



Prescription Drug Abuse

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J + P
PHARMACY



HAPPY
HOUR
5-7 p.m.



SIPRESS





Pain

An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

International Association for the Treatment of Pain



Pain

- Acute pain: Pain < 3 months
- Chronic pain: Pain > 3 months

Poppy plant





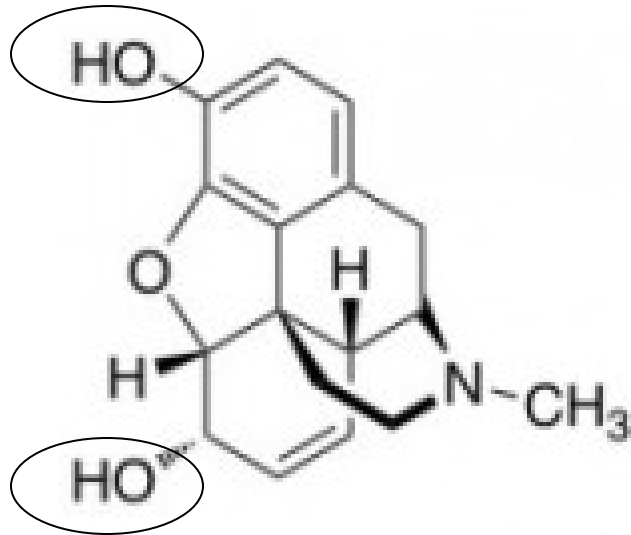




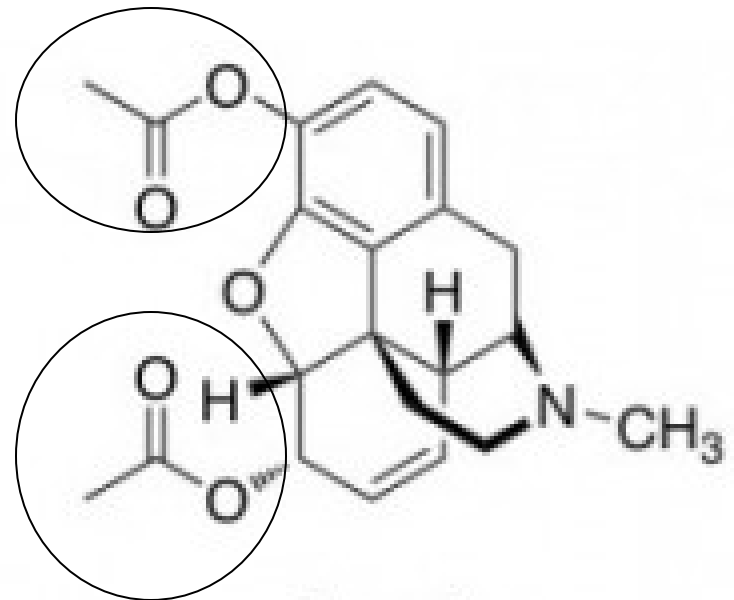
Common Opioids

- Morphine
- Oxycodone
 - OxyContin
 - Percocet
- Hydrocodone
 - Vicodin
 - Zohydro
- Dilaudid
- fentanyl

Morphine and heroin



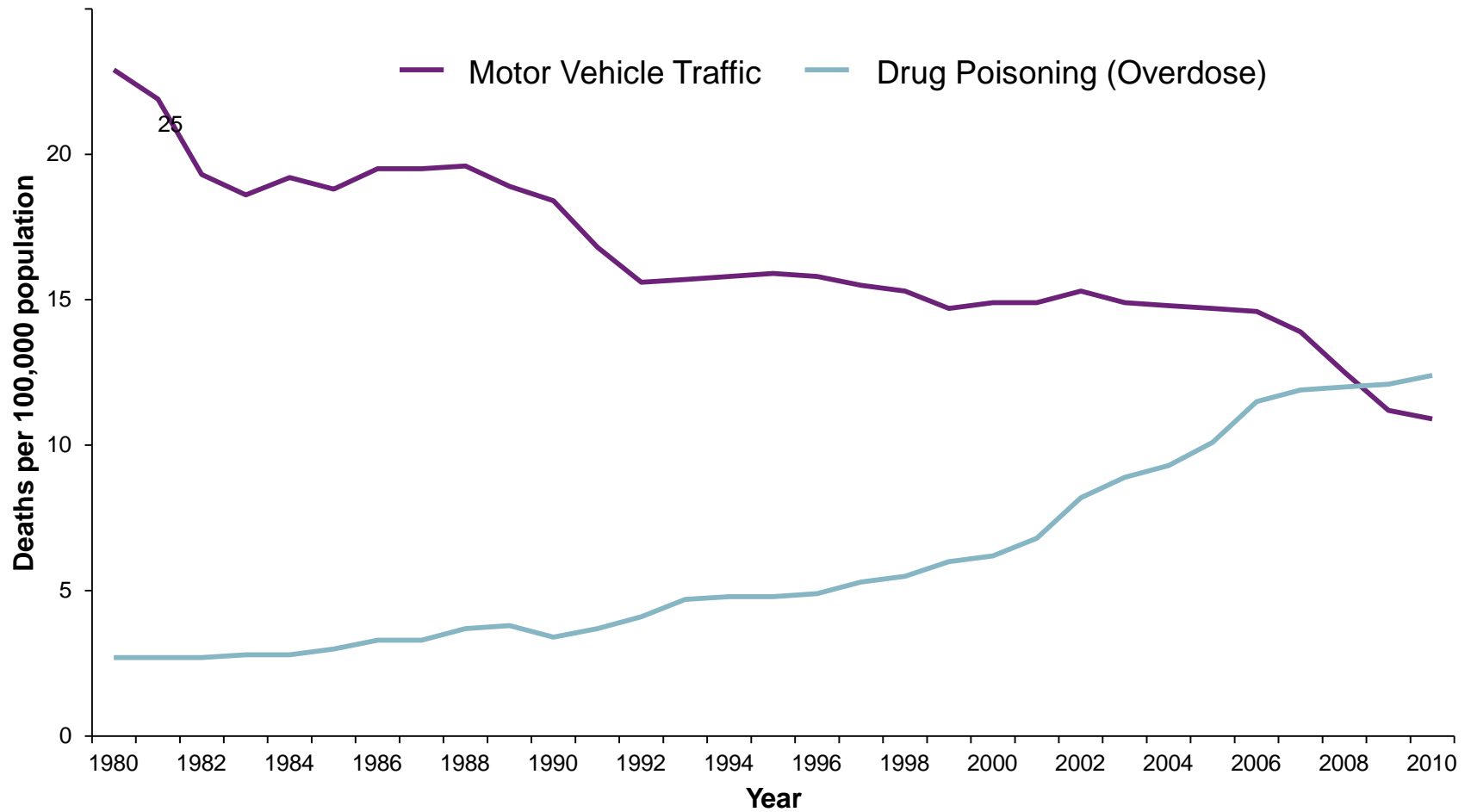
morphine



heroin



Drug overdose death rates continue to increase US, 1980-2010

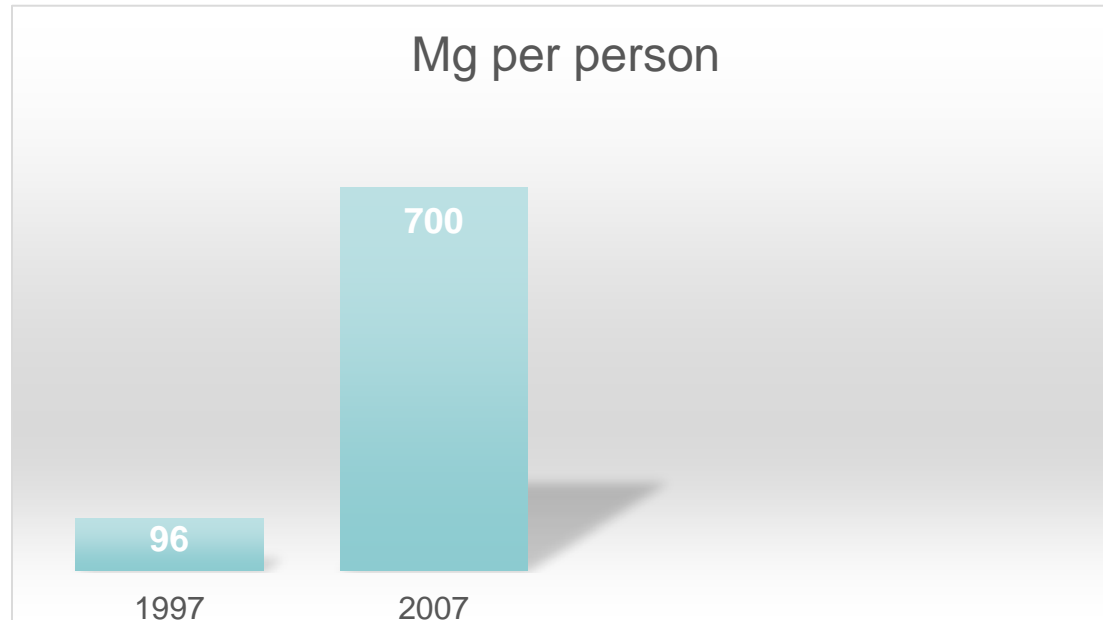




Opioid increase

Drug distribution through the pharmaceutical supply chain was the equivalent of 96 mg of morphine per person in 1997

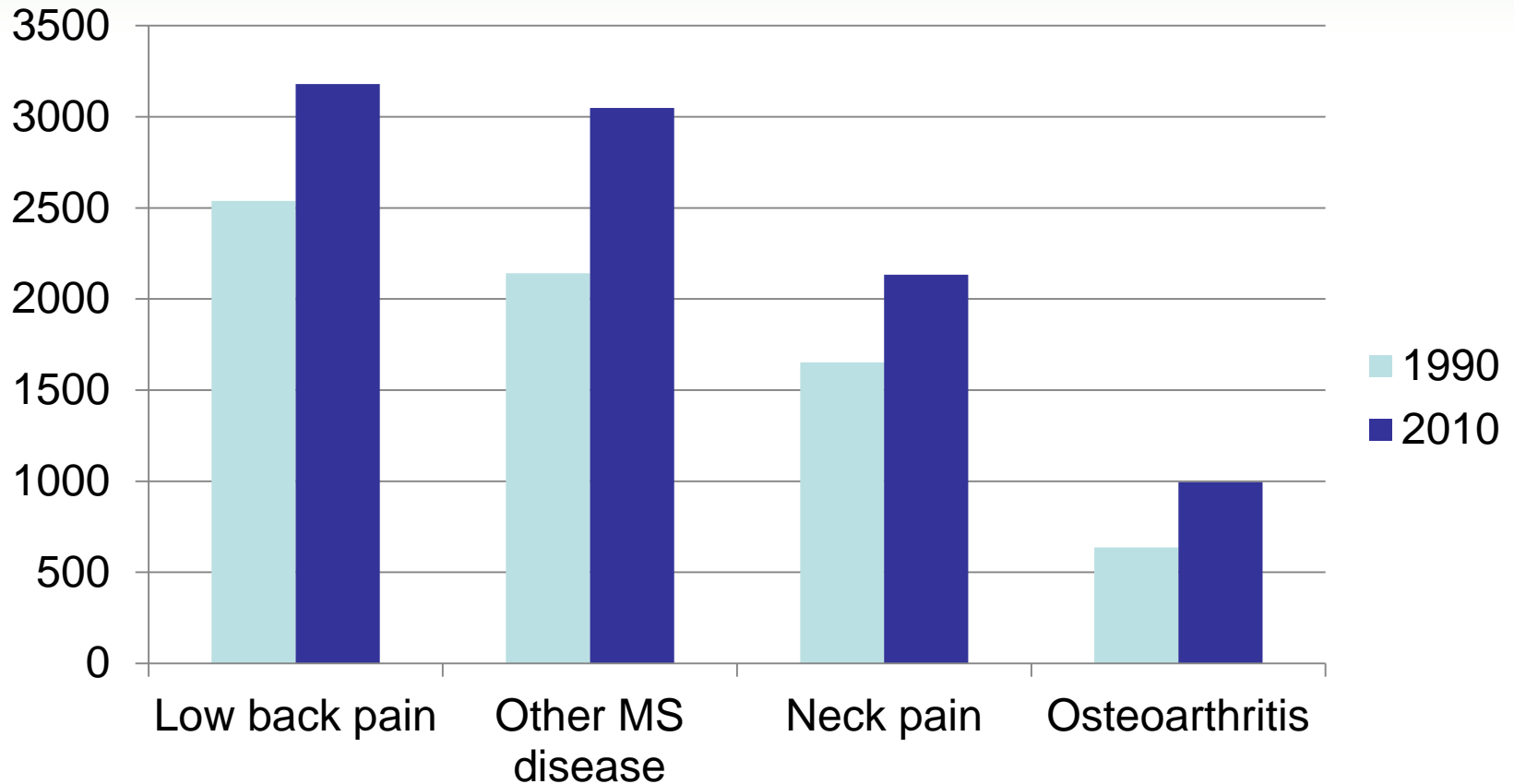
and approximately 700 mg per person in 2007, an increase of >600%.





The State of US Health

Years lived with disability (in thousands)



Murray, C. (2013). The state of US health, 1990-2010: burden of diseases, injuries, and risk factors. *JAMA : The Journal of the American Medical Association*, 310(6), 591-608.



Institute of Medicine

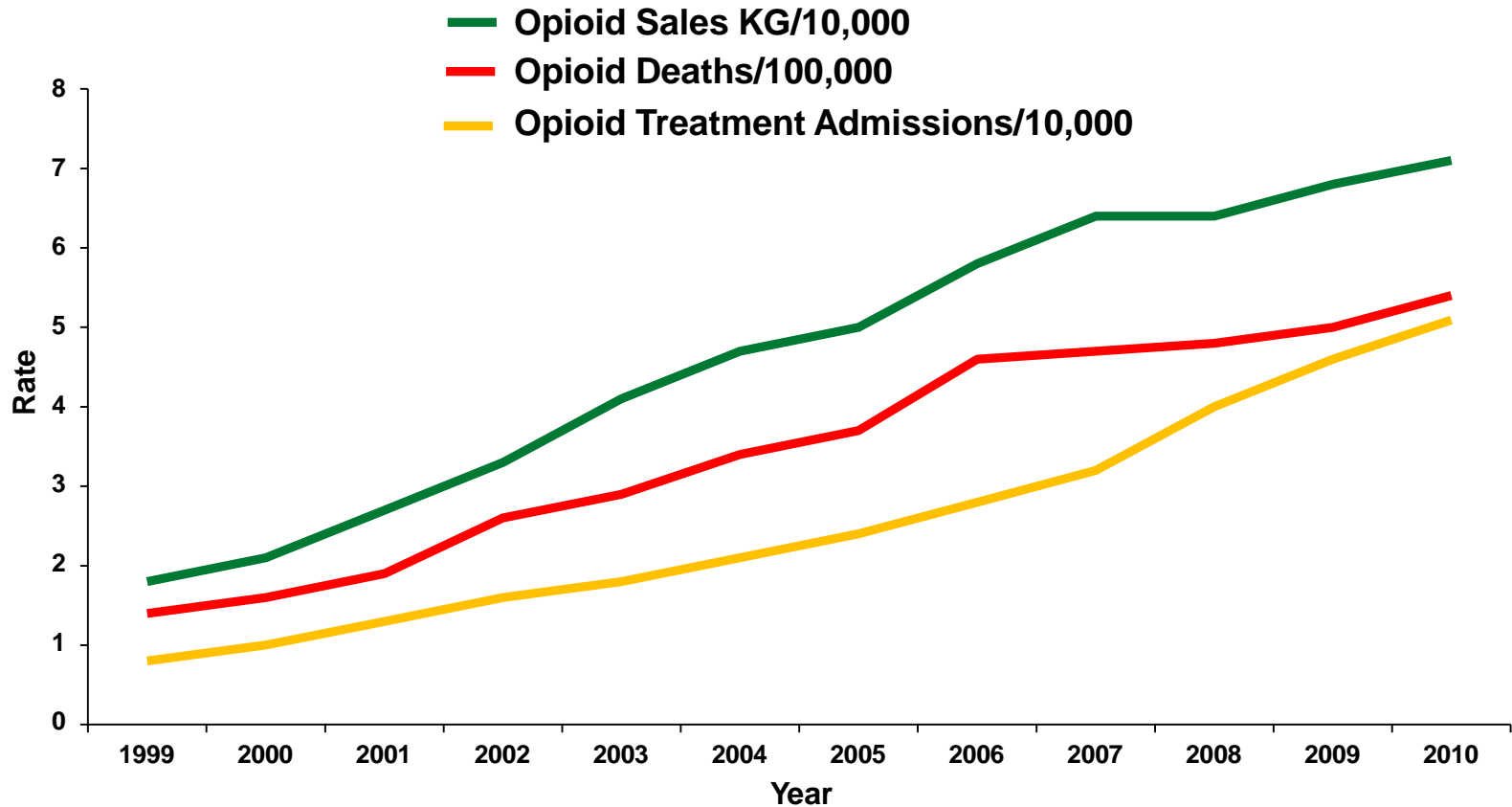
Relieving Pain in America 2011

“Pain affects millions of Americans; contributes greatly to national rates of morbidity, mortality, and disability; **and is rising in prevalence.**”

IOM (Institute of Medicine). 2011. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Washington, DC: The National Academies Press.

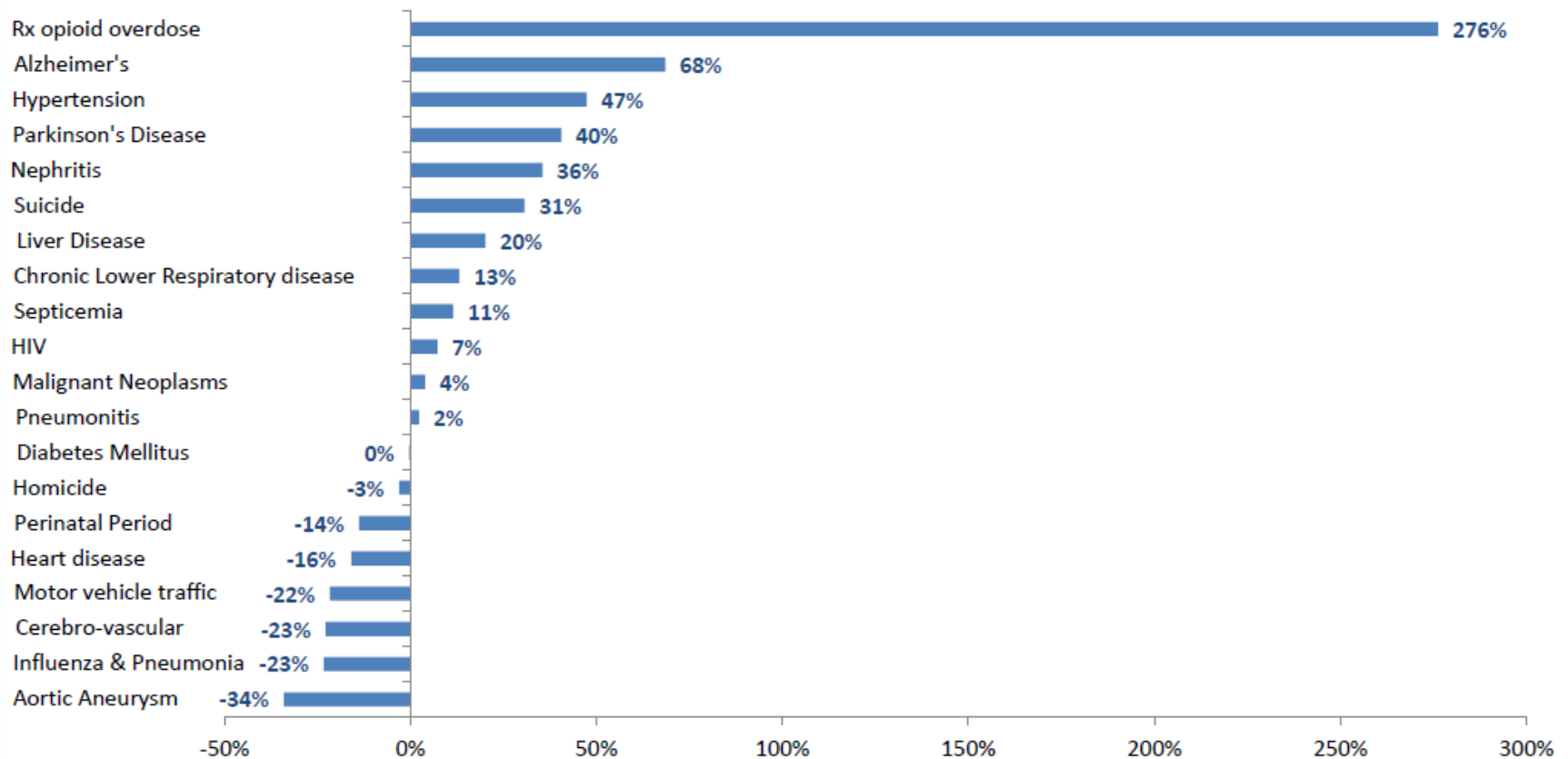


Rates of opioid overdose deaths, sales and treatment admissions, US, 1999-2010



Opioid pain reliever-related overdose deaths increasing at a faster rate than deaths from any major cause

% change in number of deaths, United States, 2000-2010





How did we get here?

- A number of organizations said that we were not treating pain well enough.
- APS and AAPM led this declaration
- Joint Commission: Pain is the 5th vital sign
- Russell Portenoy
- Purdue Pharmaceuticals
 - Purdue video
- State declarations and laws
- Opioid side effects
- Poor training in pain management
- Poor training in addiction



"Ask your doctor if taking a pill to solve all your problems is right for you."



What is the deal with the opioids?

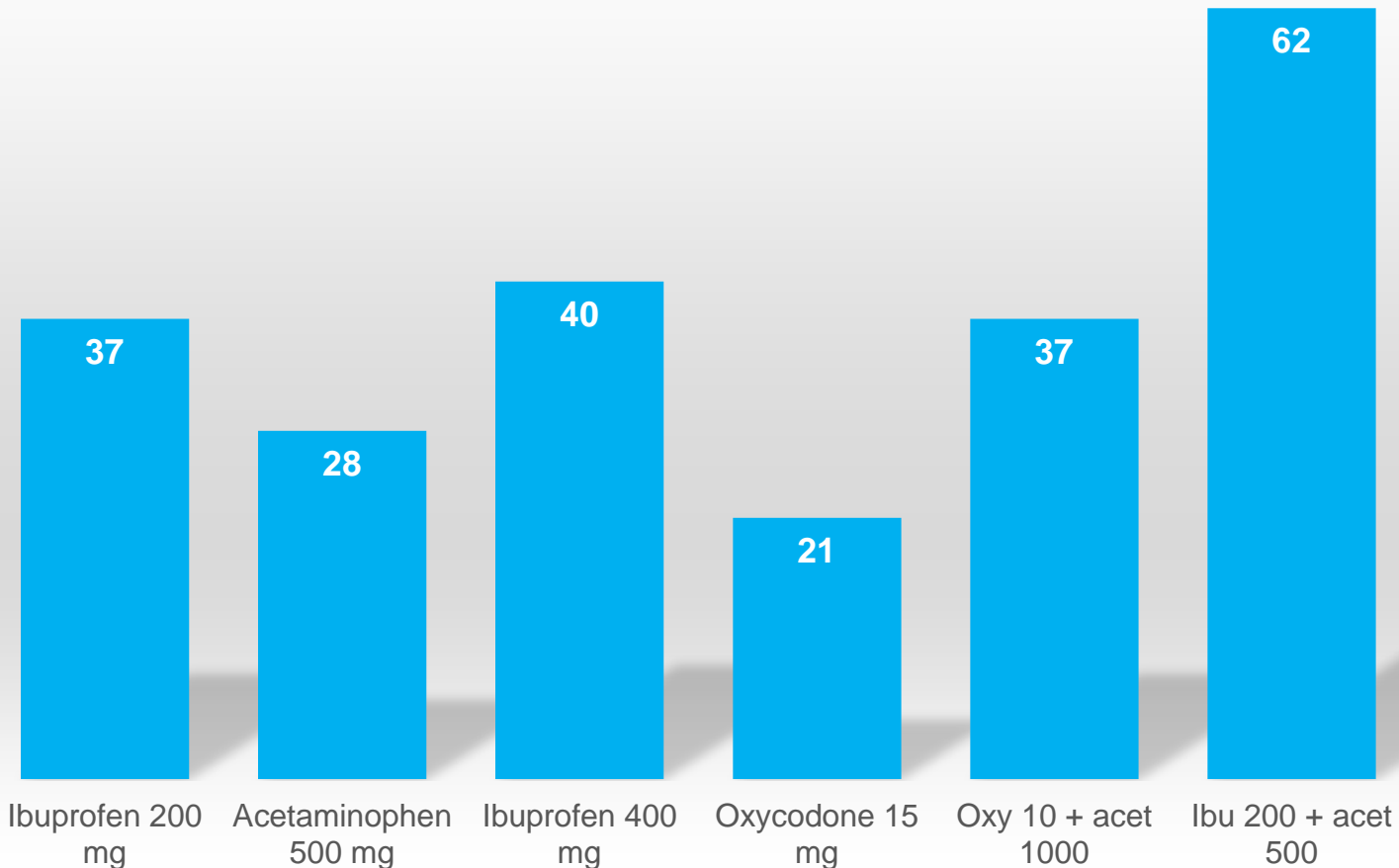
- They stimulate dopamine just like all other drugs of addiction.
- They affect your brain more than they affect the pain.
- They cause more brain changes (damage) than other drugs.
 - The sink-hole for all drugs of abuse



Efficacy of pain mediations

Acute pain

Percent with 50% pain relief





Renal colic

A 2005 Cochran review concluded:

NSAID medications and opioids have equal effectiveness in treatment of acute renal colic...

but opioids have **more** side-effects.



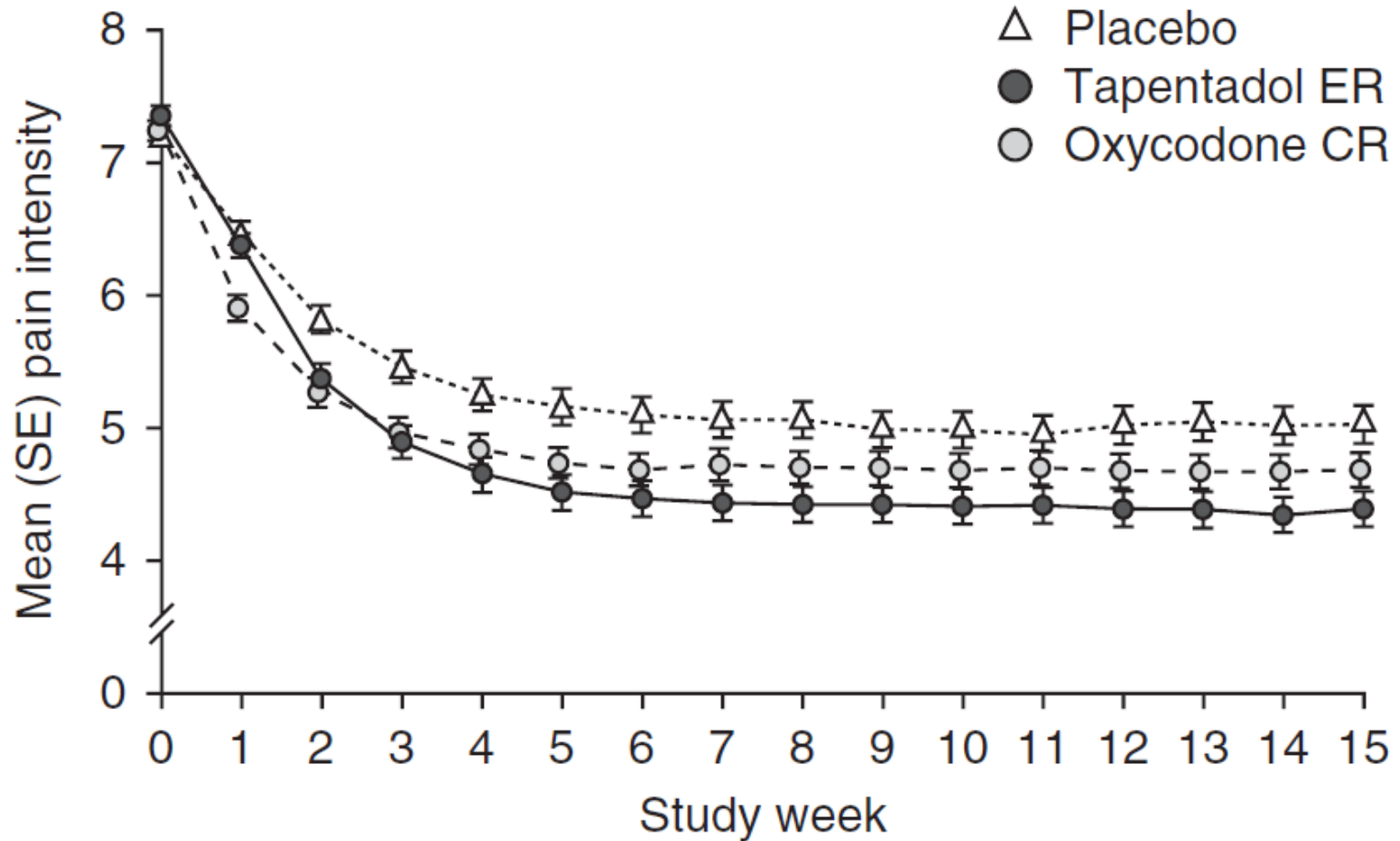
Safety of ibuprofen and acetaminophen

“These analyses of published reports of adverse events for ibuprofen and paracetamol taken at recommended OTC doses for ≤ 7 days show that there are no statistically significant differences in the reports of adverse events in any of the major organ systems, irrespective of the type of adverse event reported or the overall frequency.”

Rainsford KD, Roberts SC, Brown S. Ibuprofen and paracetamol: relative safety in non-prescription dosages. *J Pharm Pharmacol*. 1997;49(4):345-376. <http://www.ncbi.nlm.nih.gov/pubmed/9232533>.



Tapentadol study





Acute prescriptions

- Approximately 30% of ALL ER visits end with a prescription for a opioid.
- Approximately 60% of patients going to the ER with back pain will get an opioid prescription.
 - Primary care doctors give opioids to about 35% of their patients presenting with back pain.
- Pain is the most common reason for people to go to the ER or to their primary care doctor.



One opioid prescription after an injury:

- Increases medical costs by 30%
- Increases the risk of surgery by 33%
- Doubles the risk of being disabled at one year

Webster BS, Verma SK, Gatchel RJ. Relationship between early opioid prescribing for acute occupational low back pain and disability duration, medical costs, subsequent surgery and late opioid use. *Spine (Phila Pa 1976)*. 2007;32(19):2127-2132. doi:10.1097/BRS.0b013e318145a731.

Franklin GM, Stover BD, Turner J a, Fulton-Kehoe D, Wickizer TM. Early opioid prescription and subsequent disability among workers with back injuries: the Disability Risk Identification Study Cohort. *Spine (Phila Pa 1976)*. 2008;33(2):199-204. doi:10.1097/BRS.0b013e318160455c.



Opioid side effects

- Mentally impairing
- Delay recovery
- Increase medical costs
- Opioid hyperalgesia
- Double the chance of disability
- Increase falls (and fractures)
- Cardiac. GI.
- They are great at treating depression and anxiety – temporarily
- Withdrawal symptoms
- Addiction



Brain changes

“A quick and robust return to pre-opioid volume levels would suggest that opioid effects are transient, and easily negated by simple cessation of the drug. In our analyses, however, we found no evidence that morphine-induced volumetric changes reverse after opioid cessation.”

Younger JW, Chu LF, D’Arcy NT, Trott KE, Jastrzab LE, Mackey SC. Prescription opioid analgesics rapidly change the human brain. *Pain*. 2011;152(8):1803-1810. doi:10.1016/j.pain.2011.03.028.



Who is at risk of addiction from these medications?

- Family history
- Personal history of addiction
- Mental health diagnosis
- Adverse childhood events
- Stress
- Prolonged prescription
- Diagnosis of:
 - Back pain
 - Headaches
 - Fibromyalgia

Does one of these apply to you?

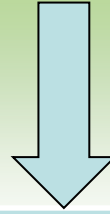


Treatment

- Abstinence based treatment
- Methadone
- Buprenorphine (Suboxone)
- Naltrexone (Vivitrol)



Prescriber behavior



Initial use

Extra use

Abuse

Addiction

Criminal Activity

Overdose

Death

Education

Treatment

PDMP

Naloxone



Disconnect



Medical
Care

The diagram consists of two large, light blue arrows pointing away from each other. The left arrow points left and contains the text "Medical Care". The right arrow points right and contains the text "Public Health". The arrows are positioned horizontally, with a significant gap between them, visually representing a disconnect between the two fields.

Public
Health



Policy ideas

- Mandate prescriber education about pain and addiction for all who prescribe opioids
- 3 day limit on acute opioid prescriptions
- Everyone on chronic opioid therapy should wean off every 2 years
- All primary care doctors who prescribe should be certified to prescribe buprenorphine
- Prescribe buprenorphine through health departments (without limit)
- Require universal prevention measures in schools



Summary

- Opioids are not “powerful painkillers”.
 - Ibuprofen is better.
- Opioids have many side effects that are much worse than NSAIDs and acetaminophen
- Opioids cause brain damage
- By reducing the prescribing of opioids, we improve pain treatment
- Most people on chronic opioid therapy do better when weaned off
- Addiction is a disease and most people with addiction to opioids need methadone or buprenorphine.



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