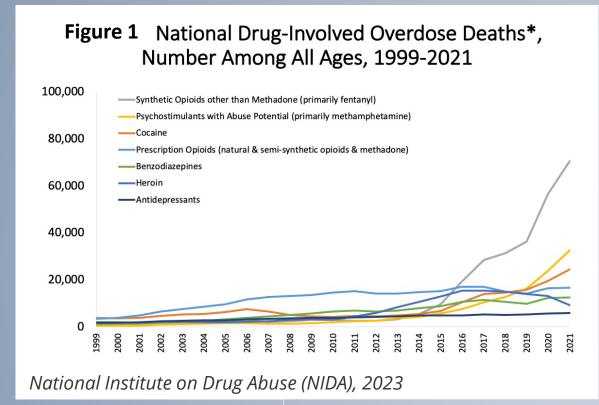
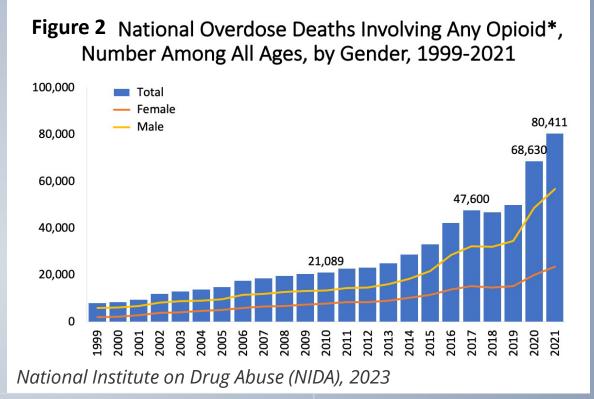


# America's Opioid Crisis

Origin of the Epidemic, the Role of the Pharmaceutical Industry, and the Current Situation

### The American Opioid Crisis



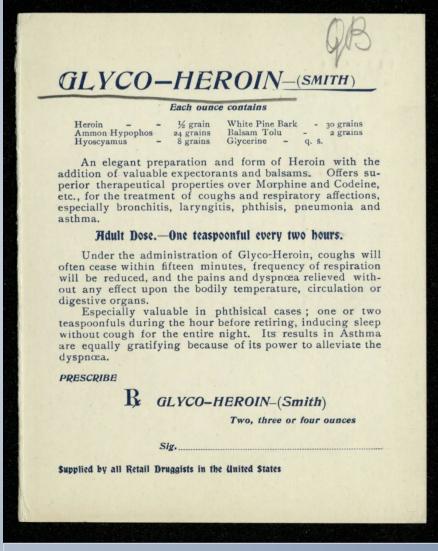


https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates

- > Over 80% of drug overdose deaths are attributable to opioid drugs.
- > 80,400 opioid overdose deaths in 2021. More than 1500 overdose deaths per week.
- > More than 1 million more people may die of opioid overdose by the end of the decade.

# Opioids in Early 20th Century USA

- > 1 in 200 Americans already addicted to opiates.
- Bayer starts commercially producing heroin in 1898.
   Considered a "wonder drug". Widely used as an analgesic and cough-suppressant.
- Campaigns started around this time targeting recreational opium use.
- > Smoking Opium Exclusion Act, 1909. Bans non-medical possession, import and smoking of opium. Drives demand for illicit supply of heroin, morphine.
- Addictive potential of heroin started to be recognised in the 1920s. Heroin sale, manufacture and import (for any use) made illegal with Anti-Heroin Act, 1924.



Original Image In: Glyco-Heroin-(Smith), Martin H. Smith Company, New York, ca 1900-1920, 2., Medical Trade Ephemera Collection, Historical Medical Library of the College of Physicians of Philadelphia

### Opioids in 1970-1980

- Vietnam War saw a wave of heroin addiction among returning veterans. 1971 Congress report estimates 10-15% addiction rate.
- Nixon administration declares drug abuse "public enemy number one", and heroin use specifically targeted. Birth of DEA.
- > 1970s, Vicodin and Percocet enter market, but widespread reluctance to prescribe opioids.
- > 1980 Letter in NEJM suggests 1% opioid addiction risk in hospital setting. Widely cited and often misquoted.

### ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients¹ who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,² Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare inmedical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug
Surveillance Program
Boston University Medical Center

Waltham, MA 02154

- Jick H, Miettinen OS, Shapiro S, Lewis GP, Siskind Y, Slone D. Comprehensive drug surveillance. JAMA. 1970; 213:1455-60.
- Miller RR, Jick H. Clinical effects of meperidine in hospitalized medical patients. J Clin Pharmacol. 1978; 18:180-8.

Porter, J. & Jick, H. Addiction Rare in Patients Treated with Narcotics. New England Journal of Medicine, 1980, 302(2), 123.

### Changing Attitudes to Pain Treatment

**1980s** → Opioids commonly used to treat acute pain, cancer pain and pain in terminal patients in hospital setting.

**1990s** → Some clinicians argue chronic pain systematically undertreated. Growing support for use of opioids in chronic non-cancer pain, despite lack of demonstrated efficacy.

1996 → American Pain Society and Veteran's Health Administration pushes for pain to be recognised as the "fifth vital sign" and checked routinely at every patient encounter. Also push for routine opioid use. APS cites 1980 NEJM letter.

1998 → Federation of State Medical Boards endorses opioid use for chronic non-cancer pain. Becomes standard of care.

**2001** → Joint Commission recognises pain as fifth vital sign.



### Introduction and Marketing of OxyContin

In 1996, Purdue Pharmaceuticals introduced a time-released oxycodone formulation called OxyContin.

### Aggressive marketing campaign:

- Advertising to public and prescribers (often false or misleading claims).
- Sponsored pain-management and training conferences for clinicians.
- Large "relentless" sales force.
- Personalised prescriber profiles.
- Substantial bonus/incentive system for sales reps.
- Branded gifts for physicians, "unprecedented for Schedule II opioids" (DEA).
- Other companies used similar tactics, e.g., Insys Therapeutics, Abbot Laboratories

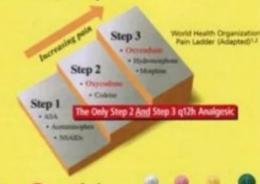
When you know NSAIDs or acetaminophen will not be enough ...



# OxyContin<sup>®</sup>q12h



- · Rapid onset of analgesia within 46 minutes
- Full 12 hours of pain relief"
- No risk of acetaminophen or ASA toxicity



OxyContin q12h 10 mg 20 mg 40 mg 80 mg



One to Start and Stay With... Easy to Dose, Easy to Titrate

For the relief of moderate to severe pain requiring the prolonged use of an opicid Side effects are similar to other opioid analgesics; the most frequently

**Purdue Pharma** 



Your doctor might prescribe an opioid medication.

Less than 1% of patients become addicted.

**ARTHRITIS** 

**PAIN** 



- · All patients were dosed q12h\*
- 94% of peak pain reduction was achieved by Day 3 of therapy\*
- · Quality of life benefits-relative to placebo, OxyContin significantly decreased pain and improved quality of life, mood, and sleep\*
- Single-entity agent—contains no acetaminophen or aspirin-can be used concomitantly with NSAIDs

For patients with moderate to severe pain requiring opioid therapy for more than a few



In noncancer patients: A prn opioid or OxyContin may be appropriate as initial opioid therapy, as judged by the prescriber.

When initiating any opioid in opioid-naive patients, significant side effects such as dizziness, nausea, vomiting and hypotension may be seen in the first days of therapy. Most side effects with OxyContin, except constipation, diminish over time. Please read brief summary of professional prescribing information on adjacent page. For more information about pain management and prevention, visit our Web site: www.partne

Co-promoted by Purdue Pharma L.P. and Abbott Laboratories Copyright 1999, Purdue Pharma L.P., Norwalk, CT 06850-3590

OxyContin Tablets are to be swallowed whole, and are not to be broken, chewed or cn Taking broken, chewed or crushed OxyContin Tablets could lead to the rapid release at absorption of a potentially toxic dose of oxycodone. The most serious risk associated with opioids, including OxyContin, is respiratory depr

headache, dry mouth, sweating, and weakness.

Common opioid side effects are constipation, nausea, sedation, dizziness, vomiting, p

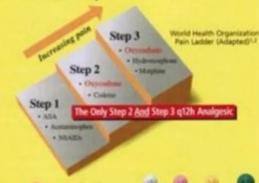
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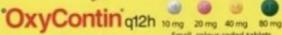


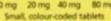
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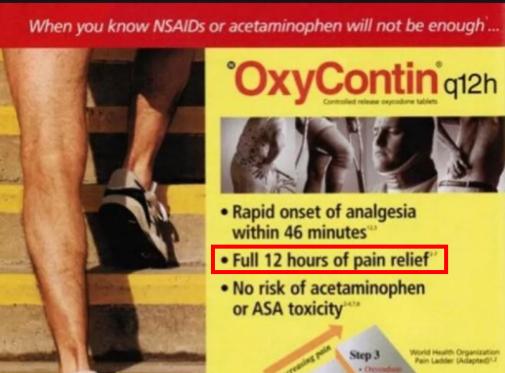
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Purdue Pharma

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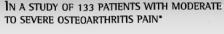


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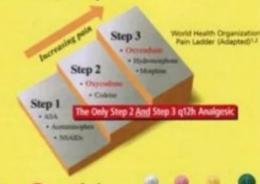
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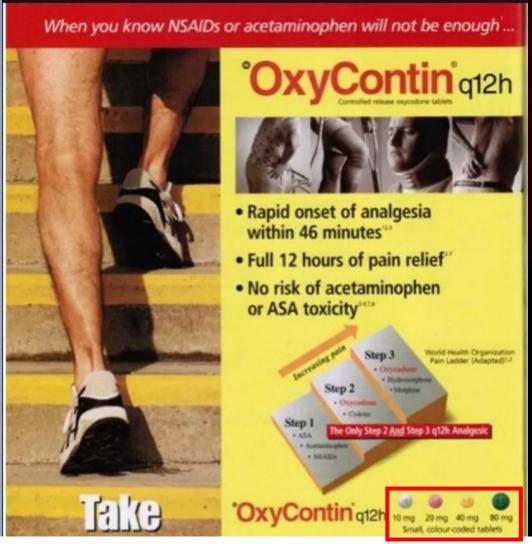
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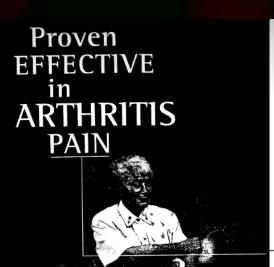
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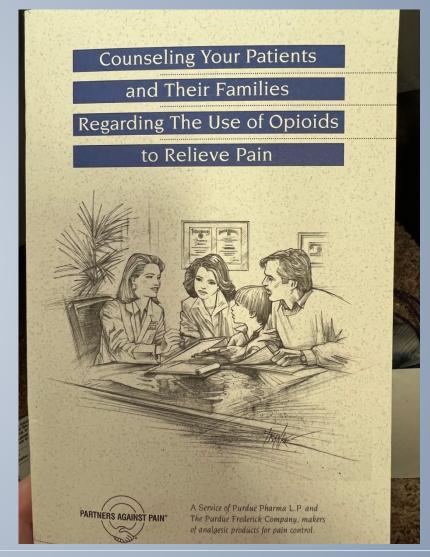
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Treatment-related ADEs were reported in 65% of patients (40% of placebo patients, 75% of CR Oxycodone 10 mg q12h patients and 82% of CR Oxycodone 20 mg q12h patients). The body systems most commonly involved were the digastive and nervous system. The most common ADEs can be seen in Table 2.

### Pharmaceutical Industry Involvement in Pain Advocacy

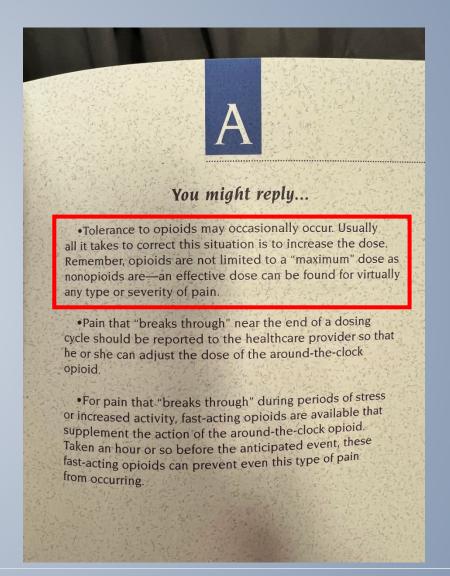
- > Sponsorship of more than 20,000 pain-related educational programs targeting physicians and other hospital staff.
- > Funding to societies and professional groups who then advocated for opioid use to aggressively treat pain.
- Partners against Pain" launched. "Alliance of patients, caregivers, and health care providers" controlled by company.



Purdue Pharma. Counseling Your Patients and Their Families Regarding the Use of Opioids to Relieve Pain. Partners Against Pain. Norwalk, CT. 1997. PDF available from <a href="https://repository.library.brown.edu/studio/item/bdr:841753/">https://repository.library.brown.edu/studio/item/bdr:841753/</a>

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Advertising by
Pharmaceutical
Companies Misleads
Public and Clinicians

New Medicare Subsidies

Patient Addiction from Regular Use, Leads to Illicit Use

First Wave (1998-2010)

Changing Attitudes to Pain Treatment, Patient Experience + Rise in Chronic Pain Prevalence

Opioids

(Mis)characterised

as Effective, Safe,

Low-Addiction Risk

Opioid Crisis

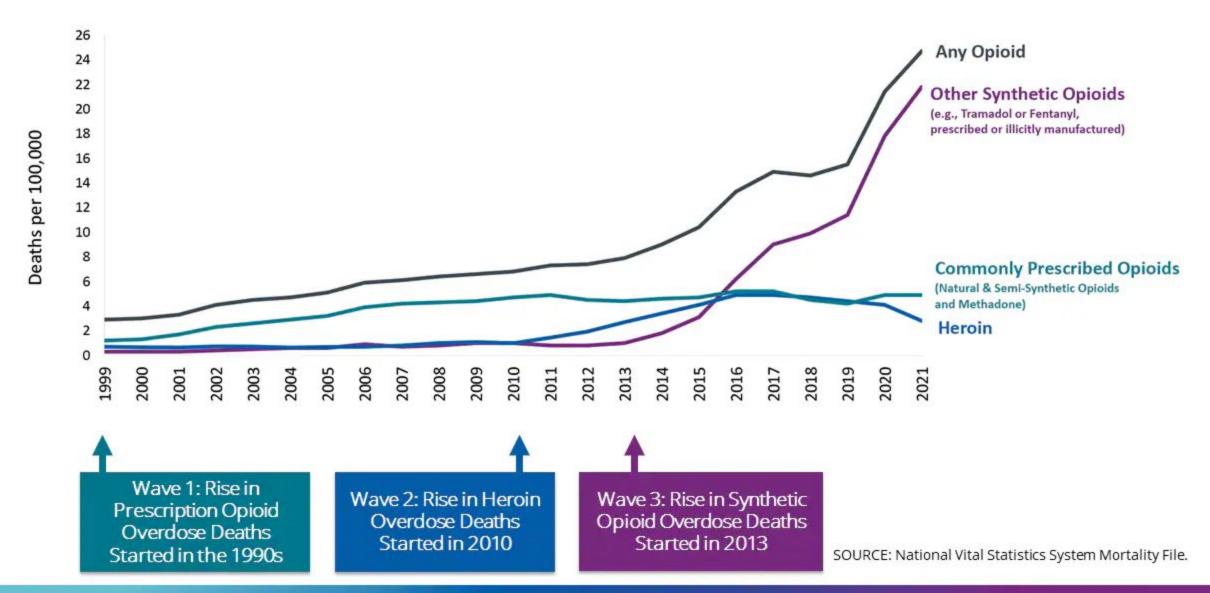
Reduced Prescribing
+ High Profitability
for Traffickers → Rise
in Fentanyl Supply

Increased Demand for Illicit Opioids → Increased Supply and Use of Heroin

Second Wave (2010-2014)

Third Wave (2014-2019)

### Three Waves of Opioid Overdose Deaths



### Tackling the Crisis – Public Health Policy

- > 2014 → American Medical Association + American Academy of Family Physicians withdraw recognition of pain as 5<sup>th</sup> vital sign.
- > 2016 -> CDC Guideline for Prescribing Opioids for Chronic Pain. Opioids no longer first-line medication for chronic pain treatment.
- > 2017 -> US Dept. Health and Human Services announces 5-point Opioid Strategy
- > 2018 → SUPPORT for Patients and Communities Act improving Medicare and Medicaid funding for treatment, recovery and prevention.
- All states have implemented Prescription Drug Monitoring Programs. Database with individualised data on patient opioid prescriptions.
- Medication-Assisted Treatment (MAT) using addiction-reversal medications, counselling and behavioural therapies.

### Tackling the Crisis – Current Challenges

- > Annual death rate due to fentanyl overdose continue to rise.
- > Failure to stop flow of fentanyl.
- > Since 2019, rising overdoses involving strong opioids and stimulants together.
- Significant increase in use during pregnancy.
- > Uneven implementation of policy measures.
- > Not all states have implemented MAT. Only reaching a minority of target group.
- > Covid-19 → Rapid worsening of epidemic in 2020-21.
- > Substantial harm due to War on Drugs. Overcriminalisation and aggressive enforcement, disproportionately affecting poor minority communities. Mortality highest in areas of socioeconomic deprivation and rural areas.