

# Pain, addiction & opioids

*The pursuit of balance over time*

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**Opioid  
Response  
Network**



**CTN-NE**  
The National Drug Abuse Treatment  
Clinical Trials Network - Northeast Node

# Disclosures

## **Commercial Support/Sponsorship:**

There is no commercial support for this training.

## **Conflict of Interest:**

In accordance with continuing education guidelines, speakers and planning committee members are asked to disclose relationships with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

**Faculty:** Dr. Savage has no relevant financial relationship(s) with ineligible companies to disclose.

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## **Mitigation Steps Implemented:**

There were no reported financial relationships to be mitigated.



# Interfacing Challenges

## Substance Use

## Opioids

## Chronic Pain

46 million persons with SUD  
6 million with OUD

-  
107,000 drug overdose deaths  
~75% (80,000) opioid-related

-  
Opioid costs ~1.0 trillion  
annually

Co-occurrence  
common

50 million with chronic pain  
19.6 million, high-impact

-  
Reduced quality of life & work  
Suicide risk 2-3x others

-  
Cost \$560-\$635 billion annually



# Familiar narrative regarding the opioid epidemic

- ✧ Big pharma promoted dangerous opioids to clinicians, falsely proclaiming their safety
- ✧ Clinicians indiscriminately overprescribed opioids
- ✧ Exposure to opioids led to addiction, overdoses, and devastation for individuals, families and communities
- ✧ The FDA, professional organizations and healthcare leaders failed to take adequate steps to protect people

## **Capitalism gone wrong: how big pharma created America's opioid carnage**

A web of firms ramped up narcotic painkiller sales, creating the biggest drug epidemic in American history as profits surged

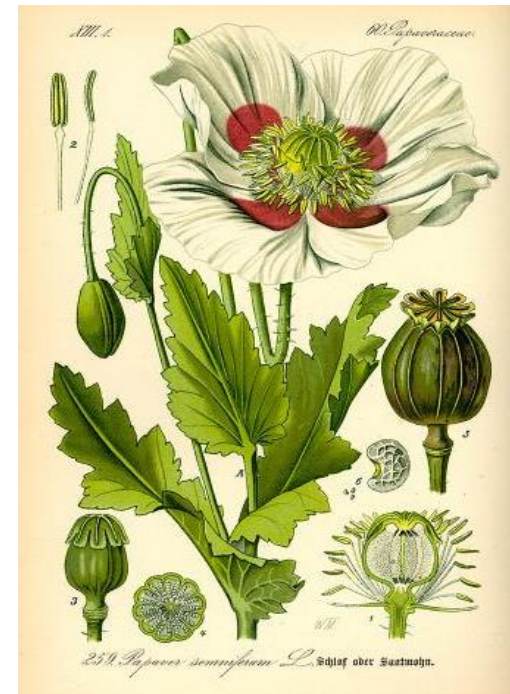
*The full reality is more complex. A more nuanced understanding may help us avoid the mistakes of the past going forward.*



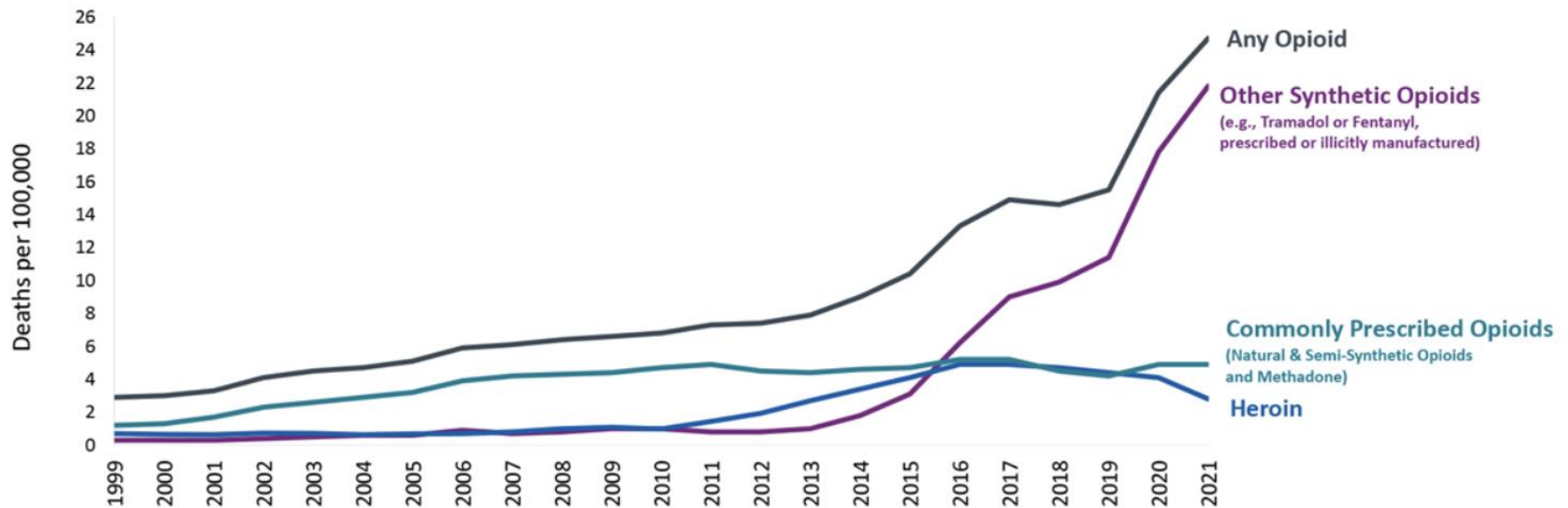
# Opioids

## *Millenia of controversy*

- ✧ The joy plant *Sumeria* 3000 BC
- ✧ “Among the remedies which it has pleased almighty God to give to man to relieve his sufferings, none is so universal and efficacious as opium.” *Sir Thomas Sydenham, 1680*
- ✧ “...save our people from the clutches of this hydra-headed monster which stalks the civilized world, wrecking lives and happy homes, filling our jails and lunatic asylums...”  
*John Witherspoon to AMA, 1900*
- ✧ Opium gives... and takes away. *Thomas DeQuincy, Confessions of an English Opium Eater, 1932*
- ✧ “The use of narcotics in the terminal cancer patient is to be condemned ... due to undesirable side effects ... dominant in the list of these ... is addiction” *Lee, JAMA, 1941*



# Three Waves of Opioid Overdose Deaths



↑  
Wave 1: Rise in Prescription Opioid Overdose Deaths Started in the 1990s

↑  
Wave 2: Rise in Heroin Overdose Deaths Started in 2010

↑  
Wave 3: Rise in Synthetic Opioid Overdose Deaths Started in 2013

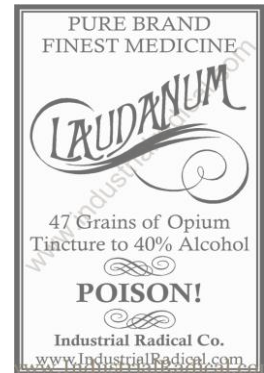
SOURCE: National Vital Statistics System Mortality File.



# Pain & Opioids

## Late 1800s-early 1900s

- ✧ Post Civil War pain treatments – opioids, willow bark, cannabis, cocaine
- ✧ Early 1900's - widespread prescribing & street opioid use with little regulation >1<sup>st</sup> American opioid epidemic
- ✧ Opioid maintenance in addiction common
- ✧ 1914 Harrison Act tracks & taxes opioids
- ✧ 1919 & 1920 Federal Decision–*addiction outside realm of medical interest: opioids can not be used to treat*
- ✧ Prescribing for pain legal, but use declined



# Pain & Opioids

## 1920s-50s

- ❖ Opioid use declined, few alternatives
- ❖ Cancer feared, elective surgeries deferred, chronic pain tolerated

## 1960s

- ❖ Addiction medicine field emerges (AMSA > ASAM)
- ❖ Methadone treatment introduced
- ❖ Haight-Ashbury Free Clinic –SUD care with respect
- ❖ St Christopher's Hospice 1967 & Brompton's cocktail

## 1970s

- ❖ Pain medicine field emerges (IASP 1973, APS 1977)
- ❖ More aggressive treatment of cancer & acute pain
- ❖ Interdisciplinary care of chronic pain  
(Bonica, Fordyce, others)



*Vincent Dole & Marie Nyswander,  
Introduced MOUD with methadone*



*Dame Cicely Saunders  
Mother of hospice care*



*David Smith, Prototype CHC,  
SUD tx with respect*





# Pain & Opioids

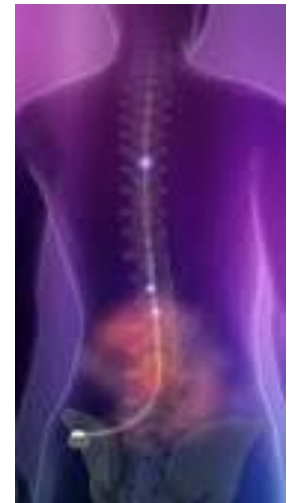
## 1980s

- ❖ Interdisciplinary care of chronic pain prominent
- ❖ Observation: cancer pts not inevitably addicted or tolerant
- ❖ Positive case series of opioids for non-cancer pain reported



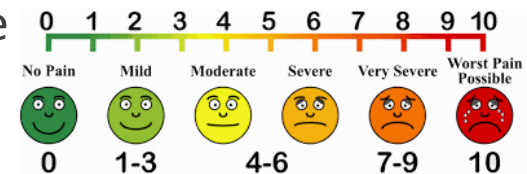
## 1990s

- ❖ Long-acting opioids—Morphine ~1992, Oxycodone 1995: expectations of less reward, more consistent analgesia.
- ❖ Pain as the 5<sup>th</sup> vital sign, state intractable pain acts
- ❖ Opioid therapy of all pain increases
- ❖ Pain technologies evolve: pumps, stimulators, etc.



*Era of hope: pain can be vanquished!*

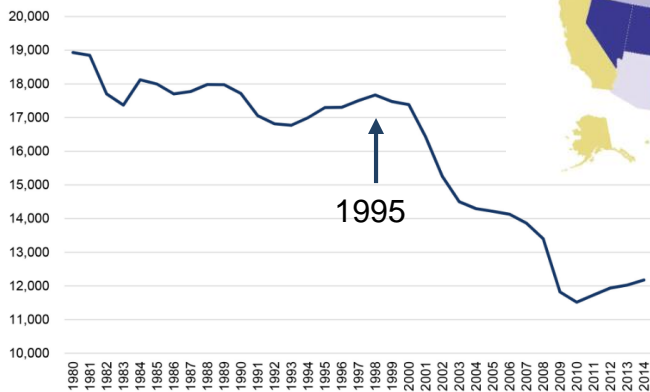
- ❖ Medicine as business, HMOs: interdisciplinary pain care wanes, shortened visits



# Evolving Social Context

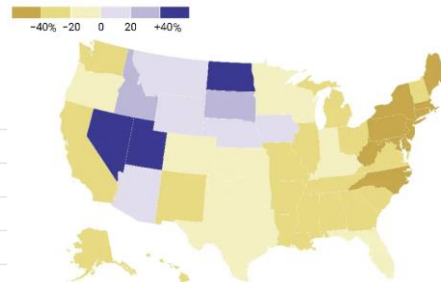
## Changing Economy

U.S. Employment in Manufacturing Industries  
Thousands of Jobs, 1980-2014



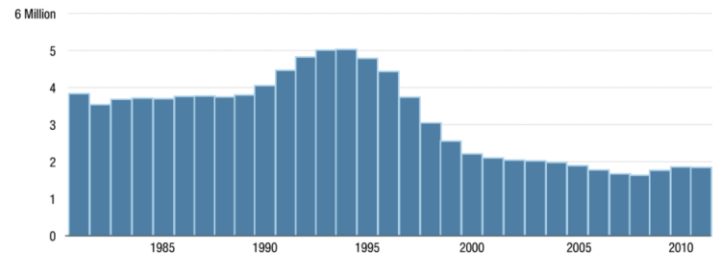
Source: Brookings Analysis of Moody's Analytics Data

Change in manufacturing employment, 1990-2022

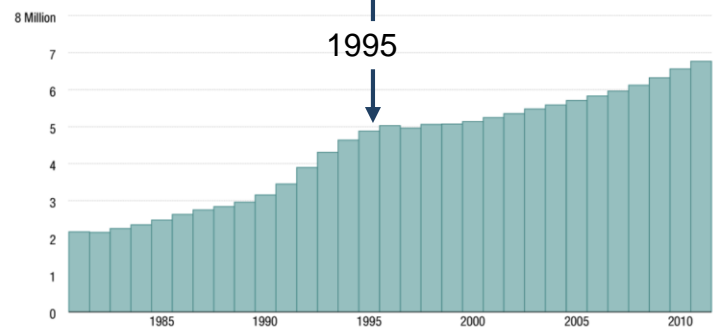


## Disability Trends

As The Number Of Families On Welfare Declined ...



... The Number Of Low-Income People On Disability Rose

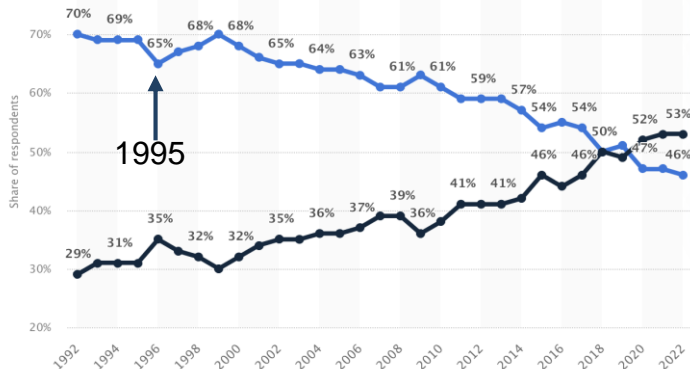


Source: Department of Health and Human Services, Social Security Administration

Credit: Lam Thuy Vo / NPR

## Community Engagement

Are you a member of a church or synagogue?



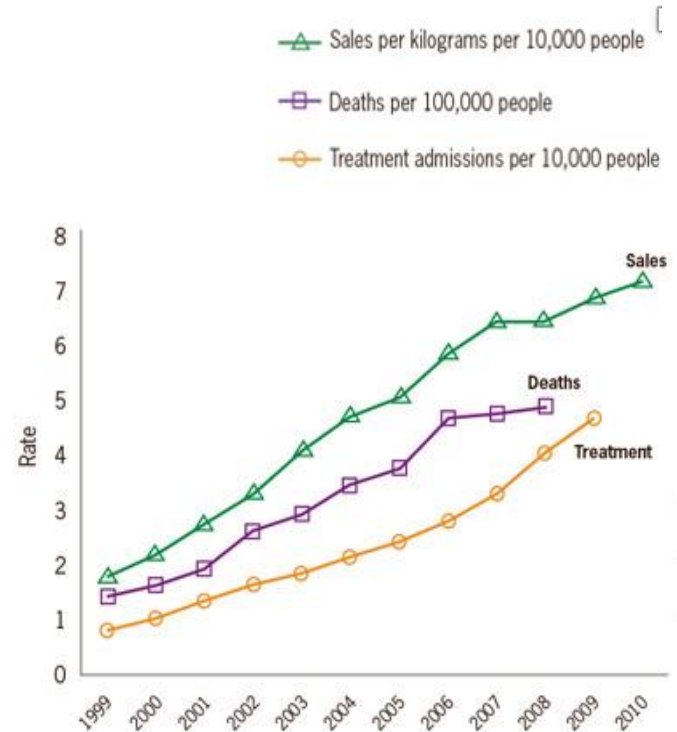
Source: *Rising midlife morbidity and mortality, US whites* Anne Case, Angus Deaton *Proceedings of the National Academy of Sciences* Dec 2015, 112 (49); <https://apps.npr.org/unfit-for-work/>; Coffin, P; *history of the Opioids Crisis*, UCTV, (UCSF) <https://www.youtube.com/watch?v=W3XGdIIPew>



# Pain & Opioids

## Early 2000s

- ✧ Growing concerns re: Rx opioid use, misuse, abuse, addiction, overdoses
- ✧ Hyperalgesia research challenges long-term efficacy
- ✧ Research on misuse, risks, strategies for prevention
- ✧ Proliferation of opioid guidelines
- ✧ Efficacy, cost, duration of interventionalist tx debated
- ✧ DATA 2001 makes buprenorphine tx available

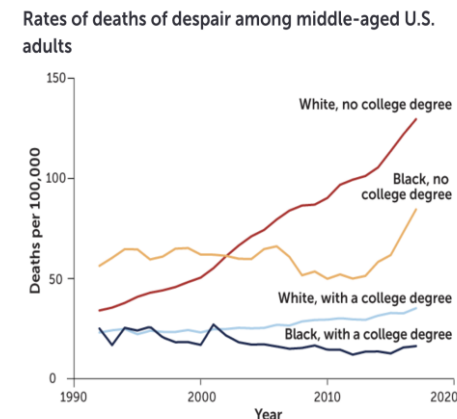
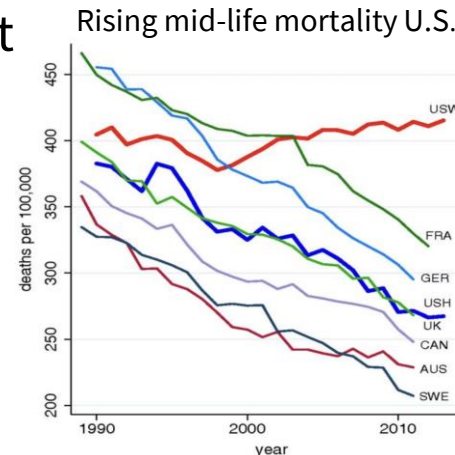
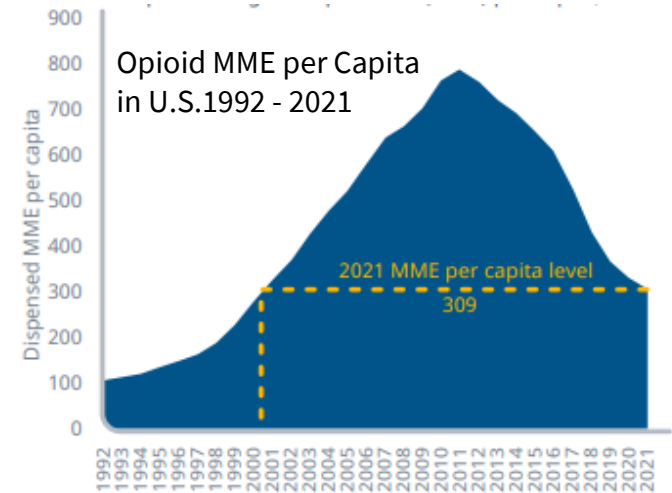


CDC, 11/4/11, *Morbidity & Mortality Weekly*



# Pain & Opioids 2010 to present

- ✧ Opioid prescribing decreases
- ✧ Increased state rules/regs on prescribing
- ✧ Guidelines used with mixed consequences
- ✧ Jurisdictions seek reparations: money moves from pharma to states
- ✧ Reappraisal of comparative effectiveness, relative risk/benefit profiles of different analgesics
- ✧ Renewed interest in interdisciplinary pain care, support challenging
- ✧ Discussion of deaths of despair



# Framing a narrative *to move forward*

- ✧ Opioid are powerful drugs
  - Powerful in healing when used well
  - Powerful in harm when misused
  - Deserving of vigilance, caution & respect
- ✧ Both pain and substance use disorders are complex, heterogenous experiences
  - With important biopsychosocial contributors
  - Requiring individualized solutions
- ✧ Safe and effective clinical practice must be informed by science
  - Anecdote can mislead
  - Letting clinical practice get ahead of science can be dangerous



# Bibliography

- ✦ Booth, Martin. Opium a history, St Martin's Press, 1998 New York.
- ✦ Bernard SA et al. Management of Pain in the United States-A Brief History and Implications for the Opioid Epidemic. Health Serv Insights. 2018 Dec 26
- ✦ Case Ann, Deaton
- ✦ Cole W. Foreword. In: Schiffrin MJ, ed. The Management of Pain in Cancer. Chicago, IL: Year Book; 1956:7-8. 20. Jacox A. Pain: A Source Book for Nursing
- ✦ CDC Wonder in NIDA Drug Overdose deaths, <https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates>
- ✦ Corder G, Castro DC, Bruchas MR, Scherrer G. Endogenous and Exogenous Opioids in Pain. Annu Rev Neurosci. 2018 Jul 8;41:453-473
- ✦ Dasgupta N, Beletsky L, Ciccarone D. Opioid Crisis: No Easy Fix to Its Social and Economic Determinants. Am J Public Health. 2018 Feb;108(2):182-186
- ✦ Dayer LE et al. A recent history of opioid use in the US: Three decades of change. Subst Use Misuse. 2019;54(2):331-339
- ✦ Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain - United States, 2022. MMWR Recomm Rep. 2022 Nov 4;71(3):1-95
- ✦ Florence C, Luo F, Rice K. The economic burden of opioid use disorder and fatal opioid overdose in the United States, 2017. Drug Alcohol Depend. 2021 Jan 1;218:108350
- ✦ Galaj E, Xi ZX. Progress in opioid reward research: From a canonical two-neuron hypothesis to two neural circuits. Pharmacol Biochem Behav. 2021 Jan



# Bibliography (continued)

- ✧ Meldrum ML. Opioids' Long Shadow. *AMA J Ethics*. 2020 Aug 1;22(1):E729-734
- ✧ Meldrum ML. A Capsule History of Pain Management. *JAMA*. 2003;290(18):2470–2475
- ✧ Mercadante S, Arcuri E, Santoni A. Opioid-Induced Tolerance and Hyperalgesia. *CNS Drugs*. 2019 Oct;33(10):943-955
- ✧ National Survey on Drug Use and Health, 2021  
<https://www.samhsa.gov/data/sites/default/files/reports/rpt39441/NSDUHDetailedTabs2021/NSDUHDetailedTabs2021/NSDUHDetTabsSect5pe2021.htm>
- ✧ Racine M. Chronic pain and suicide risk: A comprehensive review. *Prog Neuropsychopharmacol Biol Psychiatry*. 2018 Dec 20;87(Pt B):269-280
- ✧ Scarborough BM, Smith CB. Optimal pain management for patients with cancer in the modern era. *CA Cancer J Clin*. 2018 May;68(3):182-196
- ✧ U.S. Pain Management Interagency Task Force Report: Pain Management Best Practice. US Department of Health & Human Services, 2019 <https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf>
- ✧ Volkow ND, Jones EB, Einstein EB, Wargo EM. Prevention and Treatment of Opioid Misuse and Addiction: A Review. *JAMA Psychiatry*. 2019 Feb 1;76(2):208-216
- ✧ Volkow ND, Blanco C. The changing opioid crisis: development, challenges and opportunities. *Mol Psychiatry*. 2021 Jan;26(1):218-233
- ✧ Volkow N, Benveniste H, McLellan AT. Use and Misuse of Opioids in Chronic Pain. *Annu Rev Med*. 2018 Jan 29;69:451-465



Thank you!

