

Medication Management for Pain: Opiate Analgesics and Safe Prescribing

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Conflict of Interest Disclosure Statement

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Objectives

1. To recognize the differences between opioid tolerance, dependence, addiction, and pseudo-addiction.
2. To educate regarding safer opioid prescribing.
3. To understand the concept of “equi-analgesic dosing” and the pitfalls regarding switching from one opioid to another opioid.

Pain is a Major Public Health Issue

- Chronic pain affects an estimated 100 million American adults
- Chronic pain costs up to \$635 billion per year in medical treatment and lost productivity
- Compared to people without chronic pain:
 - People with chronic pain have roughly 3 times the rates of depression and anxiety disorders
 - People with chronic pain have at least two times the risk of completing suicide



Office of The Army Surgeon General

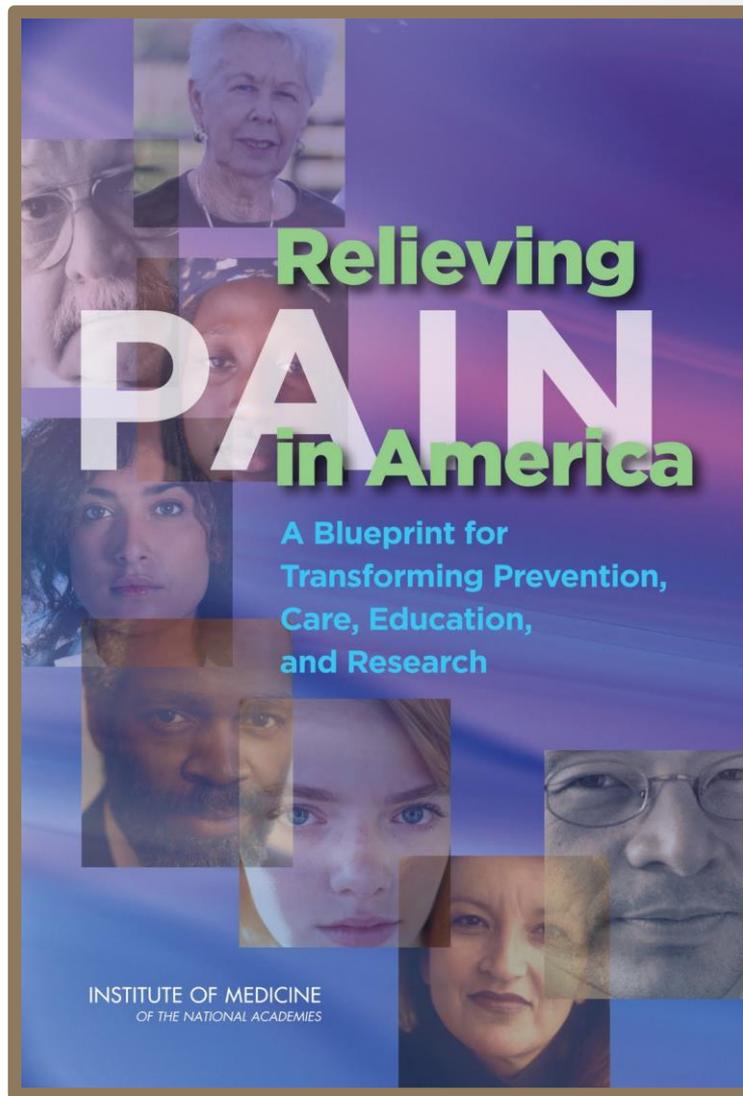
Pain Management Task Force

Final Report
May 2010

Providing a Standardized DoD and VHA Vision and Approach to Pain Management to Optimize the Care for Warriors and their Families



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Prescription Opioid Abuse is a Major Public Health Issue

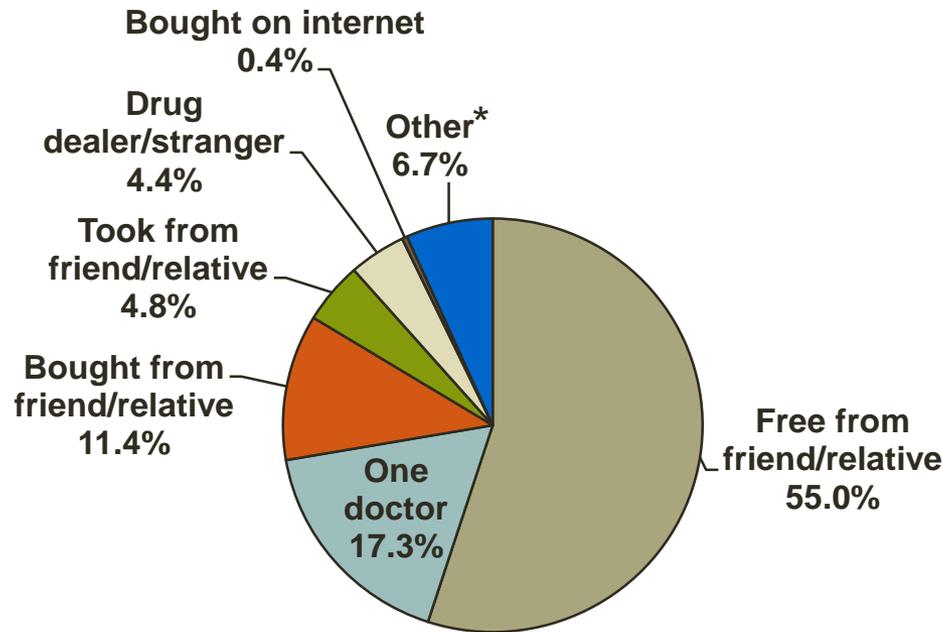
- 2010 National Survey on Drug Use and Health (NSDUH):
 - 35 million Americans (13.7%) \geq 12 years old had used a pain reliever non-medically at least once in their lifetimes (18% increase from 2002)
 - 12.2 million Americans (4.8%) \geq 12 years old had used a pain reliever non-medically at least once in the past year

What Are The Most Common Sources of Misused Drugs? (NSDUH 2010)

- 1- Buying from drug dealer
- 2- Internet Sales
- 3- Obtaining from Friend/Relative
- 4- One Doctor

Sources of Misused Drugs, NSDUH 2010

Source of Pain Relievers for Most Recent Nonmedical Use, Past Year, Users 12 or Older



*Other includes "Wrote Fake Prescription"; "Stole from Doctor's Office/Clinic/Hospital/Pharmacy"; and "Some Other Way"

Opioid Prescribing

Balance in Opioid Prescribing

Opposing Dilemmas in Treatment of Chronic Nonmalignant Pain

- Provide RELIEF from suffering and avoid UNDERTREATMENT of Pain

AND

- Understand the POTENTIAL for Drug Abuse and Diversion

= **BALANCE**

Hippocrates: “Produce good for the patient and protect the patient from harm”.

Definitions Commonly Misused with Patients Receiving Opiates

- Tolerance
- Physical Dependence
- Addiction
- Pseudoaddiction
- “Real Pain”

Weissman, Haddox, Pain, 1989, 36, 363-366

Fishbain, et al, Clin J Pain, 1992, 8, 77-85

“Physicians must now accept that it is not considered
LEGAL, ETHICAL, or GOOD MEDICAL PRACTICE to
withhold opioids from patients whose lives could be
IMPROVED with treatment”

Ballantyne 2006

Acceptance of Chronic Pain Treatment

ACCEPTED

Malignant Pain Treatment

GROWING CONSENSUS

Chronic Non-Malignant Pain

CONTROVERSIAL

Chronic Non-Malignant Pain in setting of SUD/Addictions

The Role of Opioid in Pain Management

Acute vs. Chronic Pain

- Chronic pain is pain that lasts longer than expected healing time of an injury, or that is associated with a chronic illness
 - > 3 months for chronic pain definition
 - Chronic pain may never go away
 - Often neuropathic in nature
 - Not useful as an alarm
 - Associated with depression, anger, anxiety
 - Best treated with a comprehensive approach

The Role of Opioids in Managing Acute Pain

- For **Acute Pain**:
 - Extremely useful
 - May need very high doses at first, but can usually taper and stop as cause heals
 - Along with anti-inflammatories (ibuprofen, aspirin, naproxen), one of the mainstays of treatment
 - Occasionally other medications can help

The Role of Opioids in Managing Chronic Pain

- For **Chronic Pain**:
 - Sometimes useful; sometimes harmful
 - Some people need high doses for long periods of time; others never need opioids at all.
 - Many other medications (SNRIs, various neuropathic agents, topical and transdermal) often used and can be very helpful
 - Even opioid antagonists are successfully being used to treat many causes of neuropathic pain (ie. low dose naltrexone)

3 Important Questions

1. What is addiction?
2. What are the risks and benefits of long term opioid therapy in pain management?
3. What are best practices in effective, long-term pain management?

What Are Some Characteristics of Addiction?

A- Impaired Control over drug use/ Compulsive use

B- Continued use despite harm

C- Physical withdrawal symptoms

D- A,B Only

Definition of Addiction

- **Addiction:**
 - “A neurobehavioral syndrome with genetic and environmental influences that results in psychological dependence on the use of substances for their psychic effects. It is characterized by behaviors that include one or more of the following: impaired control over drug use; compulsive use; continued use despite harm; and, craving.”
 - “Physical dependence and tolerance...should not be considered addiction”

Understanding Addiction

- Not every individual exposed to a substance of abuse develops addiction.
- Addiction is the result of an interaction between genetic and environmental vulnerabilities.
- Addiction, like diabetes, is a medical illness with a behavioral component.
- As with diabetes, treatment focuses both on reducing vulnerability and changing behavior.

Prevalence of Addiction in Chronic Pain Patients

- Structured review of available studies of development of aberrant behavior/addiction in patients on opioids for chronic pain.
- 24 studies with 2,057 patients with rate of 3.27% for abuse/addiction.
- Rate of abuse/addiction in patients with no past or current SUD was 0.19%

Aberrant Behavior

Behavior that suggests prescription misuse, abuse, or addiction (SAMSHA TIP 54)

“Prescribing opioids will lead to abuse/addiction in a small percentage of chronic pain patients, but a larger percentage will demonstrate ADRBs and illicit drug use. These percentages appear to be much less if CPPs are preselected for the absence of a current or past history of alcohol/illicit drug use or abuse/addiction.”

Aberrant Behavior Prevalence

- 17 studies of 2,466 chronic pain patients found rate of 11.5% for aberrant behavior.
- For patients without SUD, rate was 0.59%.
- 5 studies (15,542 patients) by urine toxicology: 20.4% had no Rx opioid or an opioid not prescribed.
- 5 studies (1,965 patients): 14.5% had illicit drugs.

Higher Dose, Higher Risk

“Among patients receiving opioid prescriptions for pain, higher opioid doses were associated with increased risk of opioid overdose death.”

Higher Dose, Higher Risk

- **Use opioids for pain:**
 - 750 unintentional OD vs 154,684 controls
- **Total frequency of unintentional OD: 0.04%**
 - Unintentional OD for $\geq 100\text{mg/day}$ vs. $\leq 20\text{mg/day}$
 - Substance use disorder: HR 4.45, CI 2.46-8.37
 - Chronic pain: HR 7.18, CI 4.85-10.65
 - Acute pain: HR 6.64, CI 3.31-13.31
 - Cancer: HR 11.99, CI 4.42-32.56
 - No difference for short vs long acting pain medications

Hepatic and Renal Concerns

- Metabolized by the liver, excreted by the kidneys
 - Therefore, caution in hepatic and renal impairment

Short Acting (SA) Opioids

- **Duration of action: 2-4 hours (IV and PO)**
 - Oral onset is 20-30 minutes; peaks in 60-90 minutes
 - In contrast IV peaks in 10-15 minutes

Oral Long Acting (LA) Opioids (except methadone)

- **Morphine SR (s.a. MSContin) and Oxycodone SR (s.a. Oxycontin)**
 - Provide 8-12 hours of analgesia
 - Minimum dosing interval is q 8 hrs
 - Provide onset of analgesia within 2-3 hours of taking first dose
- **Oral long acting opioids *other than* methadone can be dose escalated every 24 hours**
 - Transdermal fentanyl only every 72 hours!

Common Starting Doses

	Adult >50kg; normal renal and liver function	Elderly or <i>moderate</i> renal or liver disease HALF DOSE (if you use at all)
Morphine PO	5 mg q4h prn	2.5 mg q4-6h
Oxycodone PO	5 mg q4h prn	2.5 mg q4-6h
Hydrocodone PO	5 mg q4h prn	2.5 mg q4-6h
Hydromorphone PO	1 mg q3-4h prn	0.5 mg q4-6h

Note: Fentanyl patch dosing not for opioid naïve patients

What Two Long-Acting Opioids Require Much Caution When using?

A- Duragesic Patch- NEVER give to opioid naïve patients

B- Methadone- VERY LONG half-life (> 24 hours),and high doses can also have cardiotoxicity

C- Both A and B

Opioid Conversions

1. Find Total 24 hour dose (of old regimen)

ex. 6 tabs x 5 mg oxycodone = 30 mg oxycodone/24 hr

2. Use ratio from opioid equivalence chart

30 mg oxycodone = 20 mg oxycodone

_____ _____
X mg morphine 30 mg morphine

$30 \text{ mg} \times (30)/20 = 45 \text{ mg morphine}/24 \text{ hour}$

Adjustments

- Would this give him BETTER pain control?
- NO!
- It is essentially the SAME dose-

Concept of Incomplete Cross Tolerance

- Each opioid Stimulates a different subset of mu receptors
- Hence each type of opiate has a different response
- Switching from one opioid to another may help patient with pain, and dose can decrease by 25-50%

Opiate-Induced Hyperalgesia

- Much more common than we think
- Seen in patients with dose escalations and increase in pain

Tramadol

(controlled in most states)

- Centrally acting analgesic
 - Acts as opioid (increased affinity for mu receptor)
 - Primary effect is thought to be via activation of descending inhibitory pain systems like SNRIs
- Approved for moderate to severe pain
 - Generally used with an NSAID in OA
- Dosage: 50-400mg
- NNT = 6
- Adverse effects:
 - somnolence and serotonin syndrome
 - Can be habituating

What are the Ethical Obligations?

- Healthcare providers are obligated:
 - ✓ To prevent, diagnose, and treat uncontrolled pain (beneficence)
 - ✓ To prevent, diagnose, and treat substance use disorders (non-maleficence)
 - ✓ To minimize risk and maximize benefits (justice)
 - ✓ To deliver patient centered care (autonomy)

Doing this is a tall order