral Addiction
- ❑ Neurobiology of Addiction
- ❑ Stigma
- ❑ Treatment
- ❑ Self-Care
- ❑ Resources



An EPIDEMIC Underlying a PANDEMIC

~ *A Public Health Crisis Exacerbated by Misinformation*

~



PLANTIF TULSA WORLD CAGLE CARTOONS.COM

****Myths & Misinformation are NOT new to Addiction****



Clinical Case

“Kendra” is a 46yo woman with hypertension, diabetes and chronic back pain for which she had been prescribed oxycodone but weaned herself off. Her uncle died of alcohol-related cirrhosis.

Four years ago, in the span of 3 weeks: *“My younger sister died, then my mom died, and then my brother died. I was a wreck. Couldn’t get out of bed for a month.”* She started using oxycodone & heroin to ease her pain and suffering. She used to enjoy arts & crafts, *“but I’m not in the mood.”*

During COVID, her painful memories of family loss & grief came flooding back.

She came to our clinic to get help. *“I heard you give bupe. My husband and children need me. I can’t live like this anymore.”*





Quiz Question



Which of the following regarding Kendra's case is true?



- a) Her painkiller use is concerning for opioid use disorder
- b) Her uncle's alcohol consumption increases her risk for developing a substance use disorder
- c) Loss of family members could be a risk factor for developing an SUD
- d) All of the above
- e) Kendra's a whiner. Tell her to 'buck up' and get over it



My Pandemic Experience

It's been a tough 4+ years for ALL of us ... uniquely so for frontline healthcare workers

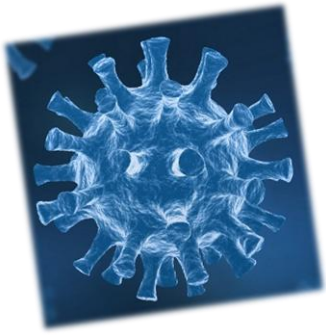
❖ Worked 3 different clinical positions:

- ✓ Medical director of COVID Isolation & Quarantine Sites
- ✓ Treated opioid addiction once/week in the Bronx
- ✓ Medical oversight at city- & state-run vaccination sites

❖ Media medical commentary on air (350+), in print/digital (Forbes)

❖ Virtual consulting, speaking

I was burning out 😞





Colliding Epidemics

SUD: During COVID-19

News Release

Sept. 30, 2021

[Contact information](#)

Nonfatal drug overdoses increased during



COVID-19
Minneapolis
over
Improvement
the month
2020. In
were 14 non-fatal

HEALTH NEWS FEB. 29, 2024 / 1:39 PM

Alcohol-related deaths rise sharply in U.S., hitting women hardest

By Ernie Mundell, HealthDay

2023:
>107,000 deaths from drug overdose per CDC (mostly driven by opioids)

hope

2024*:
~87,000 deaths from drug overdose per CDC (24% decrease from 2023)

Americans hooked on it, according to federal health officials.

Between 2015 and 2018, about 53% of the 1.6 million meth users were addicted to it and slightly more than 22% said they injected the drug, according to a new report from the U.S. Centers for Disease Control and Prevention. The CDC noted that mental illness and use of other drugs were common among meth users.



(HEALTHDAY)

NEWS
Healthcare of Tomorrow

NATIONAL NEWS
New Health Care Index Shows Increased Costs

SUD: During COVID-19 (2)

- ❖ COVID-19 pandemic distinct from other catastrophic events because of massive population exposure to **ongoing trauma**
- ❖ Job- and food-insecurity, school closures → → **uncertainty, frustration**
- ❖ 54% increase in national sales of **alcohol** in 1 week vs. same time last year
- ❖ **Chronic heavy alcohol** consumption **reduces immunity** to viral and bacterial infections



Increased STRESS
Substance Use
Relapse/Return to Use
Overdose
Death

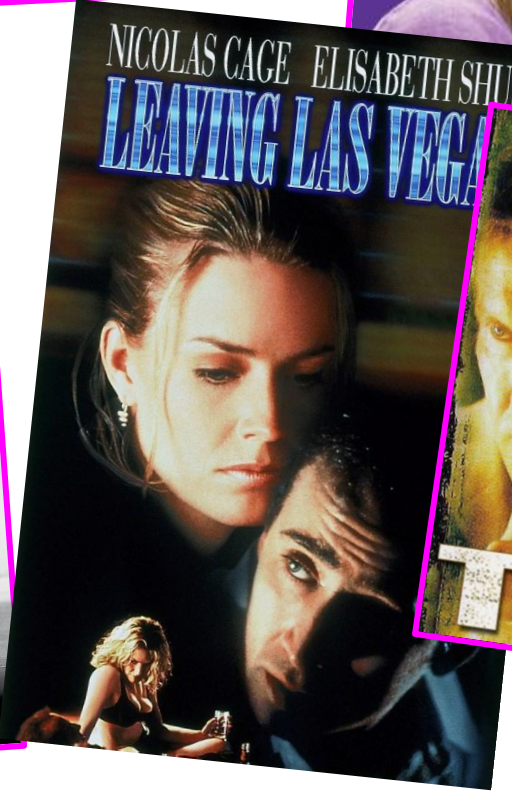


**DRUG USE &
ADDICTION
in
FILM &
TELEVISION**





Trainspotting



Celebrities & Overdose

Report: Prince died of an opioid overdose

AOL.COM EDITORS
Jun 2nd 2016 12:03PM

Whitney Houston's cause of death revealed as an overdose of prescription drugs

'Friends' star Matthew Perry died of accidental ketamine overdose, investigation finds

Accidental Overdose
Death: Accidental
...xycodone, to treat fractured hip and other is

Philip Seymour Hoffman
more

Heath Ledger's l

106 SHARES
Share on Facebook



IN LONDON
Finds Body in Home



Substance Use Affects Everyday People



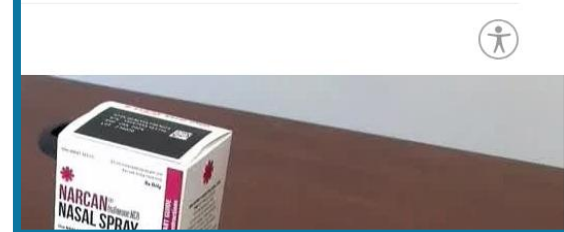
Local, State & National News

More women in the U.S. are drinking themselves to death, research finds

Alcohol is still killing more men, but two decades ago, alcohol-related mortality is rising at a faster rate among women.



New York's drug overdose deaths declining, but officials concerned about Medicaid cuts



Trump team revokes \$11 billion in funding for addiction, mental health care

MARCH 27, 2025 · 2:22 PM ET

 Brian Mann



Psychology Science
Psychology.com

Teens at Risk for Gaming Addiction

Psychology · December 10, 2024



← Home / News / Nearly Half Of All UK Teens Feel Addicted to Video Games

Nearly Half Of All UK Teens

Last Updated: March 13, 2025



Author
Zachary Pottle

Categories

[Social Media](#) [Research](#) [Adolescents](#)





Quiz Question



Addiction can involve all of the following EXCEPT...

- a) History of verbal abuse
- b) Family history of alcoholism
- c) Hurricane or pandemic
- d) Divorce or unemployment
- e) Moral weakness



Alcohol: Impact on Society

Alcohol Kills More People Than Opioids

88,000 DEATHS

EXCESSIVE
ALCOHOL USE

#NCADDAAlcoholAwarenessMonth

RISK DRINKING
COLLEGE STUDENTS

1,000 ASSAULTS

10 SEXUAL ASSAULTS/
DATE RAPES*

1 MILLION
INJURY INCIDENTS

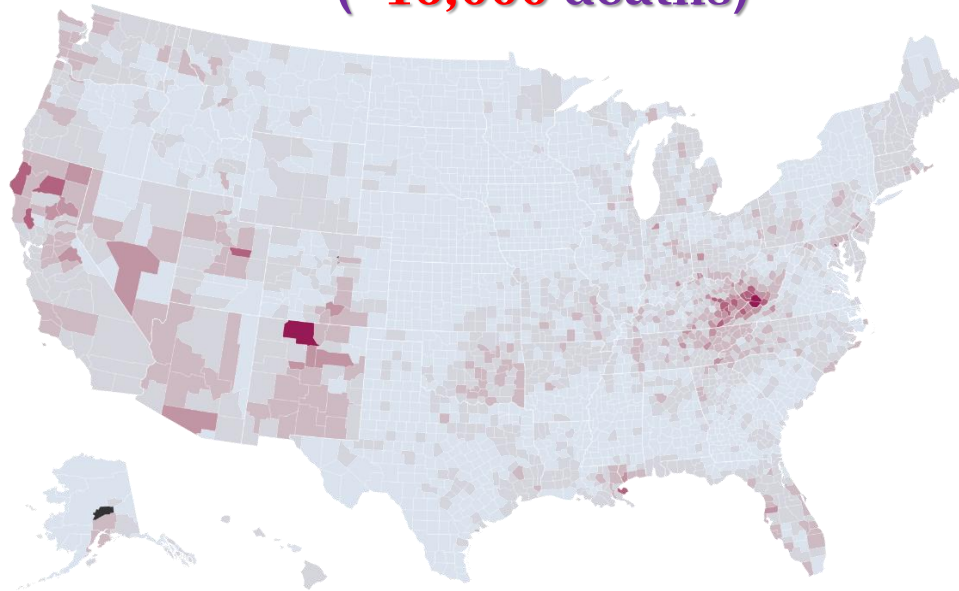
10% ENGAGE IN
BINGE DRINKING*

CDC 2010

Opioid Overdose Epidemic: A Nationwide Problem



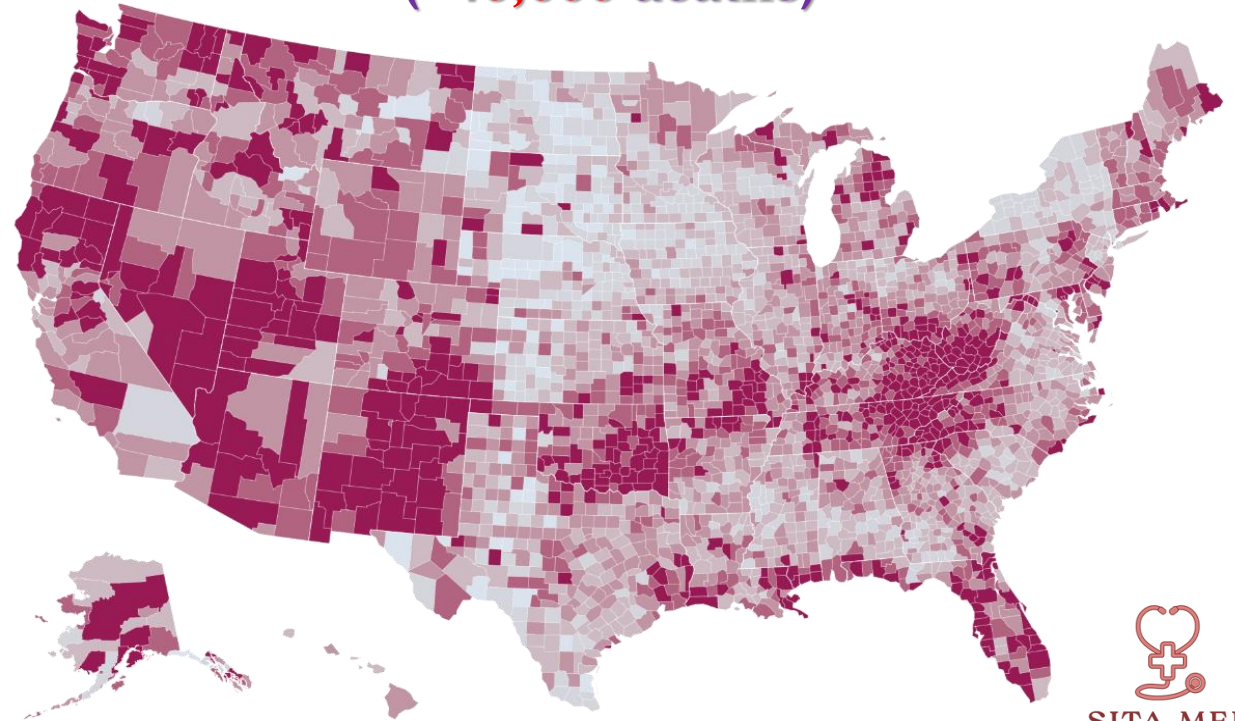
Overdose Deaths per 100,000 (1999)
(~16,000 deaths)



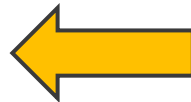
15 years later...



Overdose Deaths per 100,000 (2014)
(~40,000 deaths)



~87,000 deaths
in 2024



[114k the previous year,
mostly driven by opioids]

A person wearing an orange jumpsuit is seen from behind, standing in a dark, rocky, and cavernous environment. They are holding onto a large, heavy metal chain that is breaking apart. The person's arms are outstretched, and the chain is snapping into pieces around them. The scene is dimly lit, with a bright light source from below creating a glow on the ground and highlighting the person's figure. The overall atmosphere is one of struggle and liberation.

What is Addiction?

*“When you know addiction, you know medicine.
When you misunderstand addiction, you
misunderstand medicine.”*

- Michael Miller, MD, DFASAM, DLFAPA



ASAM Definition



“Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual’s life experiences. People with addiction use **substances** or engage in **behaviors** that become compulsive and often continue despite harmful consequences. Prevention efforts and treatment approaches for addiction are generally as successful as those for other chronic diseases.”

Substance Use Disorder is...

...a treatable **chronic medical** disease of the **brain** that causes **compulsive** drug seeking and use, **despite harmful consequences** to the individual using drugs and to those around him or her. It involves functional changes to brain circuits involved in reward, stress & self-control; these changes may last a long time after a person has stopped using. **It is NOT a sign of moral weakness or failure.**



Although the initial decision to take drugs is voluntary for most people, the **brain changes** that occur over time **challenge** a person's **self-control** and hamper his/her ability to resist intense impulses to take drugs.

The 4 C's of Addiction:

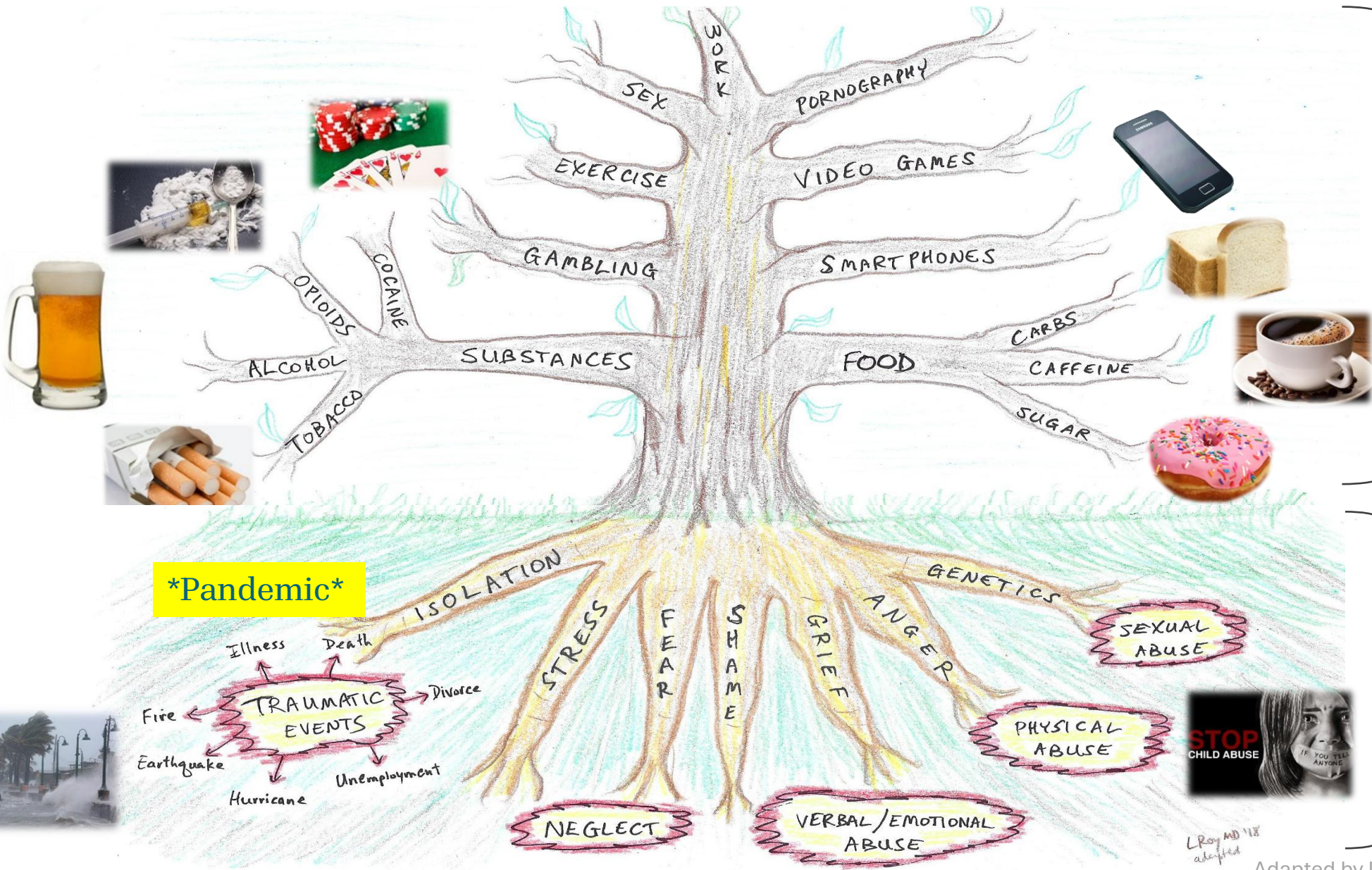
1. Impaired **CONTROL** over drug use
2. **COMPULSIVE** use
3. **CONTINUED** use despite harm
4. **CRAVINGS**





The *TRUE* Causes
of Addiction...

“Addiction Tree”



Types of Addictions

ROOTS of Addictions

L Roy MD '18 adapted

Substance Use Disorder: DSM-5 (≥2 items in 12 month period)

DSM-IV Abuse

1. Failure to fulfill responsibilities ✓
2. Use in physically hazardous situations ✓
3. Legal problems was in DSM-IV but it was replaced with Craving in DSM-5.

DSM-IV: Dependence

4. Social/interpersonal problems ✓
5. Use larger amounts/longer than intended ✓
6. Cannot cut down ✓
7. ↑ time spent to get, use, and recover ✓
8. Give up or ↓ other important parts of life ✓
9. Ongoing use despite problems ✓
10. Tolerance* ✓
11. Withdrawal* ✓

*10 and 11 do not count if opioid is prescribed

Severity:

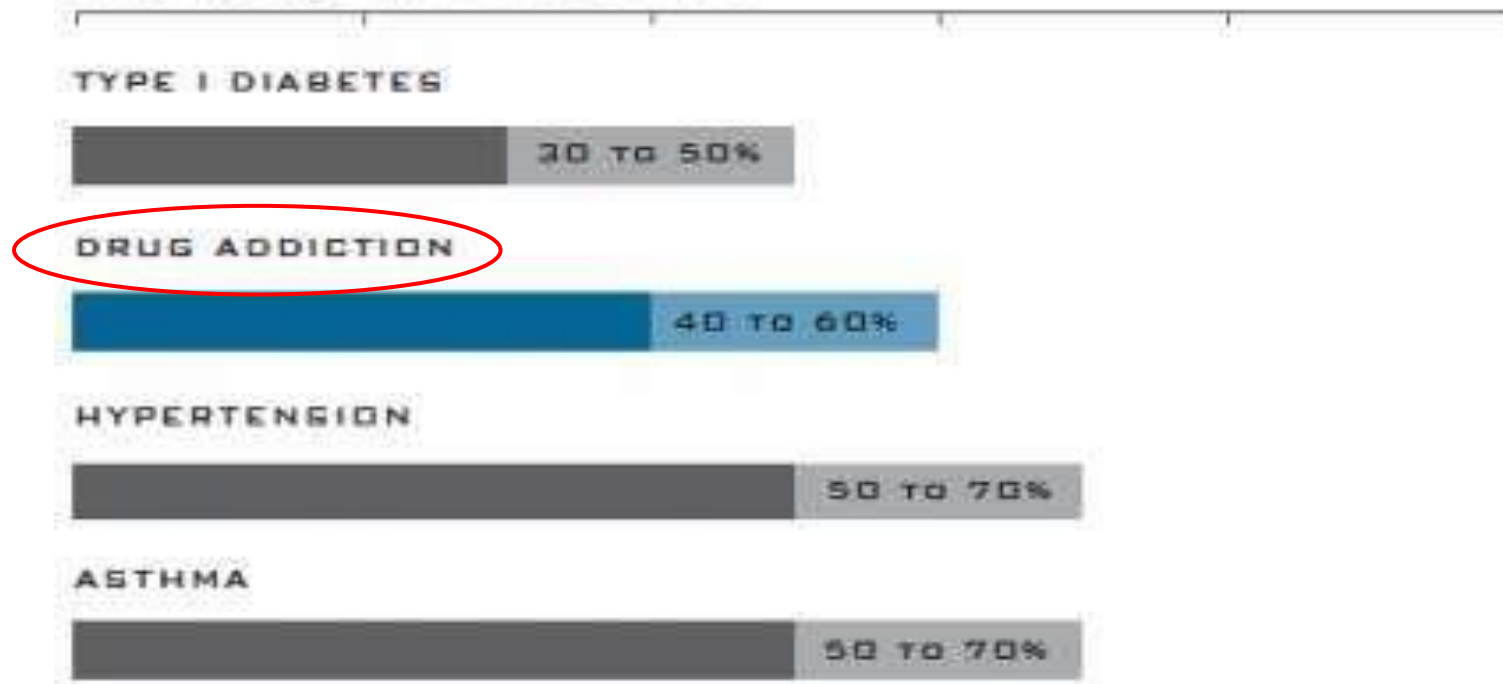
Mild=2-3

Mod=4-5

Severe=6+

Recurrence Rates: SUD vs. Other Chronic Diseases

Percentage of Patients Who Relapse



*Recurrence
("relapse") rates
for Addiction
resemble those of
other chronic
diseases such as
Diabetes,
Hypertension &
Asthma*

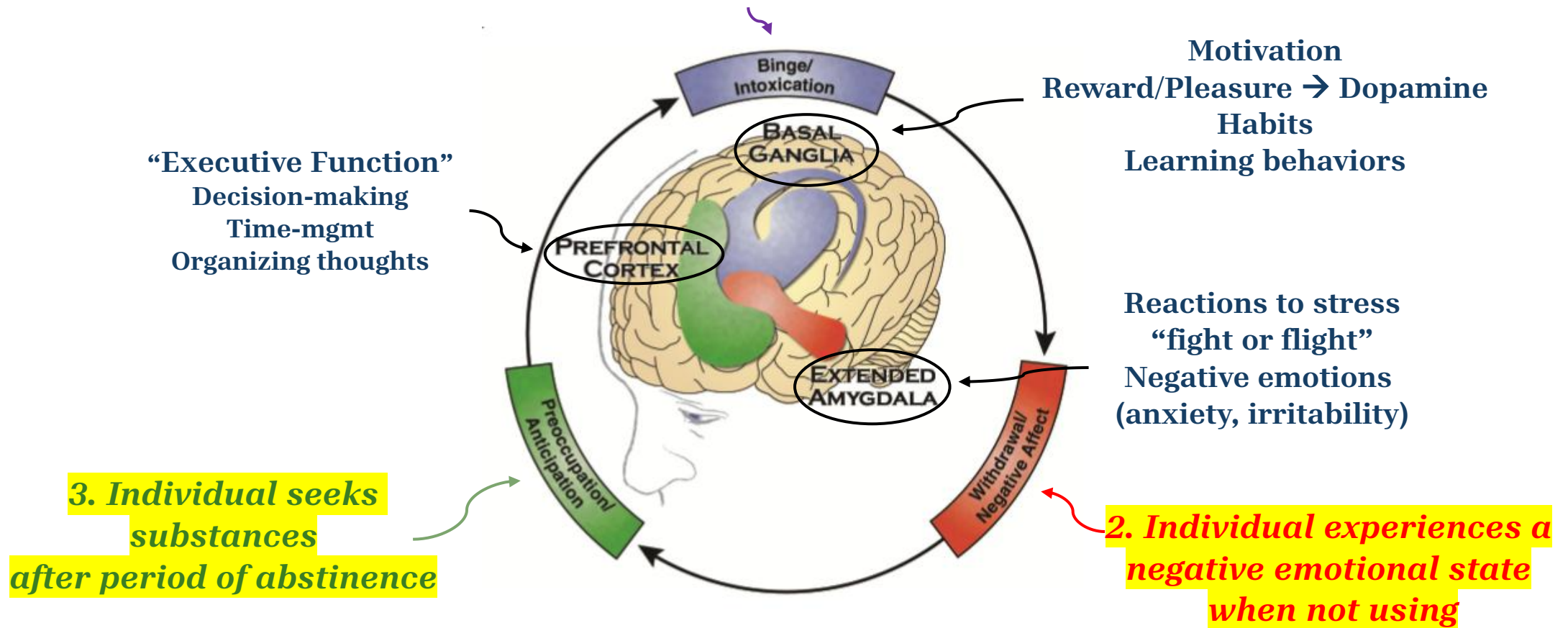


Neurobiology of Addiction

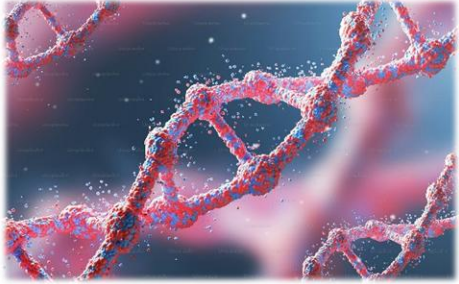
Neurobiology of Addiction

3 Stages of the Addiction Cycle and the Brain Regions Affected

1. Individual consumes an intoxicating substance & experiences its rewarding/pleasurable effects



Factors Affecting Addiction Neurobiology

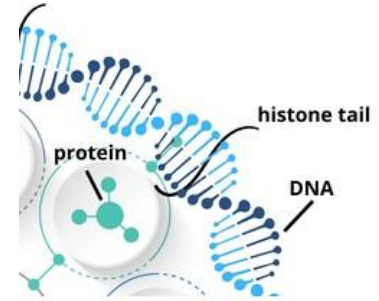


GENETICS ("Nature")

- Addiction has a 40-70% genetic component
- Many genes involved, in increasing or decreasing risk
- Genes impact expression & regulation of neurotransmitters in the reward cycle, e.g. dopamine, glutamate, GABA

EPIGENETICS ("Nurture")

- Regulates how & when specific genes are expressed in response to environmental factors, stressors & drug exposure
- E.g. DNA methylation occurs during chronic alcohol use → → change expression of genes in reward pathways, impulse control + stress response





BEHAVIORAL ADDICTIONS



Many Types of Behavioral Addictions

Food



Gaming



Gambling



Social Media



Shopping



Sex





Behavioral Addictions



Also Known As:

- Process Addictions
- Impulse Control Disorders
- Obsessive-Compulsive Spectrum Disorders

Definition:

Continued engagement in a non-substance-related behavior despite adverse consequences. Involves compulsive engagement in behavior, diminished self-control over engagement & cravings prior to engagement





STIGMA

STIGMA

Stigma: attribute, behavior or condition that is socially discrediting

Of the 48 million Americans with a SUD,
only 20% access treatment



****STIGMA is a MAJOR BARRIER to seeking help ****



→ Drug addiction is the **#1 most stigmatized social problem**
(more than mental illness; alcohol #4)



SITA MED
HEALING THROUGH CONNECTION

WORDS MATTER: Changing Our Language

Stigmatizing / Punitive / Tough

“Substance/drug abuse”

“Substance/drug abuser”

“War on Drugs”

“Dirty urine”

“Junkie,” “Addict,” “Cokehead,” “Lush”

Patient

Health care
professionals

Less likely to seek help
Perceive ↑ *discrimination*

Less regard for patients with addiction
“Less motivated”, “violent”,
“manipulative”
Shorter visits

SUBOPTIMAL CARE



Less Stigmatizing

“Substance use disorder”

“Person with substance use issues/disorder”

Urine *positive* for opioids

Patients feel less judged, more respected
Improves therapeutic relationship

More likely to seek care

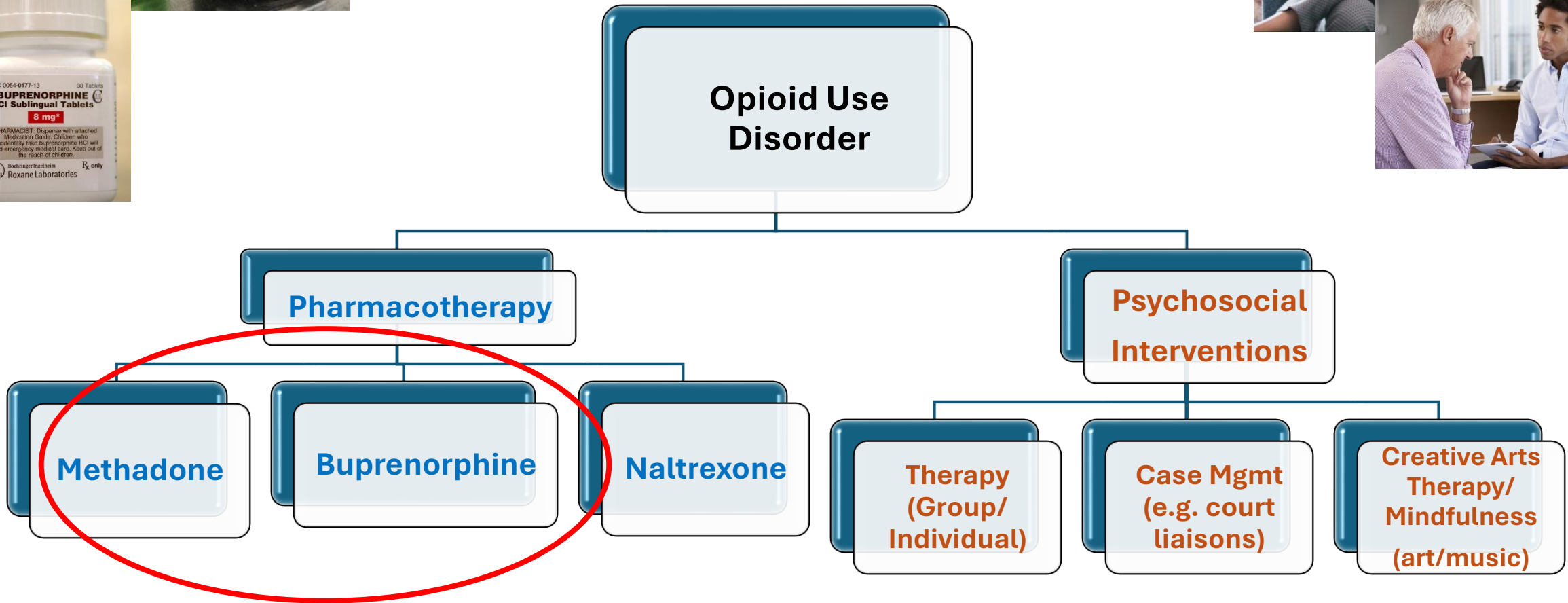




TREATMENT

*Most people with addiction – once connected to the appropriate treatment & recovery services – **GET BETTER.***

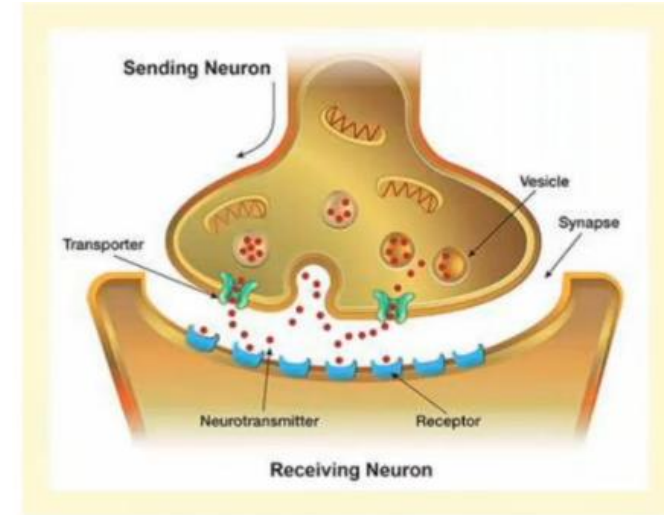
Treatment for OUD



Medications for Alcohol Use Disorder

FDA-Approved Medications

1. Naltrexone (oral + injectable)
2. Acamprosate
3. Disulfiram



All medications are grossly UNDERUTILIZED

Off-Label Medications

1. Topiramate (“Topamax”)
2. Gabapentin (“Neurontin”)
3. Baclofen

***Medications work best
in combination with
psychosocial support***

Treatment for Behavioral Addictions



Gaming Disorders

1. Cognitive behavioral therapy (CBT)
2. Bupropion (off-label)
3. Naltrexone (off-label)
4. Peer recovery programs



Gambling Disorders

1. CBT
2. Bupropion (off-label)
3. Naltrexone (off-label)
4. Nalmefene
5. Motivational interviewing
6. Psychodynamic therapy
7. Gambler's Anonymous
8. Intensive outpt & residential programs
9. Gambling helplines (800-GAMBLER)



Social Media Addiction

1. CBT
2. Mindfulness
3. Self-regulation
4. Educational programs

Clinical Case: What Happened to Kendra?

I **thanked her** for coming in & sharing her story

Started on **buprenorphine**

Connected to a **therapist** and a **psychiatrist**

Encouraged to discuss her **back pain** with **PCP** & **neurologist**

Encouraged her to do things she **loves** and that **relax** her



A year later, she is in **recovery** 😊

Her pain is **manageable**

Her depression is **improved**

She's returned to use (relapsed) a few times on anniversary of mother's death, but otherwise has **little desire to use**

She has returned to art:
"You've inspired me to paint"



Kendra's Story: Recovery, Painting, *PURPOSE*



Take-Home Points

1. Addiction is a **chronic medical disease**, a disease of the brain (NOT a sign of moral weakness or failure)
2. Several parts of the **brain** are impacted in addiction, affecting memory, emotions and executive function
3. Behavioral addictions also involve the brain and need to be treated like a chronic health condition
4. Addiction is costly but preventable and treatable
5. **Stigma** towards people with addiction acts as a **barrier to care**





SELF-CARE



1. Mindful practice – meditation, yoga, prayer, gratitude journal, etc.
2. Sleep
3. Eat – regularly and healthy
4. Exercise
5. Hydrate
6. Do what you enjoy (movies, dining, museums, travel, etc.)
7. Do nothing 😊
8. Ask for help – there is no shame in this

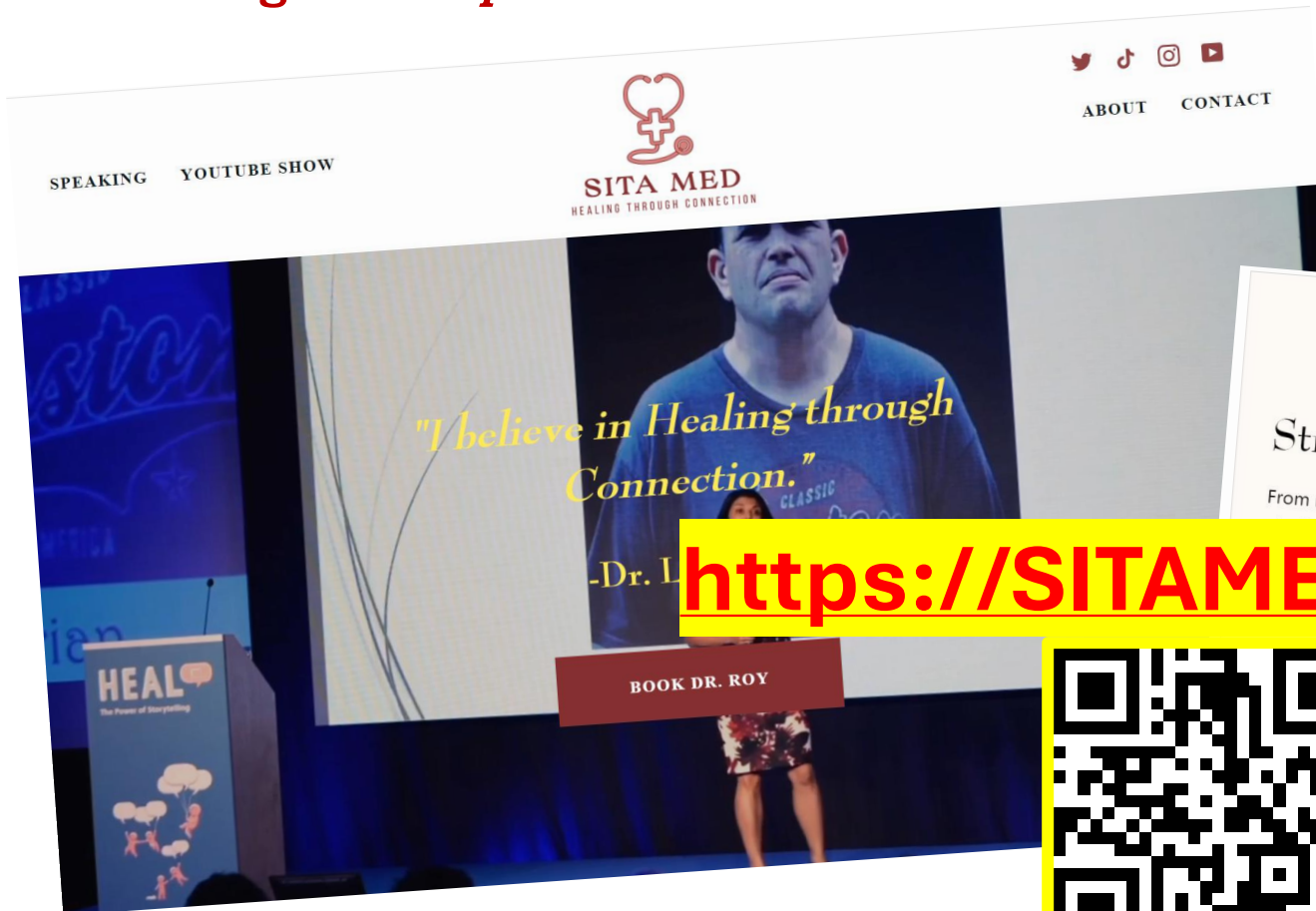


SITA MED: My Speaking Company!



*A speaking & training company addressing stress-related conditions
(e.g. addiction, mental illnesses, sleep disorders, burnout)*

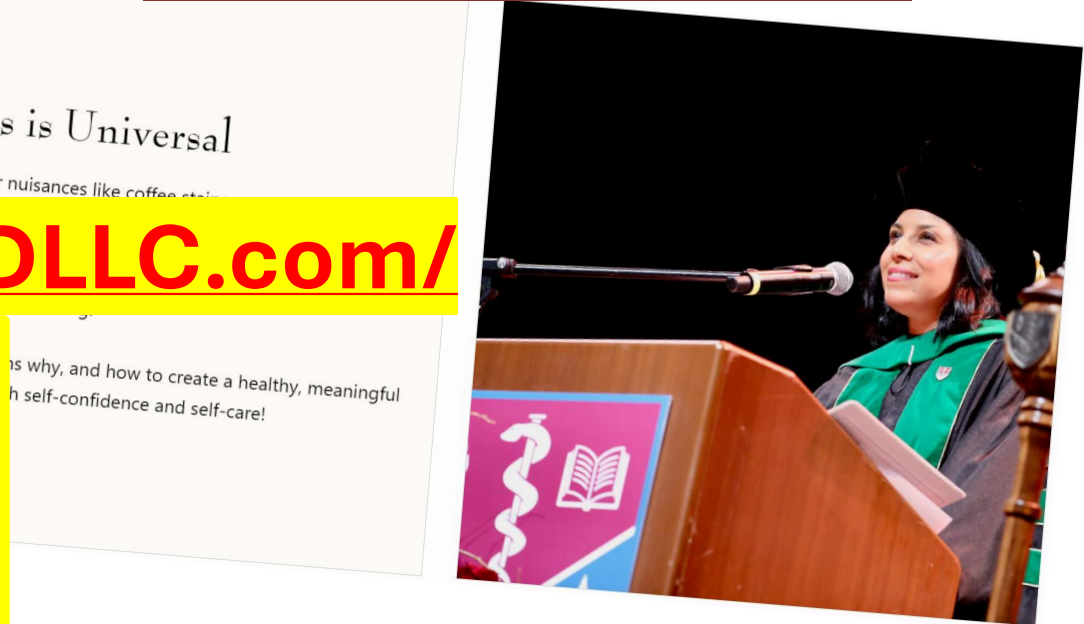
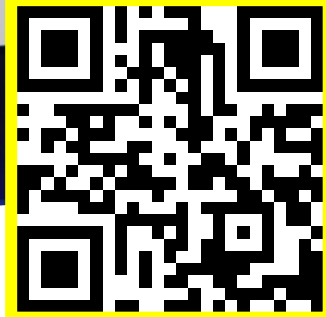
~Strength & Inspiration in Trauma & Addiction using Mindfulness, Empathy + Delight~



Dr. Roy uses science and storytelling to convert *darkness* to *delight*.

CONTACT DR. ROY

<https://SITAMEDLLC.com/>



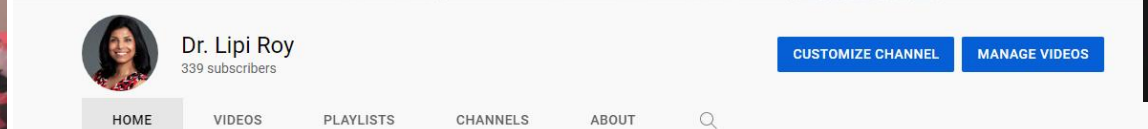
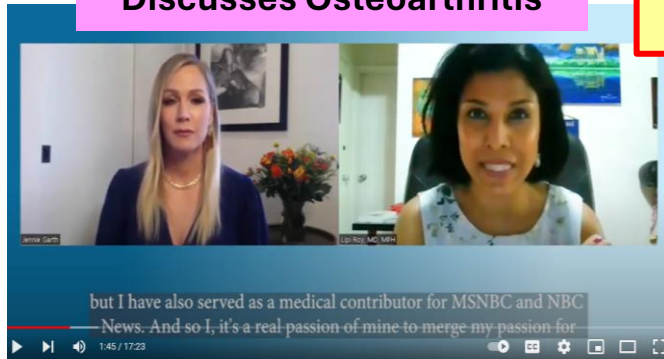
YouTube Health Series, *Health, Humor & Harmony*

~ *Health show that merges medicine, social justice + entertainment* ~

Impact of Roe Ruling on
Infertility Treatment



Beverly Hills' Jennie Garth
Discusses Osteoarthritis



Please **SUBSCRIBE + Share!** 😊

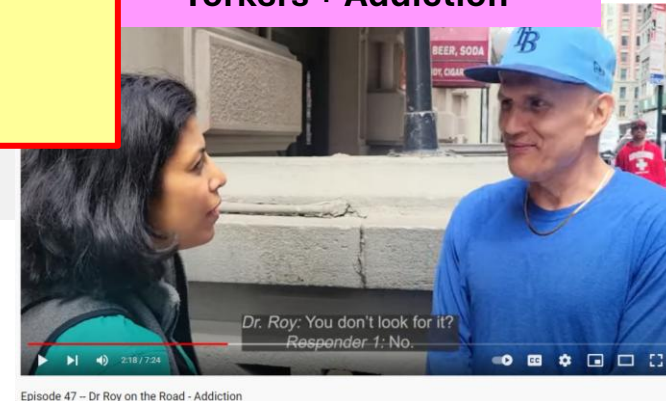
www.YouTube.com/c/DrLipiRoy



NBA Legend Alonzo Mourning &
Kidney Health



"Dr. Roy on the Road": New
Yorkers + Addiction



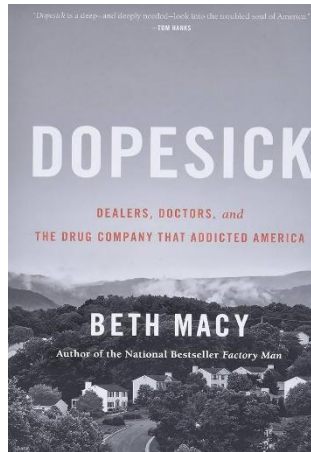
Created by Lipi Roy, MD, MPH, FASAM



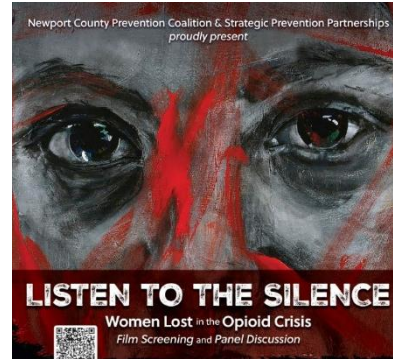
Find Your People ❤️!

References in TV, Film & Books

Dopesick



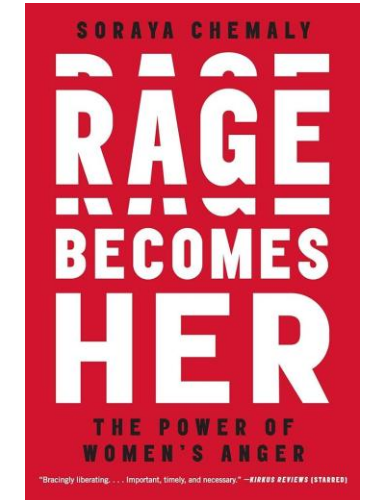
Listen to the Silence



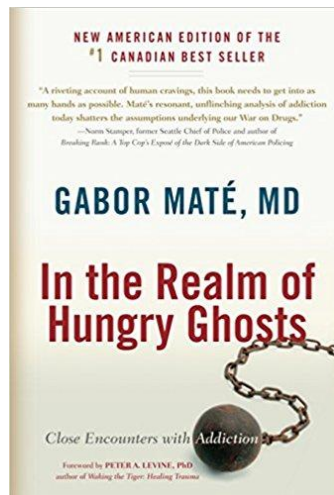
Addiction



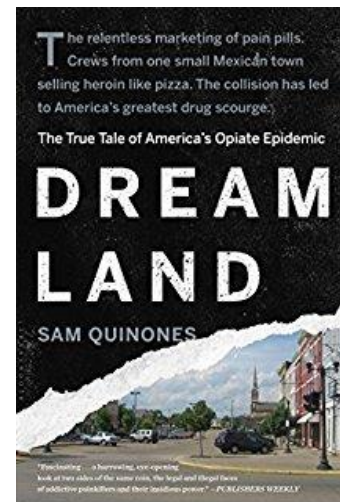
Rage Becomes Her



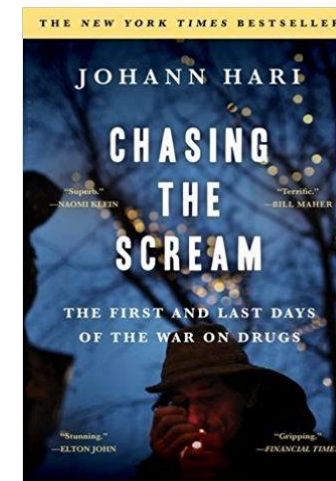
In the Realm of Hungry Ghosts



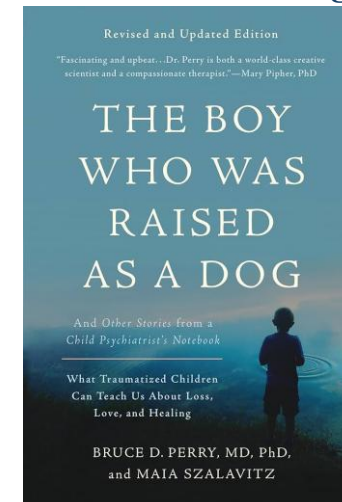
Dreamland



Chasing the Scream



The Boy Who Was Raised As A Dog



Acknowledgements

- Anika Alvanzo, MD, DFASAM
- Emily Brunner, MD, DFASAM
- Kelly Clark, MD, DFASAM
- Margaret Jarvis, MD, DFASAM
- Michael Miller, MD, DFASAM
- Yngvild Olsen, MD, MPH
- Jasleen Salwan, MD
- Michael Weaver, MD, DFASAM



Resources




Fighting for Space
by Travis Lupick



- American Society of Addiction Medicine (ASAM)
- Drug Policy Alliance (DPA)
- Grayken Center for Addiction, Boston Medical Center
- Global Commission on Drug Policy (GCDP)
- Harm Reduction Coalition (HRC)
- National Academy of Sciences, Engineering & Medicine (NASEM)
- National Institute of Drug Abuse (NIDA)
- National Center on Substance Abuse and Child Welfare
- O'Neill Institute at Georgetown Law
- Open Society Foundations (OSF)
- Pew Trust
- Providers' Clinical Support System (PCSS)*
- Substance Abuse and Mental Health Service Administration (SAMSHA)
- U.S. Surgeon General's Report 2016

**Excellent online learning modules, webinars*



The Power of *Hope*

THERE ARE NO HOPELESS SITUATIONS..



THANK YOU!!



SITA MED
HEALING THROUGH CONNECTION



www.youtube.com/c/DrLipiRoy

DrLipiRoy@SITAMEDLLC.com

 @lipiroy

  @lipiroyMD

