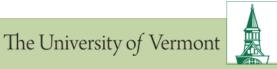
Swinging of the opioid pendulum

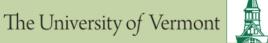
Carlos A. Pino, M.D. Associate Professor, Department of Anesthesiology Director, Center for Pain Medicine University of Vermont Medical Center Chair, Scientific/Educational Planning Committee American Society of Regional Anesthesia and Pain Medicine (ASRA)

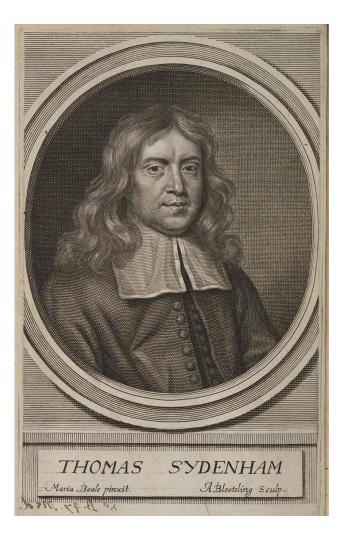


Chronic Pain

- Chronic pain affects 116 million American adults
- Pain costs \$635 billion/year in medical treatment and lost productivity

IOM. The National Academies Press, Washington DC 2011





"Of all the remedies it has pleased almighty God to give man to relieve his suffering, none is so universal and so efficacious as opium"

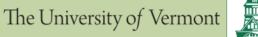
Thomas Sydenham (1624-1689)

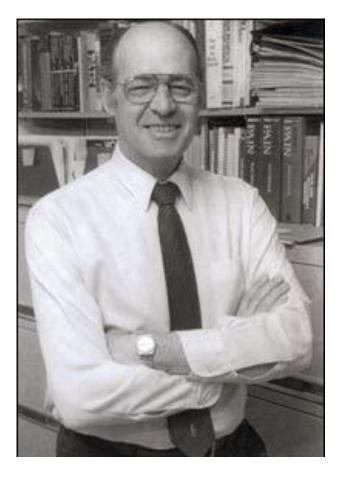


How it all started - 1986

- Series of 38 patients chronic non-cancer pain
- 66% < 20 MME/day
- 24 pts "acceptable" pain relief
- 14 pts "inadequate" pain relief
- No gains in employment/social functions
- No toxicity
- 2 pts- management "became a problem" (hx of addiction)

Portenoy RK, Foley KM. Pain 1986;25:171-186





"...these papers represent a phenomenon akin to 'breaking the sound barrier'. Our attitudes to narcotics are influenced by unfounded prejudice based on street addicts..."

Ronald Melzack - Psychologist Presidential address, 5th World Congress of the IASP (1988)



HEALTH HEALTH; Where It Hurts

By ROBERT STRAUSS Published: January 14, 2001

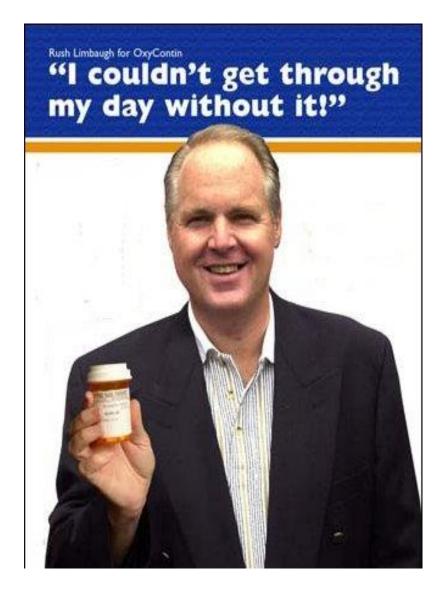
As of this week, health-care organizations will have to have a pain management system in place in order to have certification by the Joint Commission on Accreditation of Healthcare Organizations, a

"The idea that people become addicted to their painkillers is just wrong," she said. "Few people are being given that type of drug, and even if they are, it is not at those levels."

Carole Patterson, Director, Standard Interpretation Group, JCAHO

In essence, this means that pain has become the fifth vital sign -- added to temperature, blood pressure, pulse and respiration -- that will be checked regularly.

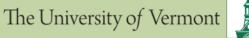








Purdue and 3 executives plead guilty to federal charges that they "misled doctors and patients". June 2007 Purdue - \$600 million Executives - \$34.5 Millions



The money and influence behind "Pain as the Fifth Vital Sign"

December 16, 2012, 11:46 pm



In 1998, the <u>Federation of State Medical Boards</u> released a recommended policy reassuring doctors that they wouldn't face regulatory action for prescribing even large amounts of narcotics, as long as it was in the course of medical treatment. In 2004 the group called on state medical boards to make under treatment of pain punishable for the first time.

That policy was drawn up with the help of several people with links to opioid makers, including David Haddox, a senior Purdue Pharma [manufacturer of OxyContin] executive then and now. The federation said it received nearly \$2 million from opioid makers since 1997....

A federation-published book outlining the opioid policy was funded by opioid makers including Purdue Pharma, Endo Health Solutions Inc. and others, with proceeds totaling \$280,000 going to the federation.

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 guid 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."

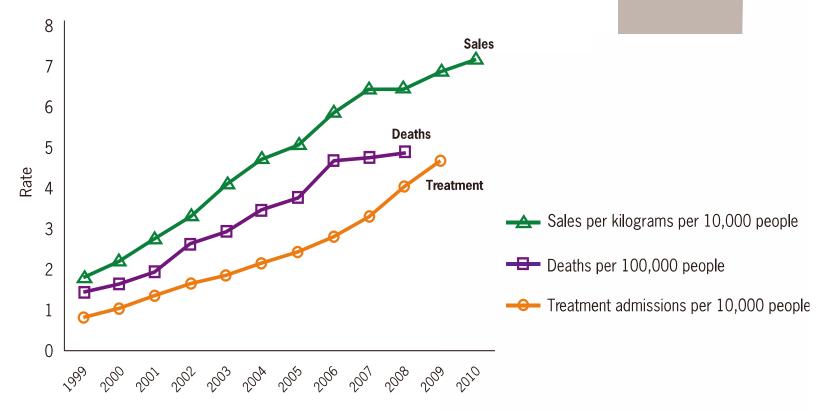


Before the current situation

- 1990-2001 56% increase death rate from poisoning
- 51% Narcotics and "psychodysleptics"
 - 50% "other Narcotics (codeine, morphine, etc)
 - 0 8% Heroin
 - o 5% Benzodiazepines
 - 5% Methadone

MMWR, March 26, 2004;53(11)233-8

Rates of prescription painkiller sales, deaths and substance abuse treatment admissions (1999-2010)

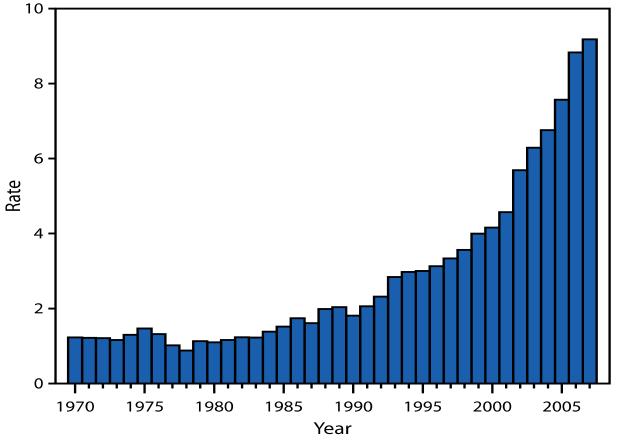


SOURCES: National Vital Statistics System, 1999-2008; Automation of Reports and Consolidated Orders System (ARCOS) of the Drug Enforcement Administration (DEA), 1999-2010; Treatment Episode Data Set, 1999-2009

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Prescription Drug Overdoses — a U.S. Epidemic

FIGURE 1. Rate* of unintentional drug overdose deaths — United States, 1970–2007

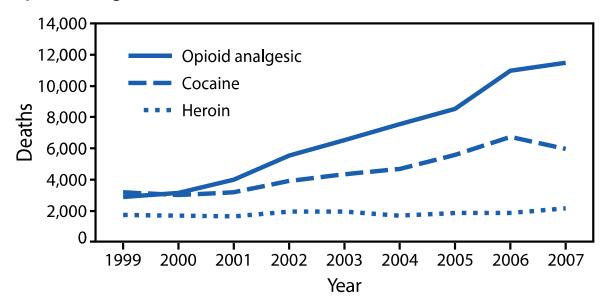


Source: National Vital Statistics System. Available at http://www.cdc.gov/nchs/ nvss.htm.

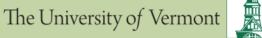
* Per 100,000 population.

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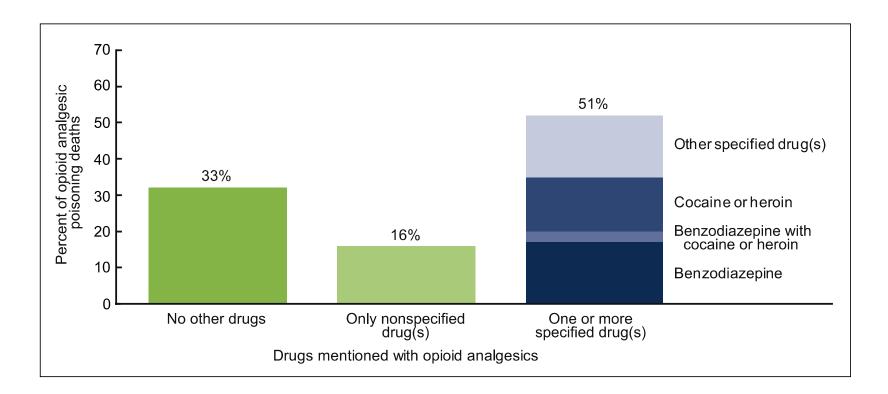
FIGURE 2. Number of unintentional drug overdose deaths involving opioid analgesics, cocaine, and heroin — United States, 1999–2007



Source: National Vital Statistics System. Multiple cause of death dataset. Available at http://www.cdc.gov/nchs/nvss.htm.



Multiple Drugs



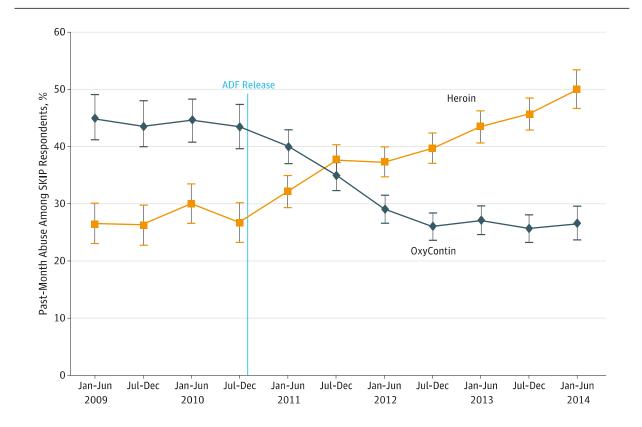
Warner M, et al. NCHS data brief;22:2009

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Is the opioid/narcotic epidemic responsible for the heroin epidemic?



At first sight...



Cicero TJ et al. JAMA Psychiatry. 2015;72(5):424-429

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Illicit Drug Use Disorder

- 2013 27 million individuals > age 12 (10%)
- 500,000 dependent/abused heroin
- Heroin abused increased (since 2002):
 - \odot 138.9% in Non-medical users of opioids since 2002
 - o 100% in Non-medical users stimulants/tranquilizers/sedatives
 - \circ 87% in users of cocaine
 - \circ 57% in binge drinkers
 - 45% in marijuana users

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MMWR 2015;314:1468-78
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Non-medical users of opioids

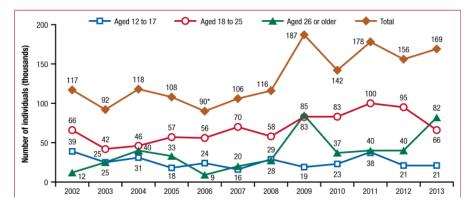
• 3.6% initiated heroin use within 5 years of starting opioids

Muhuri et al CBHSQ Data Review 2013

• 4.2% initiated heroin within the prior year (2011-13) Jones CM. Drug Alcohol Depend 2013;132:95-100



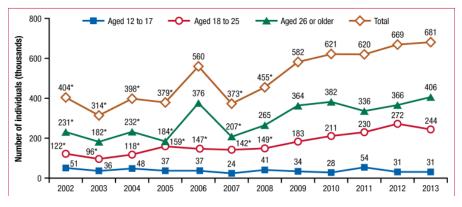
Figure 2. Past year initiation of heroin among individuals aged 12 or older, by age group: 2002 to 2013



*Difference between this estimate and the 2013 estimate is statistically significant at the .05 level.

Source: SAMHSA, CBHSQ, National Surveys on Drug Use and Health (NSDUHs), 2002 to 2005, 2006 to 2010 (revised March 2012), and 2011 to 2013.

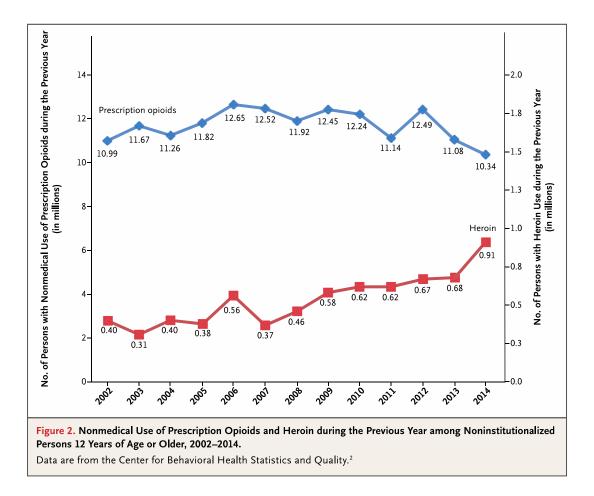
Figure 4. Past year heroin use among individuals aged 12 or older, by age group: 2002 to 2013



*Difference between this estimate and the 2013 estimate is statistically significant at the .05 level.

Source: SAMHSA, CBHSQ, National Surveys on Drug Use and Health (NSDUHs), 2002 to 2005, 2006 to 2010 (revised March 2012). and 2011 to 2013.

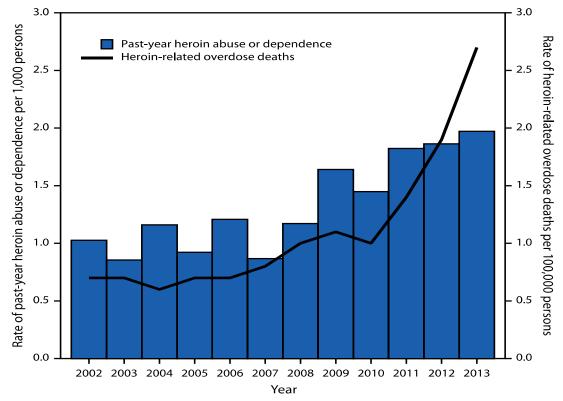




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Heroin Abuse & Deaths

FIGURE 2. Rates of past-year heroin abuse or dependence* and heroin-related overdose deaths — United States, 2002–2013



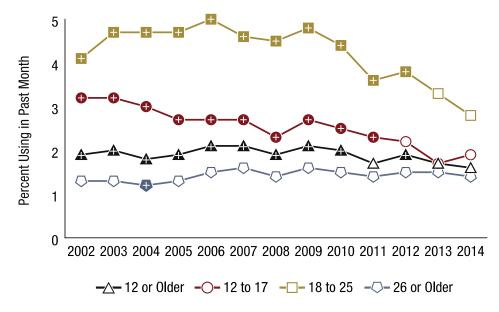
^{*} Past-year heroin abuse or dependence is based on diagnostic criteria contained in the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition*.

MMWR, July 10, 2015;64(26):719-25

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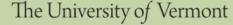
Decrease in non-medical use of pain relievers

Figure 6. Past Month Nonmedical Use of Pain Relievers among People Aged 12 or Older, by Age Group: Percentages, 2002-2014



+ Difference between this estimate and the 2014 estimate is statistically significant at the .05 level.

2014 National Survey on Drug Use and Health, SAMHSA



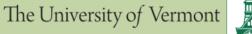
In summary

- Yes, we have an opioid/narcotic epidemic
- Yes, we have a heroin epidemic
- No clear causality between one and the other
- Increase risk of death with elevated doses of opioids
- No clear data on what strategies have worked...
 - \circ VPMS is a good idea decreases doctor shopping
 - Screening aberrant behavior
 - Surveillance (F/U; pill counts; urine screens)
 - Education medical community (MD, NP, PAs)

Where have we failed...

Addiction treatment

- Illicit Substance abuser
- \circ Pts who become secondary abusers
- Public education (TV, social media, radio...)
 - Dangers of opioids & heroin
 - \circ Realistic expectations
- Sterotyping chronic pain patients



Painkillers, NFL's other big problem



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Gregg Easterbrook

May 28, 2014

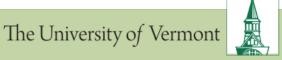
Editor's note: A group of former players has filed suit against the NFL, alleging the league's clubs pushed them to use painkillers without disclosing the risks of addiction. The new book "The King of Sports: Football's Impact on America," by ESPN.com columnist Gregg Easterbrook, contains a lengthy section on painkillers and the NFL.



AUTHOR INTERVIEWS

Anonymous Football Player Details Fear Of Health Risks In 'NFL Confidential'

Updated January 10, 2016 · 3:52 PM ET Published January 8, 2016 · 4:31 PM ET



Thank you



Harms from opioids

• Risk of overdose (adjusted hazard ratio)

- Any OD event HR 5.2 (CI, 2.1 to 12.5)
- Serious OD event HR 8.4 (CI, 2.5 to 28)
- Risk related to doses:
 - MED 1 19 mg/d
 - 0 MED 20-49 mg/d
 - \circ MED > 100 mg/d

1 (reference) HR 1.44 (CI, 0.57 to 3.62) HR 8.87 (CI, 3.99 to 19.72)

Chou R, Turner JA et al. Intern Med 2015;162:276-86.

