Pain, Opioids and Addiction

Immersion Training in Addiction Medicine Programs 2024

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CARE Clinical Addiction Research and Education

BOSTON MEDICAL CENTER
EXCEPTIONAL CARE. WITHOUT EXCEPTION.

SCOPE of Pain
Safer/Competent Opioid Prescribing Education

State of Pain

Painting by Gull G

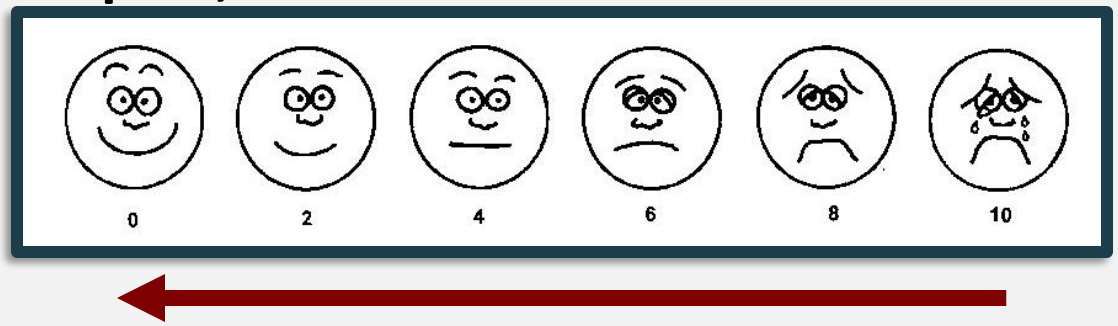
- **Acute pain** is an adaptive symptom that is life preserving
- **Chronic pain** is…
  - **Maladaptive** and may present as a disease in and of itself
  - **Common** (In the US, 21% of adults report pain on most days or everyday)
  - **Associated with psychiatric comorbidities** with higher fatal and nonfatal suicide attempts
- **Pain** contributes to disparities by disproportionally impacting females, elderly, and those with lower socioeconomic backgrounds

Yong R et al. *Pain* 2022
Rikard SM, et al. *MMWR* 2023
Institute of Medicine. *2011 Relieving Pain in America*. Washington DC

Case:

- 61 yo male, former construction worker, with HTN and chronic low back pain (s/p diskectomy, laminectomy, spinal fusion)
- Transferred to you after your colleague retired
- IR oxycodone 15 mg q4 hours (MME 135)
- On a scale of 0-10 his pain is a “20”
- “the oxys are the only thing that touch my pain”, “I have tried everything and nothing else helps”, “I am allergic to motrin”,“my surgeon said my back is a mess”
- h/o early refills and ED visits for acute opioid withdrawal, “I need to take more oxys for my pain, but Dr. X would never increase my dose”

- **Is his out-of-control behavior due to his severe pain, OUD or both?**
- **How will you help this patient?**
- **What is your facial expression right now?**
- **My learning objective…**



“The pain medication conundrum”

Opinion The New York Times

- Undertreating pain, we are admonished…it violates the basic ethical principles of medicine. On the other hand, we are lambasted for overprescribing pain medications… creating an epidemic of overdose deaths.
- For patients with chronic pain, especially those with syndromes that don’t fit into neat clinical boxes, being judged by doctors to see if they “merit” medication is humiliating and dispiriting. This type of judgment, with its moral overtones and suspicions, is at odds with the doctor-patient relationship we work to develop.

> *“As Mr. W. and I sat there sizing each other up, I could feel our reserves of trust beginning to ebb. I was debating whether his pain was real or if he was trying to snooker me. He was most likely wondering whether I would believe him…”*

Danielle Ofri, MD - Faculty at NYU and a physician at Bellevue Hospital, *August 2015*

Building Trust

After completing a thorough pain history, focused physical exam, and appropriate diagnostic testing…

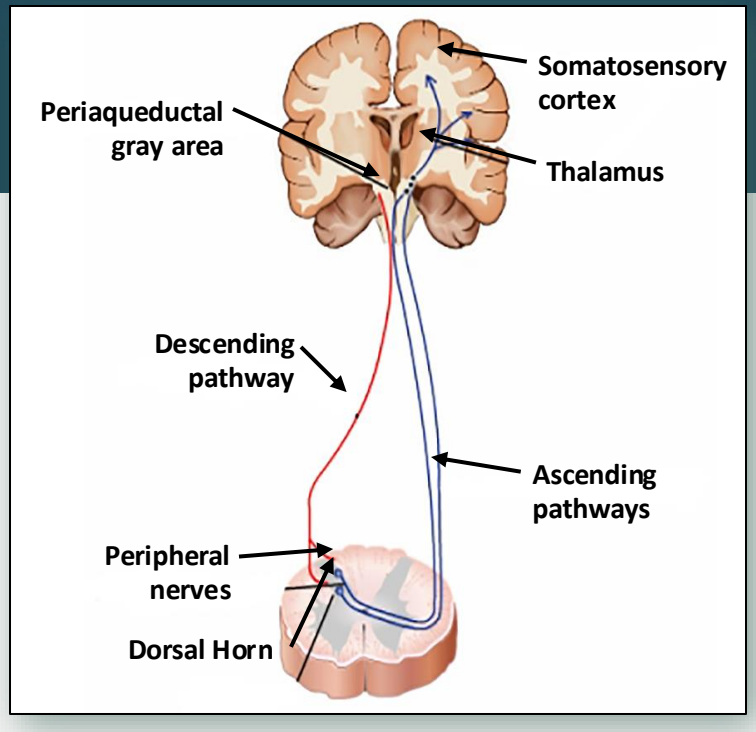
Express **empathy** for the patient's pain and suffering…

Validate that you believe the pain and suffering is real…

Believing the severity of a patient's pain and suffering

does not mean opioids are indicated

Opioid Analgesics



- **Analgesia**
  - Turn on descending inhibitory systems
  - Prevent ascending transmission of pain signal
  - Inhibit terminals of C-fibers in the spinal cord
  - Inhibit activation of peripheral nociceptors
  - **Variable response** (not all patients respond to the same opioid in the same way)
    - >3,000 polymorphisms in the human μ-opioid receptor gene
    - Single nucleotide polymorphisms (SNPs) affect opioid metabolism, transport across the blood brain barrier, and activity at receptors and ion channels
- **Active the reward pathway**

McCleane G, Smith HS. *Med Clin N Am.* 2007
Smith HS. *Pain Physician.* 2008

Opioids and Chronic Pain

“The problem is, there’s no evidence that opioids work for chronic pain”

Julia Lurie – reporter, *Mother Jones*,
April 27, 2018

Opioid Efficacy for Chronic Pain

Meta-analyses (1-6 month follow-up)

- **Opioids v placebo** *(high quality evidence)* Statistically significant improvements in pain[1,2] and functioning.[2]
- **Opioids v placebo** (neuropathic pain) *(low-mod quality evidence)* Clinically relevant pain relief and reduction of disability[3]
- **Opioids v nonopioids** *(low-mod quality evidence)* Similar benefits[2]

RCT[4] found **opioids not superior** to **nonopioids** for improving musculoskeletal pain-related function over 12 months

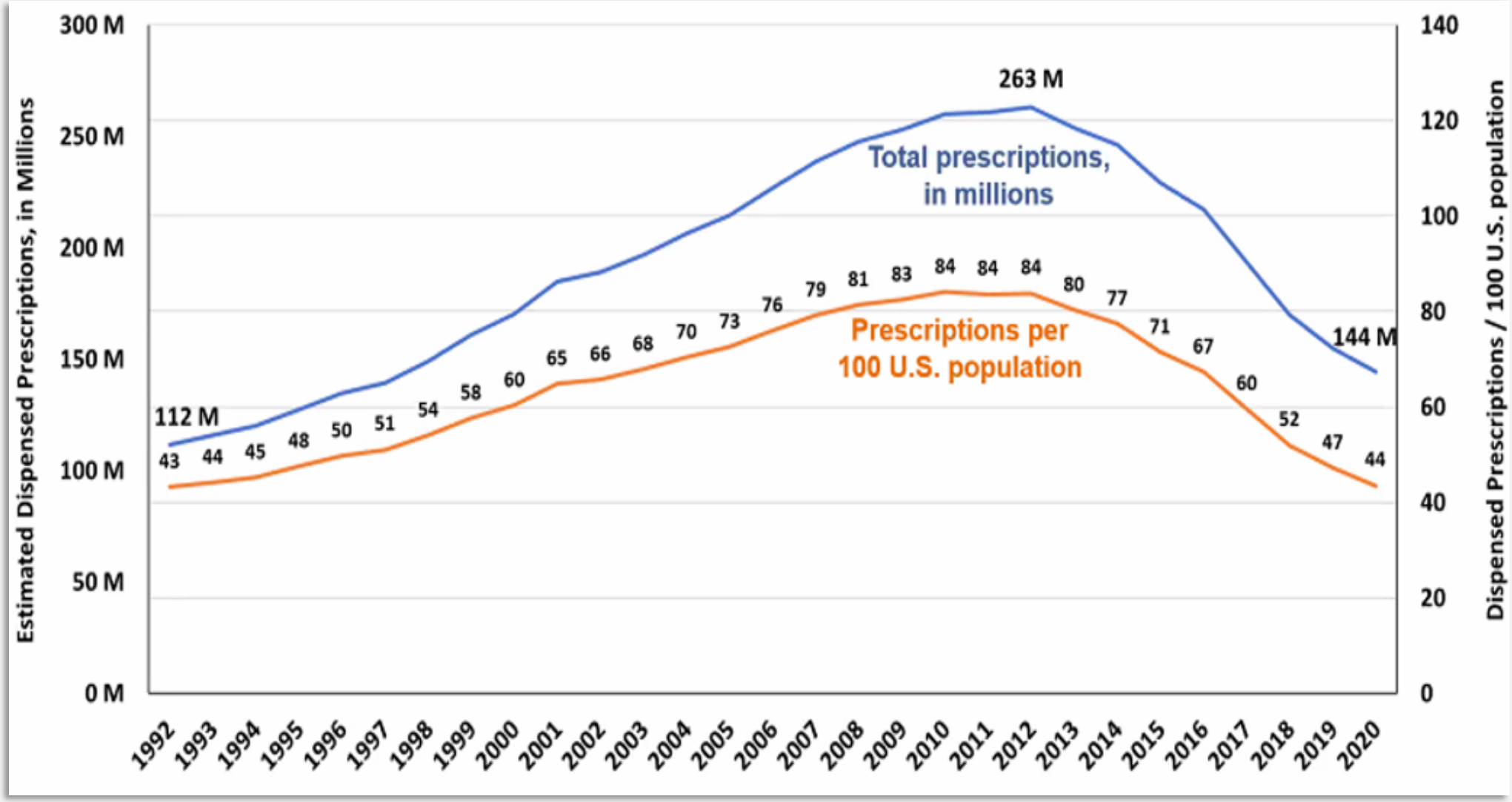
Limitations to generalizability:[5]

- *Excluded patients already on long-term opioids*
- *89% of eligible patients declined to be enrolled*

Two longer term follow-up studies found **44.3%** on chronic opioids for chronic pain had **at least 50% pain relief** [6]

1. Meske DS, et al. *J Pain Res.* 2018
2. Busse JW, et al. *JAMA*. 2018
3. Sommer C et al. *Eur J Pain.* 2020
4. Krebs EE, et al. *JAMA*. 2018
5. Webster L. *Pain Med.* 2019
6. Noble M, et al. *Cochrane Syst Rev.* 2010

Opioid Prescribing Trends



www.fda.gov

Compared to Whites, Blacks and Hispanics are less likely to receive opioid analgesics for pain and when they do it's at a lower dose

Morden NE et al.
NEJM 2021

Opioid Risks

- **Allergies** are rare
- **Side effects** are common
  - Nausea, sedation, constipation, urinary retention, sweating
- **Organ toxicities** are rare
  - Suppression of hypothalamic-pituitary-gonadal axis → hypogonadism → fracture risk
- **Immunosuppression**
  - Increased risk of invasive pneumococcal disease and community acquired pneumonia
- **Worsening pain** (opioid withdrawal-mediated pain, opioid-induced hyperalgesia)
- **Opioid Use Disorder**
- **Overdose and death**

Dunn KM et al. *Ann Intern Med* 2010
Li X et al. *Brain Res* 2001
Angst MS, Clark JD. *Anesthesiology* 2006
Wiese AD, et al. *Ann Intern Med.* 2018
Doverty M et al. *Pain* 2001

Problematic Opioid Use

Systematic review from 38 studies (26% primary care, 53% pain clinics)

Misuse rates: **21% - 29%**

Misuse: Opioid use contrary to the directed or prescribed pattern of use, regardless of the presence or absence of harm or adverse effects.

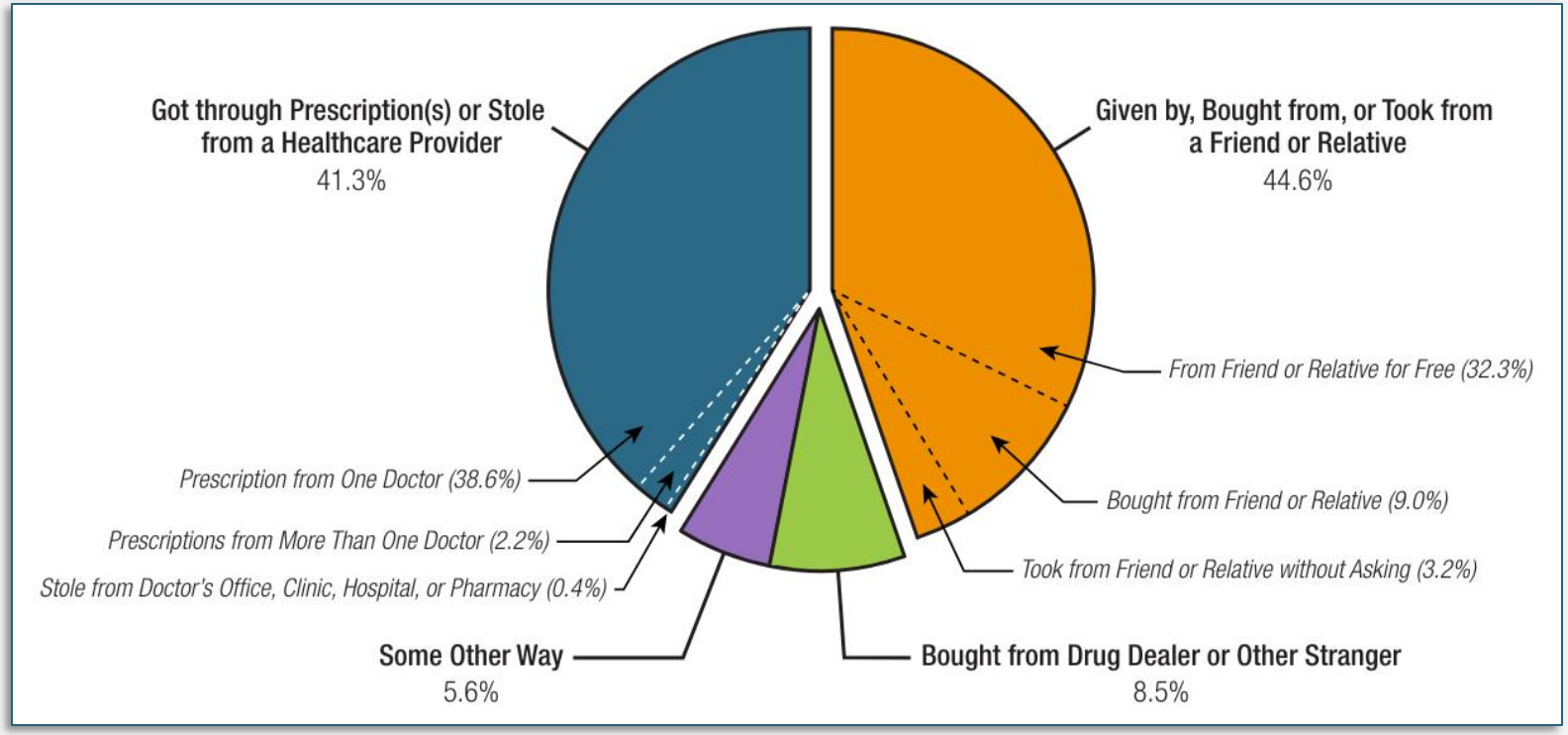
Addiction rates: **8% - 12%**

Addiction: Pattern of continued use with experience of, or demonstrated potential for, harm (eg, "impaired control over drug use, compulsive use, continued use despite harm, and craving").

Vowles KE et al. *Pain.* 2015

Prescription Opioid Misuse

8.5m Adults w/ Prescription Opioid Misuse in Past Year



Main Reason for Misuse	Past Year (%)
Relieve physical pain or other symptoms	84%
Feel good, high Due to addiction	16%

SAMSHA (2023), 2022 NSDUH

Risk Factors for Opioid-Related Harm (misuse, overdose, addiction)

Medication Factors
Higher opioid dose
Long-term opioid use (>3 months)
ER/LA opioid formulation
Initial 2 weeks after starting ER/LA opioid
Combination opioids and sedatives (e.g., benzodiazepines)

Patient Factors
Mental health disorder (e.g., depression, anxiety)
Substance use disorder (SUD) (e.g., alcohol, tobacco, illicit and prescription drug)
Family history of SUD
Sleep-disordered breathing
History of opioid overdose

Akbik H, et al. *J Pain Symptom Manage*. 2006
Ives J, et al. *BMC Health Serv Res*. 2006
Liebschutz JM, et al. *J Pain*. 2010

Michna E, et al. *J Pain Symptom Manage*. 2004
Reid MC, et al. *J Gen Intern Med*. 2002
Volkow ND, et al. *N Engl J Med.* 2016

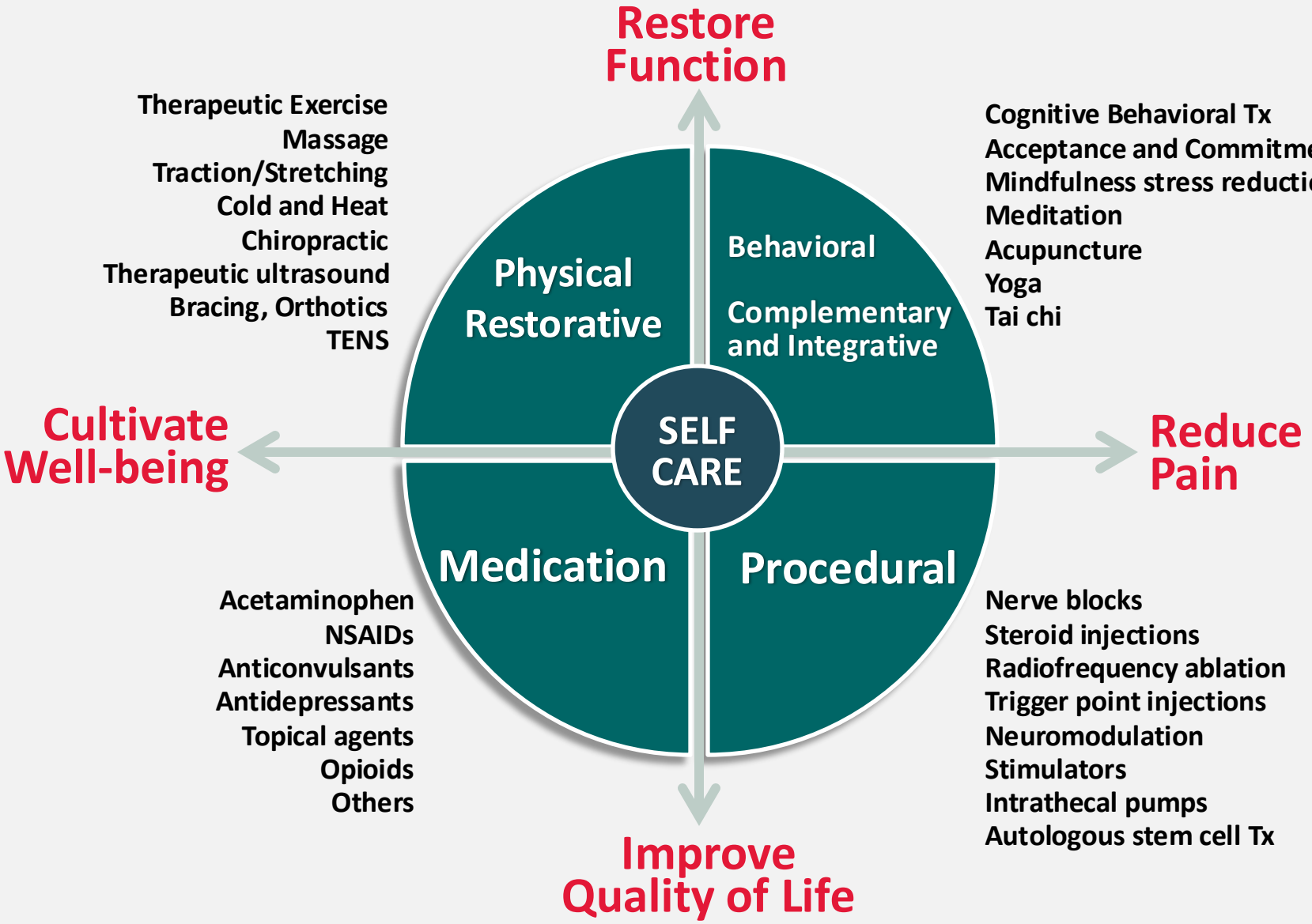
Behaviors and Concern for Prescription Opioid Misuse

The Spectrum of Severity

- Requests for increase opioid dose
- Requests for specific opioid by name, “brand name only”
- Non-adherence w/ other recommended therapies (e.g., PT)
- Running out early (i.e., unsanctioned dose escalation)
- Resistance to change therapy despite adverse effects (e.g. over-sedation)
- Deterioration in function at home and work
- Non-adherence with monitoring (e.g., urine drug tests)
- Multiple “lost” or “stolen” opioid prescriptions
- Illegal activities – forging scripts, selling opioid prescription

Safer Opioid Prescribing for Pain

Multidimensional Care for Chronic Pain



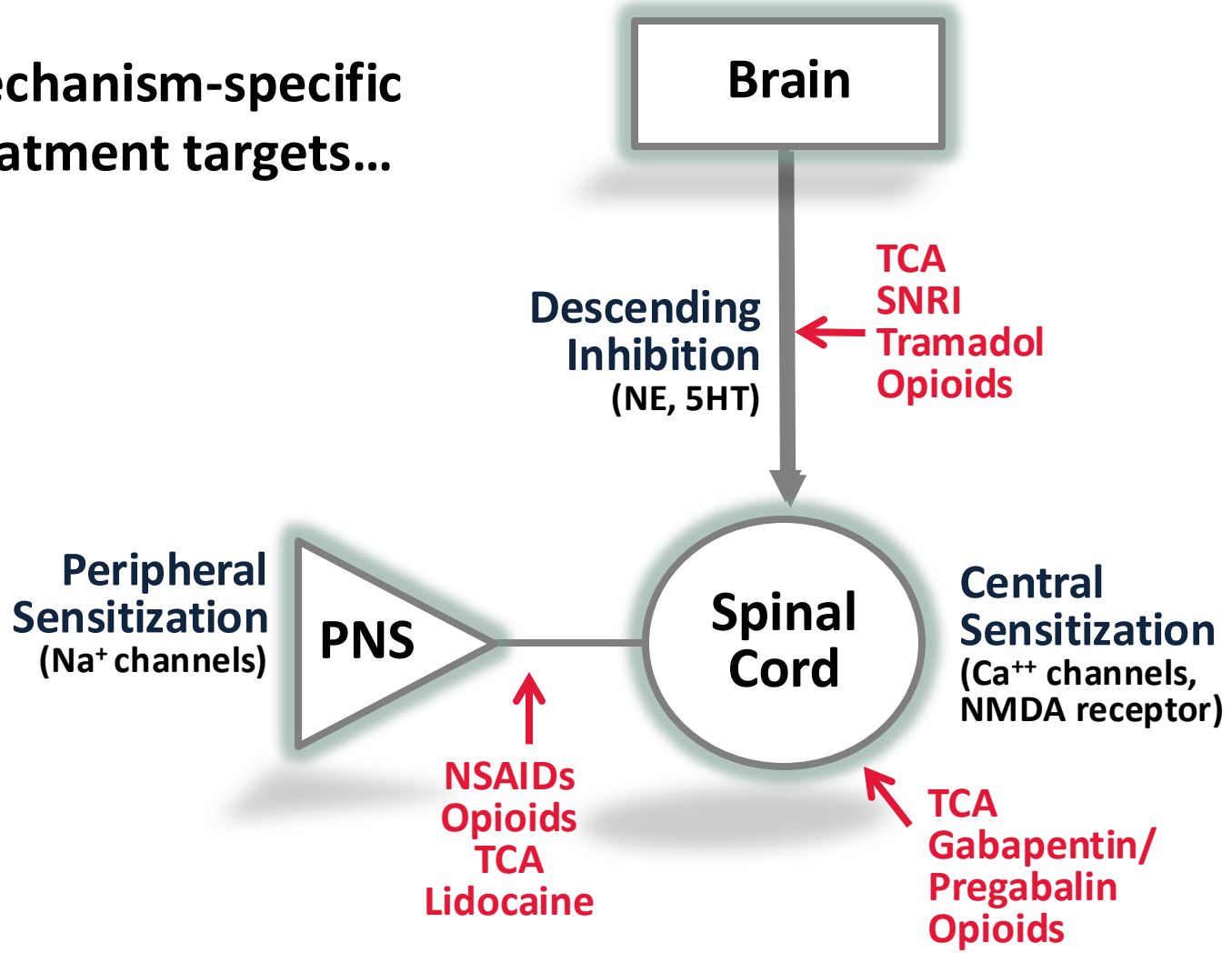
Multimodal approaches are more cost-effective than single modality options

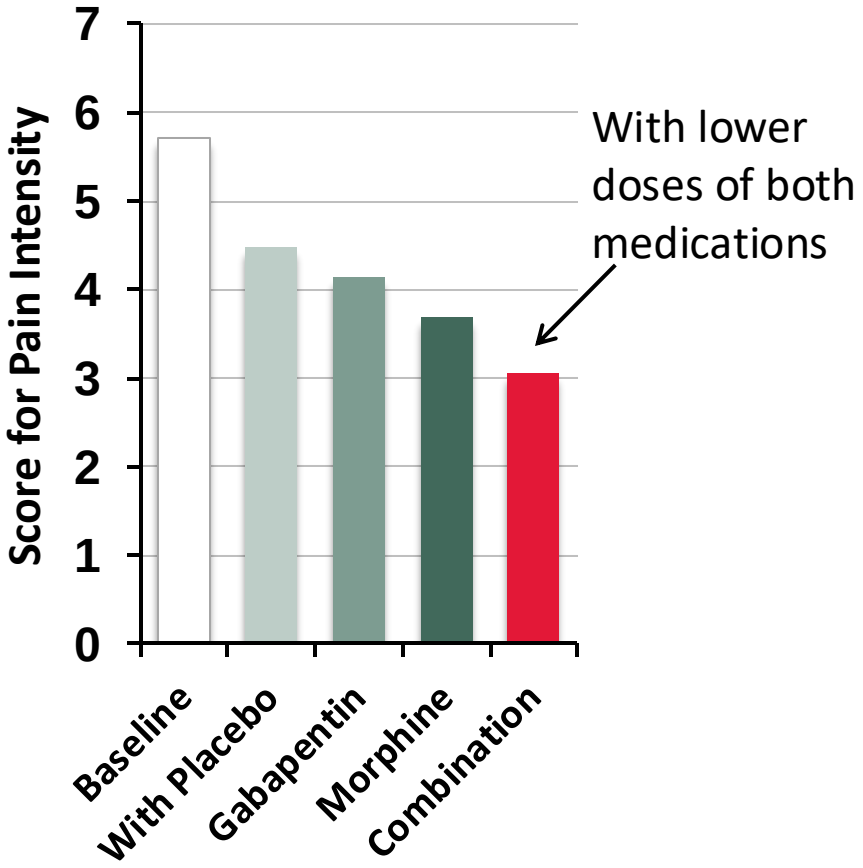
Flor H, et al. *Pain* 1992
Roberts AH, et al. *Clin J Pain*. 1993
Patrick LE, et al. *Spine*. 2004
Kamper SJ, et al. *Cochrane Review*. 2014

Modified image courtesy of Seddon Savage, MD, MS

Rational Polypharmacy for Synergy

Mechanism-specific treatment targets…





Finnerup NB. *N Eng J Med.* 2019
Woolf CJ. *Ann Intern Med*. 2004

Gilron I, et al. *N Engl J Med*. 2005

Dowell D et al. *MMWR* 2022

Opioid Guideline

CDC

Acute pain *(recommendations 1 & 6)*

- Max non-opioids. Only consider opioids if benefits > risks. Prescribe no greater quantity than needed for expected duration of severe pain

Chronic pain *(recommendations 2-5, 7-11)*

- Max non-pharm, non-opioids. Only consider opioids if benefits > risks. Discuss realistic benefits, known risks. Establish treatment goals and how opioids will be d/c'd if risks > benefits
- When starting opioids: use IR opioids. Prescribe lowest effective dose. Use caution at any dose. Avoid increasing dose above levels with diminishing benefit relative to risk
- Evaluate benefits, risks 1-4 weeks of starting opioids or after dose escalation and then regularly
- **For patients already on opioids** weigh benefits, risks…
  - **If benefits > risks**, continue opioids and optimize other therapies,
  - **If risks > benefits**, optimize other therapies, gradually taper
  - **Unless life-threatening issue, do not d/c abruptly or rapidly reduce from higher doses**
- **Use strategies to mitigate risk**: naloxone co-prescribing, review PDMP, urine toxicology testing
- Use caution when concurrently prescribing opioids and other CNS depressants

Universal Precautions when Prescribing Opioids

- Predicting opioid risk is imprecise
- Consistent application of precautions reduces stigma, standardizes care
- Precautions include:
  - Assess and document pain diagnosis(es) and opioid misuse risk
  - **Prescribe opioids as a test or trial**; continued, modified or d/c based on risks/benefits
  - *bidirectional* Patient Prescriber Agreements (not "contract"): informed consent and plan of care, written at 5th grade reading level
  - **Monitor for benefit** (PEG) **and harm/risk** (urine drug tests, pill counts, PDMP)

Gourlay DL, Heit H. *Pain Med.* 2005
Chou R, et al. *J Pain*. 2009
Franklin GM. *Neurology*. 2014
Federation of State Medical Boards *Model Policy* April 2017

Assessing Benefit – PEG scale

1. What number best describes your pain on average in the past week:

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

Krebs EE, et al. *J Gen Intern Med*. 2009

Opioids for Chronic Pain

What is the clinician's role?

VS.

- Use a risk-benefit framework
- Judge the opioid treatment, not the patient

Nicolaidis C. *Pain Medicine* 2011

Continuation of Opioids

Before writing the next opioid prescription…you should be convinced that there is…

…benefit (pain, function, QOL) and…

…absence of harm

Despite subjective assessments (benefits/harms)**, it should be documented at each visit**

Discontinuing (or Decreasing) **Opioids**

- Do not have to prove addiction or diversion - only assess and reassess the risk-benefit ratio
- If patient is unable to take opioids safely or is nonadherent with monitoring then discontinuing opioids is appropriate even in setting of benefits
- Need to determine how urgent the discontinuation should be based on the severity of the risks and harms
- Document rationale for discontinuing opioids

You are NOT abandoning the patient.
You are abandoning the opioid therapy.

Tapering Opioids

- No validated protocols in patients on opioids for chronic pain
- Goal may be to decrease dose or taper off completely
- Systematic review found **very low-quality evidence** suggests that several types of opioid tapers may be effective, and that pain, function, and quality of life may improve for some patients with opioid dose reduction
- CDC guideline recommends decrease of **10% per month if patient on opioids for years** and decrease of **10% per week if patient on opioids for weeks to months**

Frank JW et al. *Ann Intern Med.* 2017
Dowell D et al. *MMWR.* 2016

Opioid Discontinuation Risks

- Observational studies identified harms (suicide and overdose) associated with opioid tapering and discontinuation[1,2,3,4]
- A comparative effectiveness study[5] of ~200,000 individuals on **stable long-term opioid therapy** (i.e., no evidence of opioid use disorder or opioid misuse)
  - opioid tapering was associated with a small absolute increase in opioid overdose or suicide compared with maintaining stable opioid dosages

"Tapering/discontinuation **should not** be considered a harm reduction strategy for patients receiving **stable** long-term opioid therapy **without evidence of misuse"**[5]

1. James JR, et al. *J Gen Intern Med*. 2019
2. Mark TL, Parish W. *J Subst Abuse Treat*. 2019
3. Oliva EM, Bowe T, Manhapra A, et al. *BMJ.* 2020
4. Hallvik SE, et al. *Pain.* 2022
5. Larochelle MR et al. *JAMA open*. 2022

Case continued:

- 61 yo male, chronic LBP (s/p diskectomy, laminectomy, spinal fusion)
- Transferred care to you after colleague retired
- IR oxycodone 15 mg q4 hours (MME 135)
- Pain is a “20” on 10-point scale
- Requesting dose increase
- Many worrisome behaviors
- **How will you help this patient?**

Differential Diagnosis

1. Progression of back pathology (worsening pain)
2. Opioid use disorder
3. Self-medicating psychiatric co-morbidity
4. Opioid induced hyperalgesia
5. Opioid withdrawal mediated pain
6. Opioid resistant pain
7. All or some combination of the above

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Assessment and Plan

1. Assess for worsening back pathology
2. Assess for OUD

Does my patient taking opioid analgesics have an OUD?

- ❑ *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

***These criterion are 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.)

Case continued:

- 61 yo male, chronic LBP (s/p diskectomy, laminectomy, spinal fusion)
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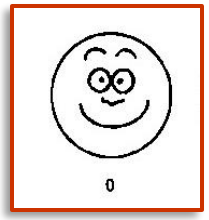
- **How will you help this patient?**

Assessment and Plan

1. Assess for worsening back pathology
2. Assess for OUD
3. Screen for (and treat) mental health co-morbidities (depression, anxiety, PTSD, insomnia) and consider co-manage with TCA, SNRI, gabapentinoids
4. Try buprenorphine QD to diagnose (and treat) opioid withdrawal mediated pain
5. Try buprenorphine TID to treat both OUD and chronic pain (and mood disorder)
6. Taper opioids and focus on nonopioid (including nonpharmacologic) treatments due to concerns about patient safety, opioid induced hyperalgesia, and/or opioid resistant pain
7. And try to…



Thanks!