

NATIONAL Center on Domestic Violence, Trauma & Mental Health


NCDVTMH Webinar Series on: Opioids, Trauma, and Domestic Violence

This is your brain on drugs. This is your brain on Trauma

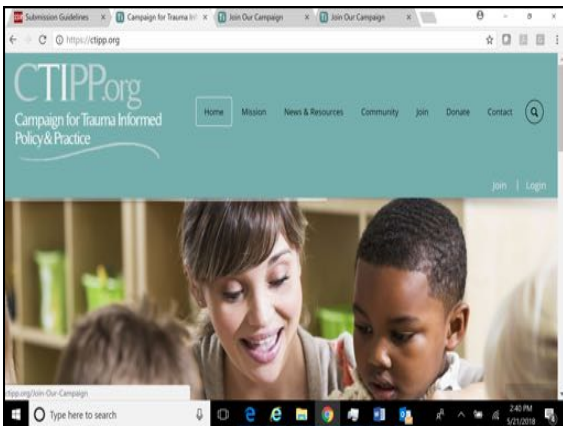
Fred Rottnek, MD, MAHCM
Sean Marz, MA
October 18th, 2018

©NCDVTMH

This webinar is supported by Grant #90EV0437-01-00 from the Administration on Children, Youth and Families, Family and Youth Services Bureau, U.S. Department of Health and Human Services. Points of view in this document are those of the presenters and do not necessarily reflect the official positions or policies of the U.S. Department of Health and Human Services.



©NCDVTMH



The screenshot shows the CTIPP.org website. The header includes the logo 'CTIPP.org Campaign for Trauma Informed Policy & Practice' and a navigation menu with links for Home, Mission, News & Resources, Community, Join, Donate, and Contact. Below the header is a large photograph of a woman smiling and interacting with a young boy. The browser's address bar shows 'https://ctipp.org' and the Windows taskbar is visible at the bottom.



**This is your brain on drugs.
This is your brain on trauma.**

A CTIPP and NCDVTMH Webinar on
Trauma and the Opioid Epidemic
October 18, 2018

Presenters and Presenting Organization

Alive and Well Communities

- Fred Rottnek, MD, MAHCM
 - Director of Community Medicine, Saint Louis University
 - Family Medicine and Addiction Medicine
 - Board of Directors, Alive and Well Communities
- Sean Marz, MA
 - Director of Training and Technical Assistance, Alive and Well Communities

Disclosure Statement:

- We have no financial disclosures to disclose
- We will not be discussing any off-label uses of medications or medical devices

Objectives

As a result of this training, participants will be able to:

- Describe the basic components of brain structure and chemistry related to trauma and opioids
- Discuss the role of medications in treatment in opioid use disorder (OUD) and similarities in medication treatment for trauma
- Describe the interplay of therapy and medication treatment in OUD
- Revise and raise their expectations for treatment goals through clearer understanding of the complementarity of treatment approaches

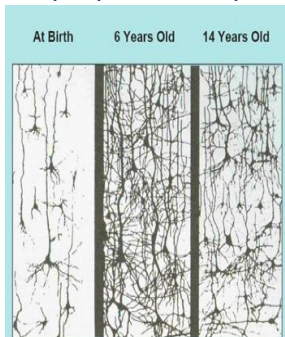
Brain Development

Trauma uniquely impacts the developing brain architecture. Key factors for consideration include:

- Age of onset of trauma,
- Duration of trauma, and
- Severity of trauma



Synaptic Density




Impact of Trauma on the Brain

Trauma can impact the developing brain by...

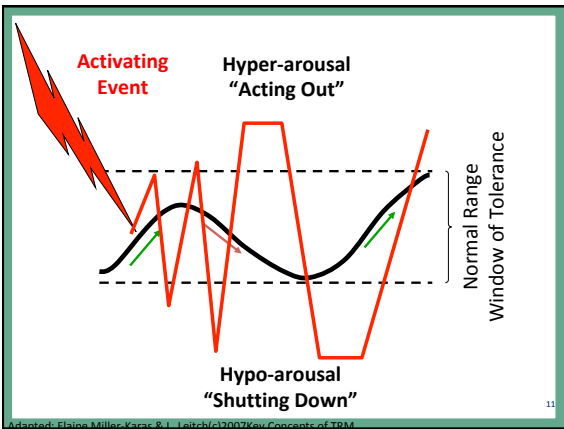
- Reducing the number of **connections** formed
- Reducing the **size of the cortex**
- Strengthening **survival** connections

Resulting in...

- Memory problems
- Attention difficulty
- Language development delays
- Emotional and behavioral regulation issues

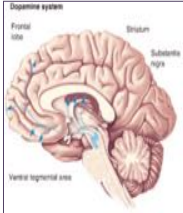


10



How OUD Affect Our Thinking and Behaviors?

- Medications help stabilize brain chemistry, reduces cravings and allow time for healing
- When patients are not obsessed with cravings, they can engage more fully in therapy and behavioral change
- Drug use affects this communication and our behavior changes
- When you think of opioids, think of dopamine



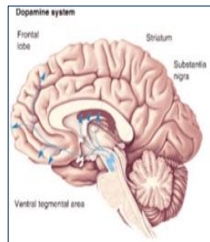
12

What is OUD?

Addiction creates an imbalance of the **lizard brain** and the **wizard brain**

Four primary signs and symptoms:

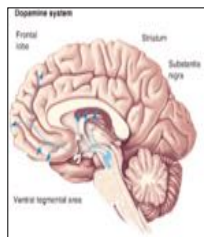
- Cravings
- Loss of Control
- Tolerance
- Continued use despite adverse consequences



13

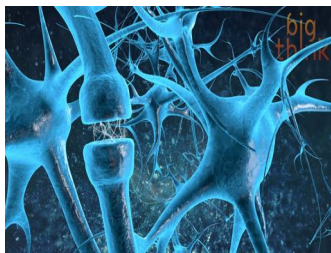
What Do Medications Do?

- It's all about brain structure and brain chemistry
- Not everyone needs medication
- Medications can help restore the lizard/wizard balance, stabilize brain chemistry and allow time for healing, *then* therapy
- Our brains are different, so the extent and process of healing differs
- This difference affects treatment options



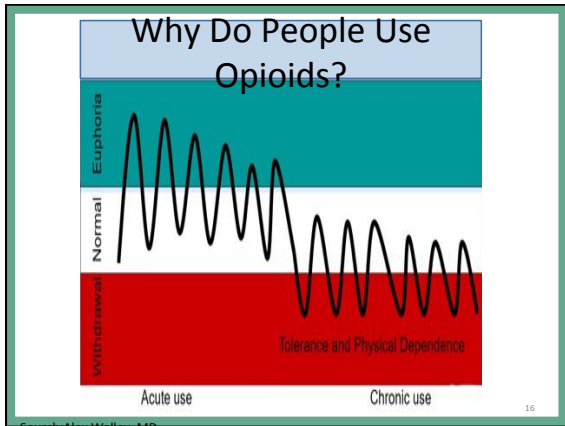
14

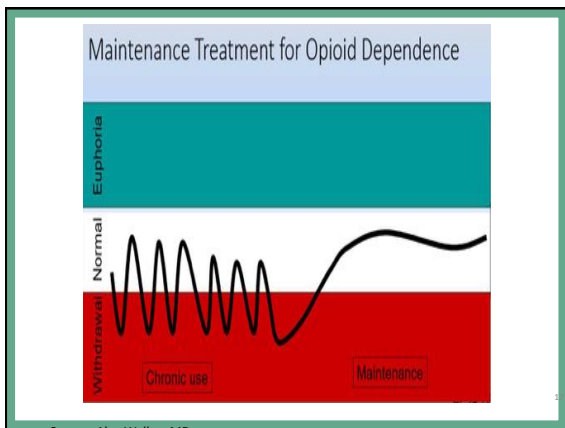
Neurochemistry, Neurotransmitters, & Neuroreceptors

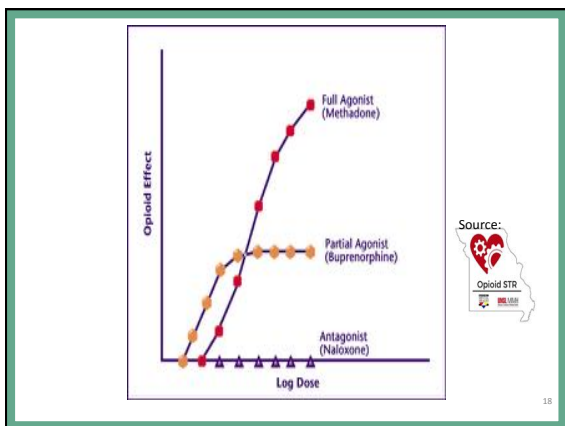


Source: Big Think

15

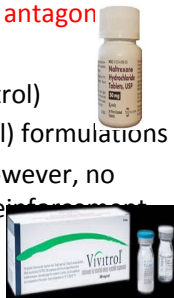






Naltrexone

- Naltrexone: Full opioid antagonist
 - Oral naltrexone
 - XRT naltrexone (Vivitrol)
- Oral and depot (Vivitrol) formulations
- Helps with cravings; however, no significant dopamine re



19

Methadone

- Full opioid agonist
- Well known to the medical community with data to support effectiveness in community-based OTP settings
- Full agonist action increases dopamine and neurotransmitter function



20

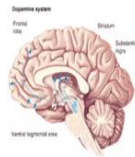
Buprenorphine

- Buprenorphine formulations: Partial opioid agonist
 - Buprenorphine (Subutex)
 - Buprenorphine/Naloxone (Suboxone)
- Sublingual forms (tablets and films)
 - Now implant and injection are approved
- Partial agonist action increases dopamine and neurotransmitter function
- Research supports efficacy in community-based practices from any medical specialty



What Do Addiction Medications Do?

- Medications help stabilize brain chemistry, reduce cravings and allow time for the brain to heal
- When patients are not obsessed with cravings, they can engage more fully in therapy and behavioral change
- Our brains are different, so the extent and process of healing differs
- This difference affects treatment choice



22

Neurotransmitter	Abbreviation	Behaviors or Diseases Related to These Neurotransmitter
Acetylcholine	ACh	Learning and memory; Alzheimer's disease; muscle movement in the peripheral nervous system
Dopamine	DA	Reward circuits; Motor circuits involved in Parkinson's disease; Schizophrenia
Norepinephrine	NE	Arousal; Depression
Serotonin	5HT	Depression; Aggression; Schizophrenia
Glutamate	GLU	Learning; Major excitatory neurotransmitter in the brain
GABA	GABA	Anxiety disorders; Epilepsy; Major inhibitory neurotransmitter in the brain
Endogenous Opioids	Endorphins, Enkephalins	Pain; Analgesia; Reward

23

Protective Factors for Risky Use and Addiction

- Environmental**
 - Economic situation
 - Perceived situational control
 - Social support
 - Social integration
 - Positive life events
- Individual**
 - Effective coping skills
 - Self-efficacy
 - Risk perception
 - Optimism
 - Health-related behavior
 - Ability to resist social pressure

source: World Health Organization 2004

24

Vulnerabilities for Risky Use and Addiction

Environmental

- Availability of drugs
- Poverty
- Social change
- Peer culture
- Occupation
- Cultural norms, attitudes
- Policies/Norms on substance use

Individual

- Genetic disposition (biologic vulnerability)
- Childhood trauma
- Behavioral health
- Socialization and acculturation
- Poor performance at school

Source: World Health Organization 2004

25

Challenges in Recovery: Facilitated by Therapy

- Encouraging patience for the brain structure and chemistry to recovery
- Reversing Pavlovian Conditioning
- Creating stability and enhancing social determinants, e.g., jobs, housing, and relationships
- Coping with environmental stressors
 - Living with others in the survival mode
 - Easy access/availability of legal and illegal drugs
 - Facing stigma and institutional barriers

26

Patient Profiles: Best Fit for Each Agent

- **Vivitrol:** Vivian developed her only addiction following an ankle fracture at work.
- **Suboxone:** Sam started substances as a teen. His dopamine pathways have been altered.
- **Methadone:** Marty failed suboxone treatment after two treatment programs and a post-incarceration trial of Vivitrol

27

Broadening the Medication Discussion

- Once on methadone/heroin/BUP, always on methadone/heroin/BUP?
- We must question our assumptions and our roles as professionals
 - What is success?
 - How are we advocating for our patients?
 - Are we setting the bar too low?
- Let's look at the role of medications like we do in every other chronic disease state
 - Lowest effective dose
 - Balance of efficacy and safety

28

Broadening the Medication Discussion

- If we are not reassessing for patient healing and improvement, and offering medication changes when we think them clinically appropriate, we are offering palliation.
- *For example,*
Consider a treatment cascade for patients who are able to thrive with treatment

- Caveats
 - Patient choice, autonomy, and treatment goal
 - Provider knowledge, experience, and bias
 - Stage and resources in this epidemic

29

Call to Action

We must push forward towards a more holistic model of care

- Trauma, mental illness, and addiction are intertwined
 - We have a broader public awareness than ever before
- We have an influx of money--for some forms of treatment but not all
 - We must not squander these resources
 - We must build programs and models of delivery based on evidence, research and program evaluation, and available resources
- We must not allow our institutional and professional inertia to prevent us from moving beyond current ineffective and toxic practices

30

Limitations and Unintended Consequences of Current Treatment Models

- Moving Beyond Harm Reduction
 - Harm reduction is essential
- But we must offer opportunities for our clients to move beyond harm reductions to
 - Harm avoidance, and
 - Harm elimination
- Therapy promotes this progression

31

Limitations and Unintended Consequences of Current Treatment Models

- **Criminalization** – incarceration and broken families and communities
- **Moralization** – AA/NA, faith-based-only programs
- **Medicalization** – substitution treatment, over-emphasis on pharmaceuticals
- **Commercialization**
 - Episodic 28-day residential, Intensive outpatients (6 weeks)
 - Failure blamed on the patient
 - Treatment models are often not standardized and not based on science and evidence
- **What other options do we have?**

32

Humanizing Recovery by Clarifying Our Goals

- Clarifying our goals
- Raising the bar for treatment goals
- Working together with our clients towards thriving



33

References

- SAMHSA's TIP 63: Medications for Opioid Use Disorder, <https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use-Disorder-Executive-Summary/SMA18-5063EXSUMM>
- SAMHSA's Pharmacologic Guidelines for Treating Individuals with Post-Traumatic Stress Disorder and Co-Occurring Opioid Use Disorders, <https://store.samhsa.gov/shin/content//SMA12-4688/SMA12-4688.pdf>
- American Society of Addiction Medicine, <http://www.asam.org/quality-practice/definition-of-addiction>
- The ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use, <http://www.asam.org/docs/default-source/practice-support/guidelines-and-consensus-docs/asam-national-practice-guideline-supplement.pdf>

34

Questions and Comments

Sean Marz,
smarz@awcommunities.org

Fred Rottnek, MD, MAHCM,
fred.rottnek@health.slu.edu



35



www.awcommunities.org



Join us for the next webinars in this series:

Substance Use, Trauma and Domestic Violence: Critical Issues, Promising Approaches
October 23, 2018
2:00 - 3:30 pm CDT

The Opioid Epidemic: Social Determinants and Practice Implications
November 14, 2018
12:30 - 2pm CDT


Intergenerational Family Support Through Child-Parent Psychotherapy
2:00 - 3:30 pm CDT

[Register at ncdvtmh.webex.com](http://ncdvtmh.webex.com)

Supported by the Administration on Children Youth and Families
Administration for Children and Families,
US Department of Health and Human Services

Selected NCDVTMH Resources


- A Systematic Review of Trauma-Focused Interventions for Domestic Violence Survivors:**
<http://www.nationalcenterdvtraumamh.org/publications-products/ncdvtmh-review-of-trauma-specific-treatment-in-the-context-of-domestic-violence/>
- Mental Health and Substance Use Coercion Surveys Report**
<http://www.nationalcenterdvtraumamh.org/2014/09/mental-health-and-substance-use-coercion-surveys-report-now-available/>
- Mental Health and Substance Use Coercion Toolkit:**
<http://www.nationalcenterdvtraumamh.org/publications-products/coercion-related-to-mental-health-and-substance-use-in-the-context-of-intimate-partner-violence-a-toolkit/>
- Trauma in the Context of DV**
<http://www.nationalcenterdvtraumamh.org/2014/10/ncdvtmh-guest-edits-special-issue-of-synergy-in-honor-of-dv-awareness-month/>
- Substance Use/Abuse in the Context of DV, Sexual Assault & Trauma**
<http://www.nationalcenterdvtraumamh.org/publications-products/substance-use-abuse-in-the-context-of-domestic-violence-sexual-assault-and-trauma/>
- Relationship Between IPV & Substance Use: Applied Research Paper**
<http://www.nationalcenterdvtraumamh.org/2016/03/new-resource-the-relationship-between-intimate-partner-violence-and-substance-use-an-applied-research-paper/>
- Real Tools: Responding to Multi-Abuse Trauma:**
http://www.nationalcenterdvtraumamh.org/wp-content/uploads/2012/09/RealTools_RespondingtoMultiAbuseTrauma_BlandandEdmund.pdf



For information about NCDVTMH, please contact:

Karla Alegria, MS
55 E. Jackson Blvd., Suite 301
Chicago, IL 60604
P: 312-726-7020
TTY: 312-726-4110
www.nationalcenterdvtraumamh.org
Twitter: @ncdvtmh
Instagram: @ncdvtmh

Supported by the Administration on Children Youth and Families
Administration for Children and Families,
US Department of Health and Human Services



CTIPP
Campaign for Trauma-Informed
Policy and Practice

For information about CTIPP visit:

www.ctipp.org
facebook: fb.com/ctipporg
Twitter: @CTIPPorg

©NCDVTMH
