

THE OPIOID EPIDEMIC IN AMERICA: PAST, PRESENT, FUTURE

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Advocate Illinois Masonic Medical Center

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Disclosures

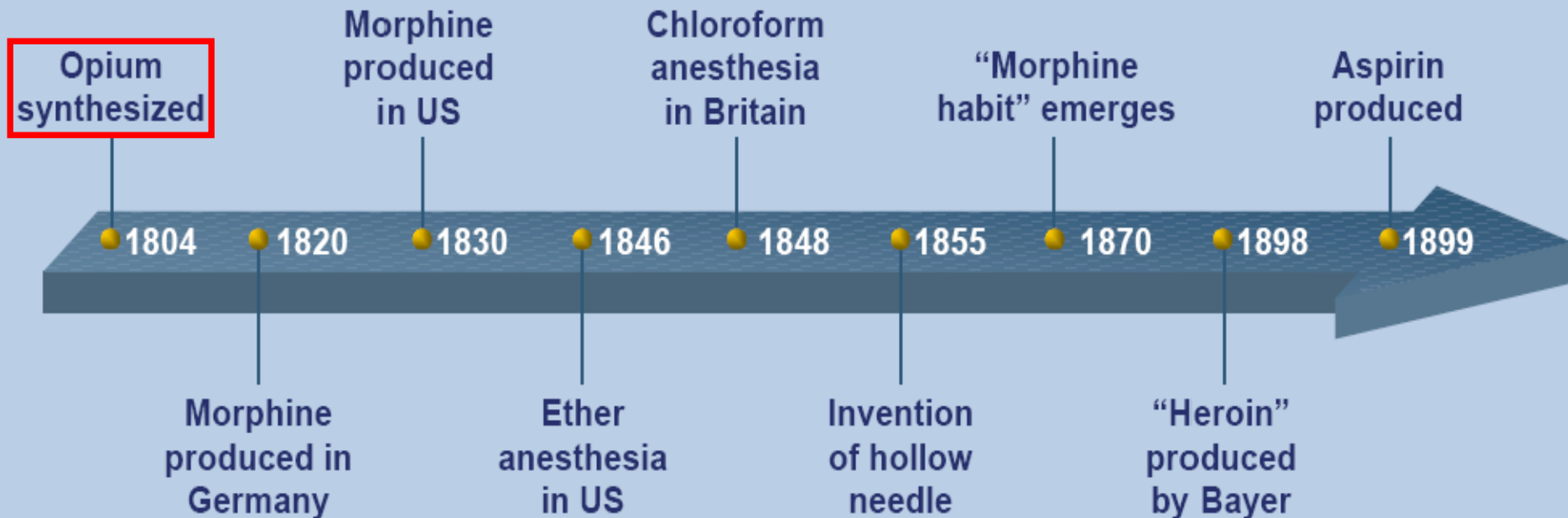
- *None Related to this Educational Activity*
- *I am **Professor of Clinical Surgery and Anesthesiology** at UIC*
- *I have Sponsored Clinical Trials: Pfizer, Semnur, Sollis, Seikagaku Corporation*
- *I am Chairman of the Anesthesiology Residency Program at AIMMC*
- *I am on the BOD of ASIPP*
- *I have a Tendency to RAMBLE....*
- *Email Me: kdcandido1@gmail.com*

LEARNING OBJECTIVES

- **UPON COMPLETION OF THIS EDUCATIONAL ACTIVITY, THE PARTICIPANT SHOULD...**
- Define the “Current” Opioid Crisis and Place it into Historical Perspectives
- Be able to define the impact of the pharmaceutical industry on the evolution of the so-called “Opioid Crisis” in America.
- Discuss the future directions of the Opioid Crisis in America.

OPIOID EPIDEMIC: THE PAST

History of Pain Control: The Nineteenth Century





A bottle of laudanum, a highly addictive liquid preparation of opium widely used as a painkiller and sleep aid in the 19th century

Friedrich Serturner (1783-1841)

as a pharmacist's
apprentice he was
the first person to
isolate morphine
from opium



1804



1853



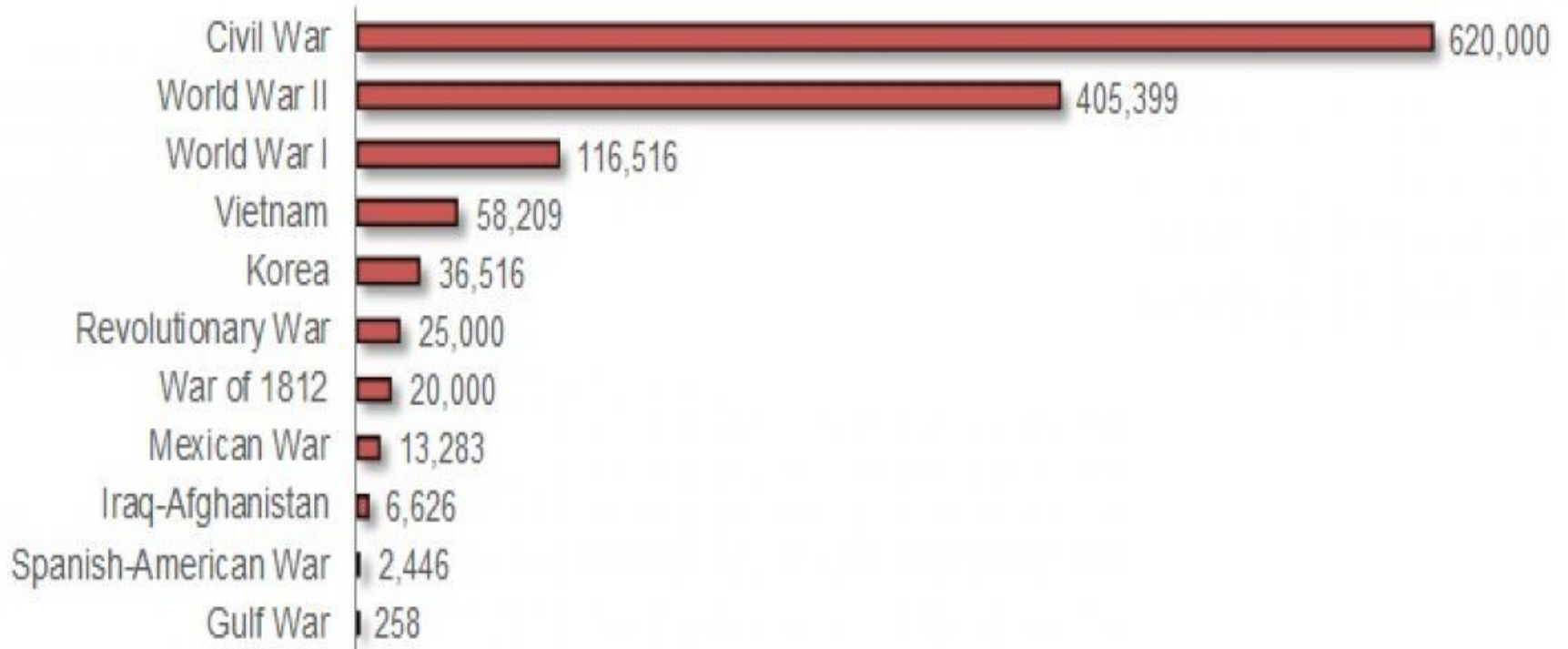
ORIGINAL HYPODERMIC SYRINGE OF
DR. ALEXANDER WOOD

THE FIRST USED IN GREAT BRITAIN



Death Toll

Civil War by War the Deadliest War in US History



AMERICAN CIVIL WAR

- Pain Killer; Anti-Diarrheal (Dysentery); Fatigue Aid; Facilitate Amputations; Induce Sleep; Suppress Cough
- 400,000 Addicts (Estimate) “Soldier’s Disease”
- 620,000 Deaths (Infection #1)
- Causalgia Described (Silas Weir Mitchell)
- PTSD Described
- Most Morphine Use Came AFTER the War’s End

History of Opium / Morphine



- **American Civil War and Post War-time Abuse**

The hypodermic syringe was used extensively during the Civil War to administer morphine to treat pain, dysentery, and fatigue. A large percentage of the soldiers who returned home from the war were addicted to morphine. Opiate addiction became known as the “soldier’s disease” or “army disease.”⁽¹⁾

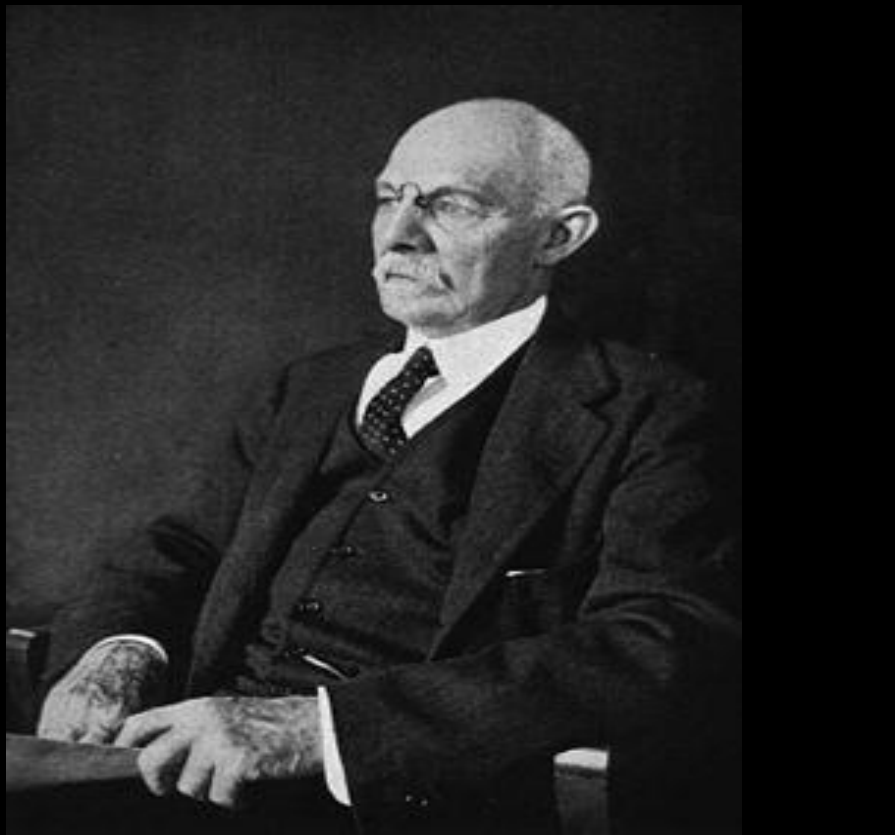




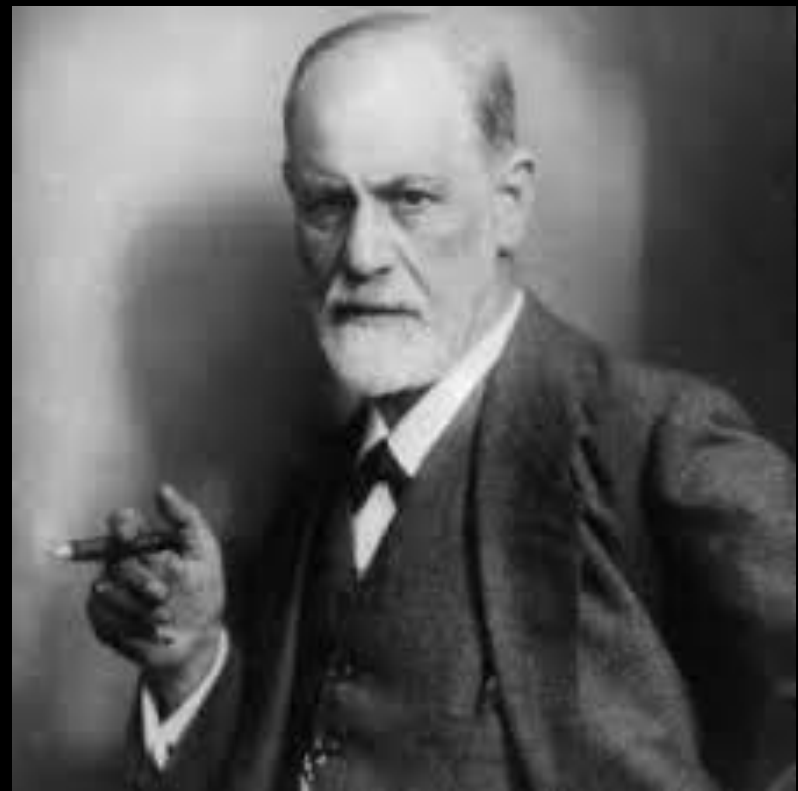
C. R. Alder Wright: UK: 1874: HEROIN from MORPHINE

1898-1913





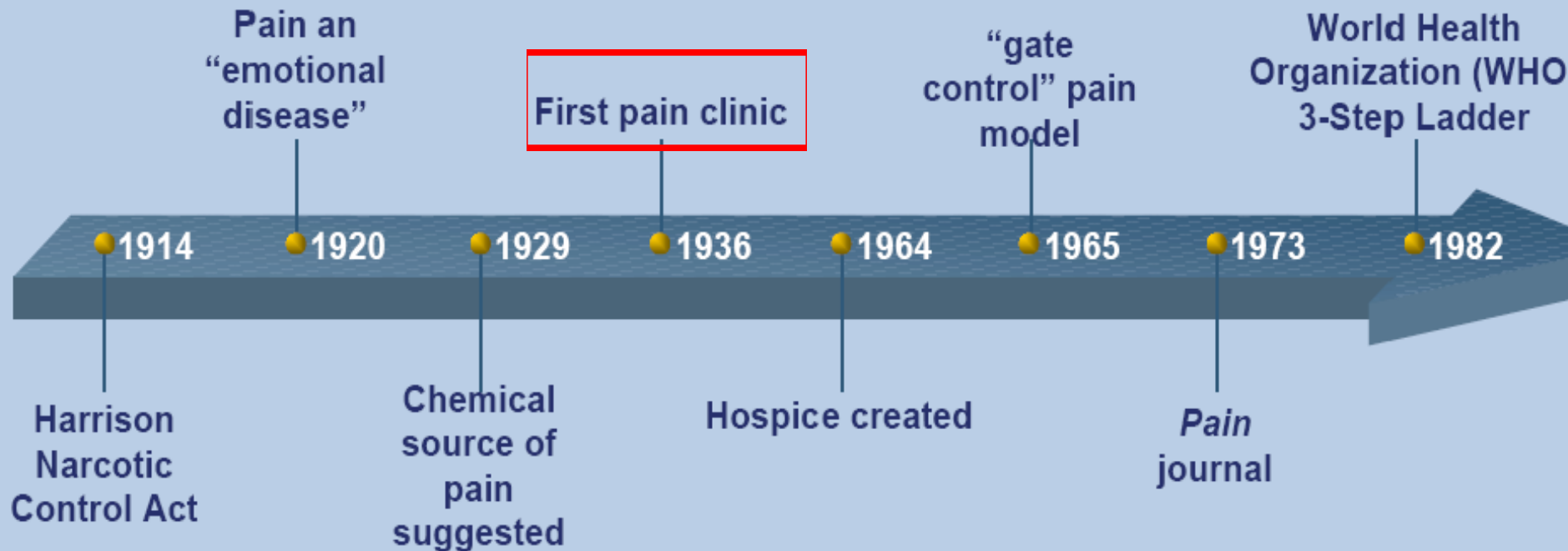
William Stewart Halsted



Sigmund Freud

1890s: Cocaine Addiction Treated with...MORPHINE !!

History of Pain Control: The Twentieth Century





HISTORY LEADING TO “CRISIS”

- **11/15/1875:** San Francisco Board of Supervisors: First US Anti-Drug Law. “Misdemeanor to ‘keep or frequent’ opium dens or smoke opium”.
- Response to Chinese influx into CA for gold rush (**1849**) & to build trans-continental railroad (**1869**).
- Attempted to eradicate Chinese from slums.
- **1900:** JAMA Editorial. “Addiction to a new form of vice-that of ‘cocaine sniffing’ or the ‘coke habit’ among Southern Blacks”.
- Essentially, drug laws were designed to target 2 groups of minorities in USA.

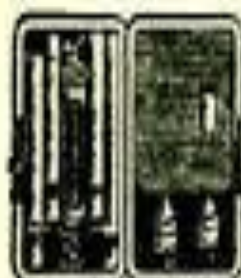


HISTORY: To a Crisis

- **1906:** “Pure Food and Drugs Act”: Required labeling of patent medications containing opiates, cocaine, alcohol, cannabis and other intoxicants.
- **1906:** Sears & Roebuck Catalogue: Offered Syringes and small quantities of Cocaine for Sale!
- **1907:** Estimated 200,000 Americans Addicted to Opioids (87,000,000 population)
- **1914:** Harrison Act: US Federal Law. Regulated and Taxed production, importation, and distribution of opiates & coca products (Rep Francis Burton Harrison-NY).

SEARS, ROEBUCK & CO., (Incorporated), Ct

HYPODERMIC SYRINGES.



Hypodermic Syringe, nickel plated, with two needles, two vials and extra wire, in neat morocco case.

No. D2100 Price, each.....\$1.00
Postage, 8 cents.

Hypodermic Syringe, nickel plated, more complete instrument than above, with two needles, four vials, extra wire, etc., in morocco case.

No. D2202 Price, each.....\$2.00
Postage, 8 cents.

Hypodermic Syringe, best grade, four vials, two needles, extra wire and washers, in closed end, aluminum pocket case.

No. D2304 Price, each.....\$1.50
Postage, 8 cents.

Needles for Hypodermic Syringes. Assorted sizes.

No. D2306 Price, each, 25c; per doz.....\$2.70

Hypodermic Syringe.

WITH CLASS BARREL.

Protected by a metal cylinder, open both sides, with graduations on piston rod. Plunger runs same as cut, and cap on end to prevent wearing out of plunger, in fine nickel case with spring cover. Needles screw into case.

No. D2309 Price, each.....\$2.75



is a much adulterated article.

No. 8D420 Price, per 1-pound box.....10c

Laudanum.

(Tinct. Opium.)

U. S. P. Strength. Directions on each bottle for young and old.

No. 8D424	Price
1-ounce bottle.....	8c
2-ounce bottle.....	15c
4-ounce bottle.....	25c

Unmailable.

Paregoric.

Always useful, both for children and adults. One of the best known and most extensively used house remedies. Full directions.

No. 8D426 Price, 2-ounce bottle..	10c
Price, 4-oz. bottle.....	15c

If by mail, postage and tube extra, small, 12 cents; large, 16 cents.

Tasteless Castor Oil.



Francis Burton Harrison (D-NY)

Died: 11/21/57 (NJ)



HISTORY: To a Crisis

- **1980:** NEJM; 10:302:123: Porter J, Jick H: “Addiction Rare in Patients Treated with Narcotics”. (Jick wished he could retract this LTE).
- **1986:** Pain;25:171-186. Portenoy RK, Foley KM: “Chronic Use of Opioid Analgesics in Non-Malignant Pain: Report of 38 Cases.” (Portenoy expressed extreme regrets about this article).
- **1987:** Vittorio Ventafridda Creates WHO Step-Ladder Approach to Managing Pain

- TO THE EDITOR
- Recently, we examined our current files to determine the incidence of narcotic addiction in **39,946 hospitalized medical patients**₁ 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 in medical patients with no history of addiction.**
- Jane Porter
- Hershel Jick, M.D.
- Boston Collaborative Drug Surveillance Program Boston University Medical Center, Waltham, MA 02154

Russell K. Portenoy, M.D.



In a frequently cited 1986 paper — based on just 38 cases — Portenoy and Foley concluded that **“opioid maintenance therapy can be a safe, salutary and more humane alternative to the options of surgery or no treatment in those patients with intractable non-malignant pain and no history of drug abuse”**. According to the Journal, that paper “opened the door to much broader prescribing of the drugs for more common complaints such as nerve or back pain”

It should come as no surprise that the (Wall Street) *Journal* reveals Dr. Portenoy has **“disclosed relationships with more than a dozen companies, most of which produce opioid painkillers.”** Dr Portenoy denied that these financial relationships biased any of his lectures or publications.

Vittorio Ventafridda

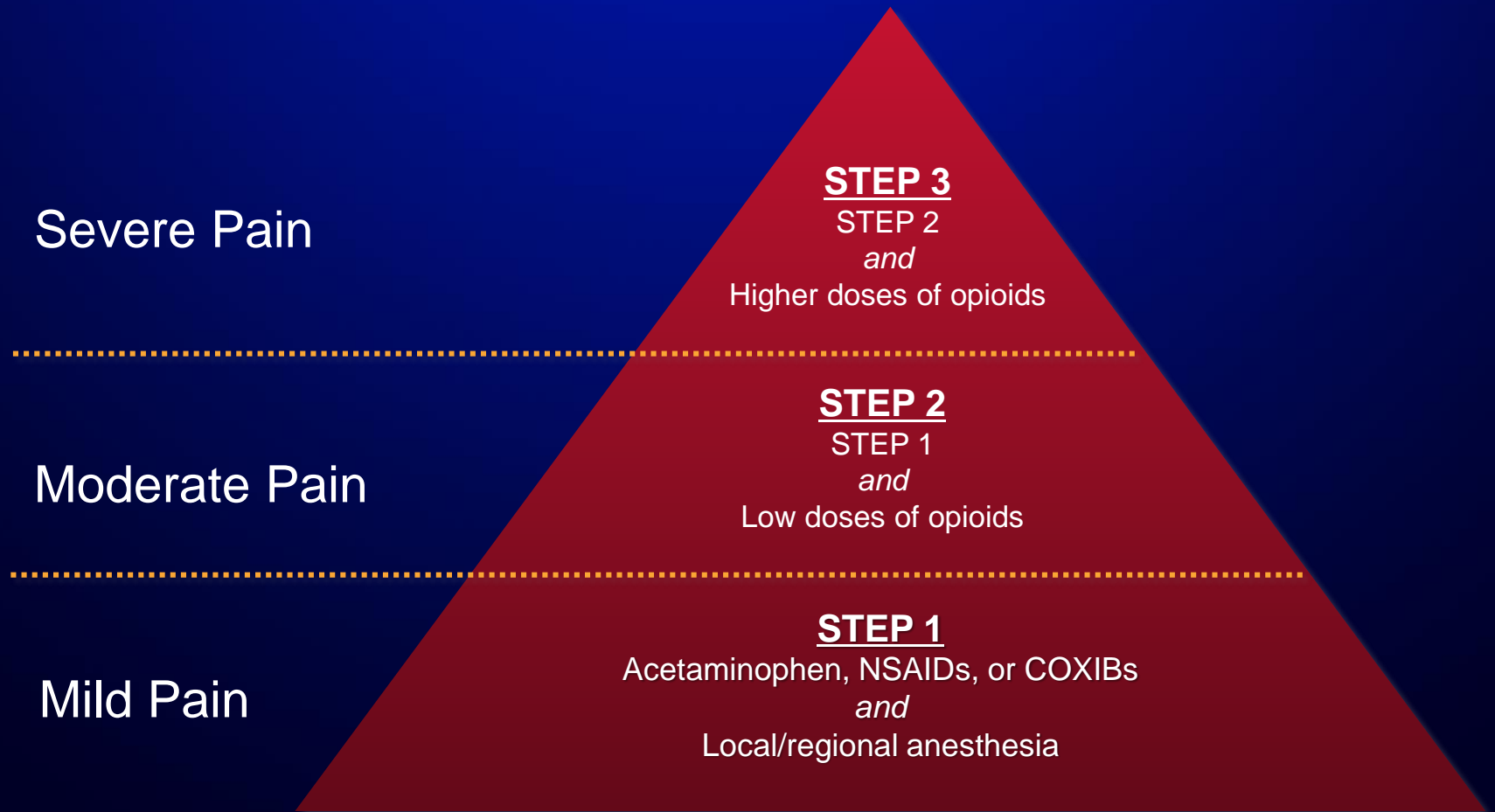
1927-2008



Prof. Vittorio Ventafridda

- 10/29/27 – 10/23/08 (80 years old)
- Born: Ragogna, Italy
- 1952: University of Pavia (Medicine/Surgery)
- 1955: University of Bologna (Anesthesiology)
- 1955: University of Illinois, Chicago (Anesthesiology)
- 1959: Milan, Italy, National Cancer Institute (NCI)
- 1967: Director of NCI for Pain Therapy and Rehab.
- Opioid and Non-Opioid Treatments for Pain
- 1976: Founder of IASP (with John J. Bonica)
- 1978: First International Symposium on Cancer Pain
- 1984-7: Geneva: Created “**WHO Analgesic Stepladder**”
- Died: Milan, Italy
- Contributions: 250 Original Articles; 4 Textbooks

Pharmacological Approach to Chronic Pain Management



1. Crews JC. *JAMA*. 2002; 288: 629-632. 2. World Health Organization. Pain relief ladder. <http://www.who.int/cancer/palliative/painladder/en/>. Accessed September 10, 2014. 3. Ventafridda V, Tamburini M, Caraceni A, De Conno F, Naldi F. *Cancer*. 1987; 59: 850-856. 4. ASA Task Force. *Anesthesiology*. 2004; 100: 1573-1581.

OPIOID EPIDEMIC: THE PRESENT

HISTORY: To a Crisis

- **2007:** 3 Purdue Pharma Executives Indicted for “Misdemeanor Misbranding”. Prosecutors didn’t need to show intent. Fine: \$634,500,000.00. (Perspective: Total Sales of Oxycontin: \$2.8 Billion). Oxycontin was 90% of Company’s Sales/Yr.
- Sackler Family: (Owners). In **2015** Became a Forbes top 20 Richest Family at \$14 Billion!
- **03/15/16:** CDC Guidelines: For PRIMARY CARE physicians who are prescribing opioids for chronic pain outside CA treatment, palliative care, end-of-life.



- The Joint Commission published a guide sponsored by Purdue Pharma. “Some clinicians have inaccurate and exaggerated concerns” about addiction, tolerance and risk of death”, the guide said. ***“This attitude prevails despite the fact there is no evidence that addiction is a significant issue when persons are given opioids for pain control.”***

HISTORY: To a Crisis

- **2012:** 259,000,000 opioid prescriptions written
- **2007-2012:** Opioid Prescriptions Increased 7.3%
- Greatest Increase: Fam Practice; Gen Practice; IM
- **1999-2002** Nat'l Health & Nutrition Exam Survey: 14.6% of Adults have Current or Widespread Pain of > 3 mos. Duration.
- **2012** National Health Interview Study: 11.2% of adults have Daily Pain
- **2015:** 3-4% of USA Population got RX for long-acting opioids

HISTORY: To a Crisis

- **1999-2014:** > 165,000 Deaths (USA) from OD due to RX Opioids (88 Persons/Day/USA)
- **2011:** Drug Abuse Warning Network (DAWN): >420,000 ER Visits for Drug Misuse
- **2013:** DSM-IV Diagnoses: 1.9 Million Abused / Were Dependent Upon Opioids
- **2017:** USA = 4.4% of world Population (7.2 billion); consumes 70-75% of all prescription Opioids/World

Table 7. *Proportionate use of opioids in the United States compared to global consumption.*

	Hydrocodone	Oxycodone	Total proportion
2000	99.4%	92.8%	67.9%
2001	99.6%	91.5%	70.8%
2002	99.6%	88.5%	71.6%
2003	99.7%	88.5%	73.4%
2004	99.6%	85.2%	73.1%
2005	99.7%	82.8%	73.9%
2006	99.7%	80.4%	73.2%
2007	99.7%	82.2%	73.5%
2008	99.5%	75.9%	68.1%
2009	99.8%	80.9%	72.6%
2010	99.8%	79.5%	72.8%
2011	99.8%	81.0%	73.2%
2012	99.9%	81.5%	75.0%
2013	99.8%	77.8%	72.1%
2014	99.7%	73.1%	69.1%

Illicit Fentanyl and Derivatives




Customs and Border Patrol officers pose next to roughly 650 pounds of seized fentanyl and methamphetamine in Jan. 2019

February 22, 2019

INFORMATION

MEMORANDUM FOR THE SECRETARY

FROM: James F. McDonnell 
Assistant Secretary for Countering Weapons of Mass Destruction

SUBJECT: **Use of counter-WMD authorities to combat fentanyl**

Purpose: Discuss plans to use appropriate CWMD authorities against fentanyl. Under this construct, fentanyl would be considered a WMD material when certain criteria are met (e.g. quantity and configuration).

Key Issues:

- Fentanyl's high toxicity and increasing availability are attractive to threat actors seeking nonconventional materials for a chemical weapons attack. In July 2018, the FBI Weapons of Mass Destruction Directorate assessed that "...fentanyl is very likely a viable option for a chemical weapon attack by extremists or criminals."
 - As little as two to three milligrams of fentanyl can induce respiratory depression, respiratory arrest, and possibly death. And some fentanyl analogues, such as carfentanil, are orders of magnitude more potent.
- In the policy arena, the federal interagency has long regarded fentanyl as a chemical weapons threat. However, most CWMD planning efforts and programs do not currently focus on fentanyl as a target material for detection and interdiction (see Background).
- The recent authorization of the DHS CWMD Office through P.L. 115-387, Countering Weapons of Mass Destruction Act of 2018, provides an opportunity to apply DHS CWMD assets and capabilities to the fentanyl problem through the lens of WMD.
 - The CWMD Office can assist in countering fentanyl and its analogues through: managing and developing requirements for technology development, supporting the deployment of sensors (i.e. detection technology), and providing analytical expertise to the operating components.
- CWMD, as a support component, already provides direct support to DHS front line operating Components for WMD detection and prevention. The development and deployment of new capabilities that include fentanyl as a target substance would be a minor adjustment to current activities.
 - As an example, although Office of Health Affairs and Domestic Nuclear Detection Office, as DHS legacy organizations, had not previously planned specifically for countering the Hydrogen Sulfide threat, the newly organized CWMD Office (limited to 872 authorities) was immediately able to develop and field countermeasures and training and deploy detection equipment in twenty urban areas.
- CWMD Office efforts will focus on quantities and configurations that could be used as mass casualty weapons. However, many activities, such as support to fentanyl interdiction and

2002 Nord-Ost siege

Dubrovka area of Moscow

The Chechen radical militant group the Special Purpose Islamic Regiment (SPIR)

According to official numbers, 900 Total Hostages; 40 terrorists and about 130 hostages died during the raid or in the following days

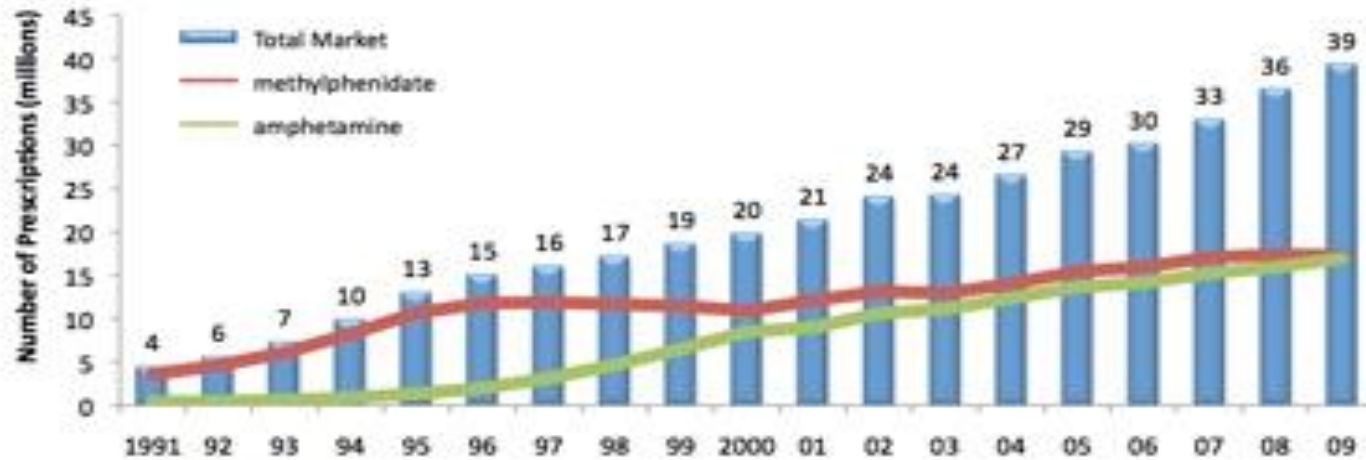
Dr. Theodore Stanley Provided Spetnatz Information on....**FENTANYL**



Number of Prescriptions for Stimulants* Dispensed by US Retail Pharmacies, Years 1991-2009

*excludes modafinil and atomoxetine products

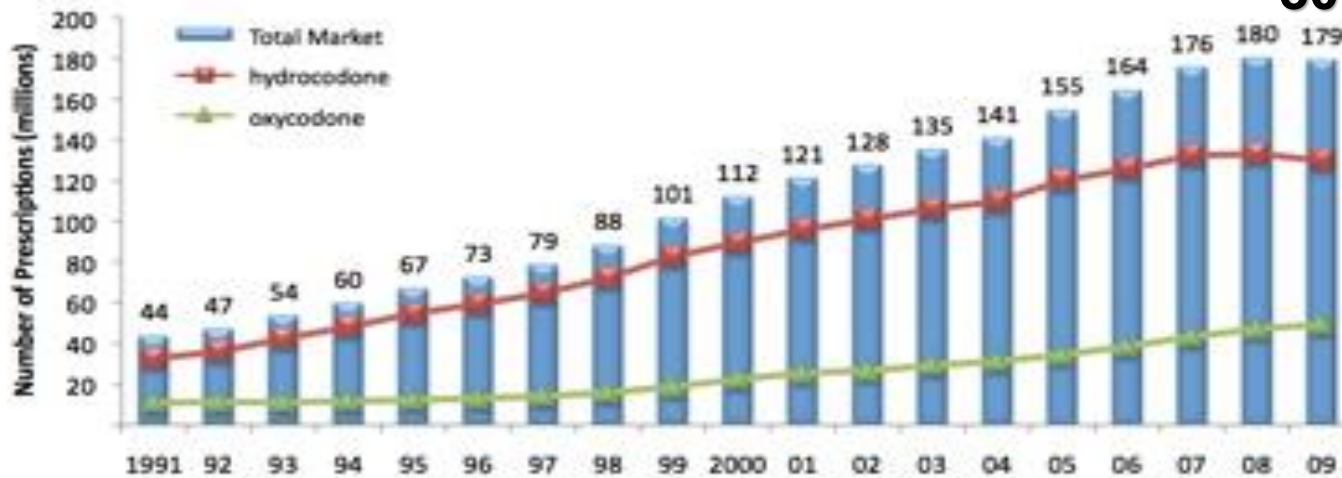
875%



Source: SDI Vector One©: National (VONA)

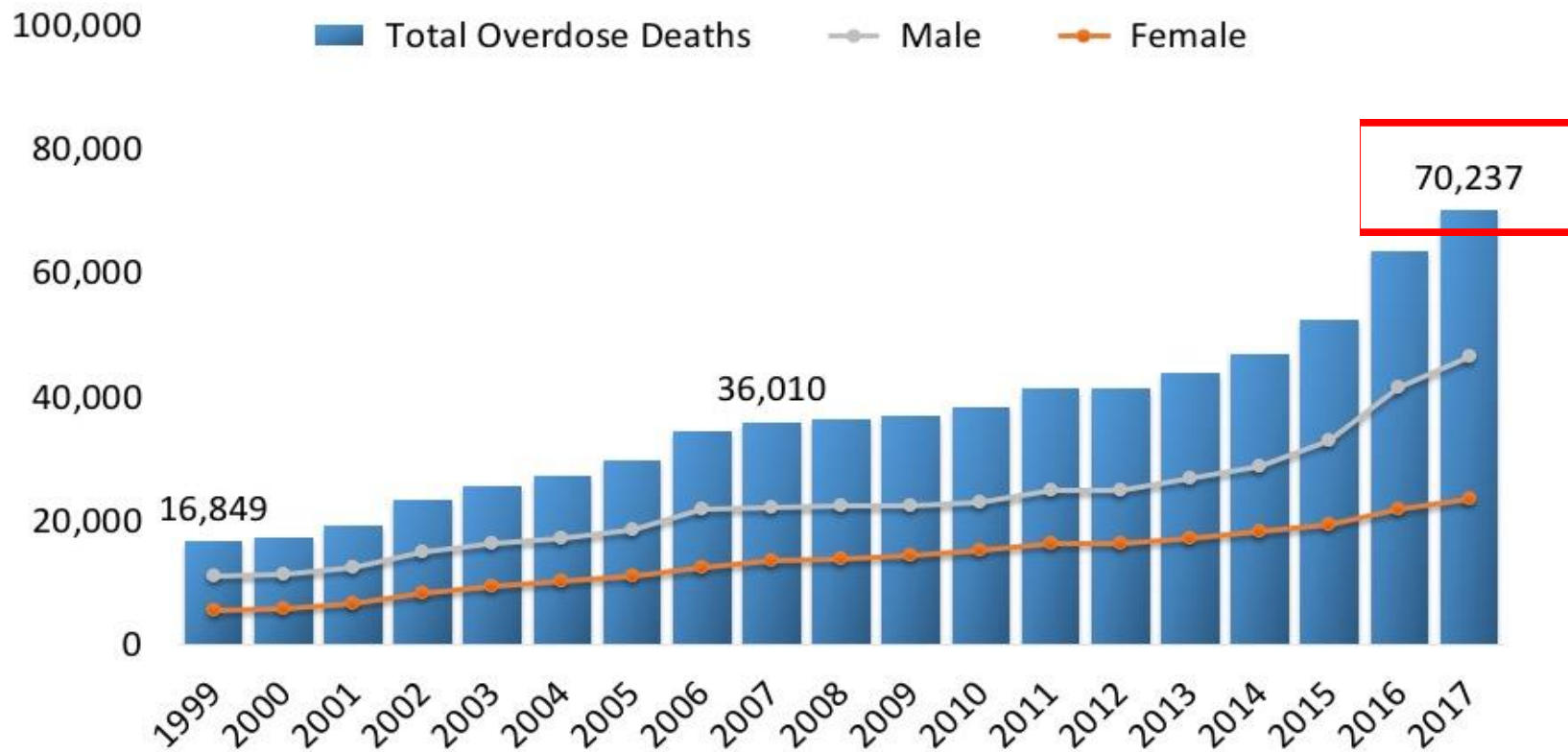
Number of Prescriptions for Hydrocodone and Oxycodone Products Dispensed by US Retail Pharmacies, Years 1991-2009

306%



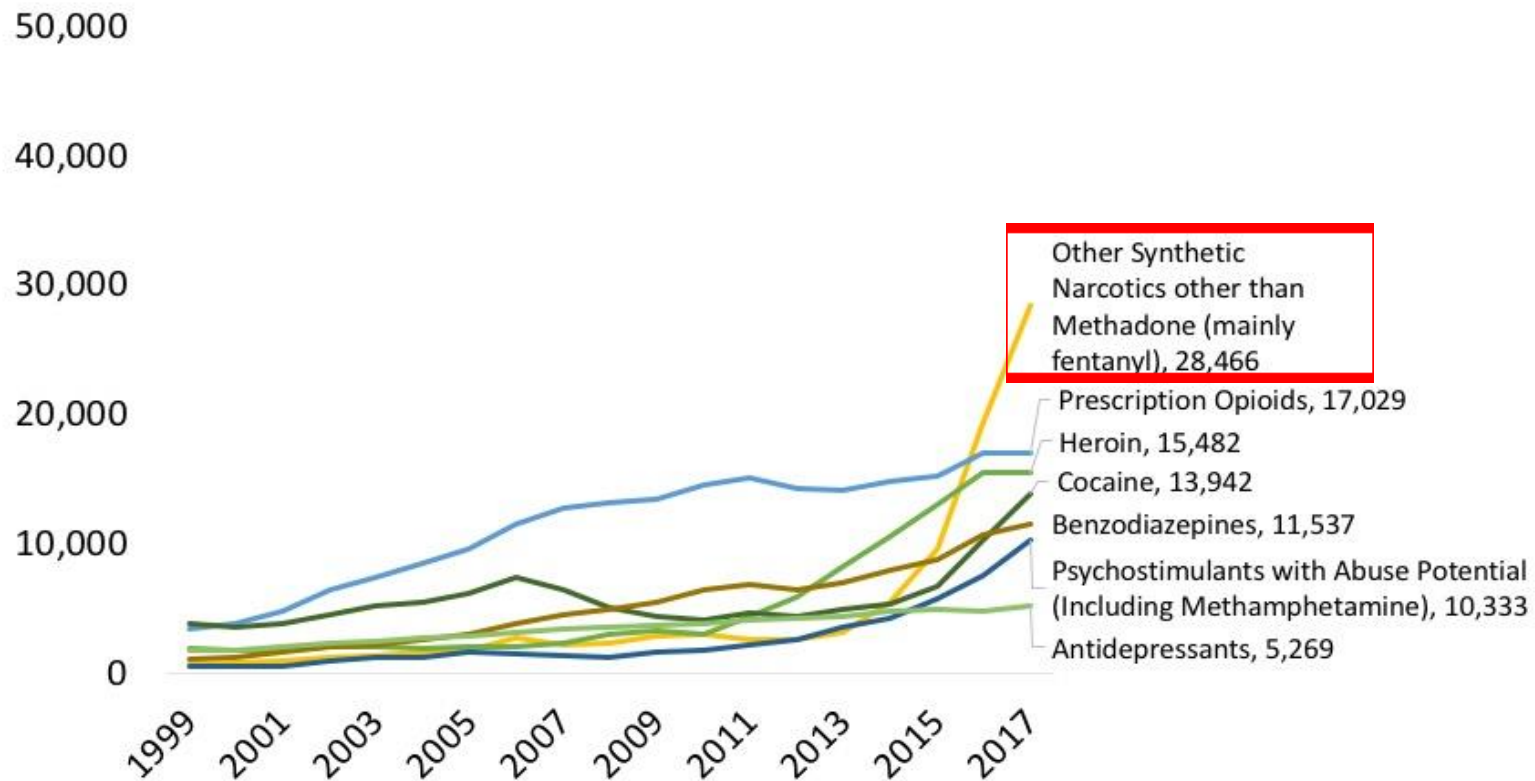
Source: SDI Vector One*: National (VONA)

Figure 1. National Drug Overdose Deaths Number Among All Ages, by Gender, 1999-2017



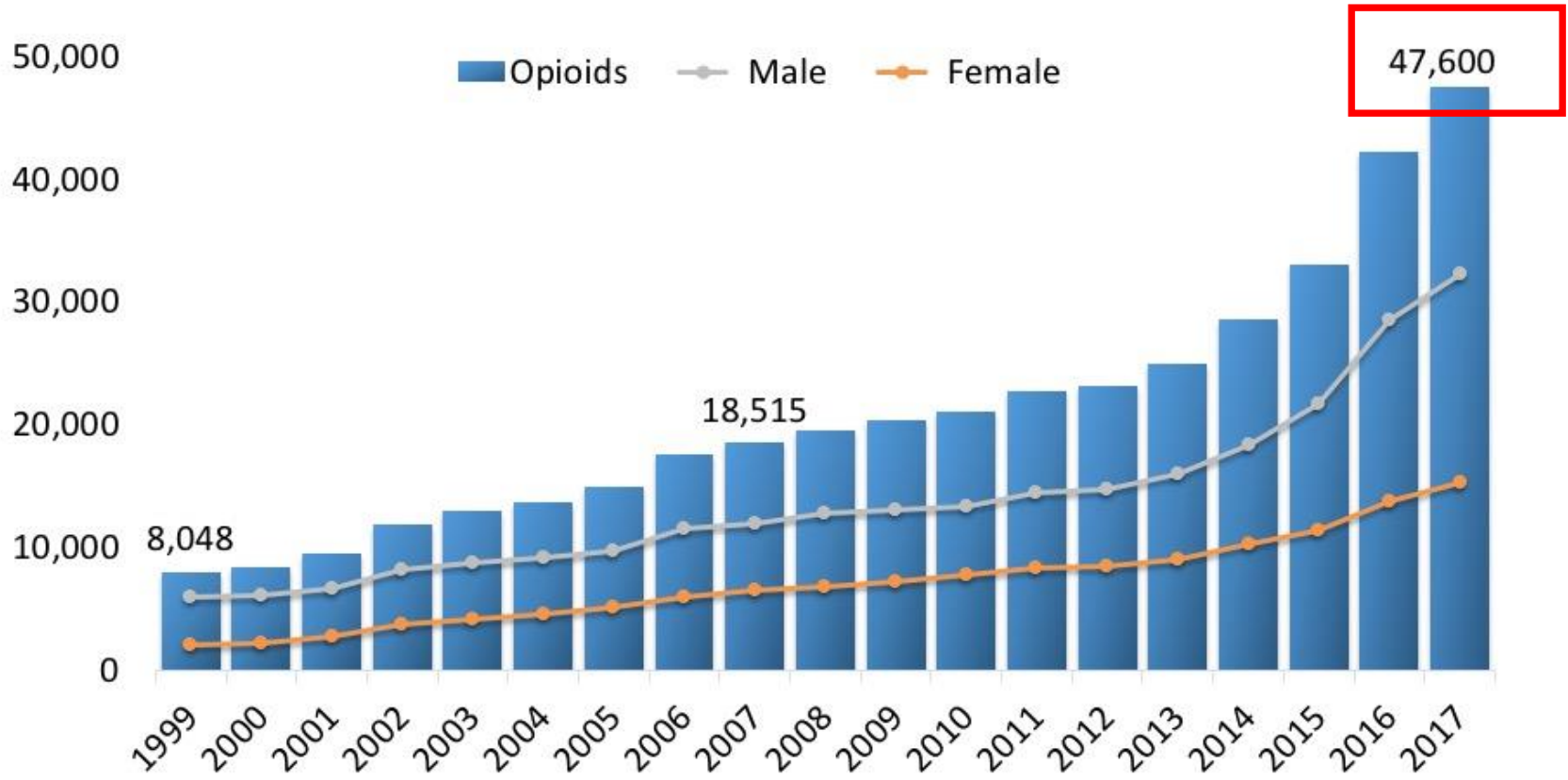
Source : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 2. National Drug Overdose Deaths Number Among All Ages, 1999-2017



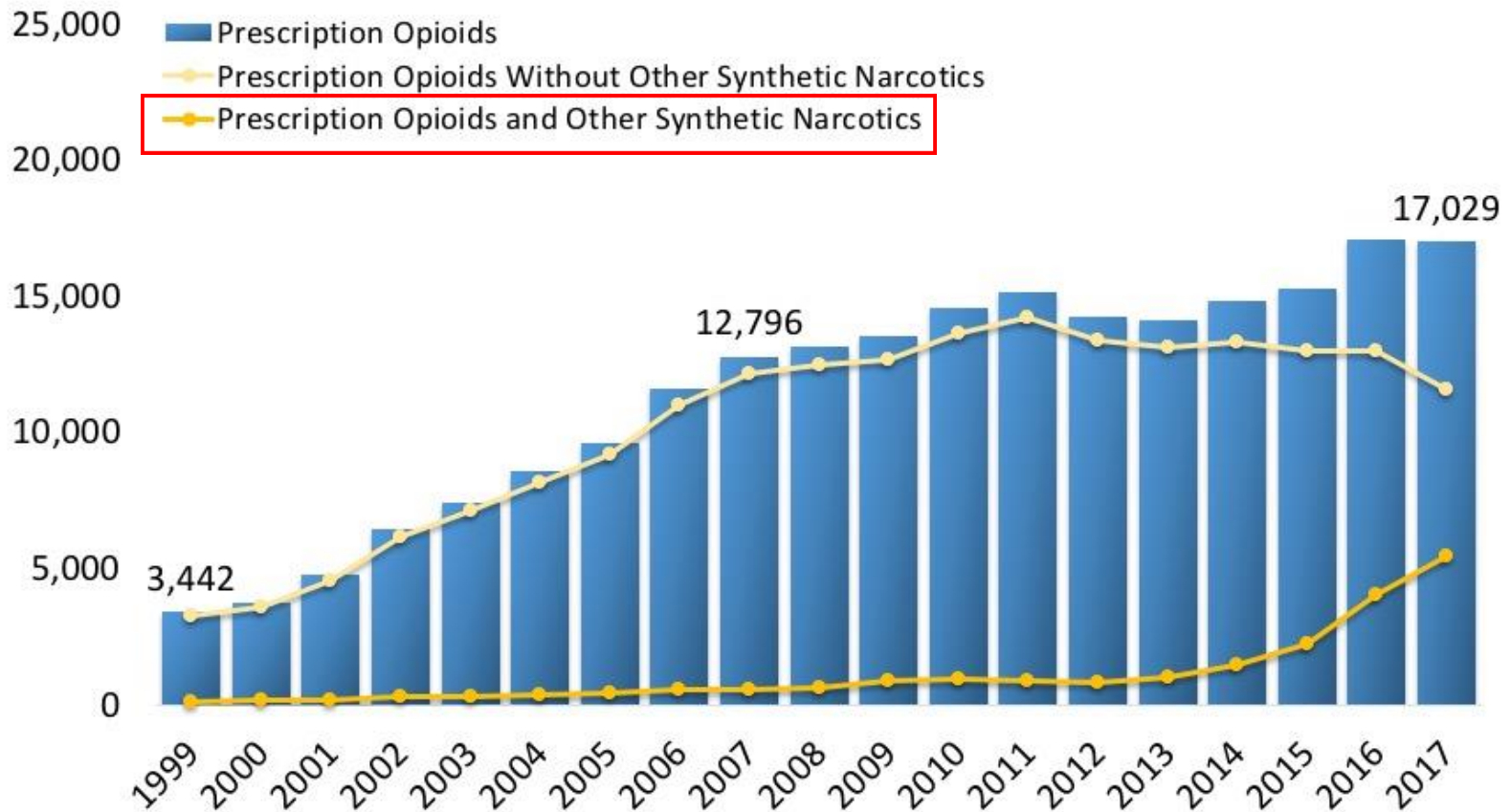
Source: : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 3. National Drug Overdose Deaths Involving Any Opioid, Number Among All Ages, by Gender, 1999-2017



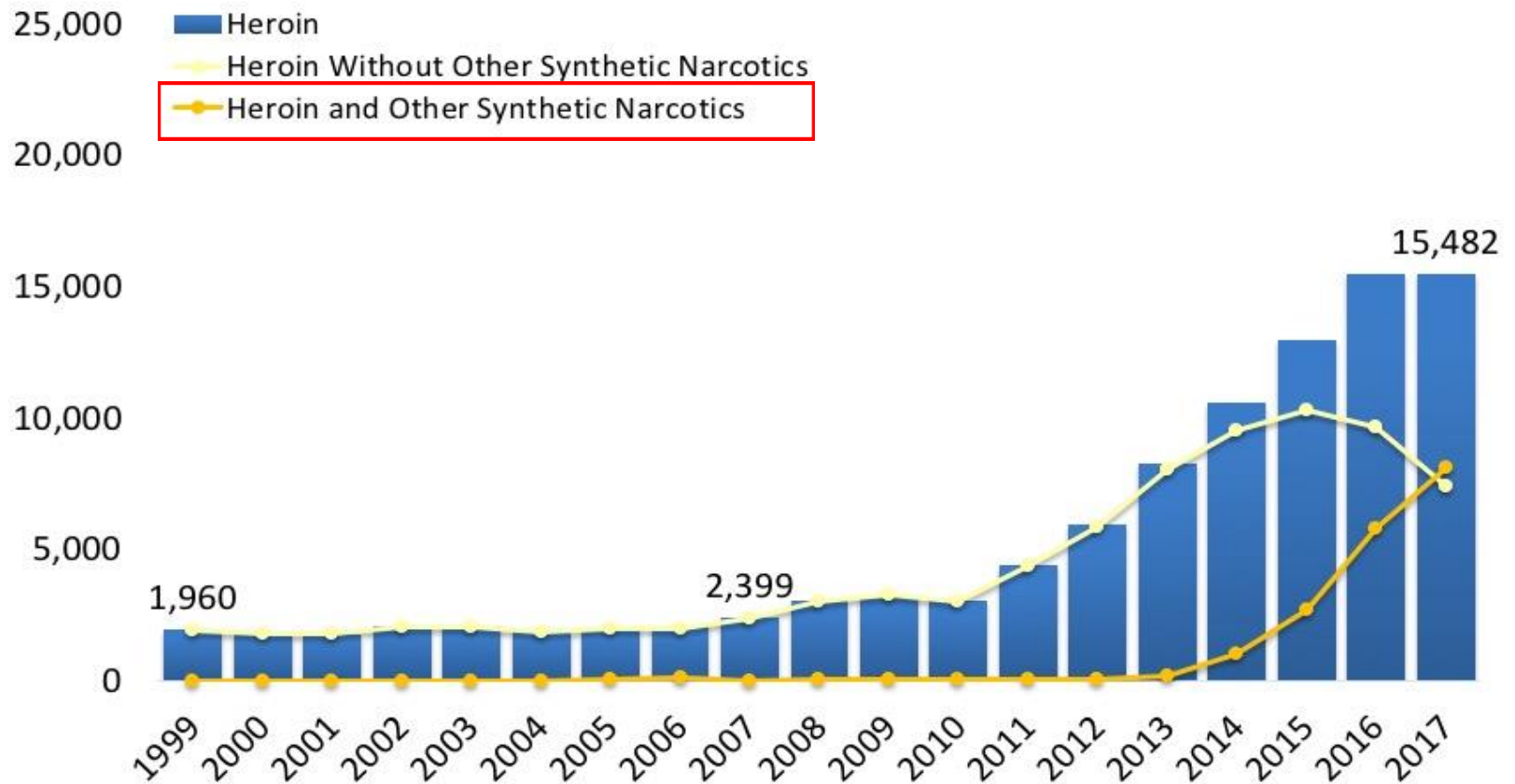
Source: : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 4. National Drug Overdose Deaths Involving Prescription Opioids, Number Among All Ages, 1999-2017



Source: : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

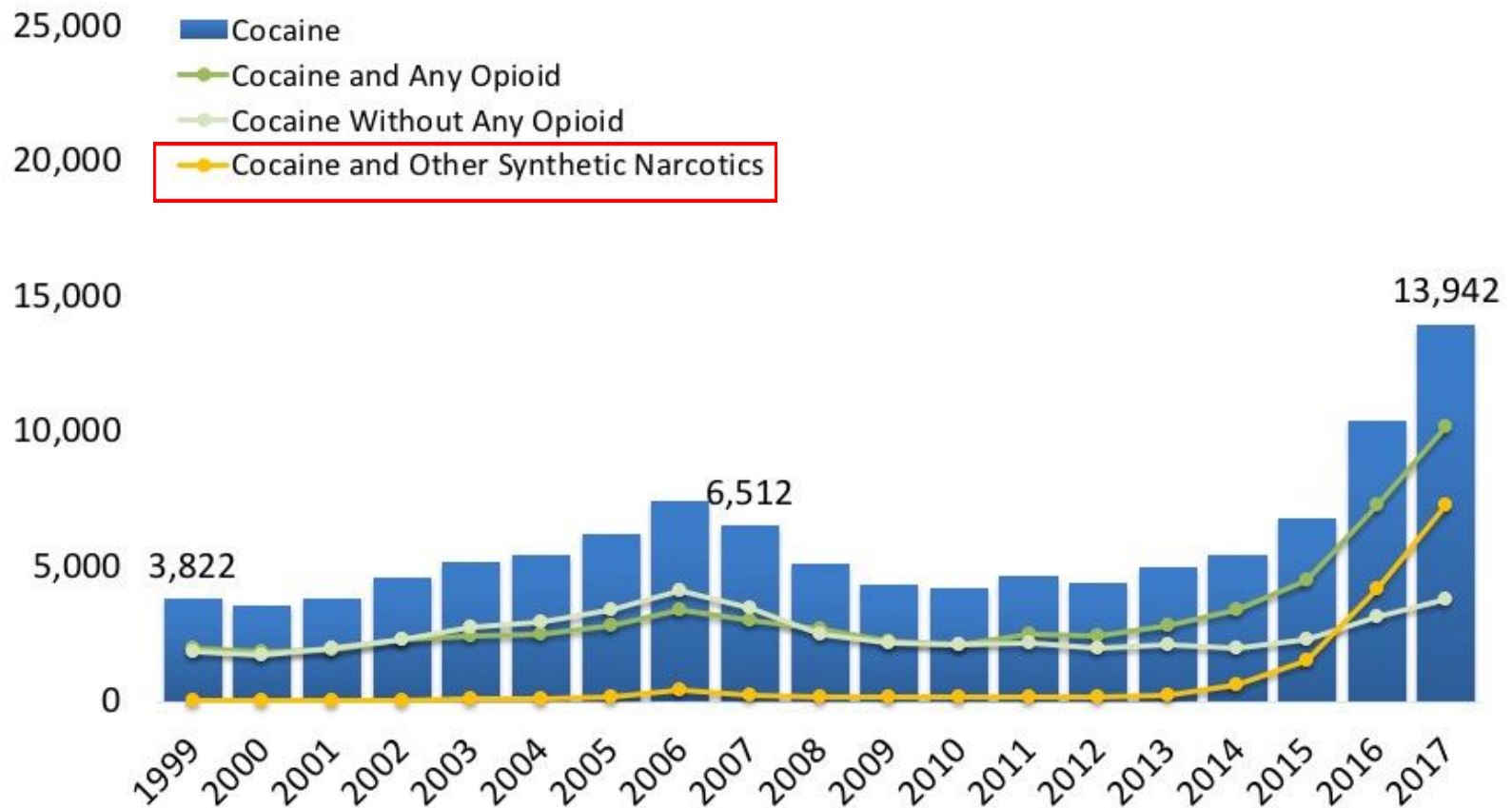
Figure 5. National Drug Overdose Deaths Involving Heroin Number Among All Ages, 1999-2017



Source: : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

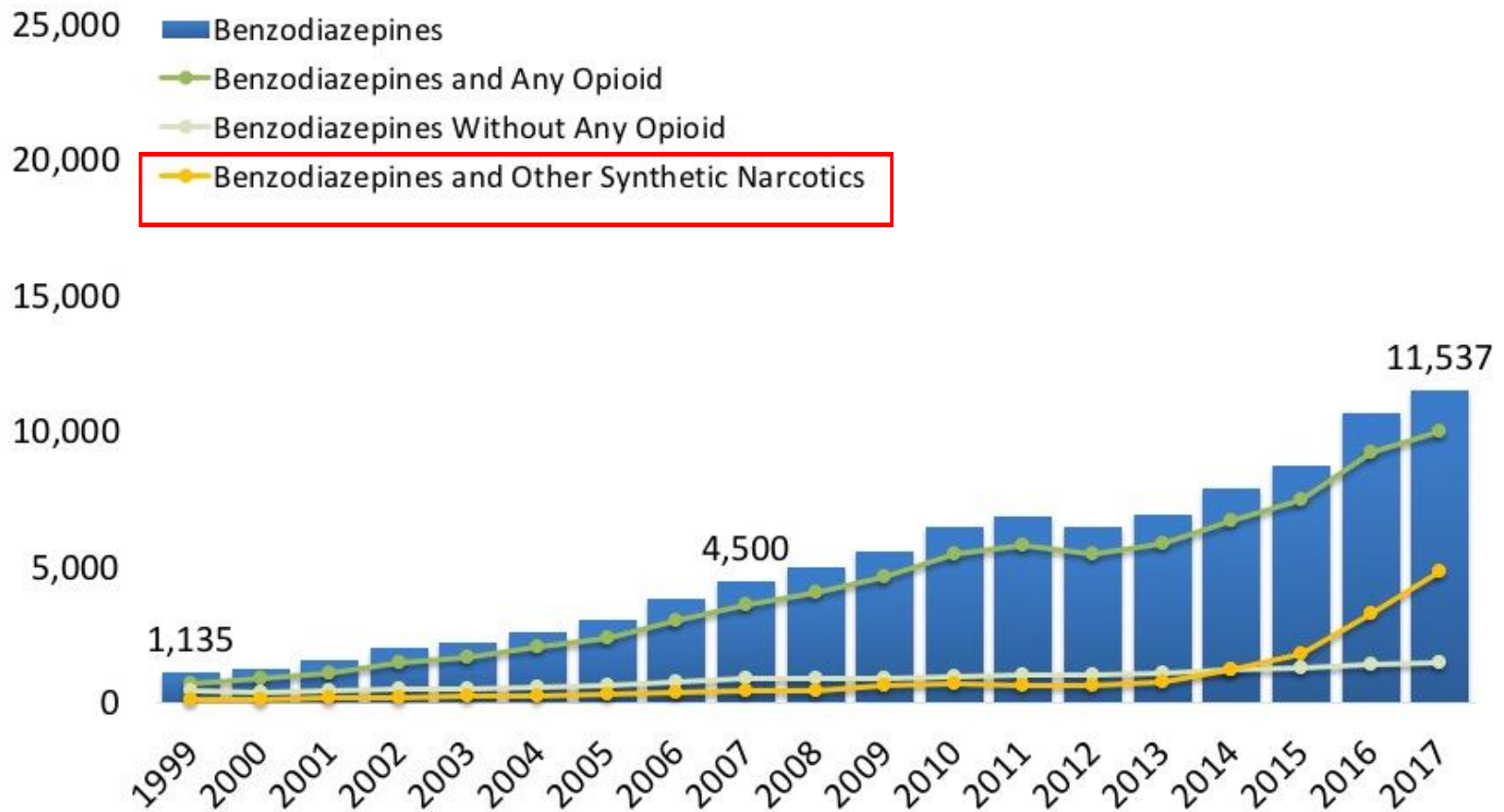
Figure 7. National Drug Overdose Deaths Involving Cocaine, by Opioid Involvement

Number Among All Ages, 1999-2017



Source : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 8. National Drug Overdose Deaths Involving Benzodiazepines, by Opioid Involvement, Number Among All Ages, 1999-2017



Source : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

CDC data may be erroneous

CDC Admits Rx Opioid Deaths 'Significantly

Inflated'

March 21, 2018

By Pat Anson, Editor

Researchers with the Centers for Disease Control and Prevention have acknowledged that the agency's methods for tracking overdose deaths are inaccurate and have significantly overestimated the number of Americans that have died due to prescription opioids.

In an editorial appearing in the *American Journal of Public Health*, four researchers in the CDC's Division of Unintentional Injury Prevention say many overdoses involving illicit fentanyl and other synthetic black market opioids have been erroneously counted as prescription drug deaths.

Spectrum of Opioid Prescribing

Avoidance

Indiscriminate



BALANCE

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2005	99.7%	82.8%	73.9%
2006	99.7%	80.4%	73.2%
2007	99.7%	82.2%	73.5%
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2009	99.8%	80.9%	72.6%
2010	99.8%	79.5%	72.8%
2011	99.8%	81.0%	73.2%
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2013	99.8%	77.8%	72.1%
2014	99.7%	73.1%	69.1%

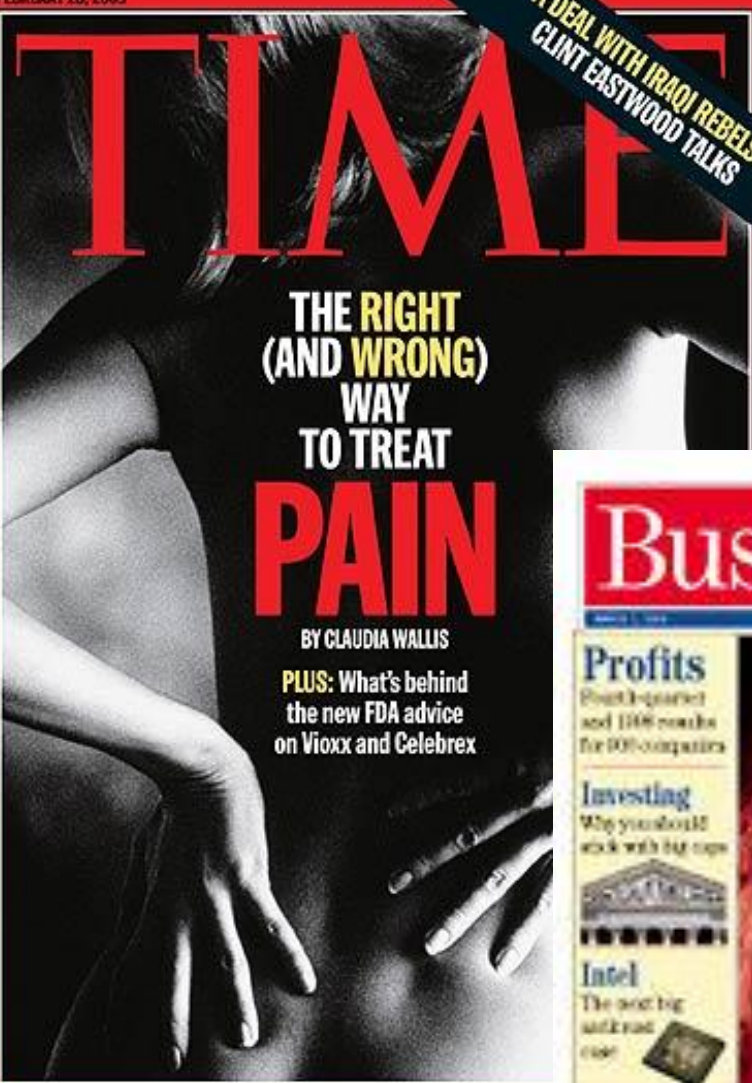
A DEAL WITH IRAQI REBELS?
CLINT EASTWOOD TALKS

TIME

THE RIGHT
(AND WRONG)
WAY
TO TREAT
PAIN

BY CLAUDIA WALLIS

PLUS: What's behind
the new FDA advice
on Vioxx and Celebrex

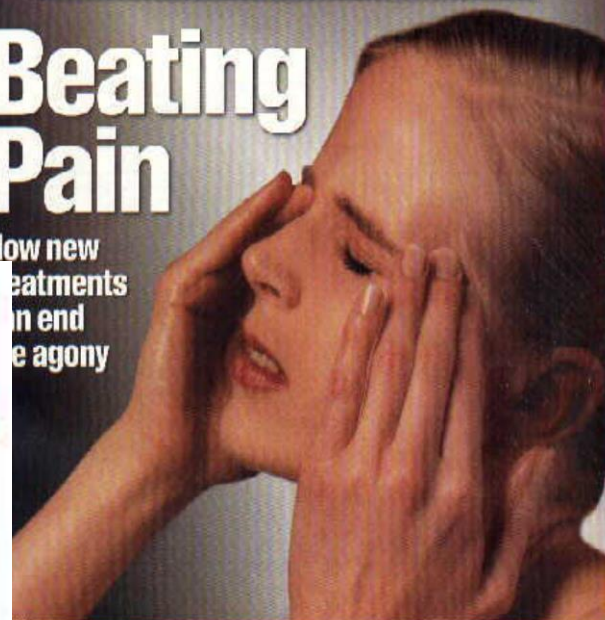


U.S. News & WORLD REPORT

U.S. News

Beating Pain

How new
treatments
can end
the agony



BusinessWeek

Profits
Fourth-quarter
and 10K results
for 100 companies

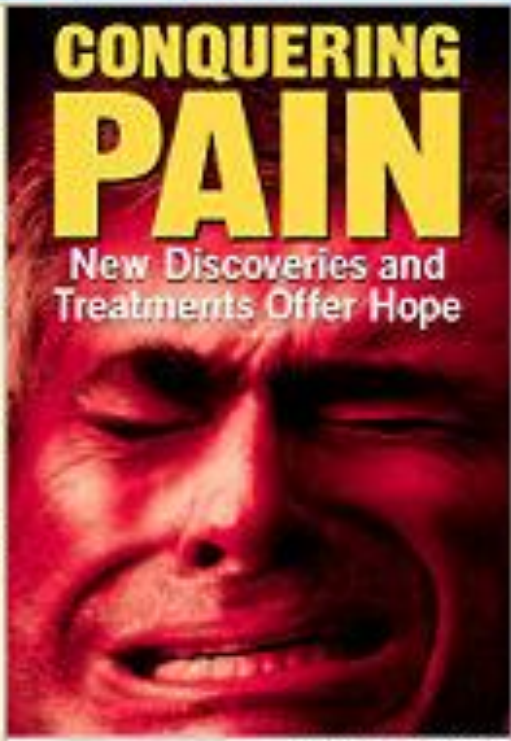
Investing
Why you should
stick with big caps

Intel
The next big
software
move

Chicago
Life is good. What
it means for
Eli's
Dairy

CONQUERING PAIN

New Discoveries and
Treatments Offer Hope



Newsweek®

June 4, 2007

newsweek.msnbc.com

THE NEW WAR ON PAIN

FROM BRAIN SCIENCE TO
BATTLEFIELD MEDICINE,
DOCTORS ARE FINDING
INNOVATIVE WAYS TO
COMBAT SHORT-TERM
AND CHRONIC PAIN

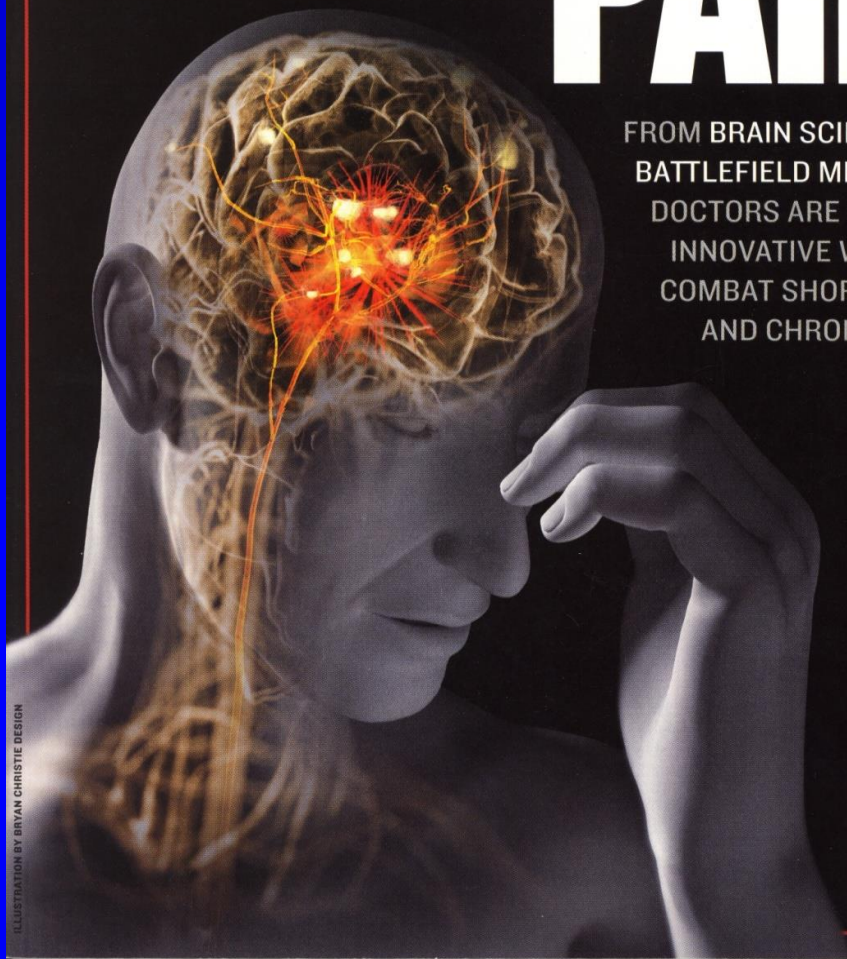


ILLUSTRATION BY BRYAN CHRISTIE DESIGN



Special Double
Health Issue

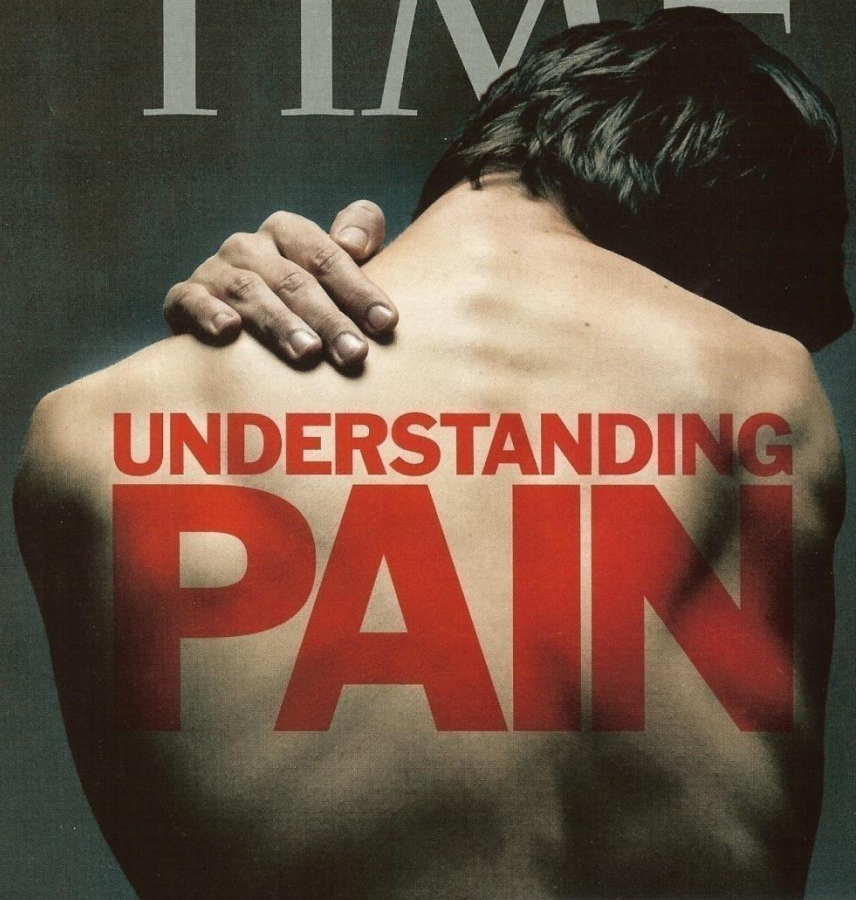
It's time for
unions to
change
BY JOE KLEIN

Muammar
Gaddafi's
last stand

FOOTBALL
Are you
ready for
a lockout?

+ 5 THINGS YOU
DON'T HAVE TO
WORRY ABOUT
THIS WEEK
PAGE 95

TIME



UNDERSTANDING PAIN

#BXBDJLX *****GRR-RT L0TKKD-005
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CHICAGO ANSHTERSIA PRINS SPECI 0001
#LS904
3000 N HARLSTED ST STE 700
CHICAGO IL 60657-5196
P00110



RUSH'S WORLD OF PAIN

His Path to Pill Addiction
Hypocrisy and The Media Wars
The Scourge Of OxyContin



Newsweek

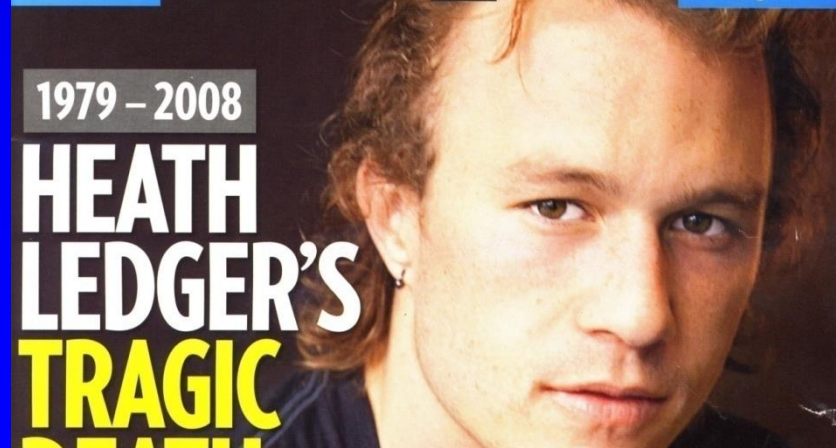
special report Fighting Addiction

New Drugs & Treatments
Dependence & the Brain
A Pill for Alcoholism
Understanding Robert Downey Jr.



MILEY CYRUS Gets a Makeover!

EDDIE'S SPLIT Shocking Details



1979 - 2008

HEATH LEDGER'S TRAGIC DEATH



The Bro Mounta 'doting found o





**Vicodin, Dilaudid, Xanax, Zoloft,
Demerol, Vistaril, Paxil, Prilosec.
Jacko's deadly cocktail of drugs**

KING OF PAIN

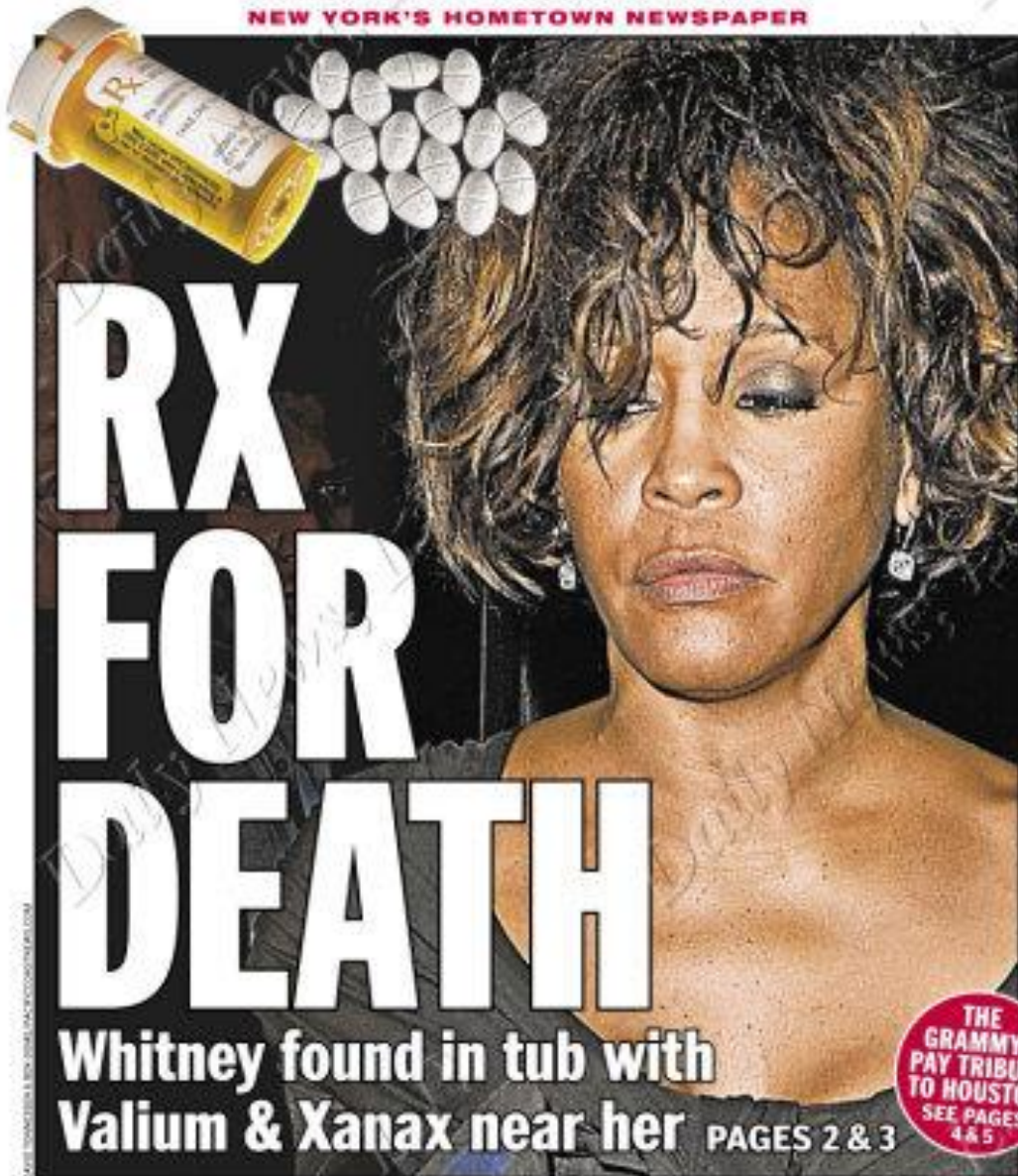


**Tragic star weighed
only 125 lbs. at death**

SEE
PAGES
2, 3, 4,
5, 6, 7,
8 & 9

DAILY NEWS

NEW YORK'S HOMETOWN NEWSPAPER



RX FOR DEATH

Whitney found in tub with
Valium & Xanax near her PAGES 2 & 3

THE
GRAMMYS
PAY TRIBUTE
TO HOUSTON
SEE PAGES
4 & 5



EXCLUSIVE

**PRINCE
LONG-STANDING PERCOCET
ADDICTION**



4.20.16

WALGREENS RUN

OPIOID EPIDEMIC: THE PHYSICIAN CASUALTIES

83-year-old 'Oxy Doc' gets 20 years in prison

By Emily Saul
April 30, 2019 | 4:54pm ET



Teshar Martin
Rashid Umar Abbasi

An 83-year-old ex-doctor **convicted of illegally prescribing more than 2.2 million Oxycodone pills** and other opioids – leading to the **overdose death of a 26-year-old Staten Island man** – will likely die behind bars, after a judge sentenced him to 20 years in a federal prison.

Doctor Murdered Over Opioid Prescription

By *Victoria Kim* 08/01/17

The doctor was shot in a hospital parking lot by the enraged spouse of a chronic pain patient.

Authorities are investigating the murder of a doctor in northern Indiana, who was shot to death for not **prescribing opioid medication**.

It's yet unknown which specific medication the patient, Petra Jarvis, was seeking at her appointment last Wednesday (July 26), but Dr. Todd Graham's refusal to write a prescription for her chronic pain was



Dr. Todd Graham - Photo via YouTube

OPIOID EPIDEMIC: THE FUTURE

THE FUTURE DIRECTIONS OF THE “EPIDEMIC”; 8 Postulates

- **Identify High Risk Patients; Comprehensive Evaluation**
- **Appropriate Physical Exam; Diagnosis**
- **Stratify Risks**
- **Treatment Goals; Improvement in Function**
- **Avoid Long-Acting Opioids at Initiation**
- **Educate Patients Re: AEs**
- **High Dose or Long-Acting only in Intractable**
- **Monitor for SEs**

Guidelines**Responsible, Safe, and Effective Prescription of Opioids for Chronic Non-Cancer Pain: American Society of Interventional Pain Physicians (ASIPP) Guidelines****Summary of Recommendations:*****i. Initial Steps of Opioid Therapy***

1. Comprehensive assessment and documentation. (Evidence: Level I; Strength of Recommendation: Strong)
2. Screening for opioid abuse to identify opioid abusers. (Evidence: Level II-III; Strength of Recommendation: Moderate)
3. Utilization of prescription drug monitoring programs (PDMPs). (Evidence: Level I-II; Strength of Recommendation: Moderate to strong)
4. Utilization of urine drug testing (UDT). (Evidence: Level II; Strength of Recommendation: Moderate)
5. Establish appropriate physical diagnosis and psychological diagnosis if available. (Evidence: Level I; Strength of Recommendation: Strong)
6. Consider appropriate imaging, physical diagnosis, and psychological status to collaborate with subjective complaints. (Evidence: Level III; Strength of Recommendation: Moderate)
7. Establish medical necessity based on average moderate to severe (≥ 4 on a scale of 0 – 10) pain and/or disability. (Evidence: Level II; Strength of Recommendation: Moderate)
8. Stratify patients based on risk. (Evidence: Level I-II; Strength of Recommendation: Moderate)
9. Establish treatment goals of opioid therapy with regard to pain relief and improvement in function. (Evidence: Level I-II; Strength of Recommendation: Moderate)
10. Obtain a robust opioid agreement, which is followed by all parties. (Evidence: Level III; Strength of Recommendation: Moderate)

The “Scarlet Letter” of “A” for Addict



Identify Risk for Aberrant Behaviors/Harm

BIOLOGICAL

- Age \leq 45 years
- Gender-MALE
- Family history of prescription drug or alcohol abuse
- Cigarette smoking

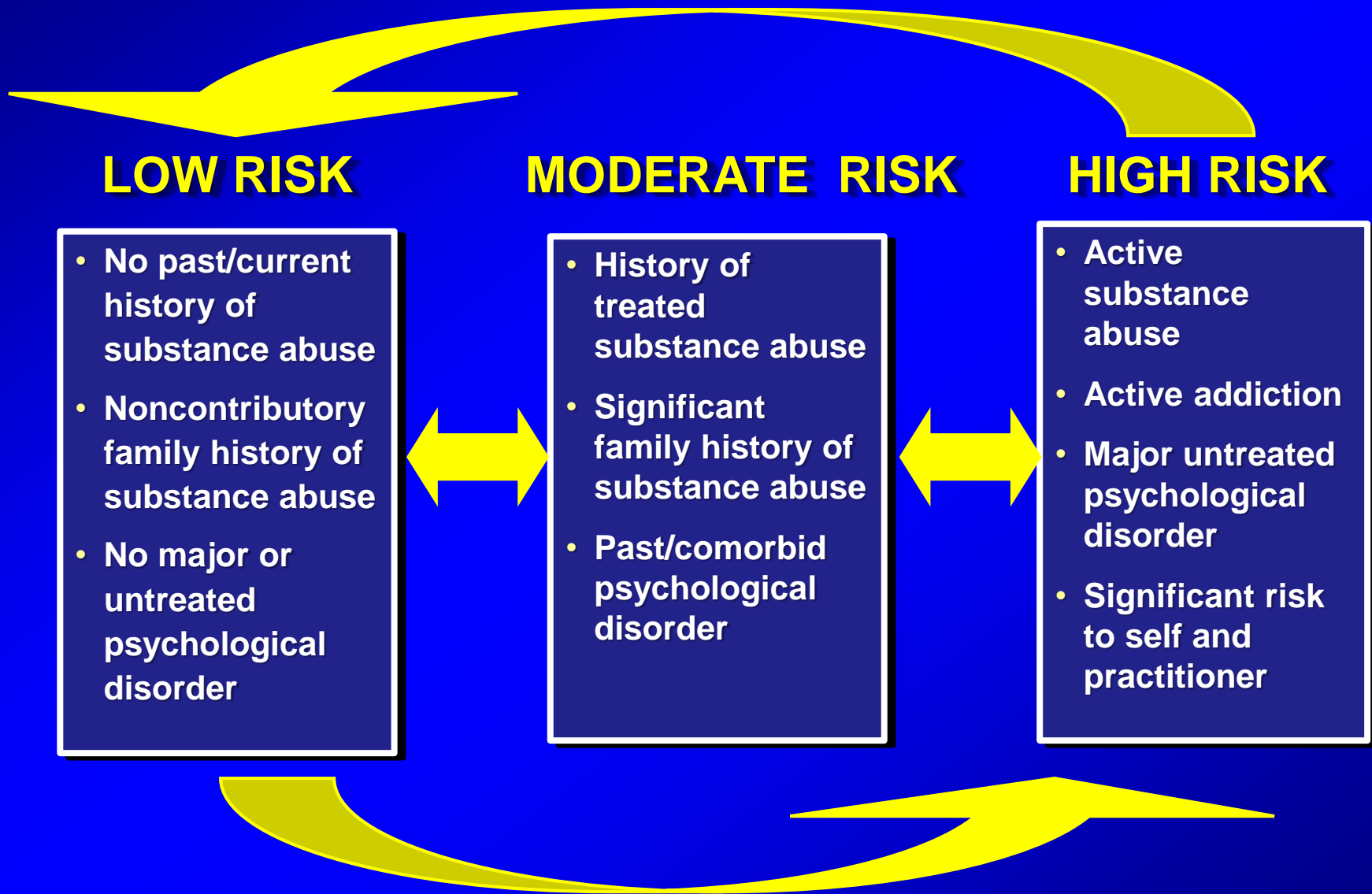
PSYCHIATRIC

- Substance use disorder
- Preadolescent sexual abuse (in women)
- Major psychiatric disorder (e.g, personality disorder, anxiety or depressive disorder, bipolar disorder)

SOCIAL

- Prior legal problems
- History of motor vehicle accidents
- Poor family support
- Involvement in a problematic subculture

Stratify Risk



ii. Assessment of Effectiveness of Long-Term Opioid Therapy

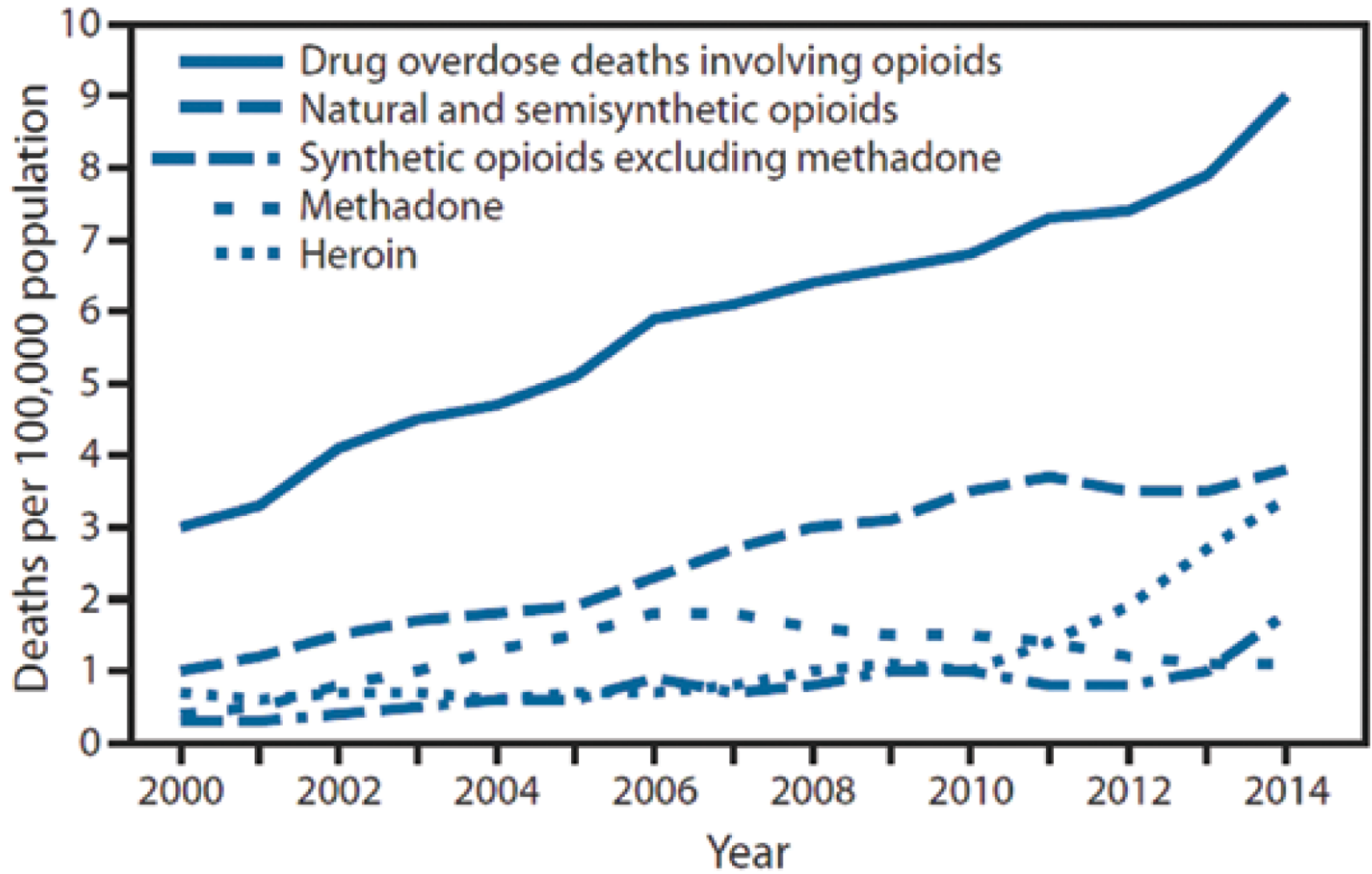
11. Initiate opioid therapy with low dose, short-acting drugs, with appropriate monitoring. (Evidence: Level II; Strength of Recommendation: Moderate)
12. Consider up to 40 morphine milligram equivalent (MME) as low dose, 41 to 90 MME as a moderate dose, and greater than 91 MME as high dose. (Evidence: Level II; Strength of Recommendation: Moderate)
13. Avoid long-acting opioids for the initiation of opioid therapy. (Evidence: Level I; Strength of Recommendation: Strong)
14. Recommend methadone only for use after failure of other opioid therapy and only by clinicians with specific training in its risks and uses, within FDA recommended doses. (Evidence: Level I; Strength of Recommendation: Strong)
15. Understand and educate the patients of the effectiveness and adverse consequences. (Evidence: Level I; Strength of Recommendation: Strong)
16. Similar effectiveness for long-acting and short-acting opioids with increased adverse consequences of long-acting opioids. (Evidence: Level I-II; Strength of recommendation: Moderate to strong)
17. Periodically assess pain relief and/or functional status improvement of $\geq 30\%$ without adverse consequences. (Evidence: Level II; Strength of recommendation: Moderate)
18. Recommend long-acting or high dose opioids only in specific circumstances with severe intractable pain. (Evidence: Level I; Strength of Recommendation: Strong)

iii. Monitoring for Adherence and Side Effects

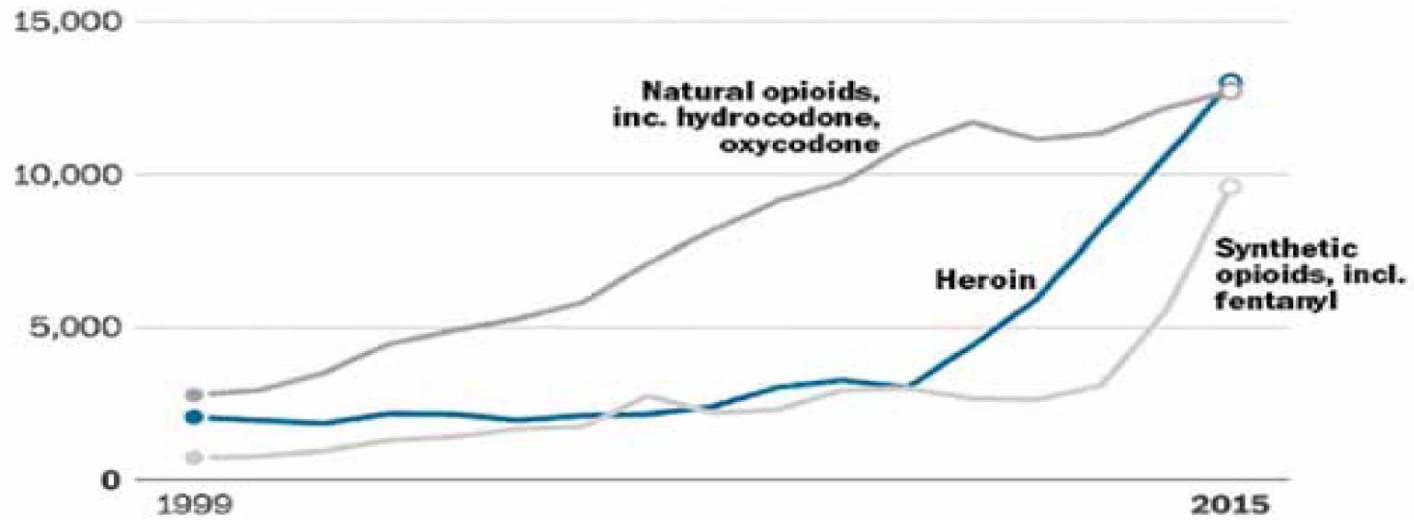
19. Monitor for adherence, abuse, and noncompliance by UDT and PDMPs. (Evidence: Level I-II; Strength of Recommendation: Moderate to strong)
20. Monitor patients on methadone with an electrocardiogram periodically. (Evidence: Level I; Strength of Recommendation: Strong).
21. Monitor for side effects including constipation and manage them appropriately, including discontinuation of opioids when indicated. (Evidence: Level I; Strength of Recommendation: Strong)

iv. Final Phase

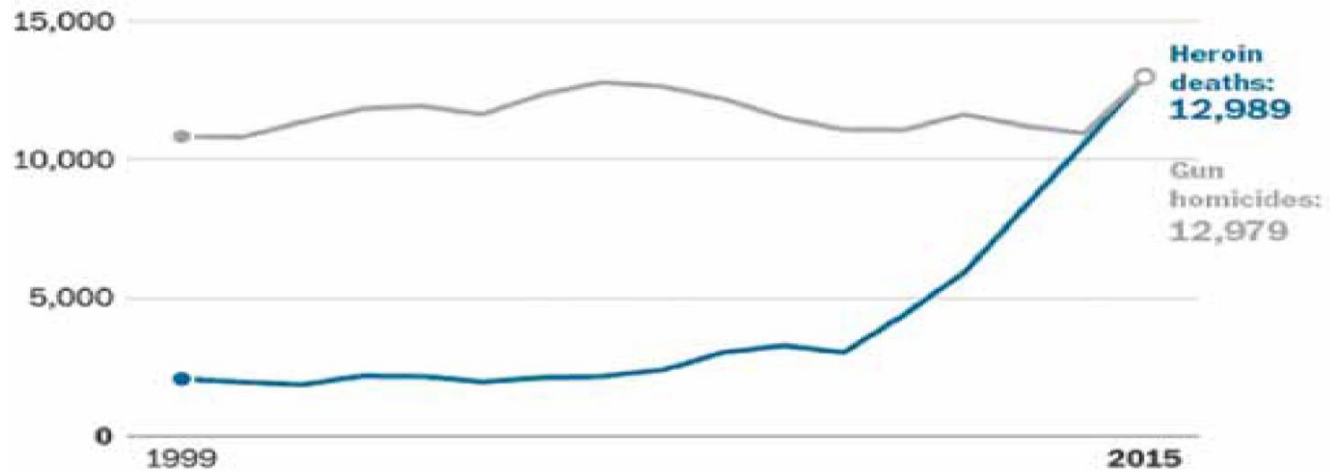
22. May continue with monitoring with continued medical necessity, with appropriate outcomes. (Evidence: Level I-II; Strength of Recommendation: Moderate)
23. Discontinue opioid therapy for lack of response, adverse consequences, and abuse with rehabilitation. (Evidence: Level III; Strength of Recommendation: Moderate)



Source: National Vital Statistics System, Mortality file.



Source: CDC WONDER



Source: CDC WONDER

Fig. 3. Heroin deaths surpass gun homicides in 2015.



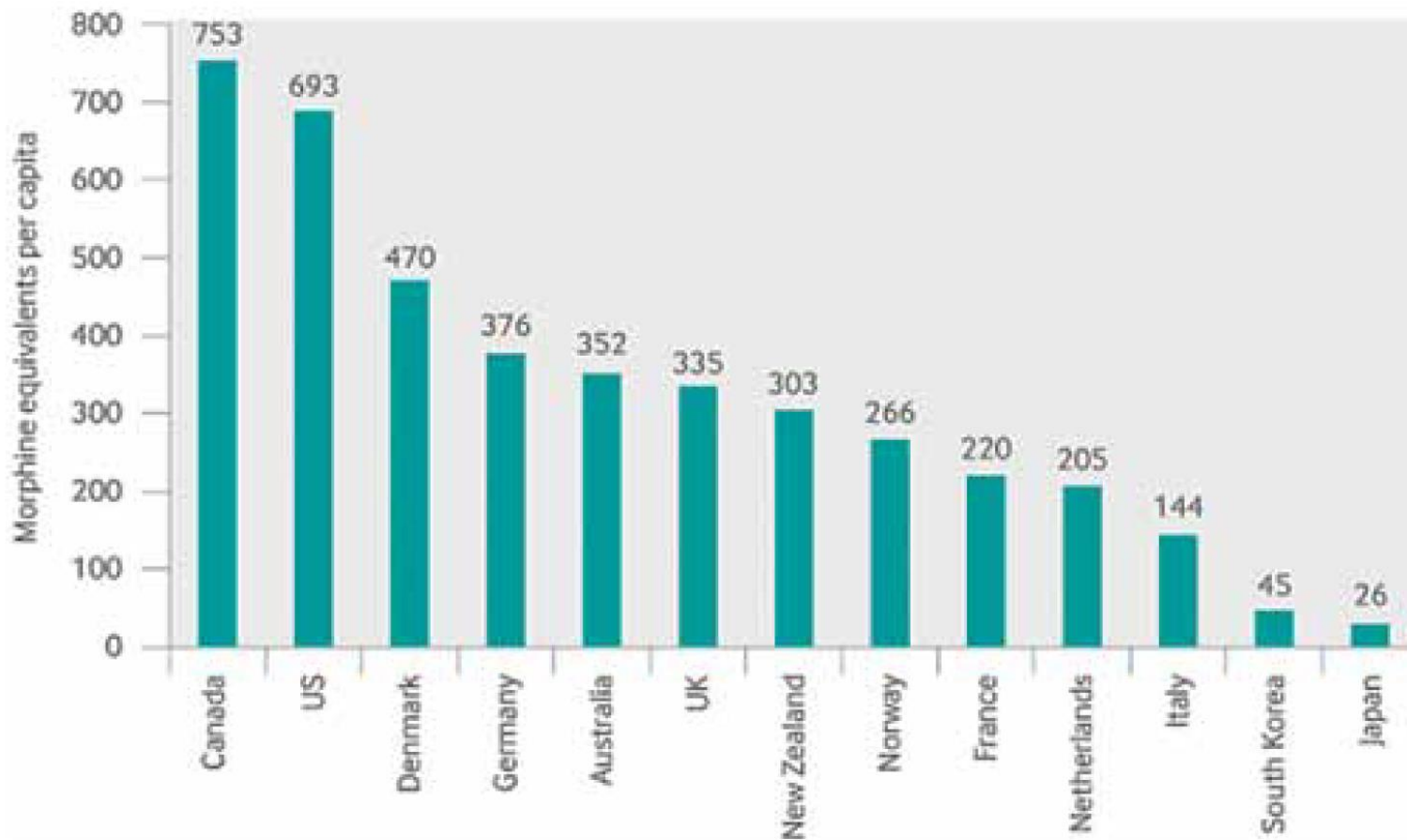


Fig. 5. International use of 6 powerful opioids—fentanyl, hydromorphone, methadone, morphine, oxycodone, and pethidine (meperidine)—during 2010 (www.painpolicy.wisc.edu)

CONCLUSIONS

- **Through 2019, Drug OD remains Large and Growing Public Health Crisis in USA**
- **Prescription Opioids: Formerly Driving the Crisis; Now Illicit Fentanyl; Cocaine; Heroin; Methamphetamines**
- **Leveling Off and Decline in Opioid Rx since 2012 Signals that “We Get It”**
- **Urgent Measures are Now Needed to Address Diverse, Growing List of Drug Classes and Types**