

WELCOME

The Lenses of Addiction

Featuring Dr. Mario San Bartolomé

August 2, 2024
12:00-1:00pm PDT

1

THANK YOU FOR JOINING US TODAY!

Please keep cameras and microphones off for this webinar session

Audio Settings ^ Chat Leave

Ask the presenter questions by writing them in the Chat Box

The presentation will be sent to attendees following the webinar.

2

Register for Session II and III

Session II: The Effects of Stigma on Service Access and Engagement



Featuring: **Heather Briscoe, MD** and **Stephanie Jeffcoat**
Live Webinar: Wednesday, August 7, 2024, 12:00pm–1:00pm PDT
Live Q&A: Wednesday, August 14, 2024 12:00pm–1:00pm PDT

Dr. Briscoe and Ms. Jeffcoat will provide insight and recommendations to mitigate the effects of stigma when serving families affected by substance use.



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Session III: Resources for Healthcare Providers



Featuring: **Jewel Loff** and **April Thornton**
Live Webinar: Wednesday, August 28, 2024, 12:00pm–1:00pm PDT

This panel discussion will provide information on services and resources designed to support pregnant people affected by substance use.



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3

TODAY'S EXPERT



Mario San Bartolomé, MD, MBA,
MRO, FASAM

- Addiction medicine specialist
- Board-Certified in Addiction Medicine and Family Medicine
- Medical Director for MAT CONNECT in Orange County
- Clinically active serving patients through KCS Health Center

4




MATConnect
A Project of The Coalition of Orange County Community Health Centers

Mario San Bartolome, MD, MBA, MRO, FASAM

Lenses of Addiction

5



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A Project of The Coalition of Orange County Community Health Centers

Disclosures

Addiction Medicine Specialist
Family Physician
Lead Physician—Substance Use Disorders for KCS Health Center in Orange County
Medical Director, MAT CONNECT, OC Coalition of Community Clinics
CEO, Thru Health, a digital health IOP for Mental Health & SUDs

6

6



Objectives

1. To understand the medical model of addiction.
2. To understand how understanding the neurobiology of addiction informs us about the needs of individuals and families impacted by addiction.
3. To be able to describe a family wellness plan.

7

7



Definitions Matter

8

8

POLITICS 06/26/2017 05:18 pm ET

Ohio Councilman Wants To Save Money, 'Send A Message' By Letting Overdose Victims Die

"You don't want to come to Middletown to overdose because someone might not come with Narcan and save your life," he said.



By Nick Wing

An Ohio city councilman concerned about the price of emergency services for opioid overdose victims wants to cut costs by denying some people access to life-saving treatment.

Last week, Middletown council member Dan Picard asked the city to explore the legality of a proposal to refuse city-dispatched medical services to any overdose victim who has sought an intervention twice before. Some local media outlets have branded the proposal as a "three strikes" policy.

9

9

Latin: *addictus*



Roman law meant a debtor was awarded as a slave to his creditor.

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*In the past, addiction was
about*

drugs

*The new definition of addiction is
about*

brains

11

11

Medical-Model

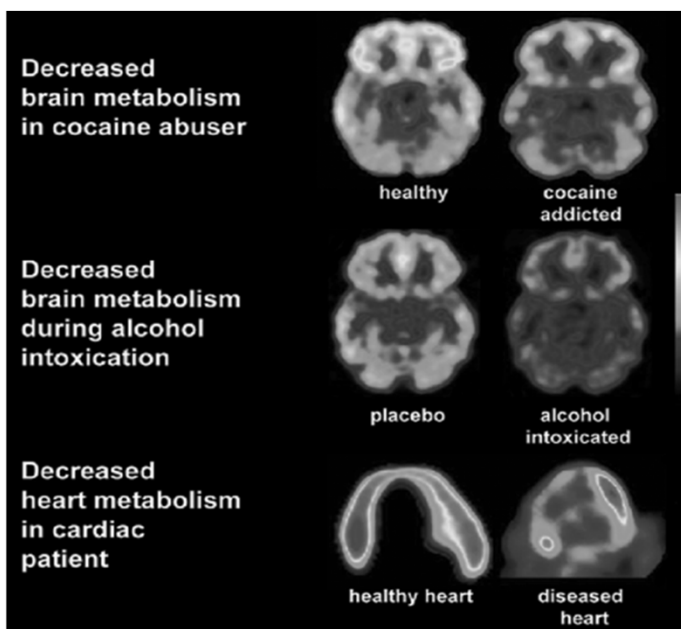


Addiction is a **primary, chronic** disease of brain **reward, motivation, memory**, and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social, and spiritual manifestations. This is reflected in an individual **pathologically pursuing** reward and/or relief by substance use and other behaviors.

12

12

Brains are affected



Volkow ND, Kim SW, Wang GJ, et al. Acute alcohol intoxication decreases glucose metabolism but increases acetate uptake in the brain. *Neuroimage* 2013;64:277-283

13

BRAIN RECOVERY WITH PROLONGED ABSTINENCE



Volkow ND, Chang L, Wang, et al. Loss of dopamine transporters in methamphetamine abusers recovers with protracted abstinence. *J Neurosci* 21(23):9414-9418, 2001

Brains Recover

These images showing the density of dopamine transporters in a brain area called the striatum illustrate the brain's remarkable potential to recover, at least partially, after a long abstinence from methamphetamine

14

“...a disease is a **cluster of symptoms** and /or **signs** with a more or less **predictable** course.”

The cluster may be associated with physical abnormality or may not.

Page x, Psychiatric Diagnosis, 1st Ed, 1994, Woodruff, Goodwin, Guze



15

Life-Process Model



- **Addiction is not a disease**
- **Habitual response**
 - Gratification
 - Security
- **Understood in context**
 - Social relationships
 - Experiences

16

16

Stigma Kills

Older Terms	Newer Terms
The War on Drugs	Treatment
Junkie, addict, drug abuser, alcoholic, drunk	Someone with a substance use disorder, person in active addiction
Clean, Dirty	Negative, positive, substance-free
User	Person who misuses drugs/alcohol
Habit or Drug Habit	Substance misuse disorder, alcohol and drug disorder, addictive disease
IV drug user	Person Who Injects Drugs (PWID)
Addicted baby	Babies exposed to opioids
Medication-Assisted Treatment, Replacement therapy, substitution therapy	Medication for opioid or alcohol use disorder

17

17

Family and Perinatal Considerations

- The burden of non-genetic intergenerational transference of risk and resilience.
- More than 50% of addicted parents are repeating the patterns from their own childhood
- Who is the patient?
- Steady move toward family and systems perspective in drug use treatment early intervention
- Particular interest in protecting the infant and immature brain from potentially dangerous stress and physiologic arousal.

18

Complications

Maternal Health

- Comorbid medical
- Comorbid psychiatric
- Placental abruptions
- Premature labor
- Violence

Infant Health

- Teratogenicity
- Low Birth Weight
- Exposure to Hep C, HIV and other STIs
- NOWS
- Stillbirths

Social

- Child Welfare Reporting
- FOB
- Extended family
- Employment
- Housing
- Enrollment in assistance programs

STIGMA

19

The Face of a Meth User – 10 years



Dead at age 38

20

DSM-V: Opioid Use Disorder

- ✓ ***Tolerance**
- ✓ ***Withdrawal**
- ✓ **Use in larger amounts or duration than intended**
- ✓ **Persistent desire to cut down**
- ✓ Giving up interests to use opioids
- ✓ **Great deal of time spent obtaining, using, or recovering from opioids**
- ✓ Craving or strong desire to use opioids
- ✓ Recurrent use resulting in failure to fulfill major role obligations
- ✓ **Recurrent use in hazardous situations**
- ✓ Continued use despite social or interpersonal problems caused or exacerbated by opioids
- ✓ **Continued use despite physical or psychological problems**

*This criterion is not considered to be met for those individuals taking opioids solely under appropriate medical supervision

Mild OUD: 2-3 Criteria Moderate OUD: 4-5 Criteria Severe OUD: ≥6 Criteria

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.)

21



Among pregnant and postpartum persons, drug overdose mortality increased by approximately 81% from 2017-2020.

Bruzelius E, Martins SS. US Trends in Drug Overdose Mortality Among Pregnant and Postpartum Persons, 2017-2020. *JAMA*. 2022;328(21):2159-2161. doi:10.1001/jama.2022.17045

22

NAS/NOWS has increased 5-fold in past decade



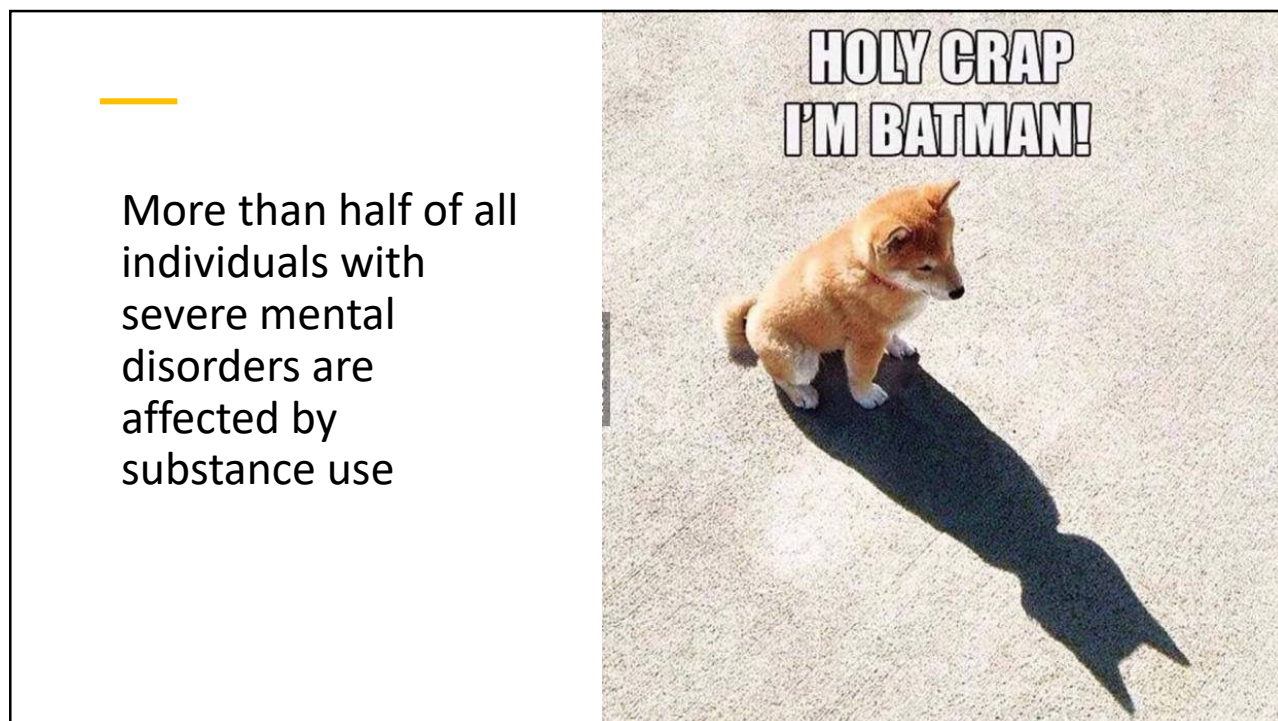
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1-in-8 teenagers abused an illicit substance in the last year.



- **61%:** Drug use increase among 8th graders
- **62%:** Teenagers in 12th grade that have abused alcohol.
- **50%:** Teenagers that have misused a drug at least once.

24



25



26



27



What's Going On?

Important Stats

28

28

Overdose (OD) Figures

Lethal drug overdoses

- 1999: < 20,000
- 2015: 52,404
- 2021: 106,699
- 2022: 109,680
- 2023: Provisional Data 3% drop to ~107,543

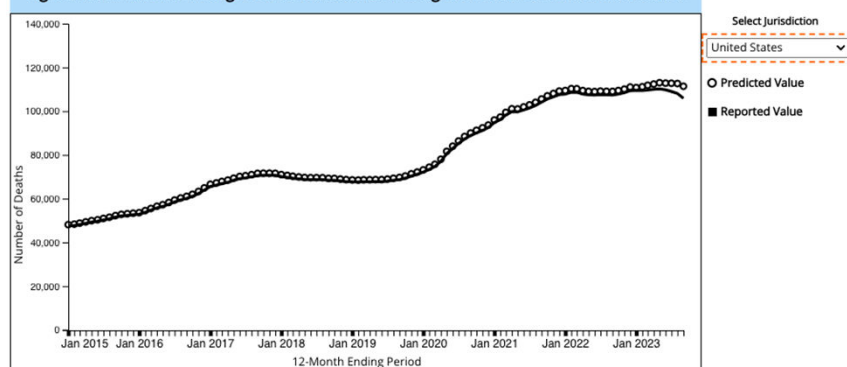


29

12- Month-ending Provisional Numbers & Percent Change of Drug OD Deaths

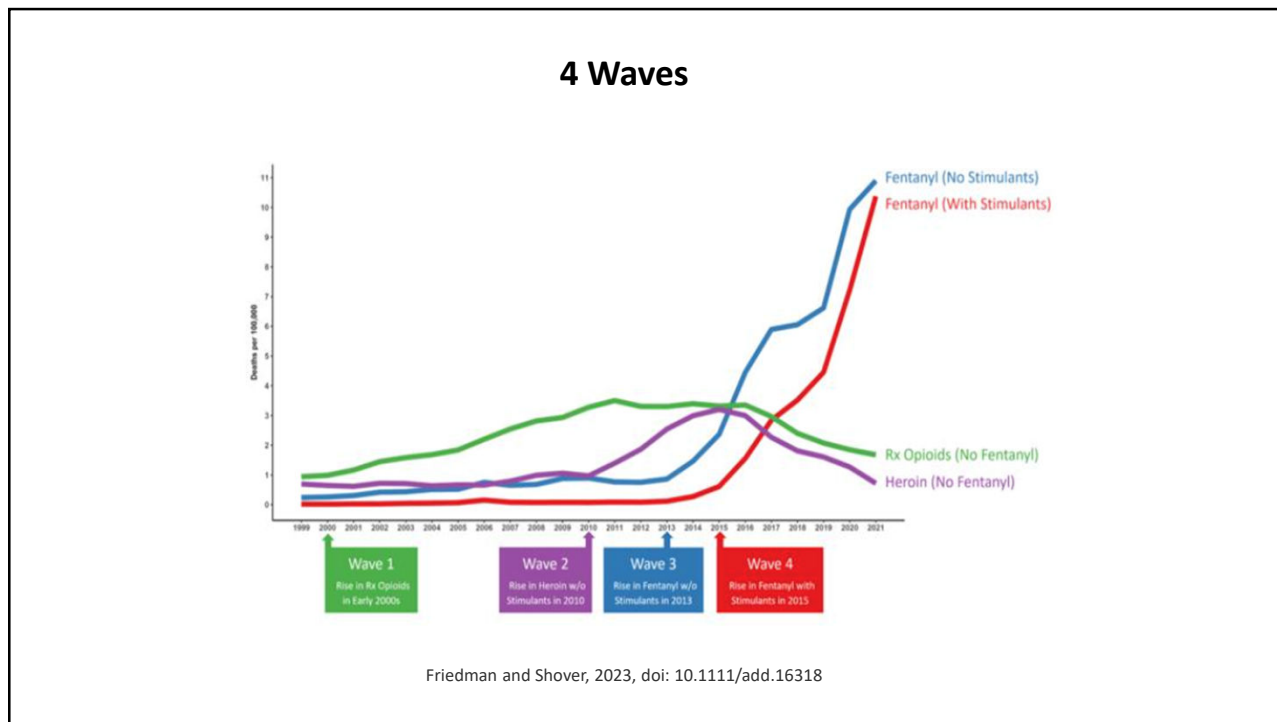
Based on data available for analysis on: February 4, 2024

Figure 1a. 12 Month-ending Provisional Counts of Drug Overdose Deaths: United States

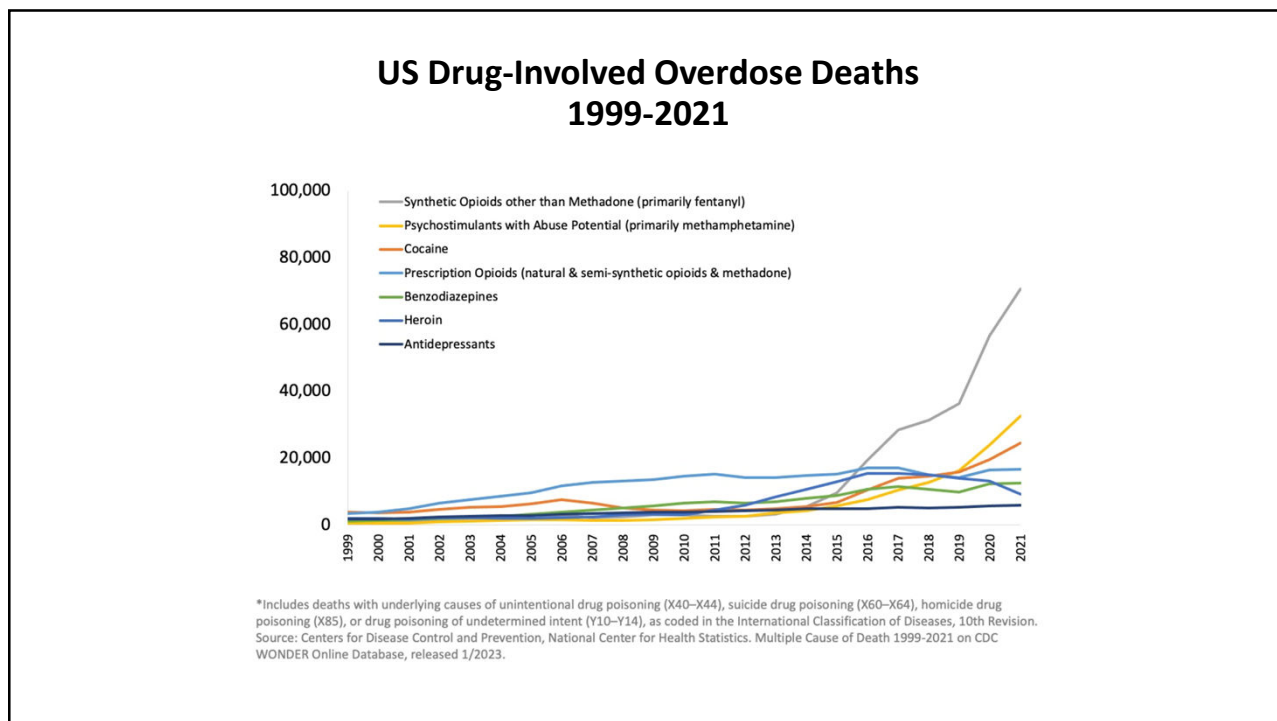


National Center for Health Statistics, CDC.
<https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>

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31



32



Neurobiology

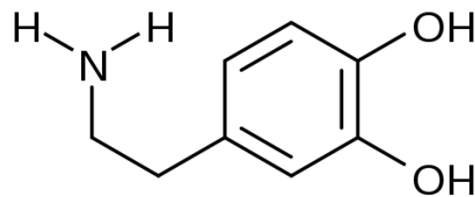


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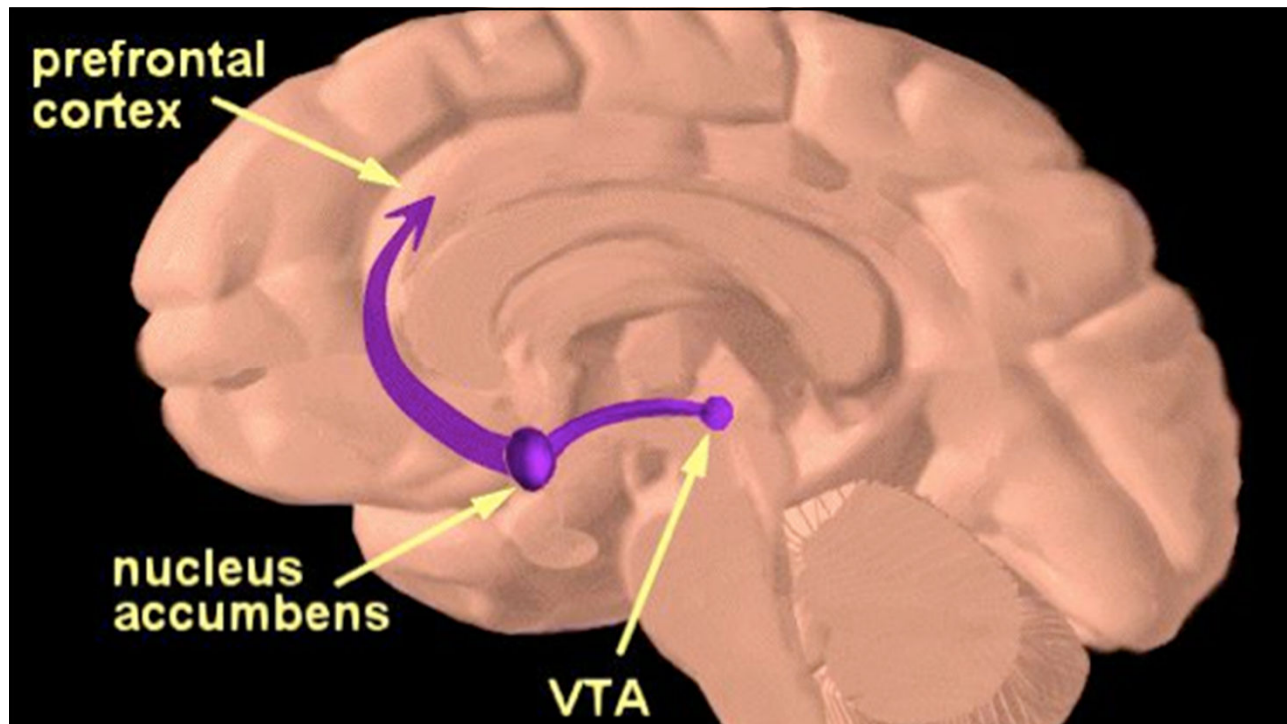
Getting Addicted & Pleasure-Reward Pathway

- The Reward pathway in the brain is activated by activities we find pleasurable.
- The common reward pathway in the brain for all pleasurable activities involves the neurotransmitter

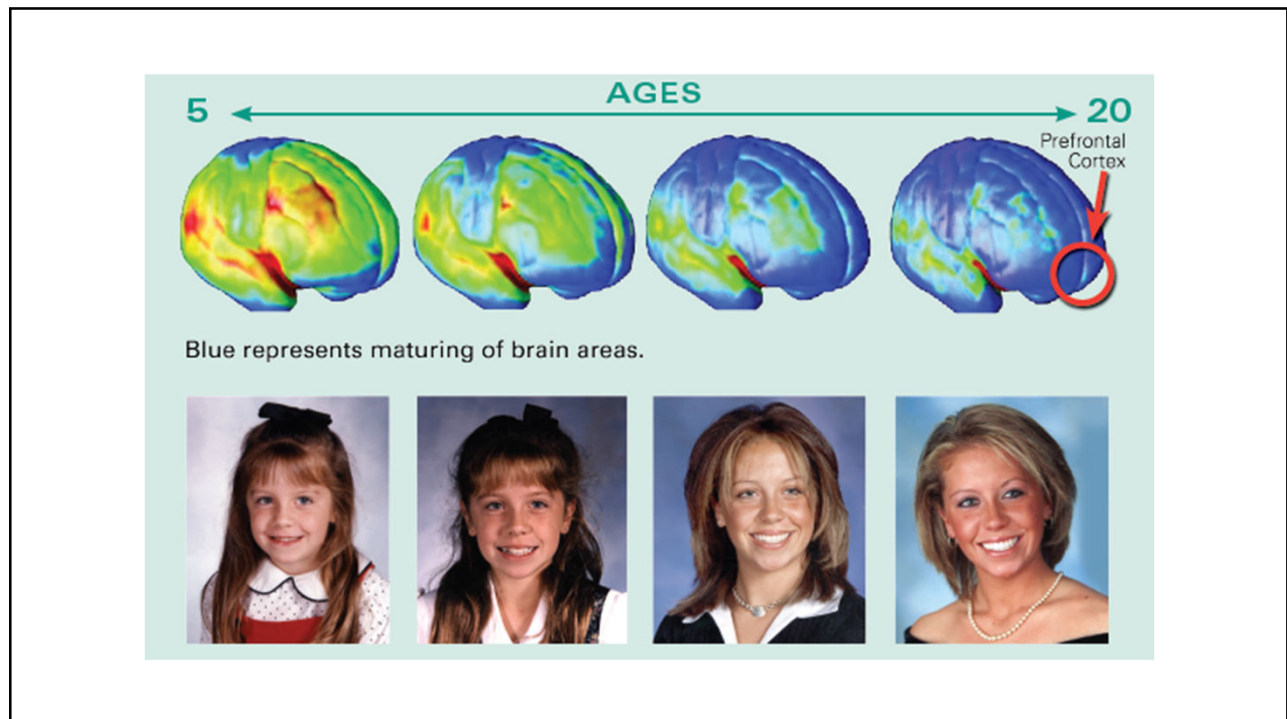


Dopamine

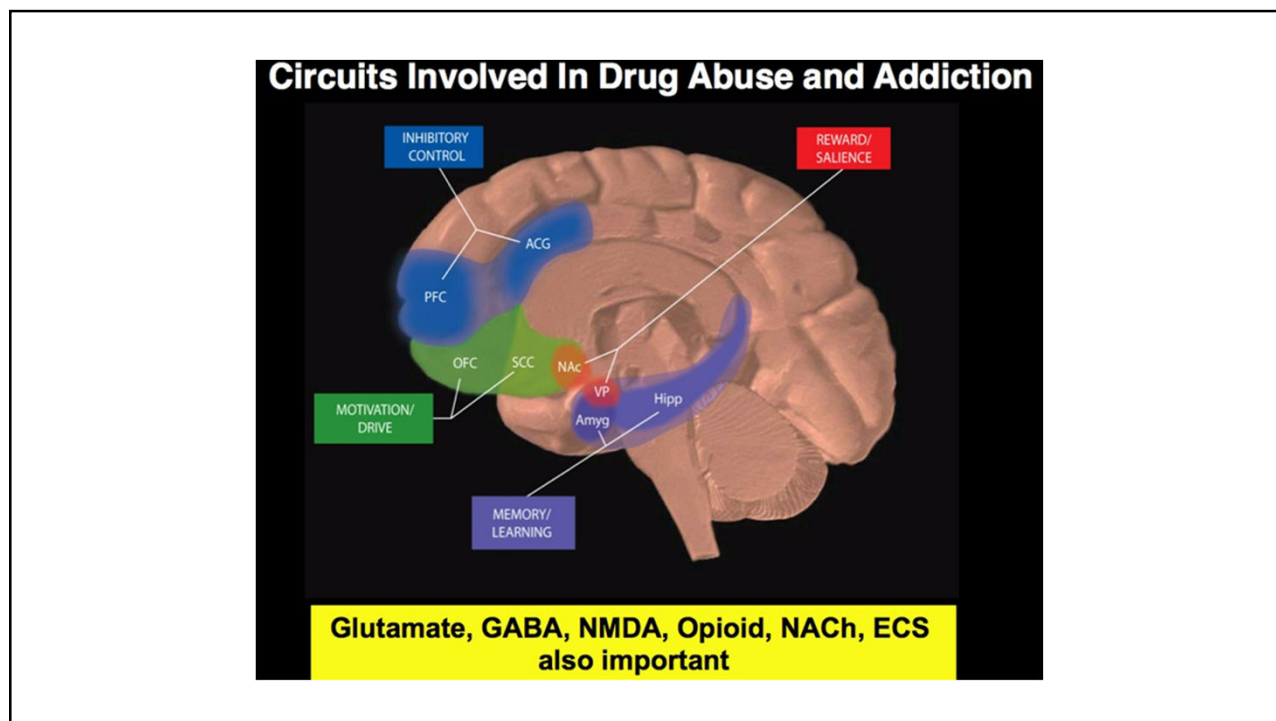
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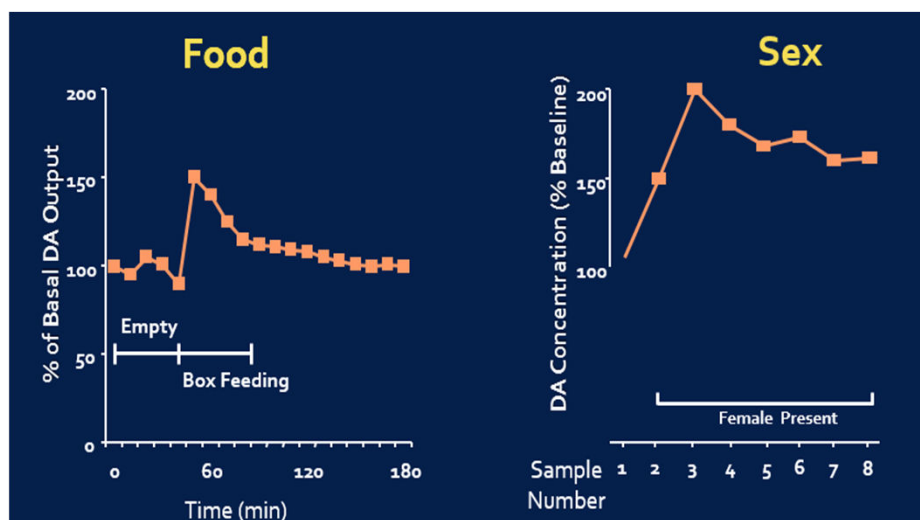


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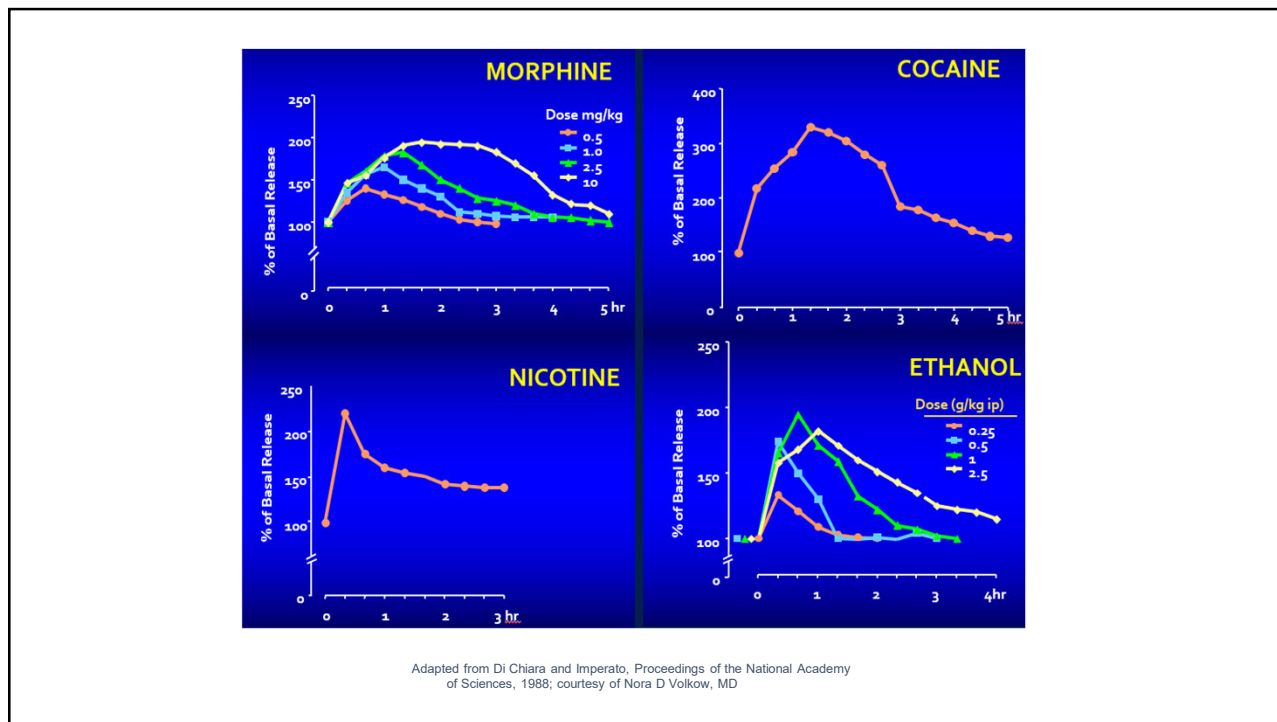
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Natural Reward and Dopamine Levels

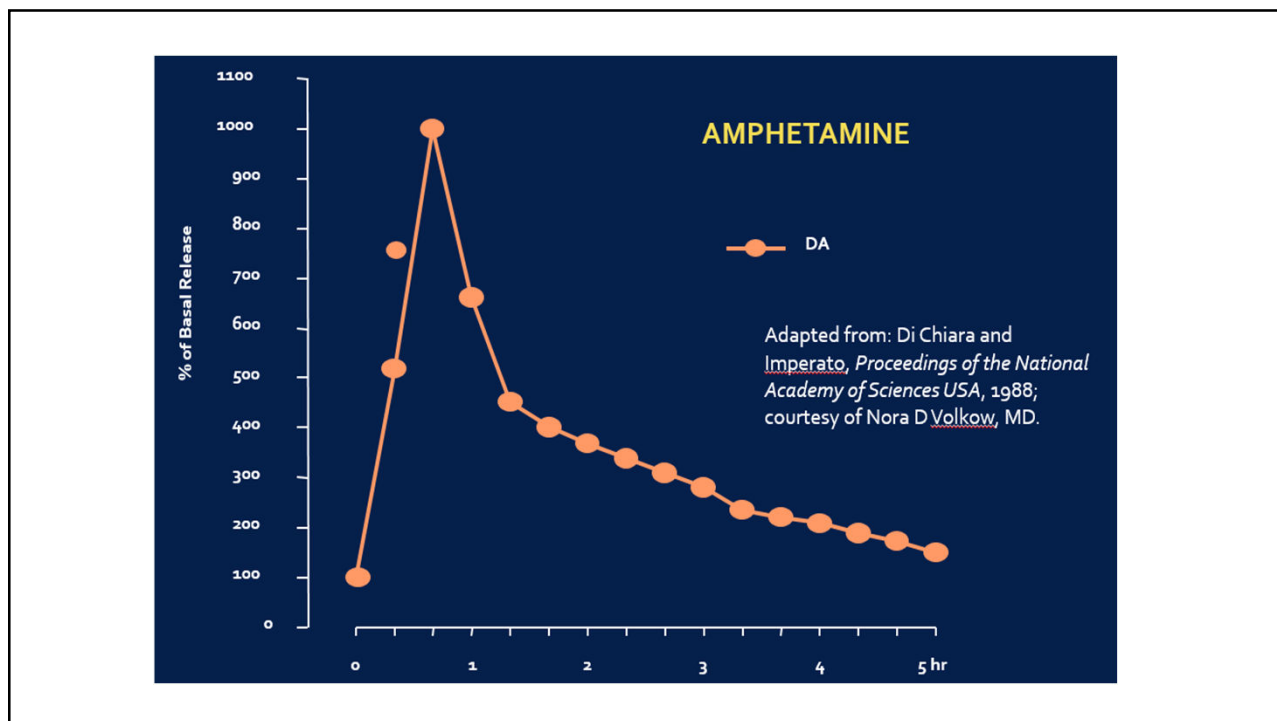


Adapted from Di Chiara et al, Neuroscience, 1999
 Adapted from Fiorino and Phillips, J Neuroscience, 1997

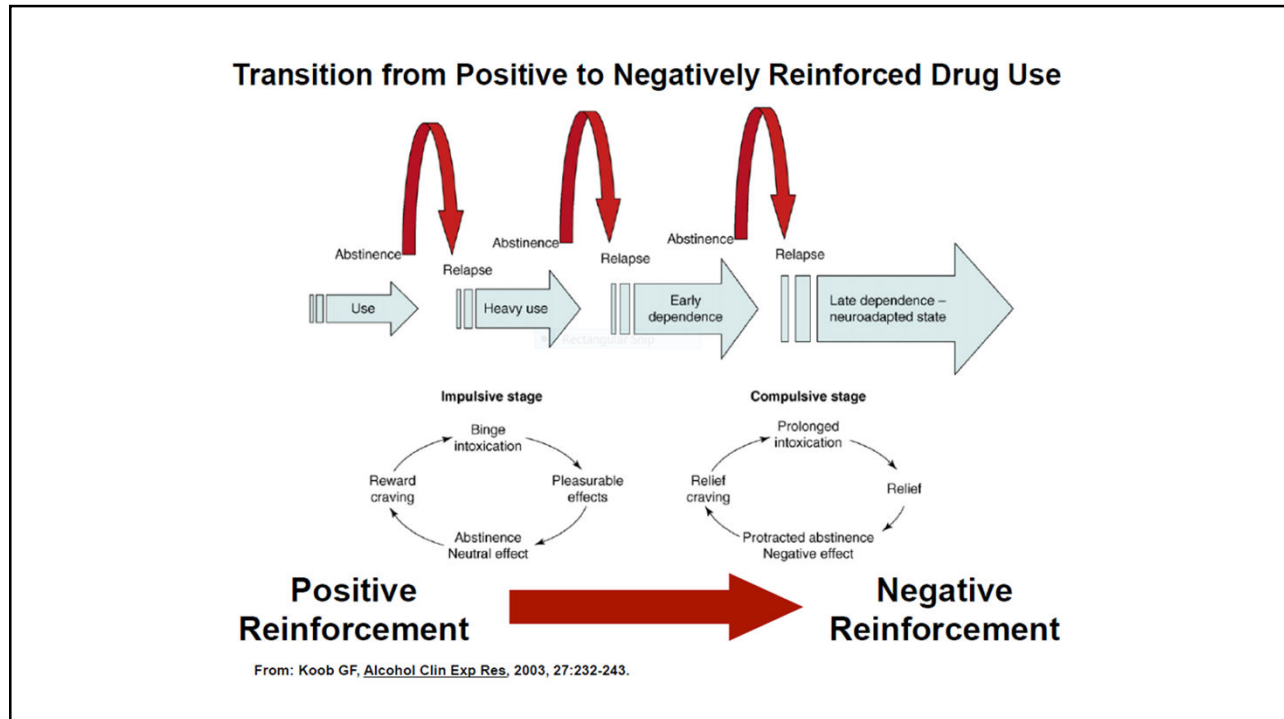
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39



40



41

The Role of Negative Reinforcement

- Drug taking to relieve a negative emotional state
- Causes of negative emotional state:
 - Dec in reward neurotransmission
 - Activation of brain stress system (Corticotropin releasing factor)
 - Impaired executive function



Koob GF, *Handb Clin Neurol* 2014
Weiss F, *Advances Neurosci Addiction* 2010

42

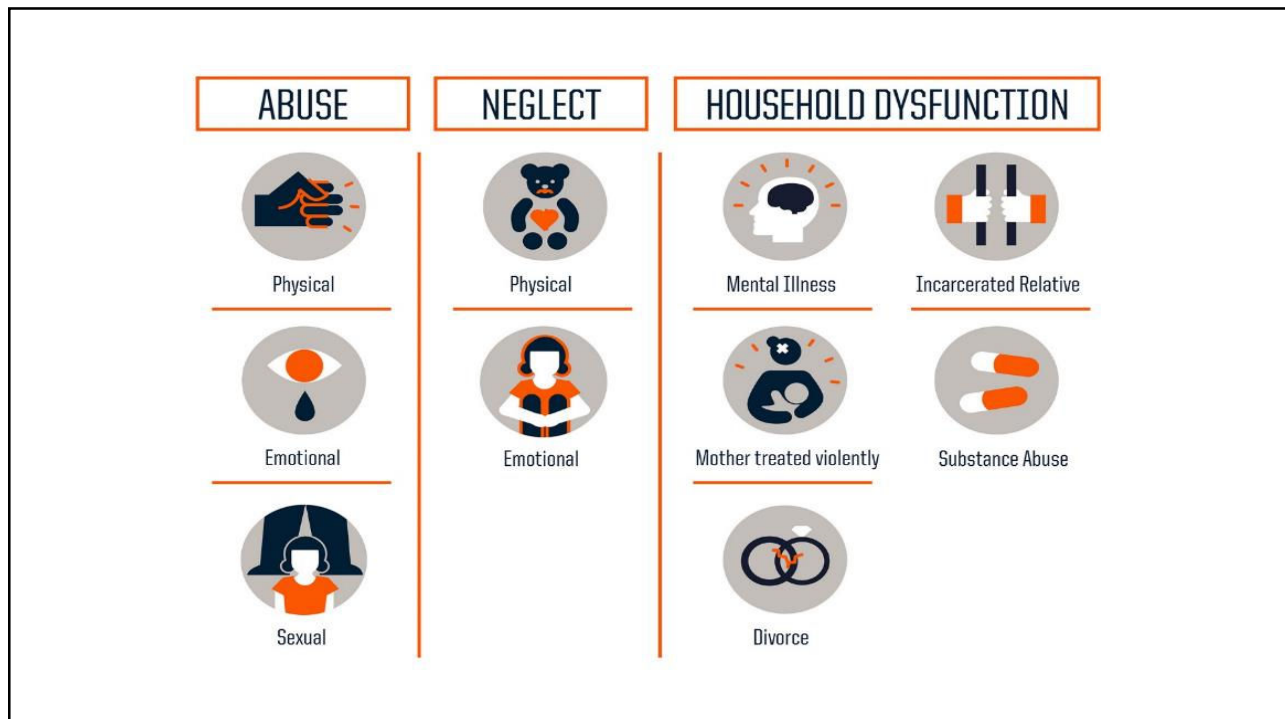
Neuroadaptation results in impaired...

- Self-regulation
- Decision-making
- Flexibility
- Assignment of relative value (saliency)
- Monitoring of error

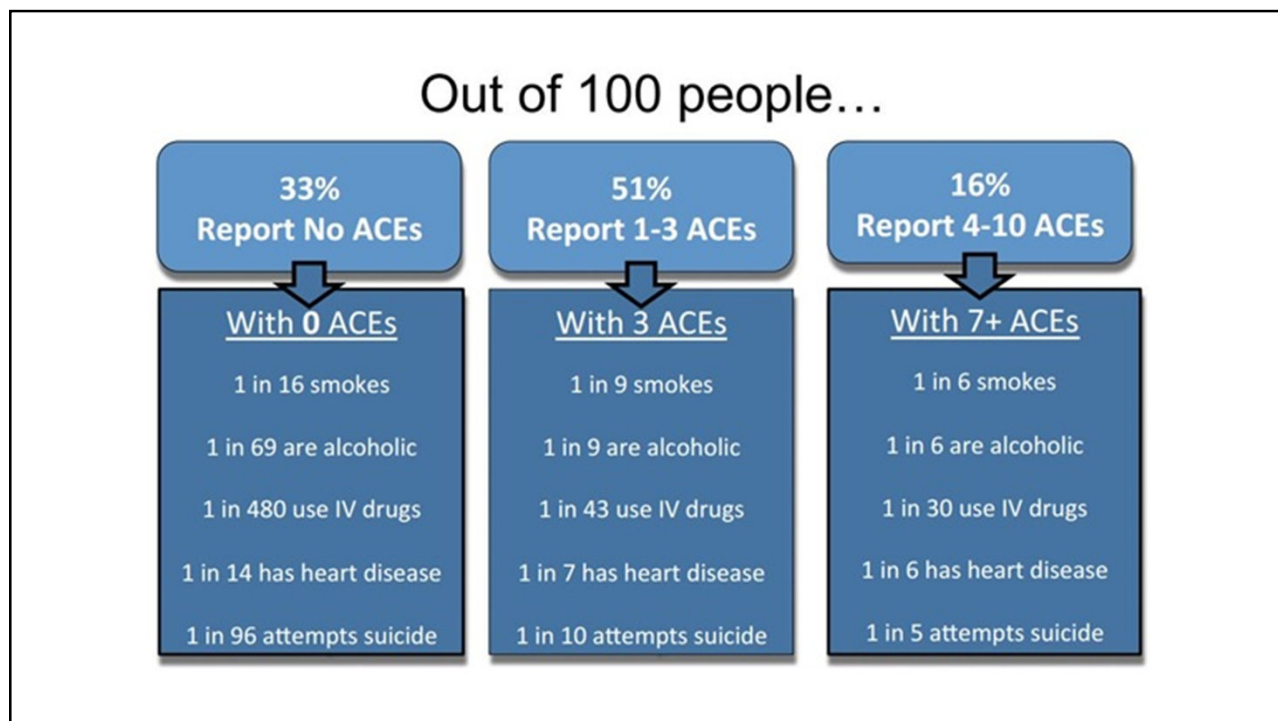


Caused by impaired dopaminergic & glutamatergic signaling


43



44



45



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The Landscape Changing Before Our Eyes

46

46

4 Waves +

1. Opioids

2. Heroin

3. Fentanyl

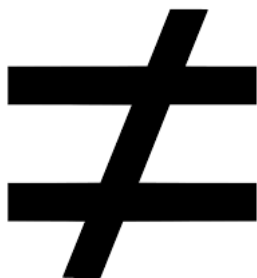
**4. Fentanyl &
Psychostimulants**



47

47

Change in Landscape



**1. Not always
“addicted”**

**2. Not only 1
substance**

**3. Poisonings have
become relevant**

48

48

September 27, 2021

For Immediate Release

Contact: Media Relations

Phone Number: (571) 776-2508

DEA Issues Public Safety Alert on Sharp Increase in Fake Prescription Pills Containing Fentanyl and Meth

DEA Warns that International and Domestic Criminal Drug Networks are Flooding the United States with Lethal Counterfeit Pills

WASHINGTON, DC – Today, the Drug Enforcement Administration issued a Public Safety Alert warning Americans of the alarming increase in the lethality and availability of fake prescription pills containing fentanyl and methamphetamine. DEA's Public Safety Alert, the first in six years, seeks to raise public awareness of a significant nationwide surge in counterfeit pills that are mass-produced by criminal drug networks in labs, deceptively marketed as legitimate prescription pills, and are killing unsuspecting Americans at an unprecedented rate.

49

49



50

50

Xylazine

- **AKA:** Tranq, Tranq Dope, zombie drug, "Sleep-Cut" when cut with Fentanyl, in PR = asesthesia de caballo
- Initially studied in humans in 60's (Bayer) as an antihypertensive
- Veterinary use since 1970s
- Federal and State Scheduling
- Use: in large animals like deer, effective for sedation, anesthesia, and muscle relaxation
- Alpha-2 Adrenergic Receptor Agonist: Related to commonly use drugs in humans (clonidine, lofexidine)
- Used as cutting agent
 - \$6-\$20 per Kg
- 1st case in humans reported in 1979, used for insomnia
- Increased prevalence since early 2000's
- Injected, snorted, and mixed

51

51

(U) Figure 2. Number of Xylazine-Positive Overdose Deaths by Region

<i>Region</i>	<i>2020</i>	<i>2021</i>	<i>Percent Increase</i>
Northeast	631	1,281	103%
South	116	1,423	1,127%
Midwest	57	351	516%
West	4	34	750%

Xylazine and Fentanyl: mixtures found in 48 states and up to 23% of Fentanyl powder mixed with Xylazine

52

52

Xylazine Effects

- Lowers blood pressure, heart rate
- Sedating
- Can potentiate other CNS depressants leading to respiratory depression and arrest
- May cause physiologic dependence and withdrawal anecdotally worse

Tissue Necrosis



53

53



Hold On—Let's take a step back
It's about families

54

54



55

Components of Comprehensive Care



- * Psychological
- * Social Well-being
- * School
- * Family dynamics
- * Tools to interface with risky peer group
- * Address Mental Health Issues

56


56

Family Wellness Plans (also known as Plans of Safe Care)


What is a Family Wellness Plan (FWP)?

The goal of the Family Wellness Plan (sometimes called Plan of Safe Care (POSCI)) is to strengthen the family unit, help mothers have a healthy pregnancy, and keep child(ren) safely at home. It is also:

- A personalized guide to ensure necessary resources are provided to help families thrive
- A tool that helps communicate strengths, needs and accomplishments to providers
- A tool to help with care coordination.



57



Dr. Mario

58

Register for Session II and III

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59

The Orange County Family Support Task Force Family Wellness Initiative



Valuing their role. Keeping them together. Supporting their recovery.

**Download the latest Task Force brief on the
Orange County Family Wellness Initiative**



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For more information on the Task Force or to be added to their mailing list, contact:

Task Force Co-Leads
Dianna Daly: DiannaMDaly@gmail.com
Kristen Stits: Kristen.Stits@ssa.ocgov.com

60