

2026 **SUPPLEMENTAL HEALTH,
DI AND LTC** CONFERENCE

Navigating Change

Chronic Pain Management and Opioids: Balancing Relief, Risk, and Outcomes





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Agenda: Chronic Pain Management

- **Introduction**: Definition, Pathyphysiology, and Classification
- **Epidemiology** and **Types** of Chronic Pain: Who is at risk
- **Treatment Modalities**: Current and emerging options
- **Use of Opioids**: Historical record and current approach
- **Risk Assessment**: Key considerations that impact morbidity and mortality risk
- **Outcomes**: Favorable and unfavorable



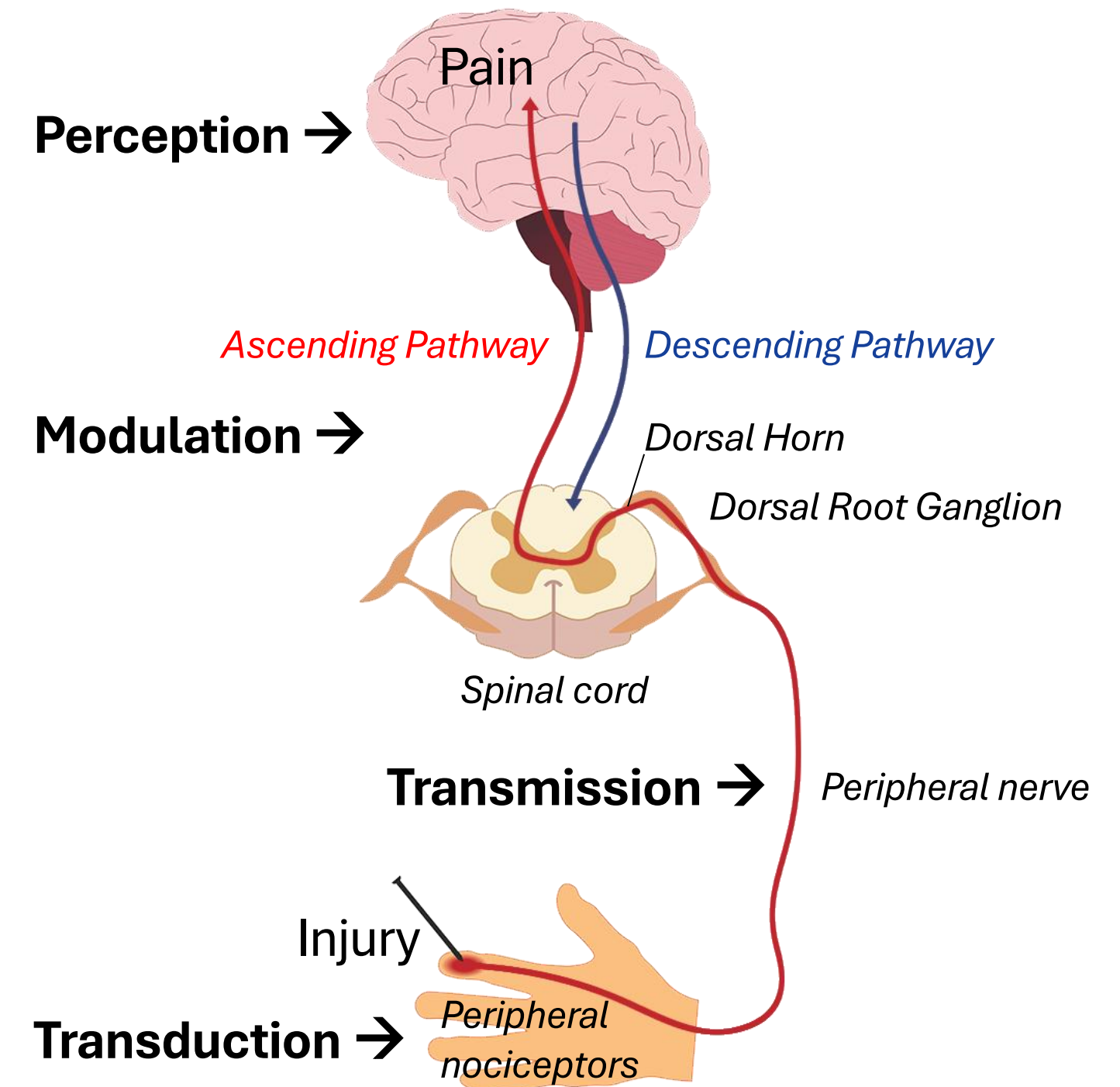
Definition, Pathophysiology and Types of Chronic Pain

Definition

- Pain that persists beyond the usual course of a disease, typically 3 months or longer.
- Physical effects: loss of energy, muscle tension, limited mobility, appetite changes.
- Emotional effects: mood alterations, anxiety, fear of re-injury or worsening symptoms, social isolation
- Cause can be from musculoskeletal, neurogenic, psychogenic sources or a combination

Pathophysiology: Terminology and Anatomy

- **Transduction:** conversion of stimuli to electrical energy
- **Transmission:** electrical energy transmitted to spinal cord
- **Modulation:** alteration of pain signal (increased or decreased)
- **Perception:** brain's subjective, conscious awareness and interpretation of a pain signal that involves:
 - Emotional state: depression, anxiety, anger, psychosocial stress, distracted, hyperfocused
 - Past experiences: fear of re-injury, incomplete recovery from prior pain experience
 - Environmental factors: temperature extremes, poor air quality, lack of natural light, inadequate sleep



Source: https://www.researchgate.net/figure/Possible-sites-of-neuropathic-pain-lesions-along-the-spinothalamic-tract-including-at_fig1_377485933

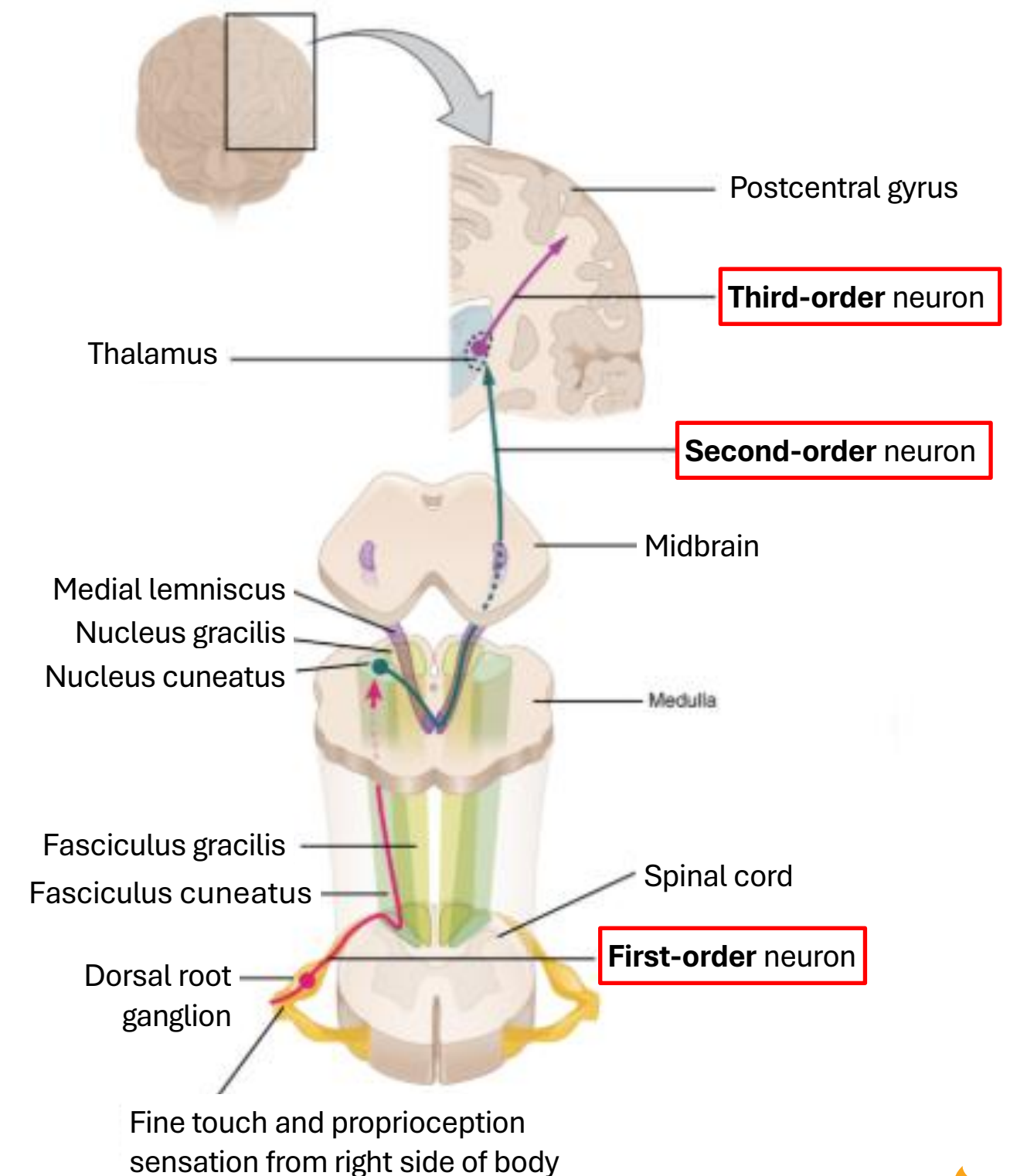
Pathophysiology: Somatosensory System

Purpose: 3-neuron system designed to collect, transmit and interpret data
1st order neurons: reside in skin, muscles, joints and serve to detect stimuli

2nd order neurons: in spinal cord and brainstem, transmit signals to the thalamus

3rd order neurons: in thalamus, relay processed information to cerebral cortex

Diseases anywhere along this pathway lead to neuropathic pain



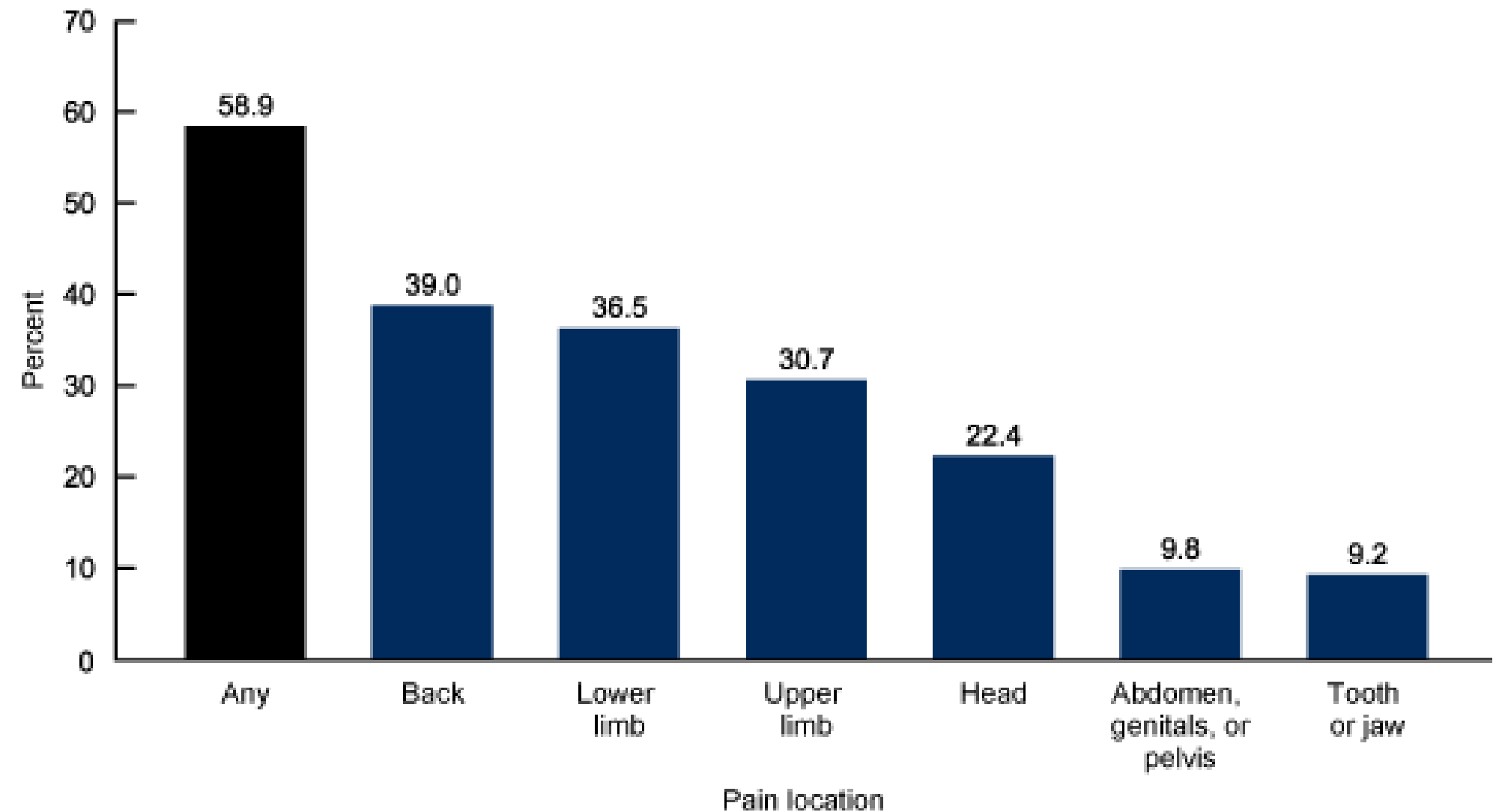
Pathophysiology: Underlying Mechanisms

- **Nociceptive:** pain due to real or threatened tissue injury that leads to activation of nociceptors.
 - Examples: burn, laceration, osteoarthritis, rheumatoid arthritis, degenerative disc disease
- **Neuropathic:** disease or injury that disrupts somatosensory nervous system causing maladaptive response. No nociceptor activation.
 - Examples: diabetic neuropathy, postherpetic neuralgia, complex regional pain syndrome
- **Nociplastic:** dysfunctional and overactive central nervous system causing distorted pain perception. No nociceptor activation or disease/injury to somatosensory nervous system.
 - Fibromyalgia, IBS, TMJ, tension headaches

Most Common Types of Chronic Pain

- Musculoskeletal
 - Lumbar spine
 - Hips/knees
 - Cervical spine
 - Hands/shoulders
- Headache and migraines
- Fibromyalgia
- Neuropathic
 - DM neuropathy

Percentage of adults aged 18 and over with any pain and pain by body region in the past 3 months: United States, 2019



Source: National Center for Health Statistics, National Health Interview Survey, 2019.

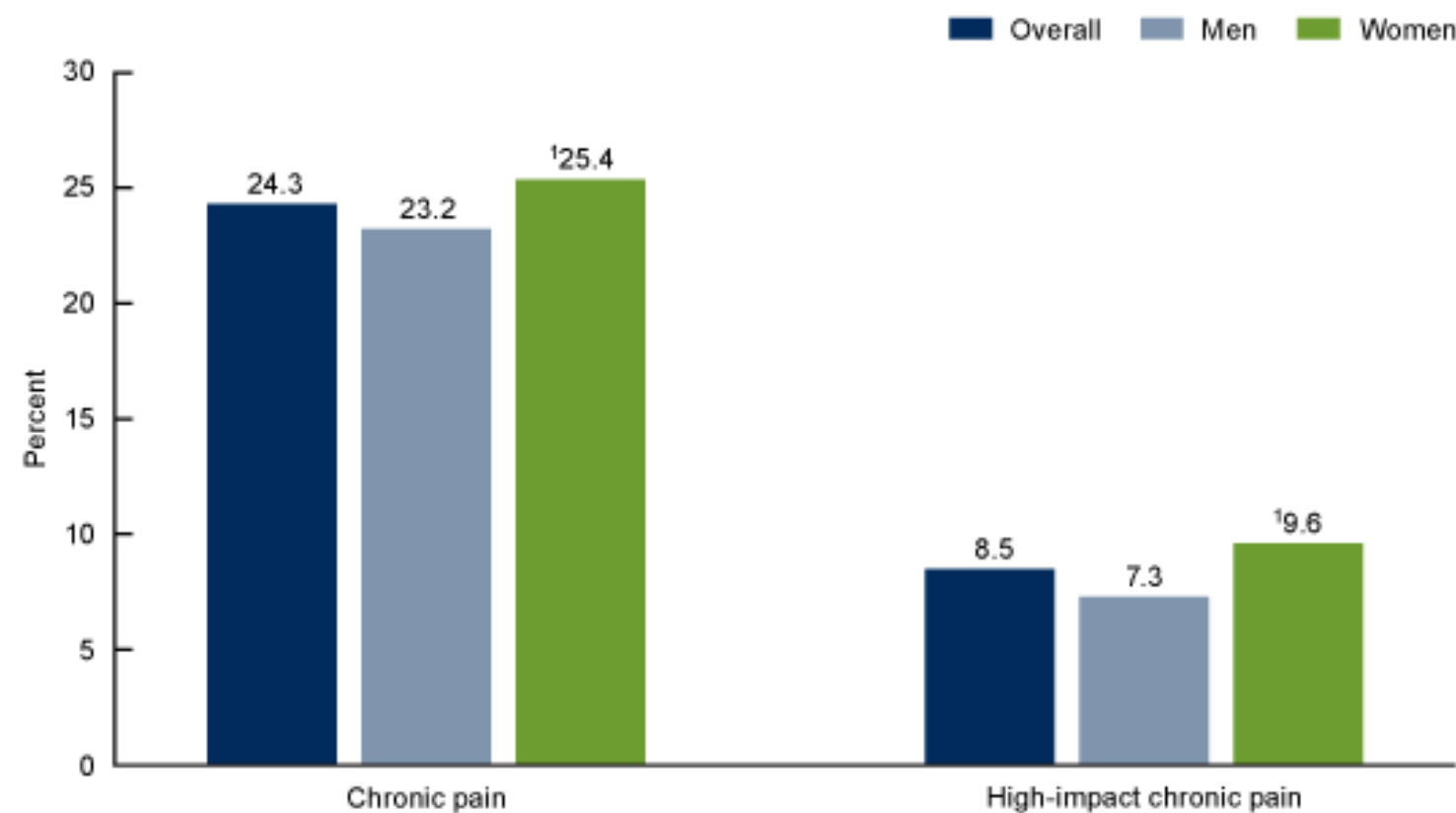


Epidemiology of Chronic Pain

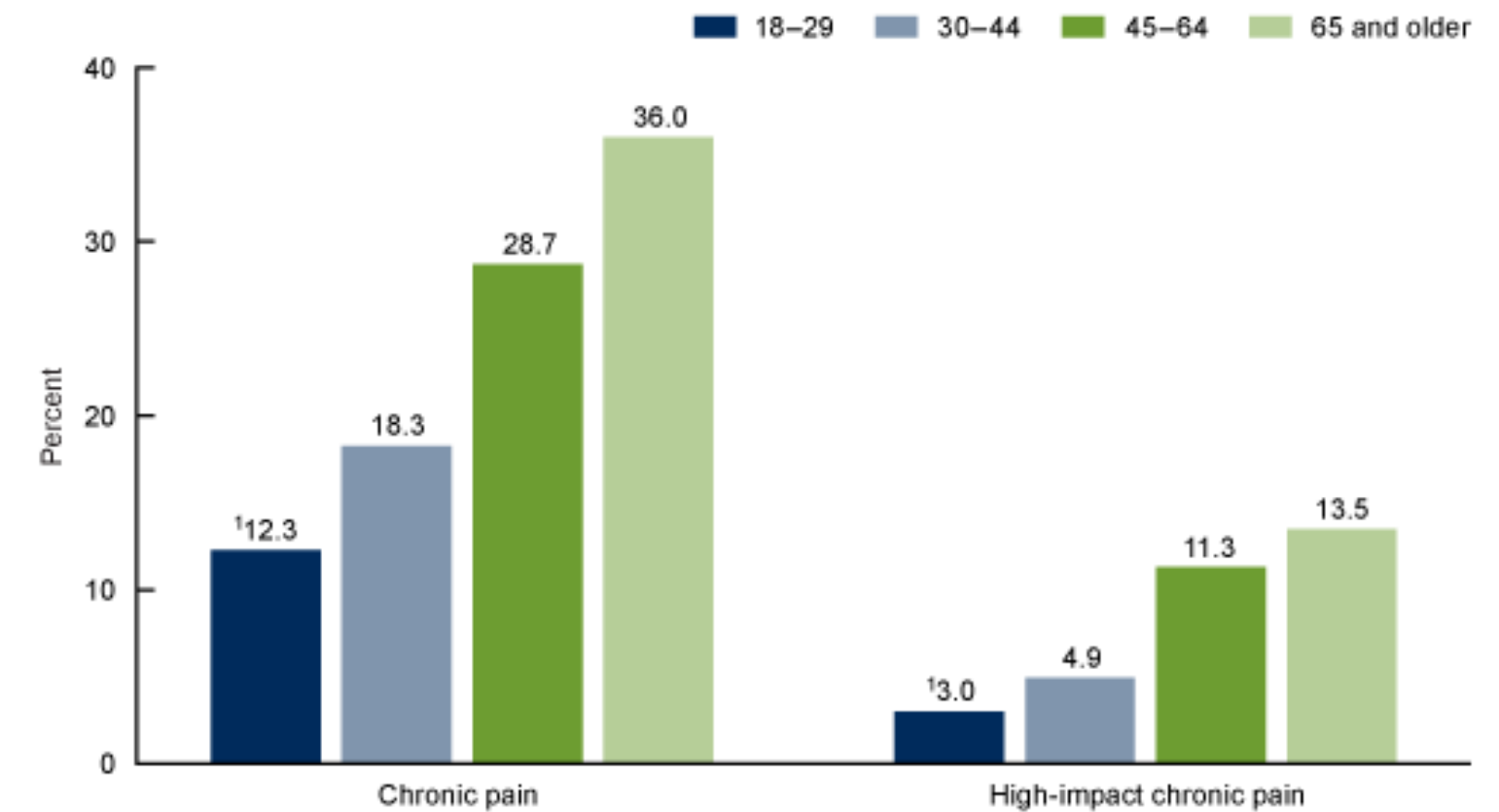
Epidemiology

- ~25% of US adults experience chronic pain (60 million)
- 8.5% (20million) have high-impact chronic pain
- F > M although not significant margin
- Incidence increases steadily with age

Percentage of adults age 18 and older with chronic pain and high-impact chronic pain in the past 3 months, overall and by sex: United States, 2023



Percentage of adults age 18 and older with chronic pain and high-impact chronic pain in the past 3 months, by age group: United States, 2023



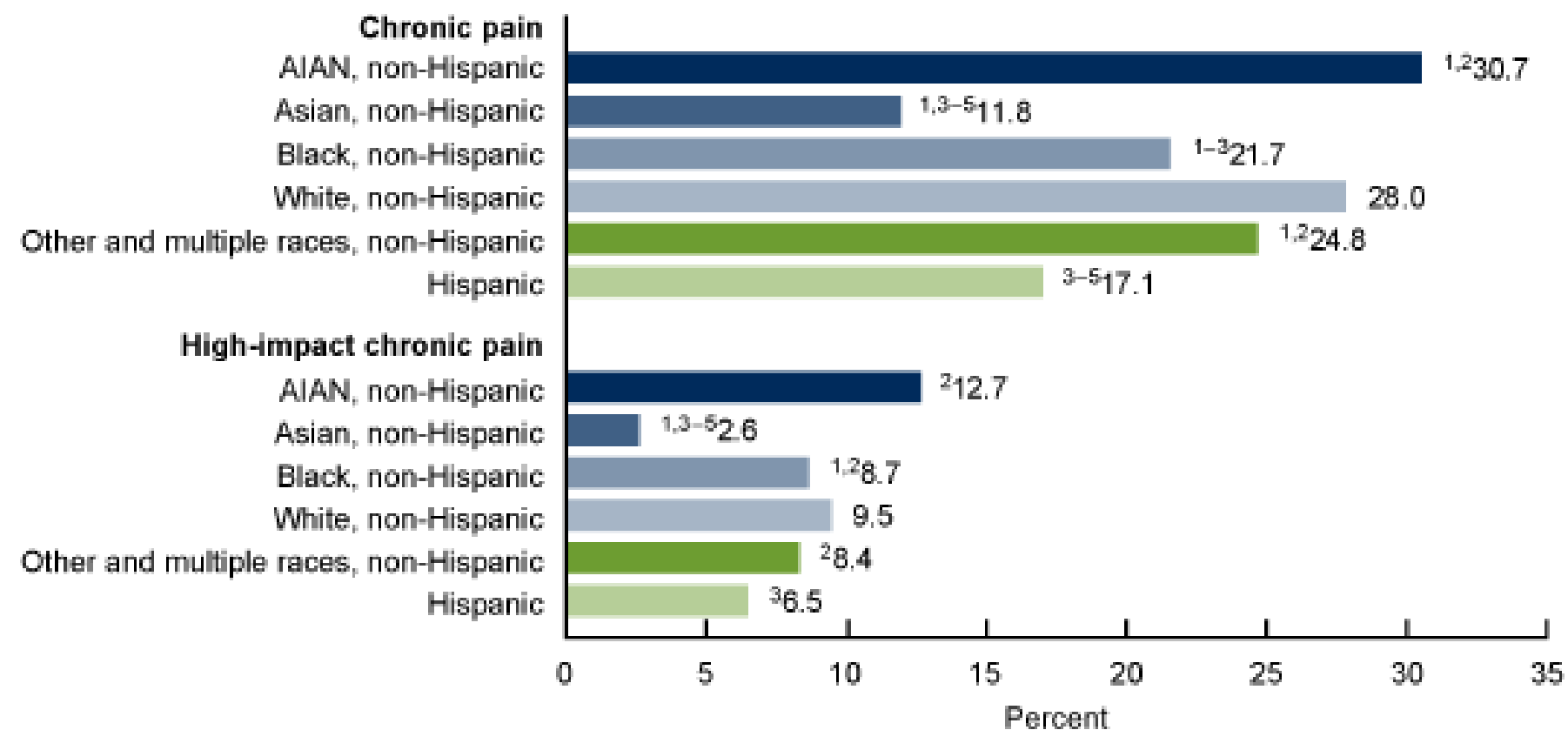
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2023.

Epidemiology

Incidence by race:

AIAN > Caucasian > AA > Hispanic > Asian

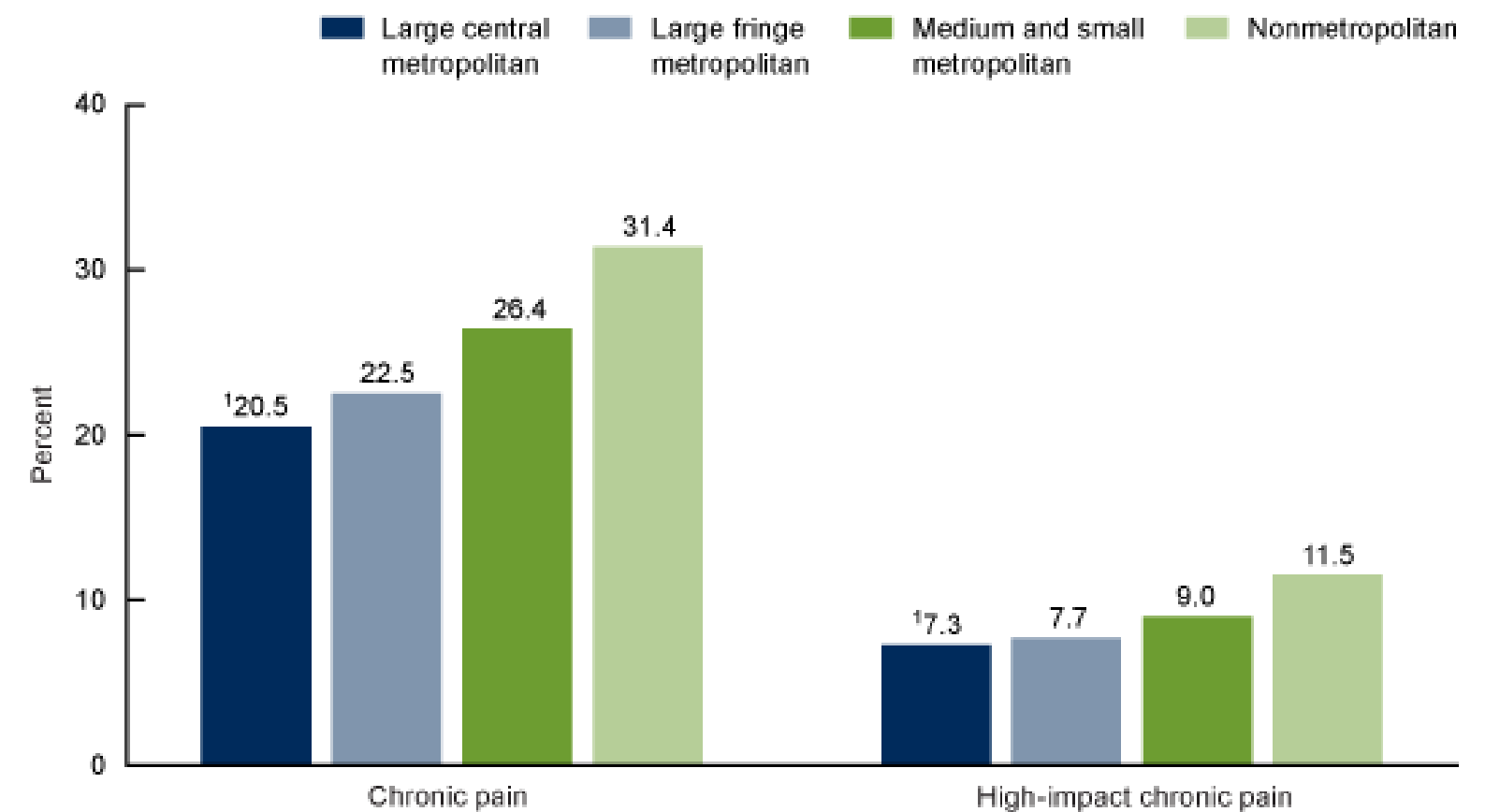
Percentage of adults age 18 and older with chronic pain and high-impact chronic pain in the past 3 months, by race and Hispanic origin: United States, 2023



Incidence by geography:

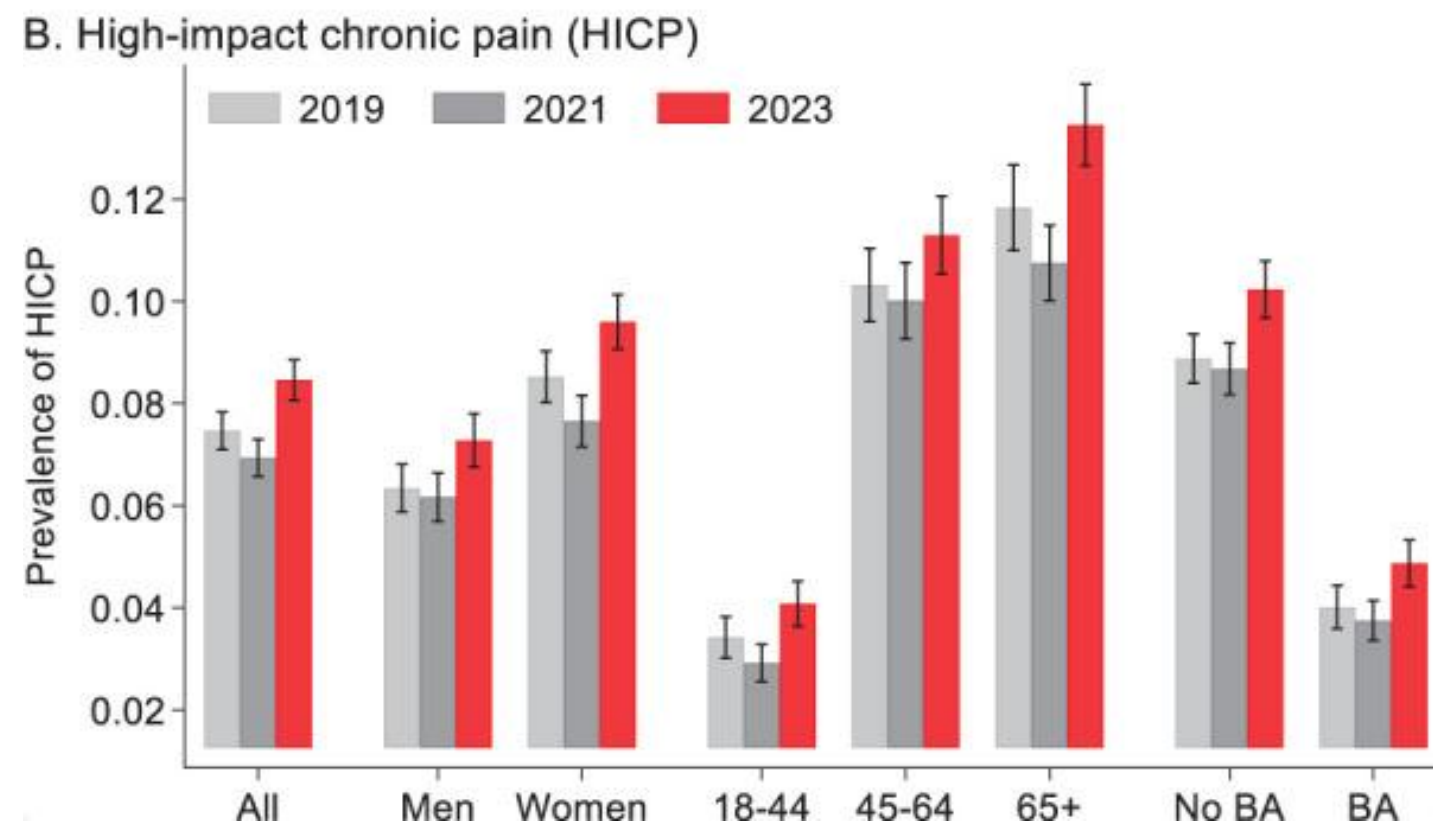
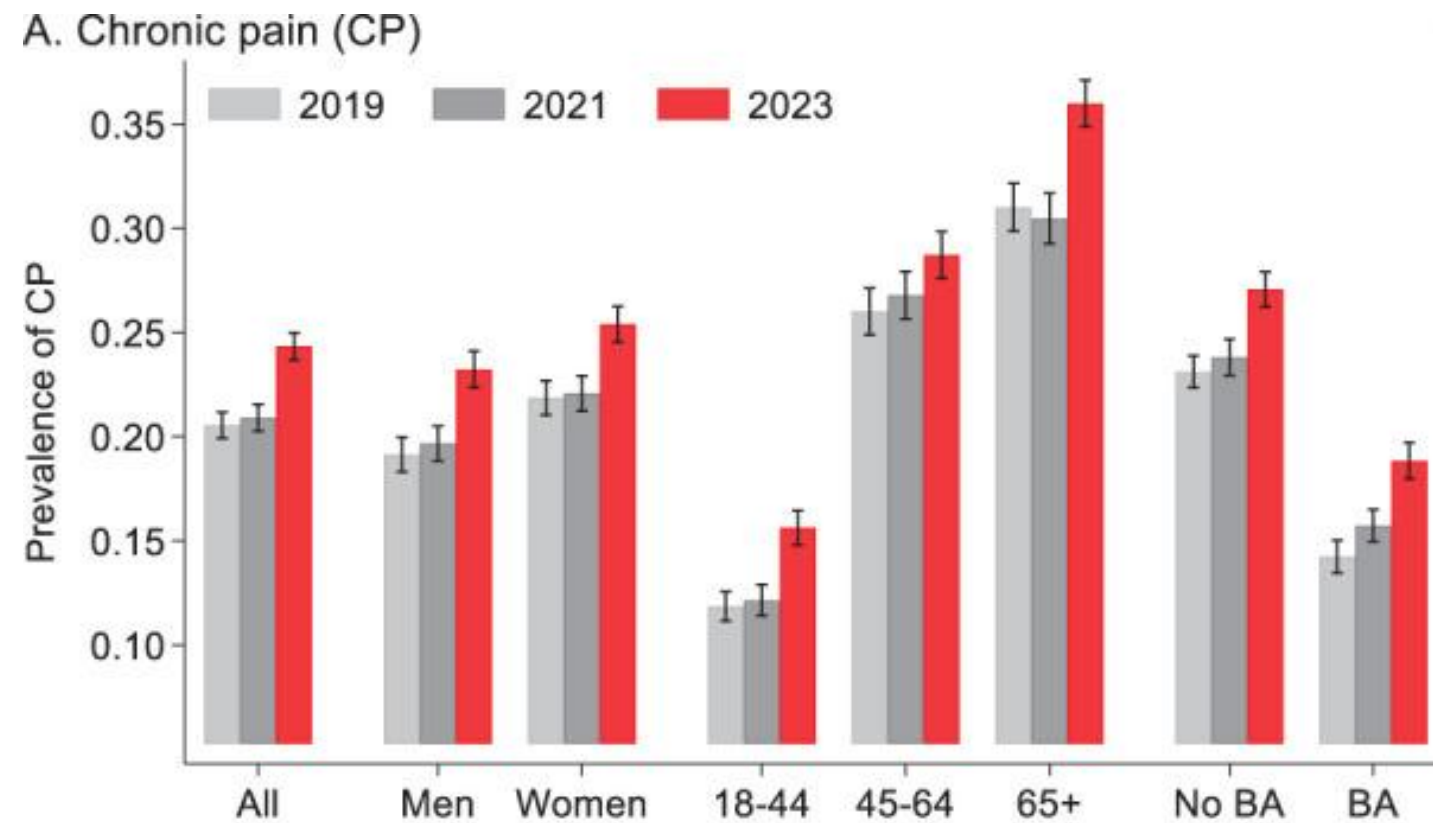
Nonmetropolitan >> large central metropolitan

Percentage of adults age 18 and older with chronic pain and high-impact chronic pain in the past 3 months, by urbanization level: United States, 2023



SOURCE: National Center for Health Statistics, National Health Interview Survey, 2023.

Epidemiology: COVID-19



13% of recent surge in US chronic pain and high-impact chronic pain is attributed to long-term effects of COVID-19.

- CP: 2021 20.9% → 2023 24.3%
- HICP: 2021 6.9% → 2023 8.5%

Source: Chronic Pain Surged in U.S. After Pandemic — Pain News Network

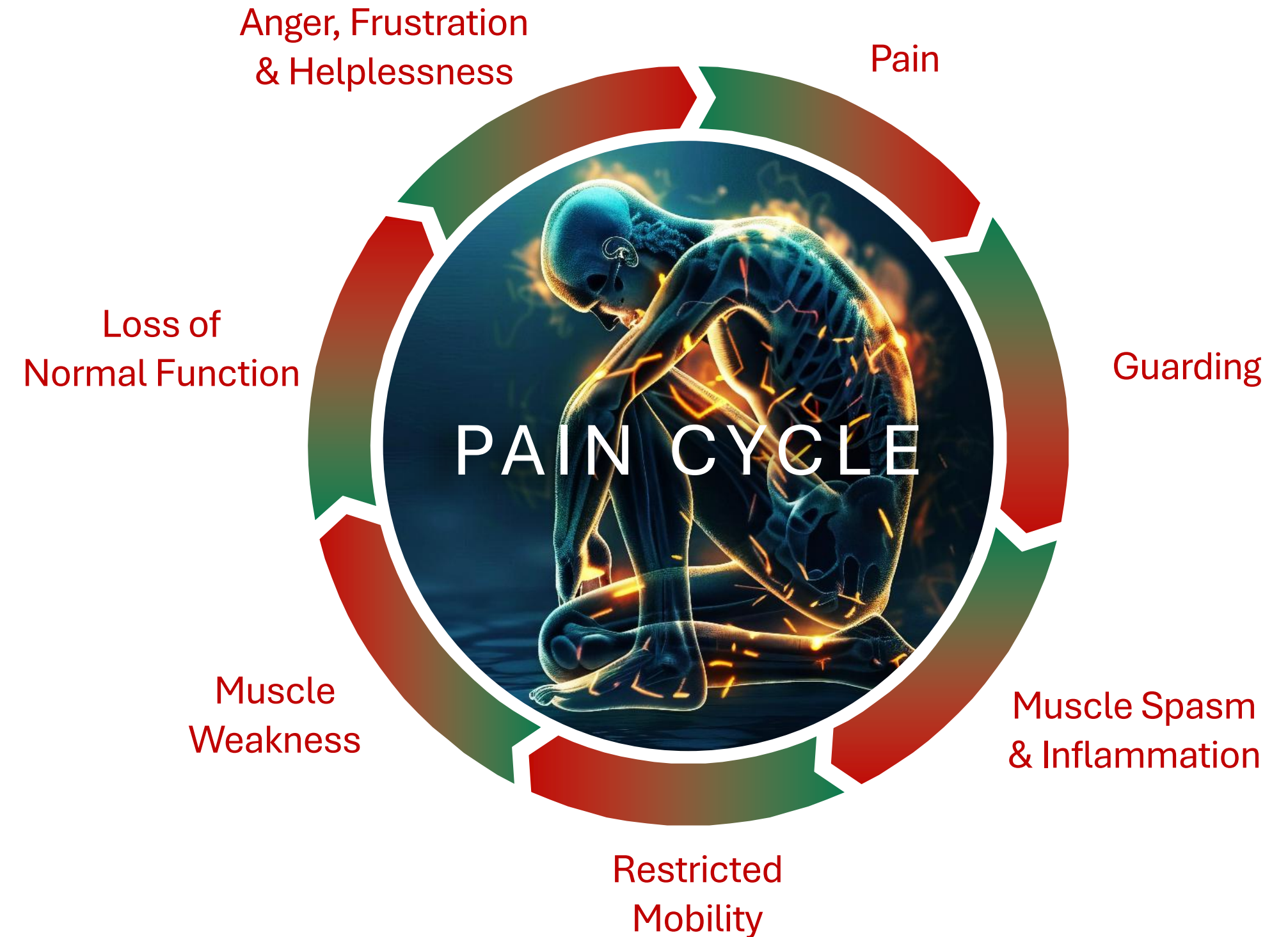
Epidemiology: Morbidity Impact

2025: \$723B economic cost

- \$531B in medical expenditures
- \$192B in lost productivity

2025 per person cost:

- \$8000 more in annual medical costs
- \$3000 more in lost productivity



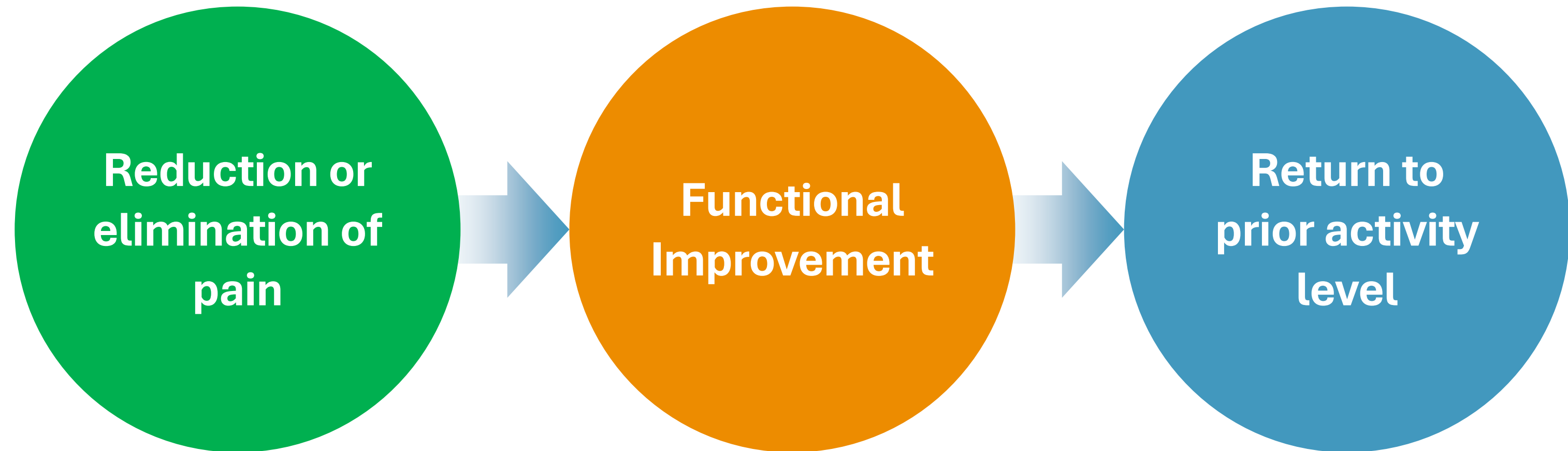


Treatment of Chronic Pain



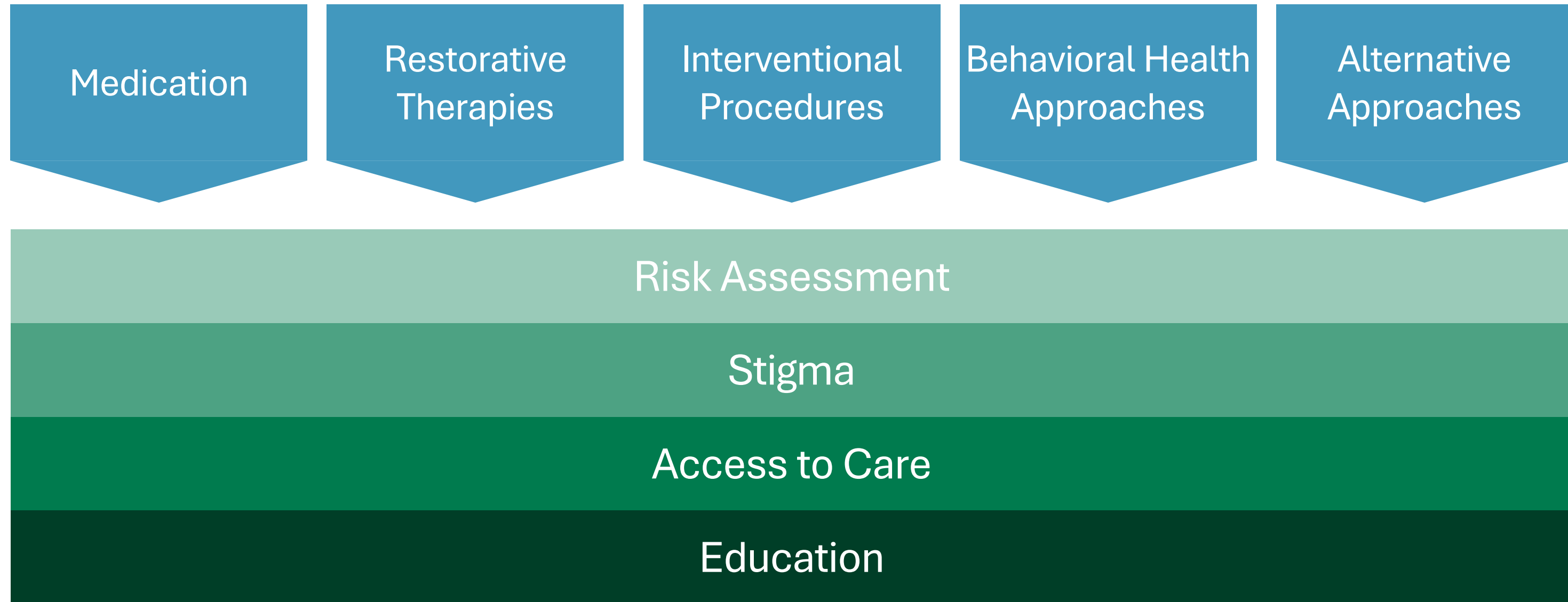
Goals of Treatment

3 Main Goals:



Chronic Pain Management

Multidisciplinary Approach



Source: <https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf>

Treatment: Non-Invasive

Low-level Laser Therapy (e.g., *Physiolaser*)

- Directs a single wavelength of light at an area of discomfort



Shockwave Therapy (e.g., *EPAT*)

- Sound waves to assist with circulation and healing
- Plantar fasciitis, frozen shoulder, etc.



Transcutaneous Electrical Nerve Stimulation

- Provides electrical impulses via surface electrodes (non-invasive) for pain relief
- Kneehab/Neurotech



Treatment: Non-Invasive Hinge Health Enso



Treatment: Minimally Invasive

Nerve Injections & Ablations

Injections & blocks are usually used to localize the source of pain

Ablations destroy nerves to achieve longer lasting pain relief

Heat, ice, radiofrequency, chemicals

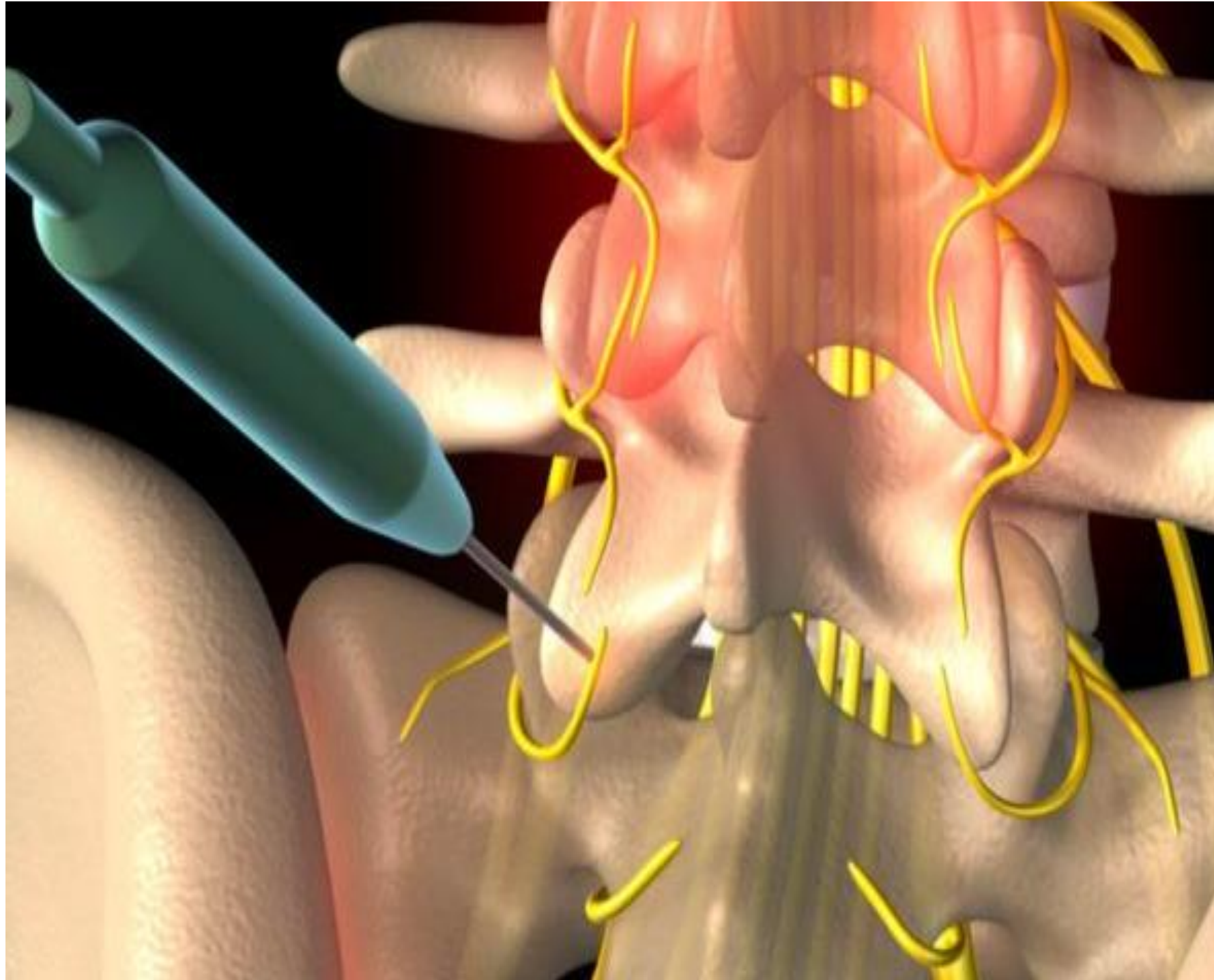
Newer procedures

- Knee pain – Genicular nerve ablation (e.g., COOLIEF)
- Hip pain – Obturator nerve ablation
- Shoulder pain – Suprascapular nerve ablation

Potential to avert more invasive and costly procedures

Such as total joint replacements

Treatment: Nerve Injections and Ablations



Treatment: Minimally Invasive

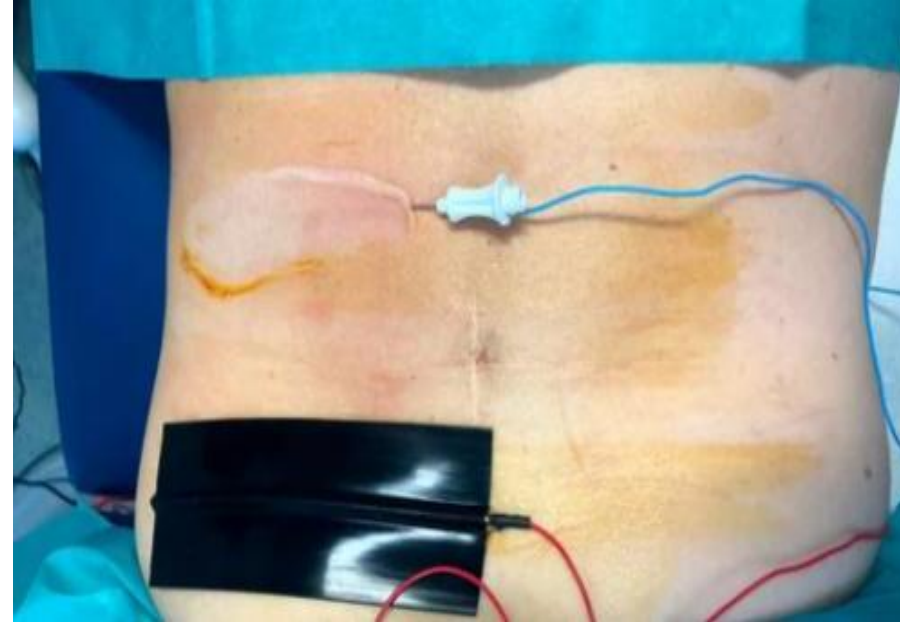
Percutaneous Electrical Nerve Stimulation

Implant delivers electrical impulses to the peripheral nerve

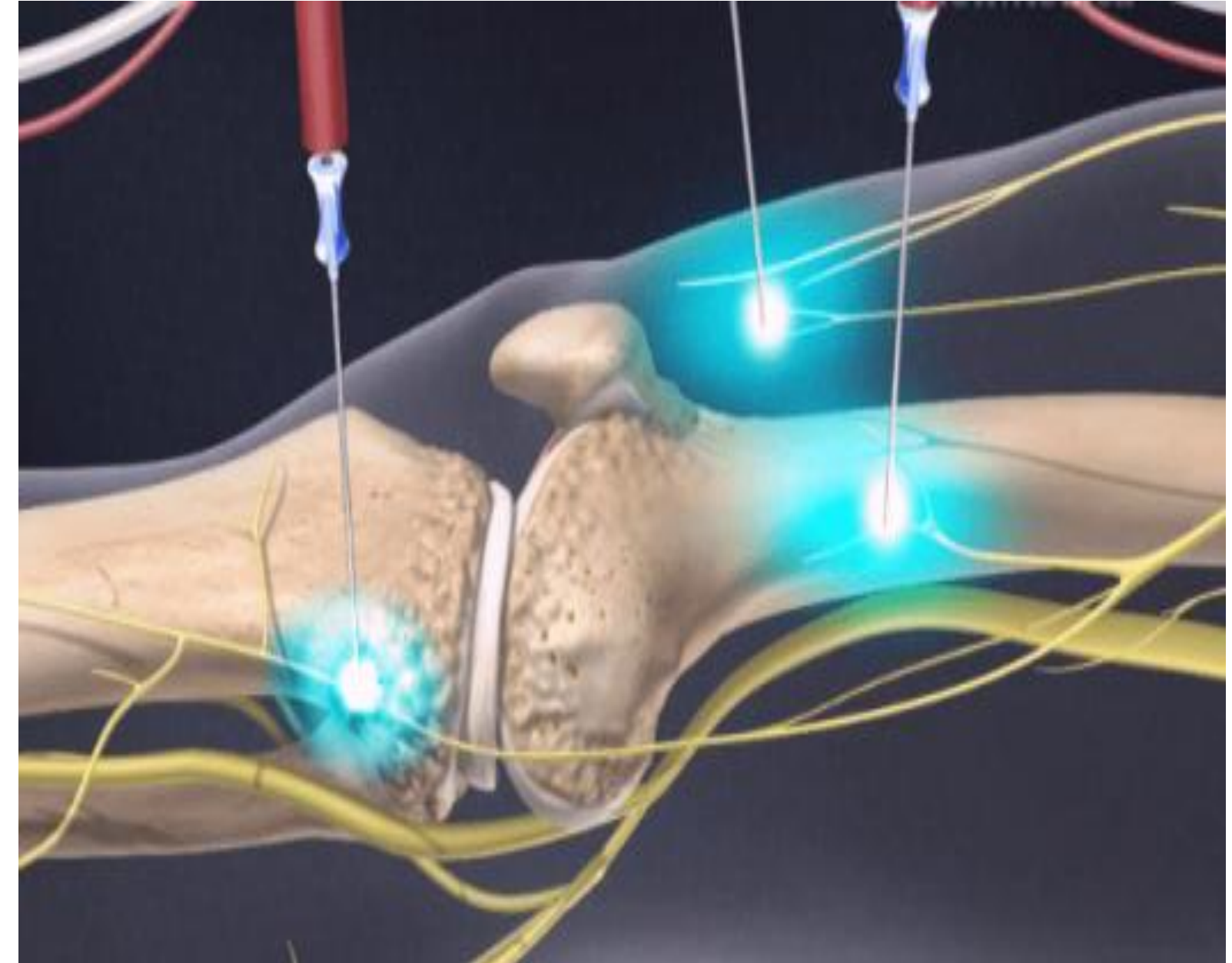
Changes the way the body perceives pain by closing the pain “gate”

Considerably smaller and more easily placed than spinal cord stimulators

Examples include StimRouter/Bioness, SPRINT/SPR, and others



Treatment: Minimally Invasive Cooled Radiofrequency Ablation(COOLIEF)



Images: <https://avanospainmanagement.com/solutions/chronic-pain/cooled-radiofrequency-products>

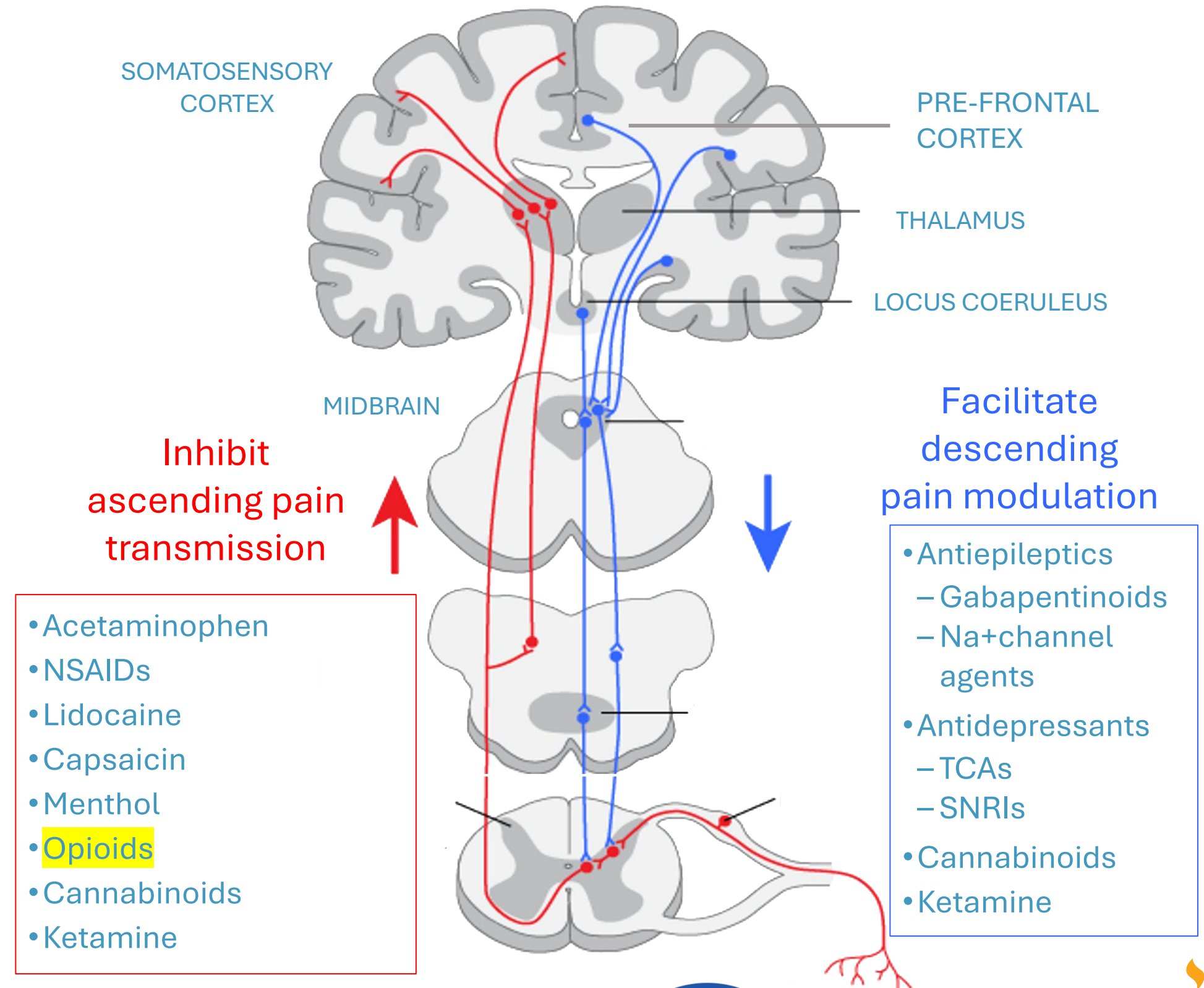
Treatment: Invasive

- Considered after all non-surgical options have failed
- Most effective for clear structural cause for pain
- Examples:
 - Deep brain/spinal cord stimulation
 - Spinal decompression (DDD)
 - Joint replacements (severe OA)
 - Rhizotomy

Treatment: Medication

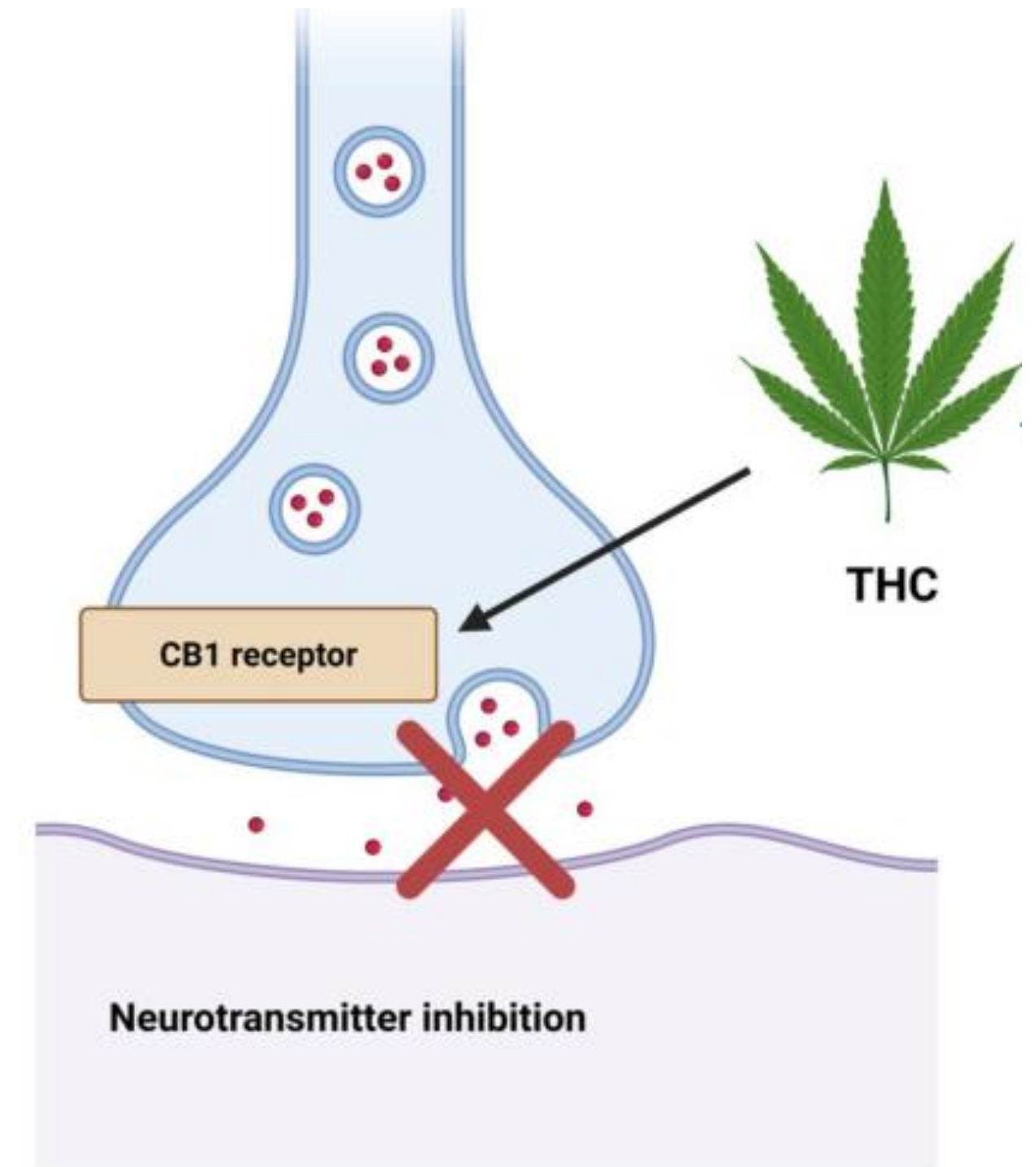
Treatment pathways:

1. Inhibit pain transmission
2. Facilitate pain modulation



Treatment: Medication

- Current non-opioid pain medications are less effective than opioids
- Cannabinoids: prescribed off-label (no FDA approval), effective but psychoactive side effects
- VER-01: breakthrough therapy designation (BTD) from FDA as of 6/8/26
 - Contains THC, CBD and CBG (cannabigerol)
 - Blocks Cannabinoid receptor 1 (CB1) in CNS that moderate neurotransmitter release
 - Blocks CBD2 on macrophages to reduce production of proinflammatory cytokines



Source: *Cannabinoids in Chronic Pain: Clinical Outcomes, Adverse Effects and Legal Challenges*

Treatment: Journavx (Suzetrigine)

- FDA-approved 1/30/25
- First-in-class non-opioid to treat mod-severe acute pain
- Blocks sodium channels found in peripheral sensory neurons
- Prevents transmission of pain signals to the spinal cord and brain
- Not indicated for chronic pain
- Used for post-operative pain control
- No addictive potential

Treatment: Opioids

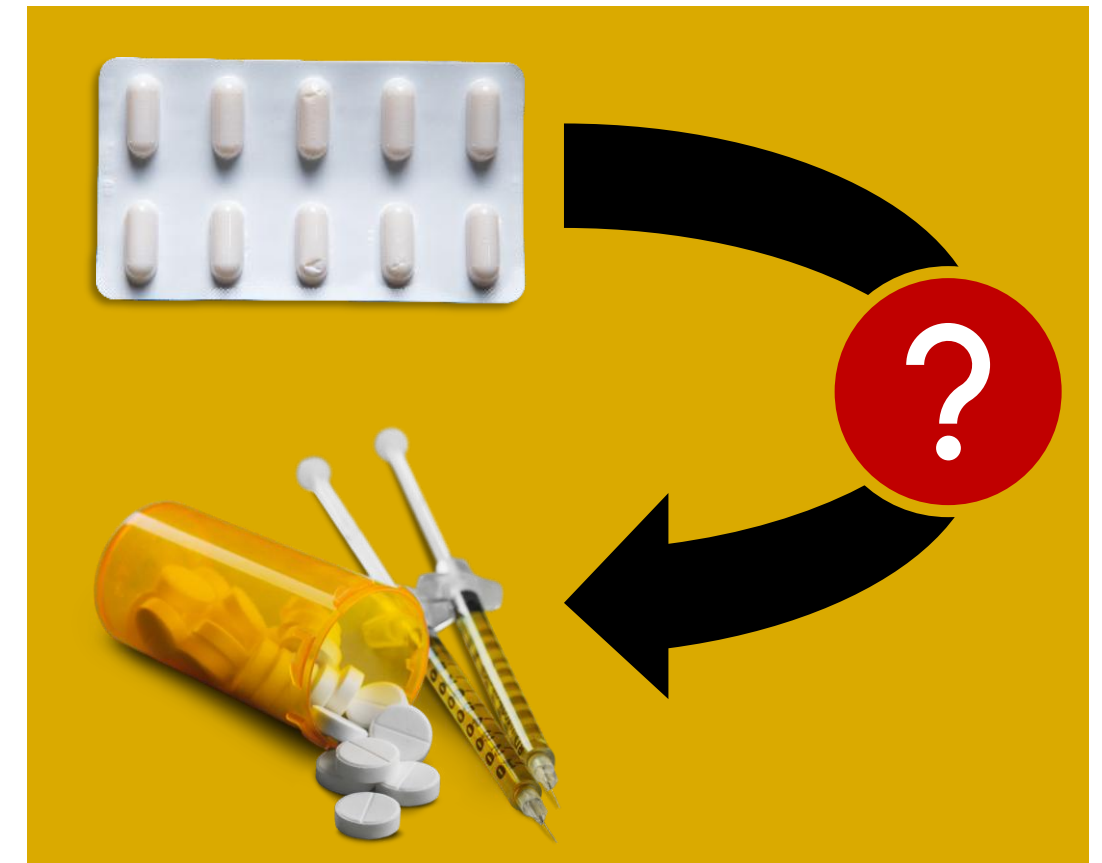
Multidisciplinary approach not always realistic



Severe pain needs to be addressed urgently



Not many medication options between OTCs and opioids



NOT indicated for:

- Fibromyalgia
- Chronic headaches/migraines
- Mild to moderate chronic pain

Opioid Addiction: Risk Factors

- Younger age (early 20s)
- Family history of substance misuse
- History of severe depression, anxiety or PTSD
- History of physical or sexual abuse
- Adverse childhood events (ACEs)
- Heavy tobacco use
- DUIs, risk or thrill-seeking behavior
- Poor school performance, unemployed

Opioid Addiction: Risk for Women > Men

- Increased incidence of long-term pain
- More likely to be prescribed opioid medications
- Given higher doses of opioids for longer periods of time
- More likely to become dependent on prescription pain medications

01

Hormones

Estrogen and progesterone make women more sensitive to drug effects

02

Genetics

Genetic risk for addiction can vary between men and women

03

Metabolism

Slower metabolism in women leads to greater substance impact

04

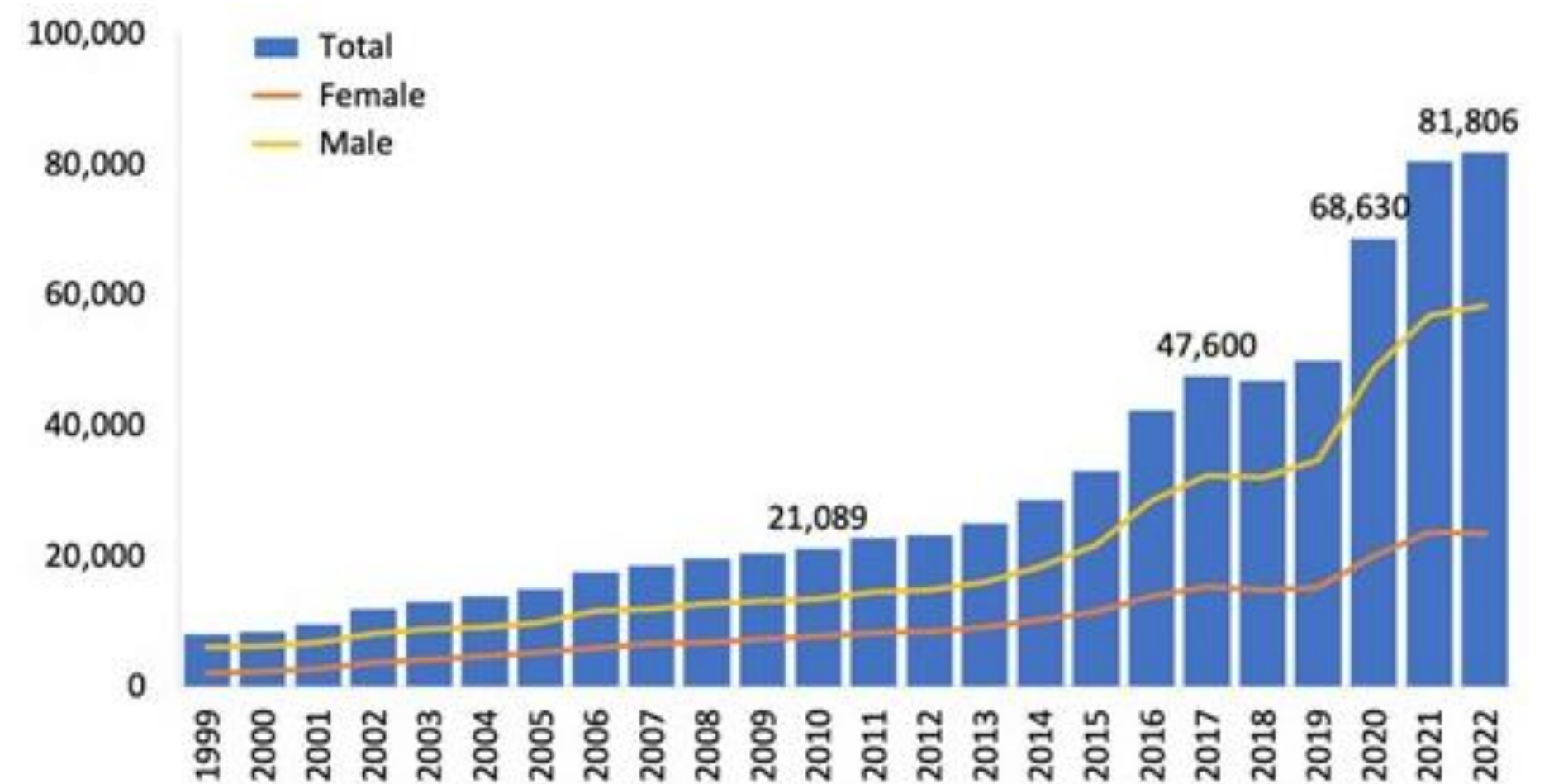
Brain Chemistry

Women have stronger internal cravings; men respond more to external cues

Opioid Addiction: Risk of Overdose Men > Women

- M:F ratio 2-3:1
- Increased incidence ages 15-74
- Greater use of all other illicit drugs
- Protective factors in women?
- Other biological, behavioral and social factors involved?

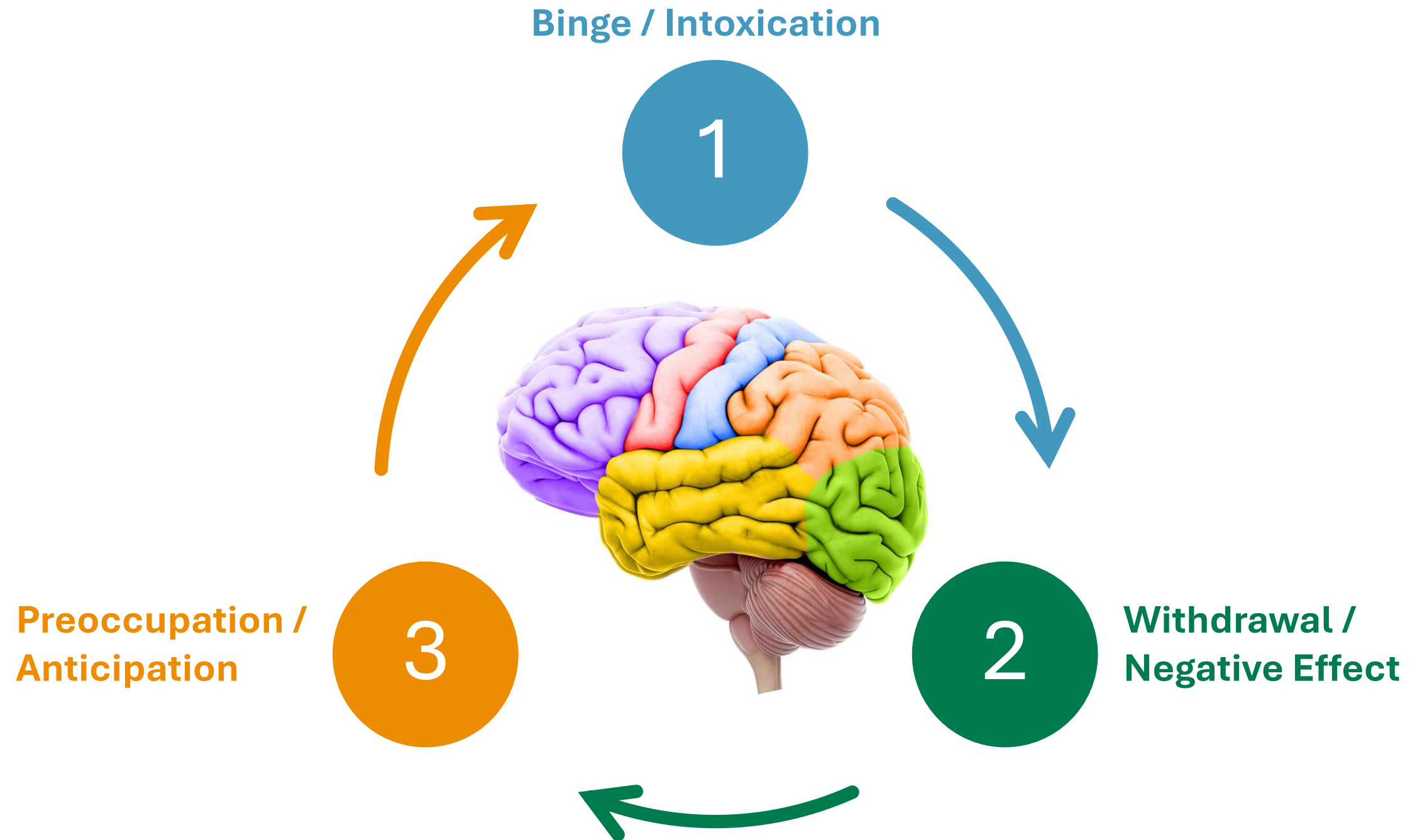
U.S. Overdoses Deaths Involving Any Opioid by Sex, 1999-2022



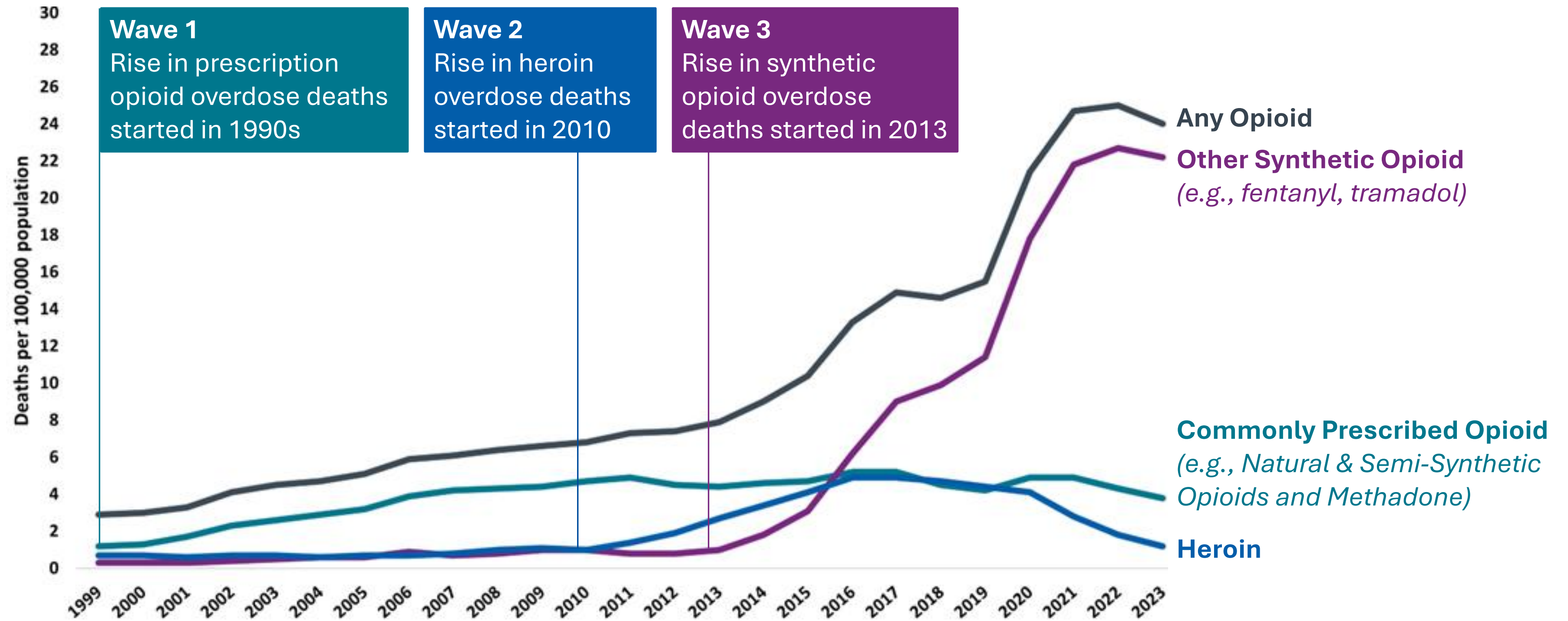
Source: <https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates>

Opioid Addiction: 3 Stages

1. Binge and intoxication
2. Withdrawal and negative effect
3. Preoccupation and anticipation (craving)



Risk of Opioid Use: Overdose



Source: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA, US Department of Health and Human Services, CDC; 2024. <https://www.cdc.gov/overdose-prevention/about/understanding-the-opioid-overdose-epidemic.html>

Top Ten Leading Causes of Death in US

All Ages (2024)

Rank	Cause of Death	Number of Deaths
1	Heart Disease	683,037
2	Cancer	619,812
3	Unintentional injuries	196,488
4	Stroke	166,783
5	Chronic Lower respiratory diseases	145,612
6	Alzheimer’s Disease	116,016
7	Diabetes	94,382
8	Kidney Disease	55,070
9	Chronic Liver Disease And Cirrhosis	52,259
10	Suicide	48,683
11	All Other Causes	893,897
All Deaths		3,072,039

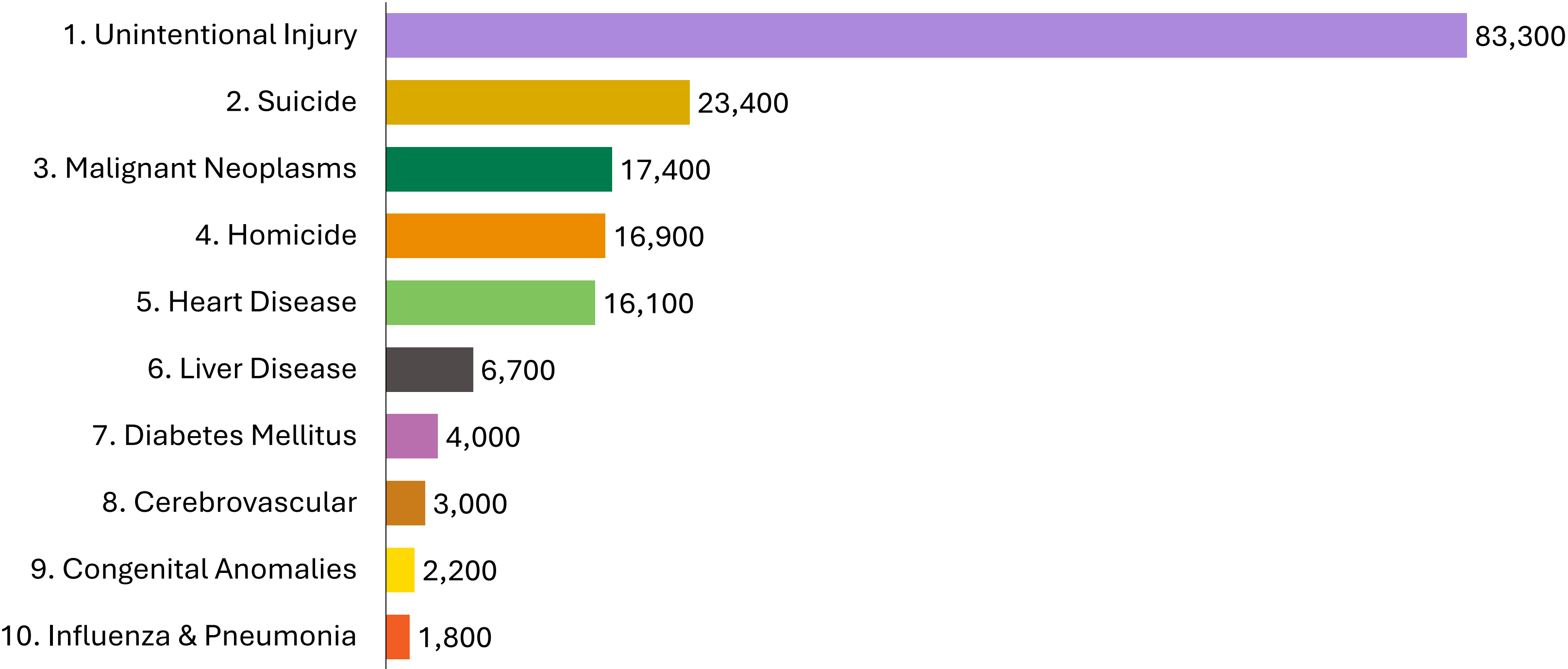
Source: National Center for Health Statistics, National Vital Statistics System



Top Ten Leading Causes of Death in US

Ages 1-44 (2023)

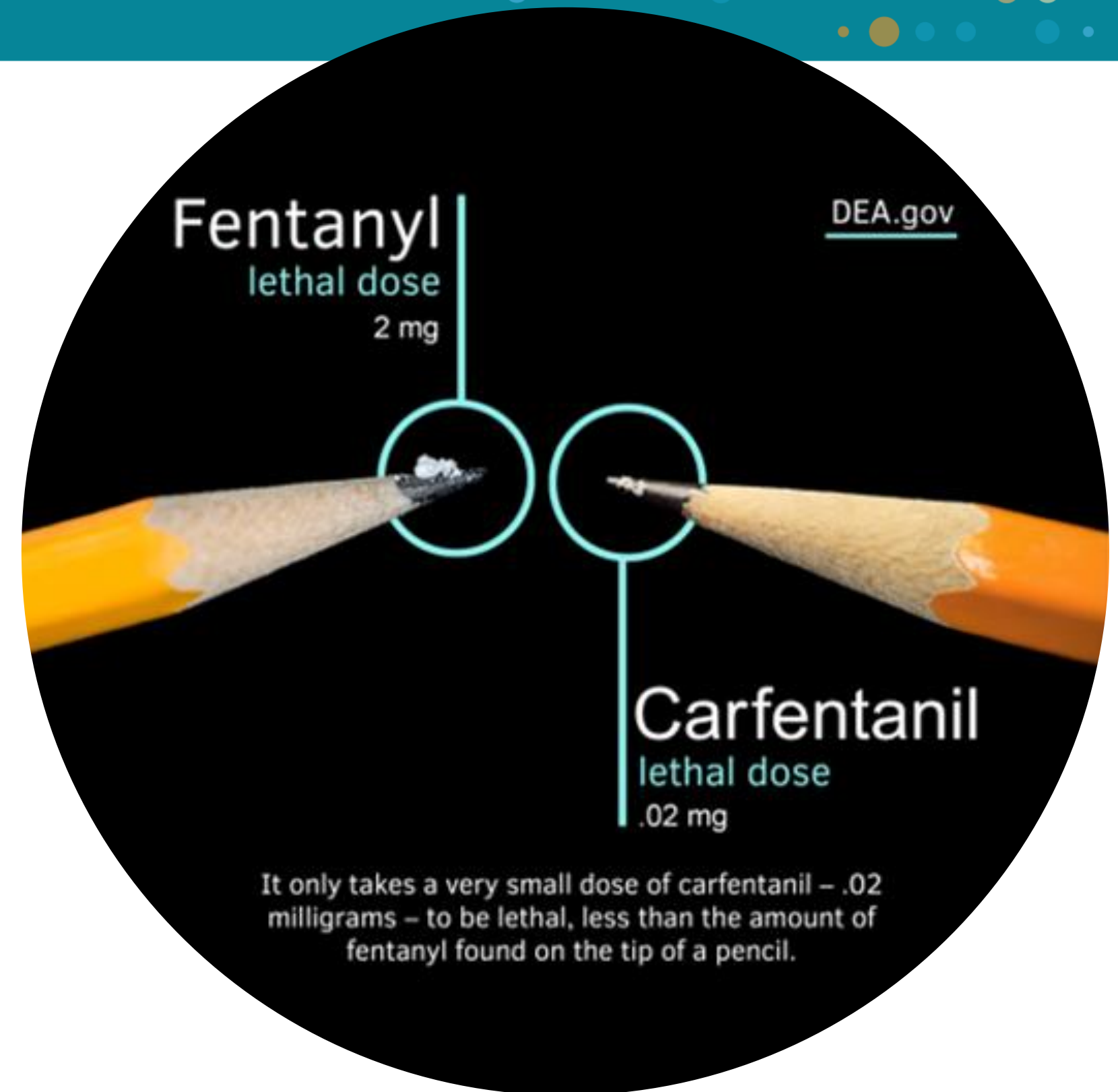
Number of Deaths



Source: <https://wisqars.cdc.gov/animated-leading-causes>

Rise of Synthetic Opioids

- 2023: ~ 70 % of all drug poisonings and overdose deaths involved synthetic opioids
- Leading cause: Fentanyl
- New drug: Carfentanil
 - Resembles fentanyl and cocaine in appearance
 - Significantly more lethal than fentanyl
 - Designed to tranquilize large animals
 - 10,000x more potent than morphine
 - 100x more potent than fentanyl



Source: <https://www.dea.gov/stories/2025/2025-05/2025-05-14/carfentanil-synthetic-opioid-unlike-any-other>

Underwriting Chronic Opioid Use: What To Look For

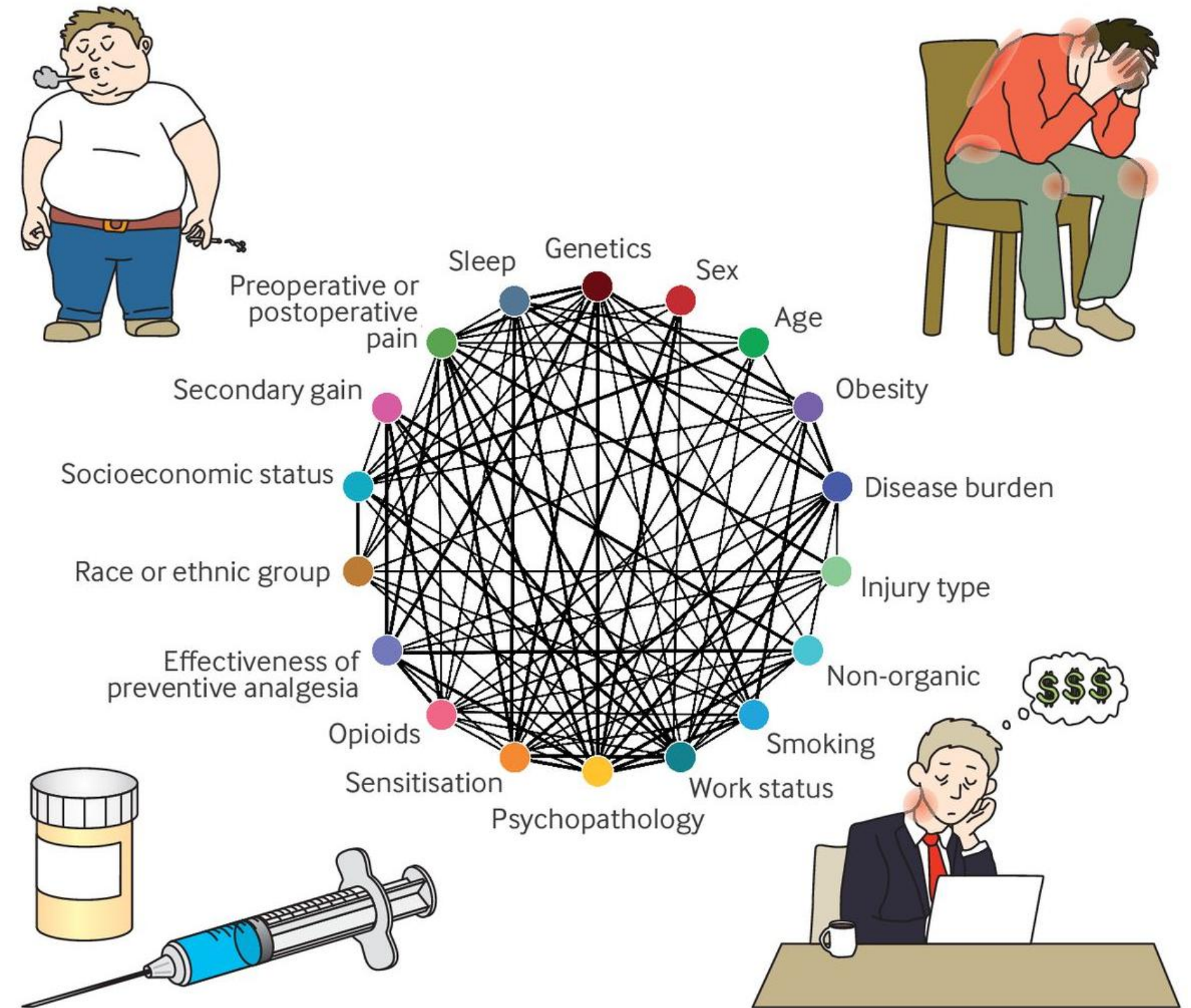
- Appropriate testing done to confirm underlying diagnosis
- Chronic pain impairs function or quality of life
- Failure of nonopioid therapy or non-pharmacologic treatment (if prescribed)
- Regular appointments with prescriber that address response to treatment
- Rx come from single prescriber and pharmacy (pain management if advised by PCP)

Underwriting Chronic Opioid Use: What To Look For (cont'd)

- Opioid dose does not exceed 100mg/d morphine equivalent
- Ratable alcohol and/or marijuana use
- History of illicit drug use, alcohol dependence, prescription drug abuse or use of suboxone
- Psychiatric comorbidity, severity and compliance with advised treatment
- Performance of full-time employment or at-home/parental duties

Outcomes: Favorable Aspects

- Multimodal and personalized care
- Targeted pharmacological care and intervention procedures
- Mental health support
- Physical therapy and movement/exercise
- Lifestyle habits
- Education/realistic goals



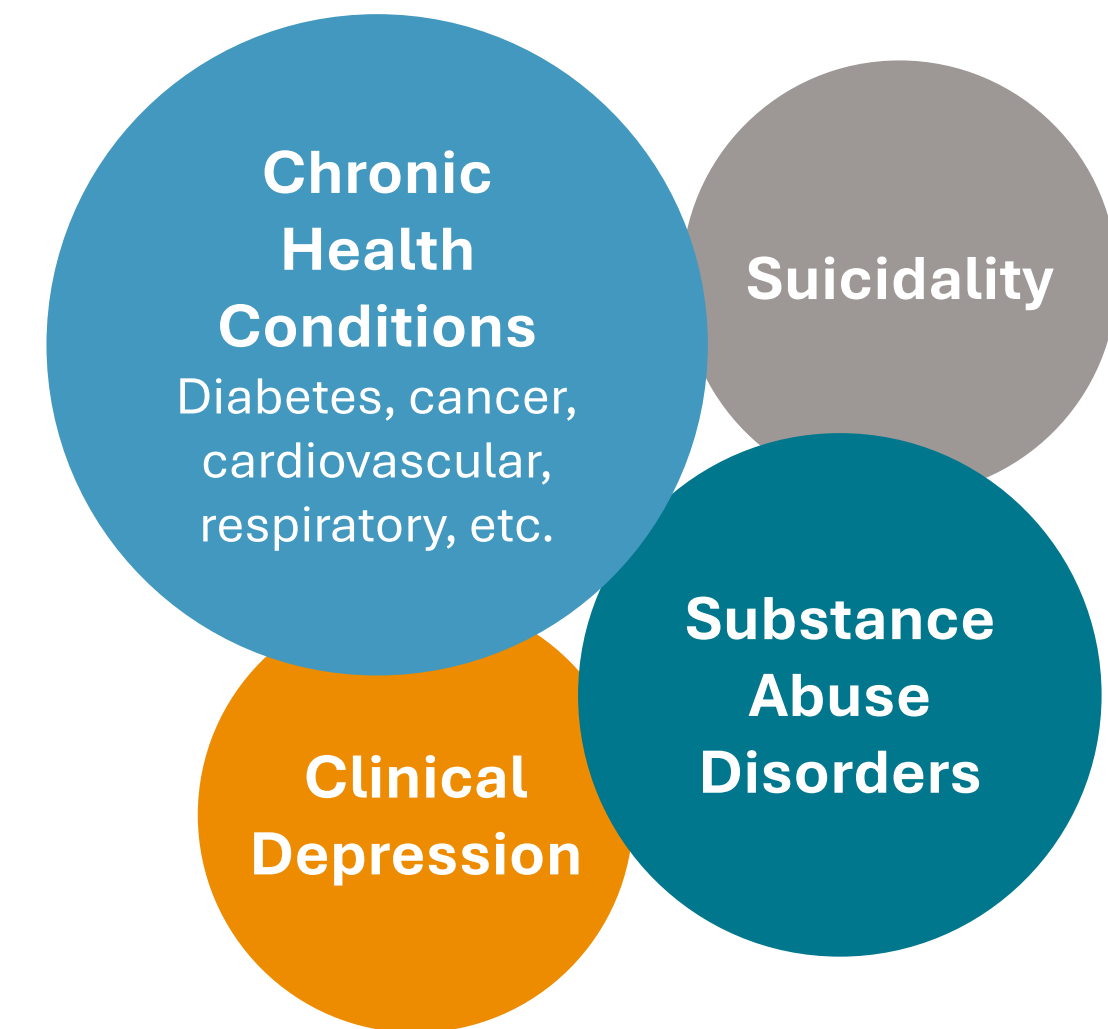
Outcomes: Unfavorable Aspects

- Older age
- Elevated BMI
- Sedentary lifestyle or decreased activity from baseline
- Hypertension
- Poor nutrition
- Adverse childhood experiences (ACEs)
- Limited access to care/lack of coordinated care
- Overtreatment of mild disease

People with 4+ ACEs

2–5X

more likely to develop



Outcomes: Unfavorable Aspects (cont'd)

- Uncontrolled mood disorders
- Relationship strain/social isolation
- Cognitive decline
- Sleep deprivation
- Occupational limitations
- Coping dysfunction
 - Substance use/abuse
 - Suicide risk

Current inconsistencies and fragmentation of pain care limit best practices and patient outcomes.

— *The Pain Management Best Practices Intra-agency Task Force*

MENTAL AND EMOTIONAL RISKS



Depression/Anxiety

- ▶ Stress over changes to daily life
- ▶ Difficulty coping
- ▶ Inflammation from stress hormones

Cognitive Decline

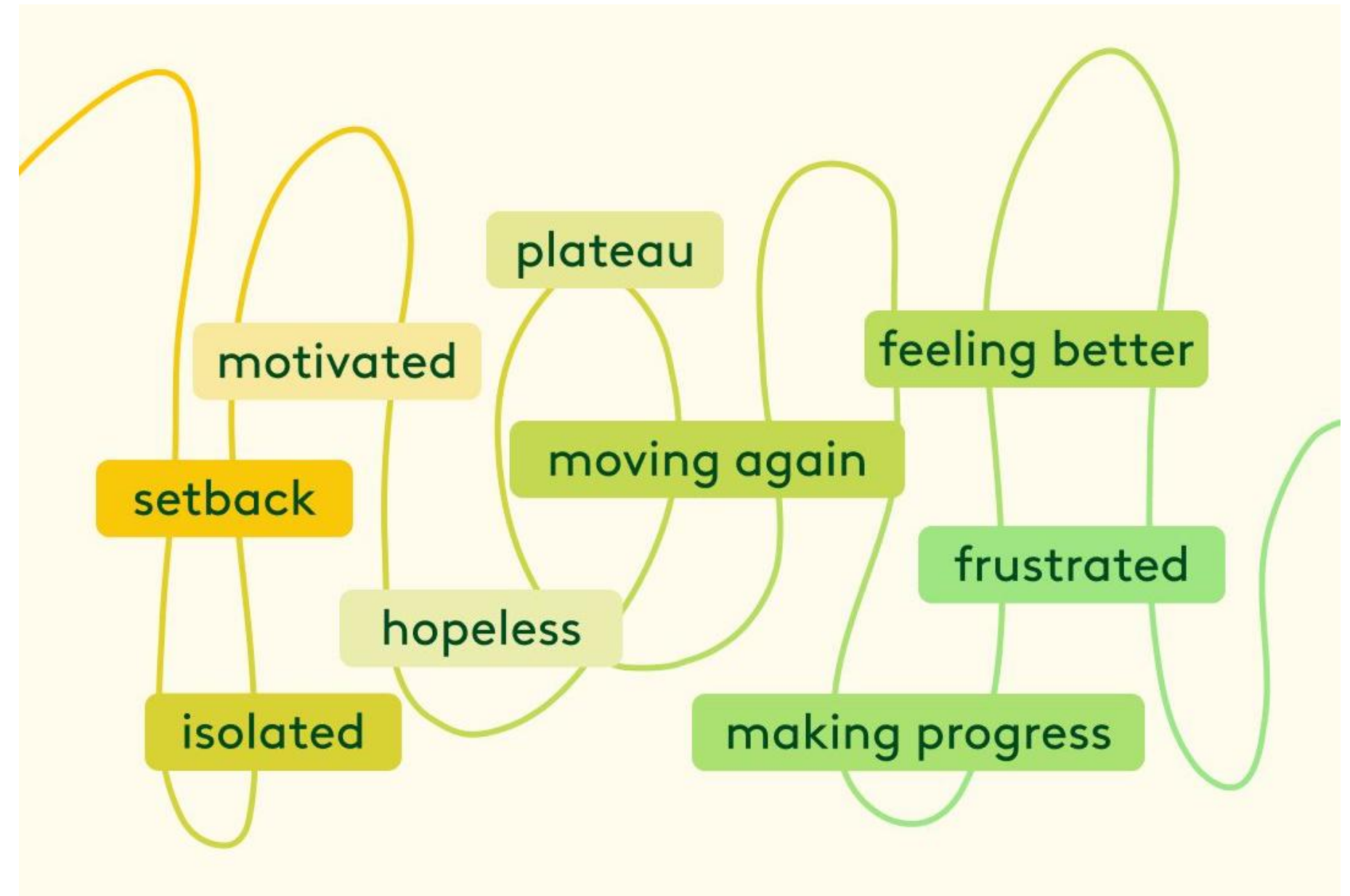
- ▶ Difficulty focusing on anything besides the pain
- ▶ Complications with memory, attention, and planning

Sleep Disturbance

- ▶ Falling asleep is more difficult
- ▶ Impacts sleep patterns
- ▶ Poor sleep worsens pain

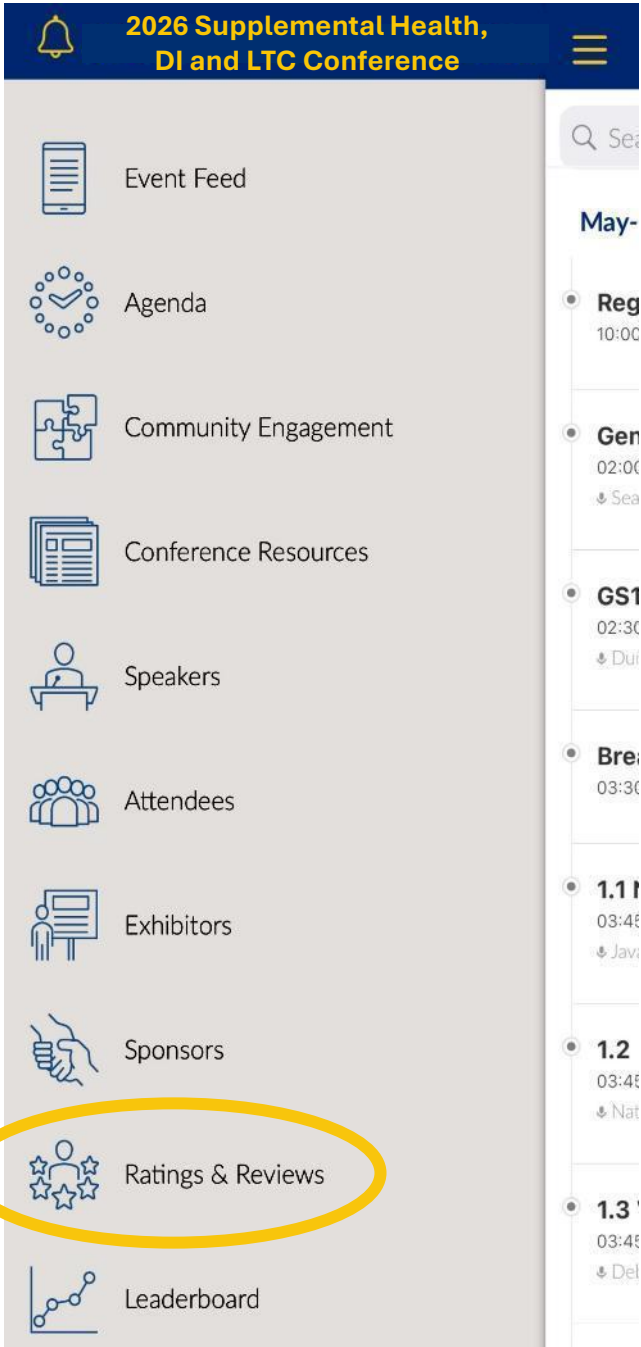
Summary

- Chronic pain is common in the US and increasing in incidence
- Opioid epidemic led to more widely used multimodality approach with improved outcomes
- Risk assessment of chronic pain requires consideration of all available case details related to diagnosis, treatment, compliance and addressing psychosocial issues to determine accurate morbidity risk.

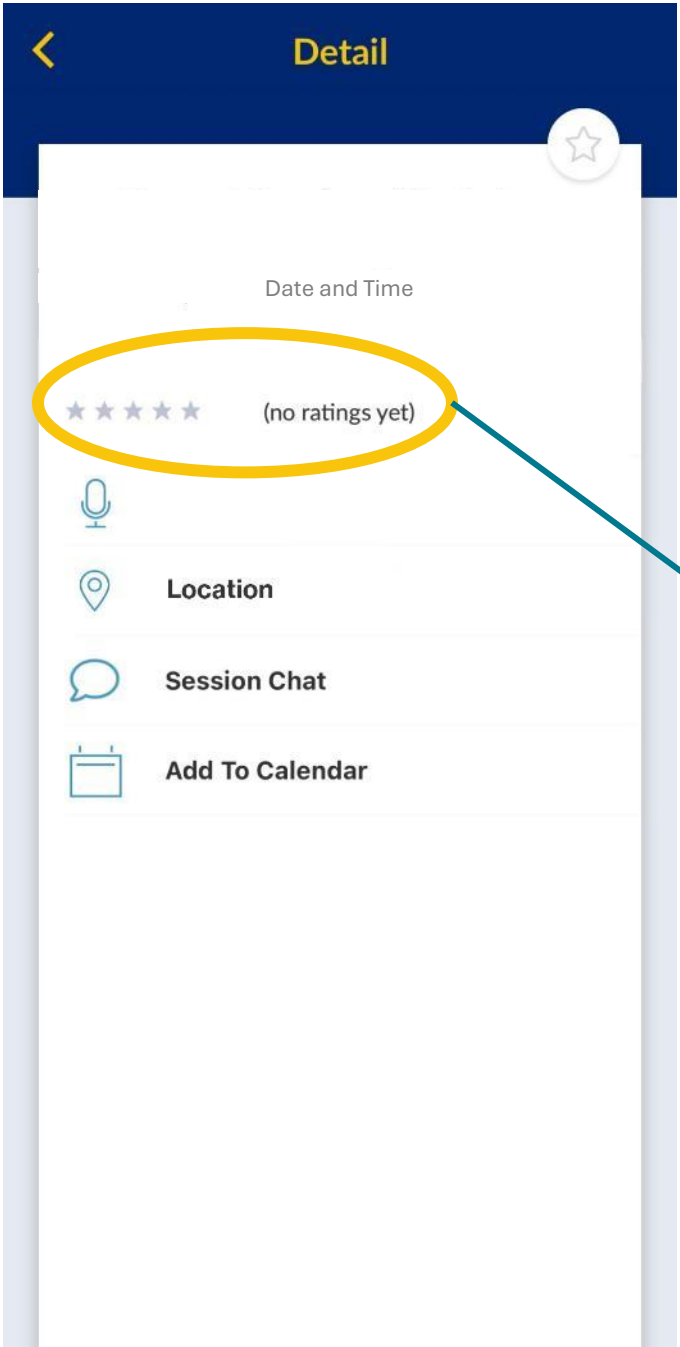


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Agenda Option



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