Physical and Mental Intersection of Pain and Behaviors

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MASSACHUSETTS GENERAL HOSPITAL
PSYCHIATRY ACADEMY

Disclosures

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"Neither I nor my spouse/partner has a relevant financial relationship with a commercial interest to disclose."

Massachusetts General Hospital

- MGH/Charlestown Monument Street Counseling Center
- Pain Management Center at MGH (Anesthesiology DACCPM)
- HOME BASE Veteran and Family Care (OP Medical Director)

Board Certified:

- American Board of Anesthesiology (ABA)
- American Board of Psychiatry and Neurology (ABPN)
- ABPN – Addiction Psychiatry

Today's discussion

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- Psychiatric approach to patients with PAIN 1
- Treat patients with PAIN (and/or SUD) "thoughtfully"
  - **Chronic pain and SUD display reciprocal and complicated features**
  - Acute Severe Pain predisposes treatment toward opioid products
- Why do clinicians avoid pain and addictions cases?
  - Scope of the problem(s) = **complexity**
  - Don't do it alone – seek collaboration
- Substance Use Disorder definitions and behaviors 2
  When is it NOT addiction? What is POUD?
- Why is the opioid epidemic / addiction-crisis lessening?

- Neurobiological insights worth thinking about 3

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1

Seeking Relief

- "My life has been stolen"
  - **(in every dimension)**
- *"I don't want to die but I don't want to live like this"*
- Provider frustration
  - We can't fix the problem
  - We participate in the problem
- Patient Projections

The Referral

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- The reason and why now?
- **You** have unique expertise in behavioral complexity of stress response
  - Anxiety and Depression – **is the origin: pain, PSY primary or both, SUD?**
- **You** have unique expertise with many of the non-opioid adjuvant meds that are prescribed for pain
- Relationships with PCP's have changed – patients can feel alone = "lost"
- **YOUR ROLE** will be influenced by the clinical setting
- **PLAY YOUR PART** – you don't "own" the pain or SUD, but you can significantly contribute to dealing with the process (all stakeholders)

Complete exam | Thoughtful correlations

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- Complete a comprehensive exam
  - Developmental, Psychodynamic = Identify stressors/ SUD PTSD!
- Assess co-occurring primary psychiatric diagnosis (past/present)
- Get a sense for the course of pain history and impact on their life
  - **Interference: function, motivation, relationships, self-esteem**
    - § Surgical History especially "failed surgeries"
    - § Who are their pain providers
- Medication history and present medications
- Ask them about NON-PHARMOCOLOGIC successes and failures
- ♀ Do not ignore menses (PMDD) and menopause
- Ask about SLEEP – consider if sleep study is indicated

Things you may encounter

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- Common outpatient: HA, axial spine, “sciatica”, joints (aches and pains)
- More chronic: rheumatologic, immunological based, post surgical
- Severe – Pain clinic referral level:
  - Pain unresponsive to OP / PCP level care "hitting the wall"
  - OMF – TGN
  - Migraine *
  - Post Surgical outcomes including “failed procedures”
  - Complex regional pain syndrome (CRPS), Fibromyalgia, “neuropathy”
  - Schwannoma
  - Immune Diseases Cystic Fibrosis Sickle Cell Crisis
- Explore PTSD dimensions esp in Severe category – reactivity/triggering

Treatments

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- Psychopharm: SSRI, SNRI, DRI, alpha, AED's, BzD's
  - Most common = duloxetine, TCA's, AED's (gabapentin, topiramate)
  - The strategy: try to envision "blending" with PCP for result = interdisciplinary
  - THINK secondary and tertiary benefits but don't ignore unintended risk
  - Serotonin syndrome is often overemphasized !!
  - BzD's not used for pain treatment but can help – 1st consider buSPIRone
  - Controlled Rx's = opioids
- Behavioral: CBT, coping strategies, management of expectation
- Physical: PT, OT, aqua, functional restoration
- Interventional: TPI, ESI, SCS, PNS, ablation
- ? ECT / TMS

It's a puzzle

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- Attempt to help solve it!
- Work with the patient
- Maintain good boundaries
- Therapy works = coping strategies
- If pain referrals become frequent, learn about resources and start to learn patterns of pain processes and treatment
- You are part of a collaborative effort to help the patient

Some key words

- **COPING**:
  - **ACKNOWLEGE** √ vs "ACCEPTANCE" ×
  - **CONTAIN** √ vs "CONTROL" ×
  - **"PACING"** !
- *EXPECTATION* – 'no pain' × is not on the table
- Beware! (your agenda)
  - Sympathy vs Empathy vs Compassion
  - Transference vs Countertransference
    - **You cannot** "feel your patients' pain…"

Sinclair S:. Sympathy, empathy, and compassion: A grounded theory study of palliative care patients' understandings, experiences, and preferences. Palliat Med. 2017 May;31(5):437-447. doi: 10.1177/0269216316663499.

2

Tolerance . Dependence . Addiction . Abuse

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- Tolerance: **diminished response to a drug**, which occurs when the drug is used repeatedly, and the body adapts to the continued presence of the drug
- Dependence: adaptive (allostatic) changes by the body to a drug that result in **withdrawal symptoms upon cessation of that drug**
- **Addiction**: is the most severe form of a full spectrum of substance use disorders (NIDA); impaired control, social impairment, risky use, and pharmacological criteria (DSM V); problematic pattern of use of an intoxicating substance leading to clinically significant impairment or distress (2 of 12 DSM V)

- **USE** **MISUSE** ***ABUSE*** (illegal) **ADDICTION**

"x"UD vs Abuse" / "Misuse"

POUD ? prescribed

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Clearly Problematic	Potentially Problematic
Selling	Hoarding
Forging prescriptions	Specific type of drug requested
Stealing drugs from others	"borrowing"
Using by nonprescribed route (e.g., injecting or crushing and snorting)	
Doctor shopping	Seek new doctor
Repeated losing, running out early	Single loss, running out early
Multiple dosage increases	Single dosage increase

illegal

Am J Psychiatry 2016; 173:18–26; doi: 10.1176/appi

POUD

p(prescribed)

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- You may be consulted for a pain patient “using opioids more or inappropriately” – often patient reports “insufficient” (esp for flare)

- **POUD is REAL !!!**
  - *J Clin Psychiatry. 2024 Jul 15;85(3):24m15258. doi: 10.4088/JCP.24m15258*

- OIH Opioid Induced Hyperalgesia is a confounder – mechanisms:
  - Spinal cord elevated NMDA, glutamate and dynorphin induced hyperexcitability

Prim Care Companion CNS Disord 2024;26(5):24f03763 Sofia Matta, Ted Stern

Tolerance Hyperalgesia Allodynia

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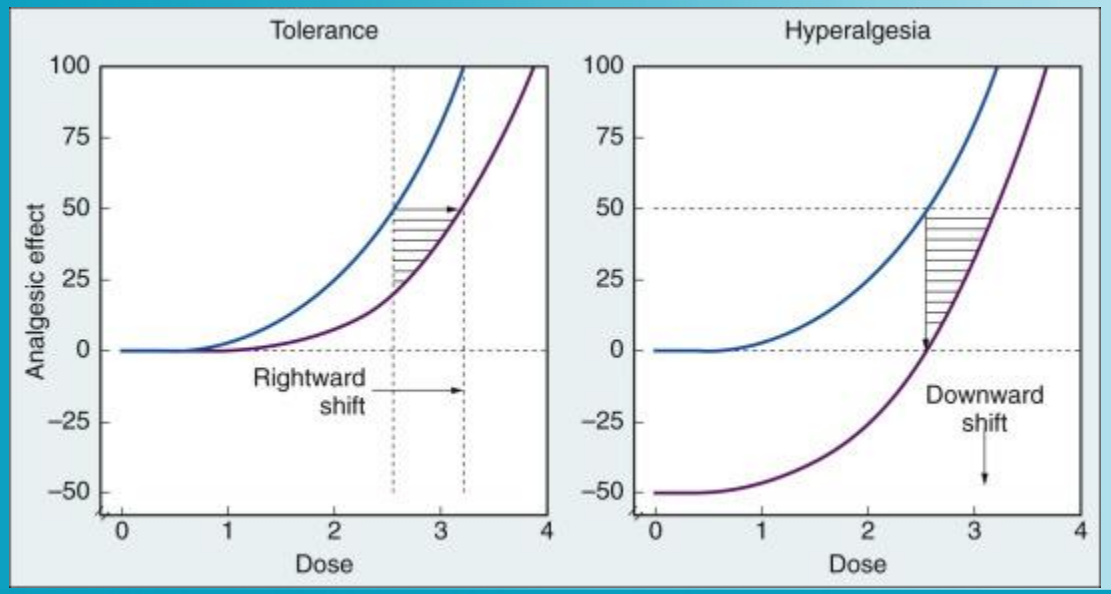
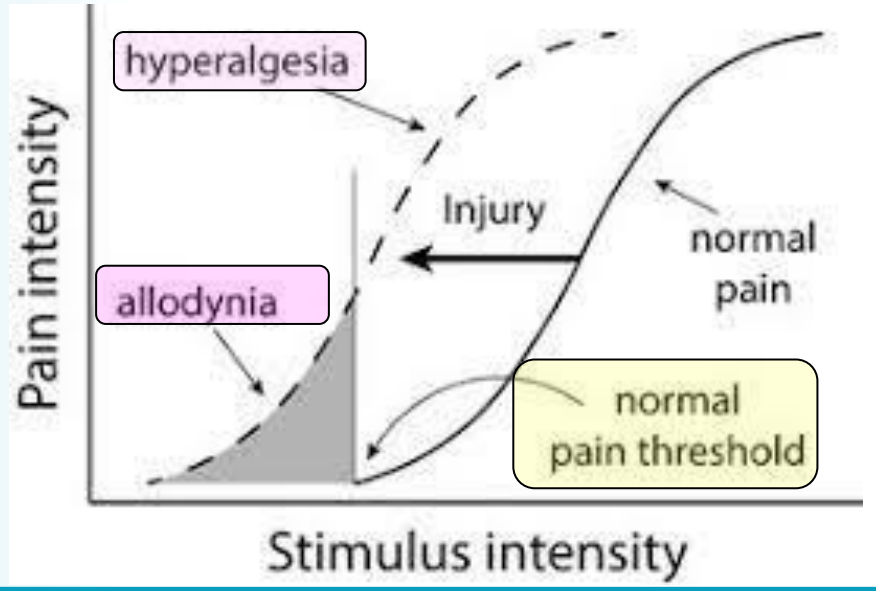
- Tolerance represents a **reduction in drug potency** (response to a dose) and creates a rightward shift in analgesic opioid dose response curves
  Hyperalgesia **increased pain sensitivity** (*perceived*) modeled by a significant downward shift in analgesic dose response

vs Allodynia





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OUD Four C's + 1 ("DSM short")

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- Compulsion
- Craving > vs "thought" or "urge"
- Consequences
- Control loss

+

- Contorted thinking [fantastic excuses]

"clinically significant impairment or distress"

OUD Screening Tools

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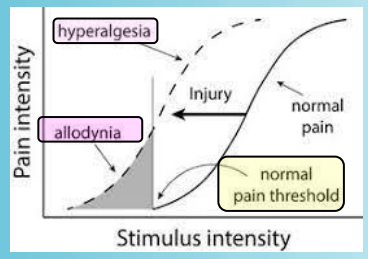
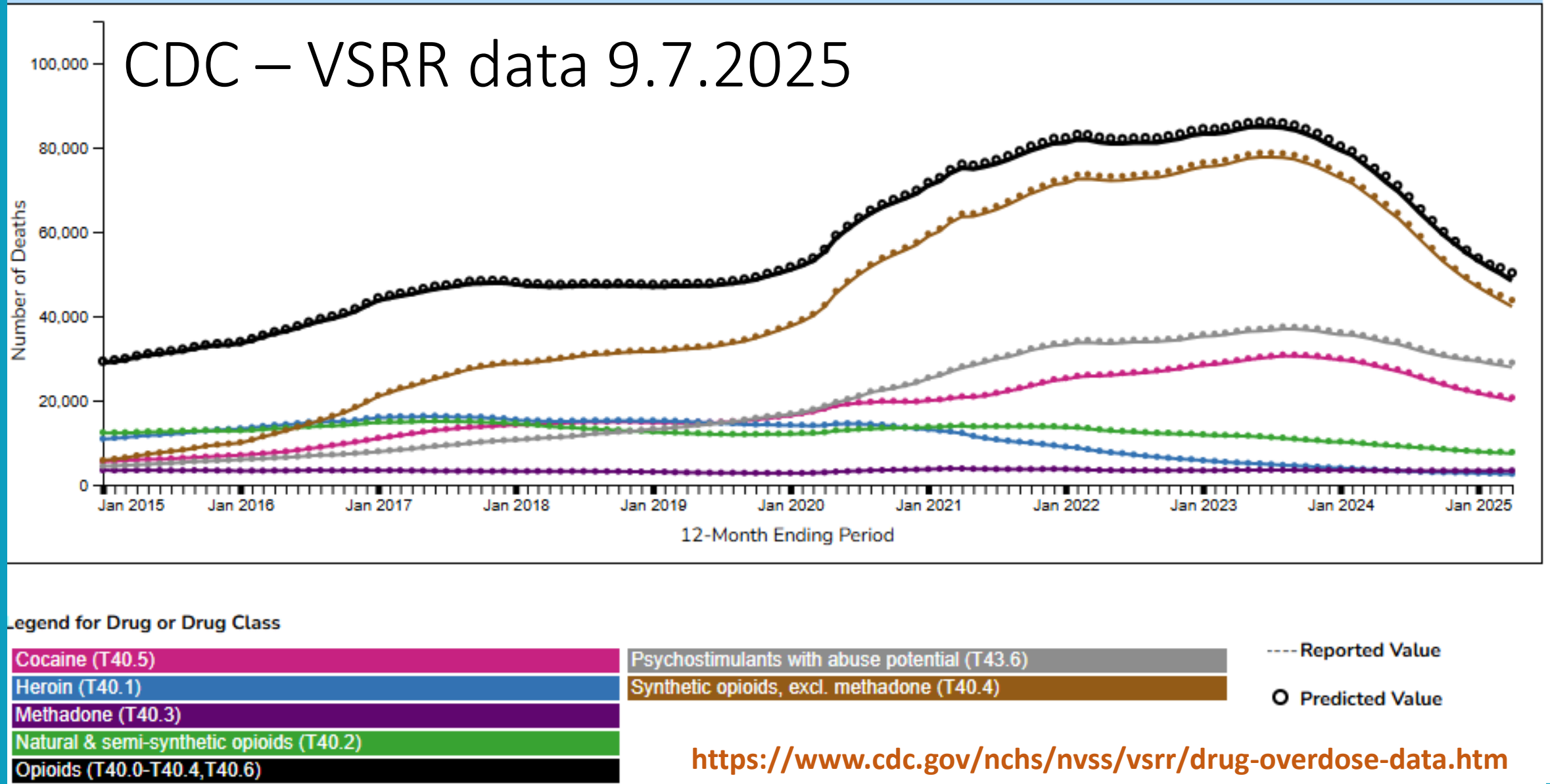
- Most screening tools for OUD are minimally validated.
- No screening tool was meaningfully capable of identifying patients for whom opioids can and cannot be safely prescribed.

Klimas J, et.al. JAMA Netw Open. 2019 May 3;2(5):e193365.

- There is limited data for Rx opioid risk
- TOX screens: highly sensitive vs clinical picture
- It's the behavior!



CDC – VSRR data 9.7.2025



https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm

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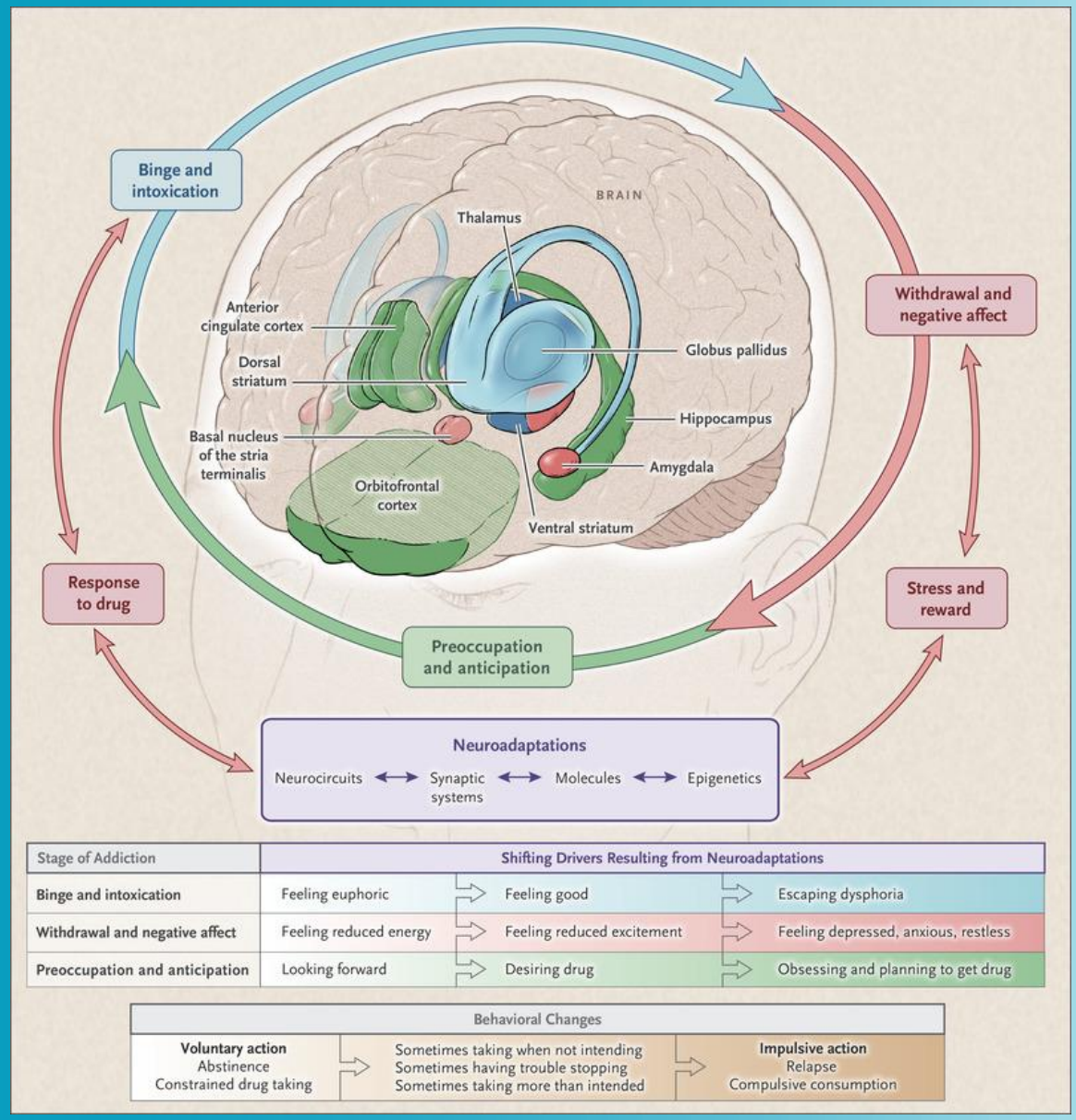

Stage of Addiction	Shifting Drivers Resulting from Neuroadaptations		
Binge and intoxication	Feeling euphoric	Feeling good	Escaping dysphoria
Withdrawal and negative affect	Feeling reduced energy	Feeling reduced excitement	Feeling depressed, anxious, restless
Preoccupation and anticipation	Looking forward	Desiring drug	Obsessing and planning to get drug

Behavioral Changes		
Voluntary action Abstinence Constrained drug taking	Sometimes taking when not intending Sometimes having trouble stopping Sometimes taking more than intended	**Impulsive action** Relapse Compulsive consumption

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Preoccupation / anticipation.

REWARD

Binge / intoxication.

Withdrawal / stress v reward

ANTIREWARD

NOTE Response to (specific) drug

Opioid (type) < cocaine < methamphetamine

Neuroadaptation Loop!

Neurobiology of Addiction

Volkow ND, Koob GF, McLellan AT. Neurobiologic Advances from the Brain Disease Model of Addiction. N Engl J Med. 2016 Jan 28;374(4):363-71. doi:10.1056/NEJMra1511480

Stigma and the Toll of Addiction.

Volkow ND. N Engl J Med. 2020 Apr 2;382(14):1289-1290. doi: 10.1056/NEJMp1917360.

Neurobiological Process

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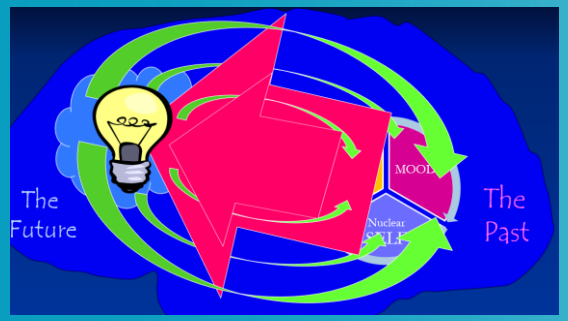
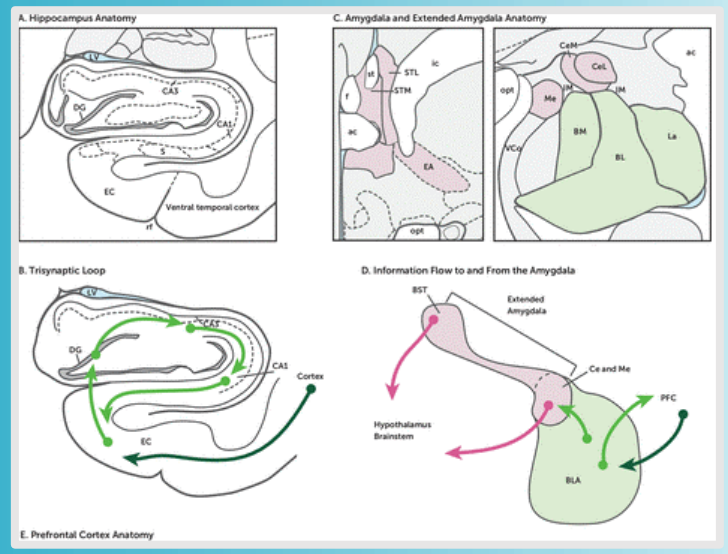
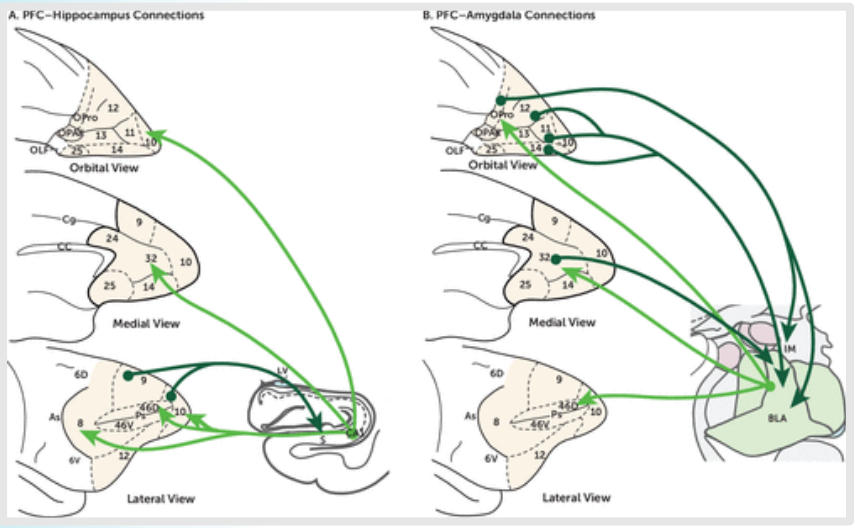
Cortico-Limbic Interactions Mediate Adaptive and Maladaptive Responses







Am J Psychiatry. 2019 Dec 1;176(12):987-999. doi: 10.1176/appi.ajp.2019.19101064.

Extended amygdalar neural ensemble encodes the unpleasantness of pain

Corder et al., Science 363, 276–281 (2019)

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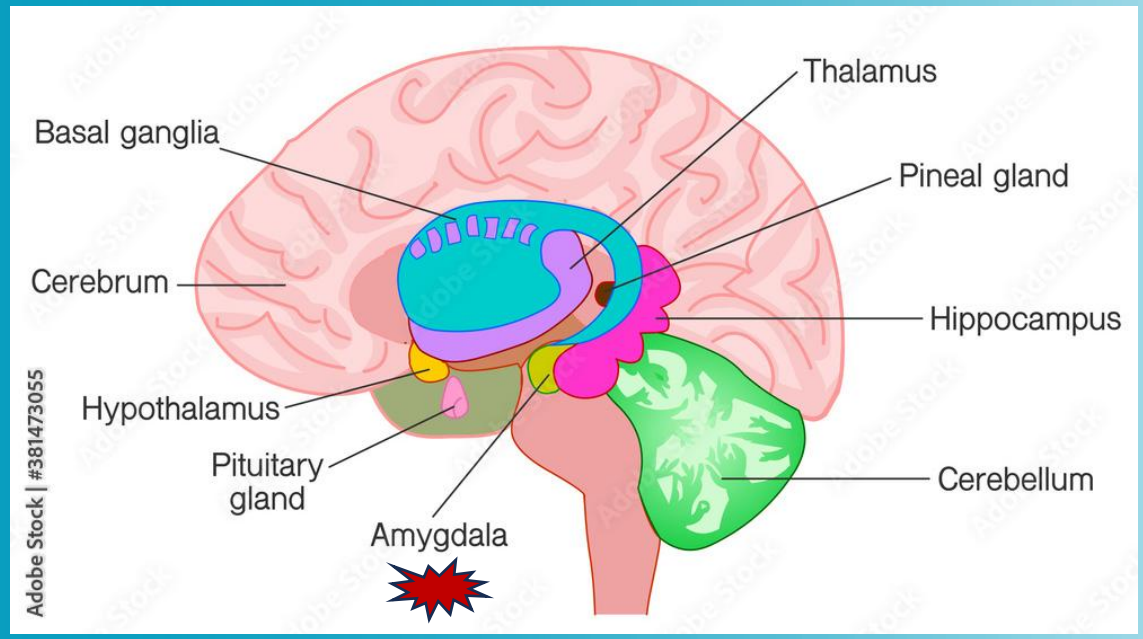

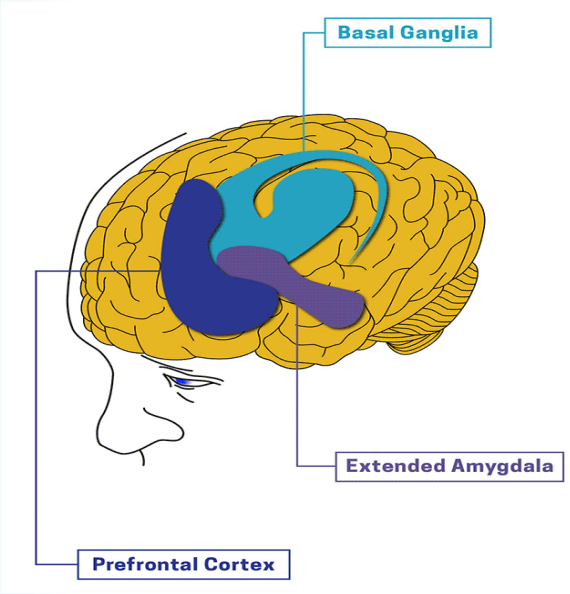

Extended Amygdala: Memory and Emotions

Threat

Pain – PTSD - Withdrawal

vs

Prefrontal Cortex: Cognition

Salience

Three Novel Areas for Treatment

- ✓ Motivational Circuitry
- ✓ Antireward Pathways
- ✓ Interoception (cognition)

➢ **PRECORTICAL** vs **EXTENDED AMYGDALA**

Levounis, Petros, Bench to bedside: from the science to the practice of addiction medicine, *Journal of Medical Toxicology*, 2016.

SUDS – PAIN INTERFACE

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- There is an association between SUDS and PAIN (strong and complex)
- However, linear causality is not reliably demonstrated by data
- Focused treatment of either presentation benefits the other
- Coordinating treatments improves outcomes
  - J Subst Abuse Treat. 2022 Oct 1;143:108892. doi: 10.1016/j.jsat.2022.108892\
- Don't forget PTSD

*The LONG VIEW -Dr. Kelly

*Dr Kelly recently published an analysis of patients with long sustained AUD remission (up to 23 years) who relapsed that showed a strong correlation to onset or intensification of a significant pain process doi 10.3389/fpubh.2025.1706192

BUPRENORPHINE (BUP)

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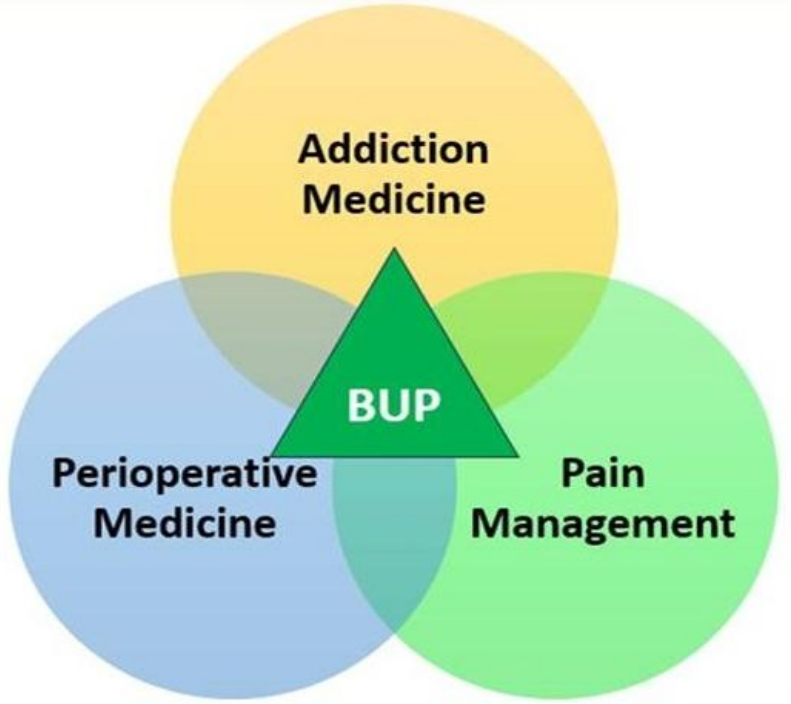
- **BUP as replacement / for Full Agonist Opioid (FAO)**:
- HYBRID OPTION (blending)

• Designed as "safe opioid" ?OTC	1966
• MOUD maintenance & "rescue" >	1979
• Perioperative/periprocedural >	2018
• Acute / Chronic Pain >	the future

US FDA approved buTRANS and Belbuca

METHADONE OPTION – long duration – "FAO", but can be nettlesome



Thomas Hickey MD
Yi Zhang MD

- Azar P et. al Pain Management Strategies for Patients Receiving Extended-Release Buprenorphine for Opioid Use Disorder: A Scoping Review.
- Subst Use. 2025 Jun 14;19: doi: 10.1177/29768357251343612.