Prescription Drug Abuse

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PHARMACY

J + P

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
  – Percociet
• Hydrocodone
  – Vicodin
  – Zohydro
• Dilaudid
• fentanyl
Morphine and heroin

morphine

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

Deaths per 100,000 population

- Motor Vehicle Traffic
- Drug Poisoning (Overdose)

Year

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)

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

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

- Opioid Sales KG/10,000
- Opioid Deaths/100,000
- Opioid Treatment Admissions/10,000
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

- Rx opioid overdose: 276%
- Alzheimer's: 68%
- Hypertension: 47%
- Parkinson's Disease: 40%
- Nephritis: 36%
- Suicide: 31%
- Liver Disease: 20%
- Chronic Lower Respiratory disease: 13%
- Septicemia: 11%
- HIV: 7%
- Malignant Neoplasms: 4%
- Pneumonitis: 2%
- Diabetes Mellitus: 0%
- Homicide: -3%
- Perinatal Period: -14%
- Heart disease: -16%
- Motor vehicle traffic: -22%
- Cerebro-vascular: -23%
- Influenza & Pneumonia: -23%
- Aortic Aneurysm: -34%

WISQARS, 2000 and 2010; CDC/NCHS, National Vital Statistics System
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 medications
Acute pain

Percent with 50% pain relief

- Ibuprofen 200 mg: 37%
- Acetaminophen 500 mg: 28%
- Ibuprofen 400 mg: 40%
- Oxycodone 15 mg: 21%
- Oxy 10 + acet 1000: 37%
- Ibu 200 + acet 500: 62%
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.”

Tapentadol study

![Graph showing the mean (SE) pain intensity over study weeks for Placebo, Tapentadol ER, and Oxycodone CR.](chart.png)
Acute prescriptions

- Approximately 30% of ALL ER visits end with a prescription for an 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


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.”

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

making our world safer
Disconnect

Medical Care

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.
References


References (cont)


