Pain Management and the Opioid Epidemic
Where are we today

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More specifically…

- Where were we?
- Where we are now?
- How we got here (dispelling the myths)?
- Clarification of alternative facts

Objectives

1. Interpret current opioid usage and outcomes data
2. Evaluate facts and myths associated with opioid usage and mortality
3. Recognize at least 3 medical disorders of “epidemic proportion” other than opioid abuse that may involve addictive personality
4. Summarize pharmacist strategies to address the opioid epidemic and mitigate opioid risk

Pre / Post Test #1

Nonmedical use of opioid analgesics from early 2000 to the mid-2000's have…

A. increased approximatley 50%
B. decreased approximately 50%
C. remained the same
D. have fluctuated up and down

Pre / Post Test #2

Which of the following is true regarding morphine equivalent daily equivalent (MEDD) doses?

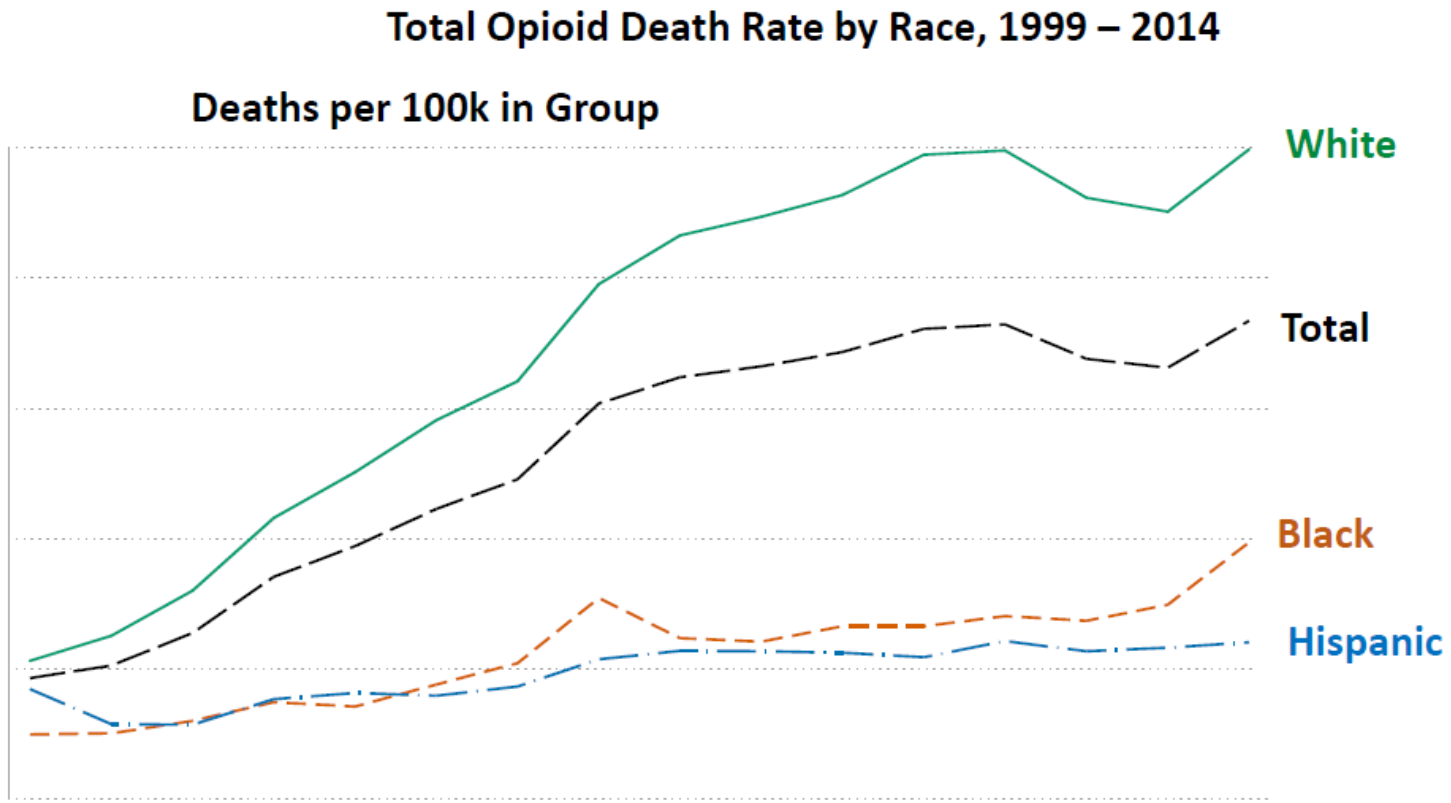
A. There is general consensus of what constitutes an MEDD
B. The Internet posted CDC calculator should be used to provide accurate morphine equivalents for methadone conversions
C. Online opioid conversion calculators by states and federal agencies are generally consistent in terms of MEDD
D. There is no general consensus on what constitutes an MEDD

Two Types of Opioid Consumers

1. Opioid abuse disorder
   - Heroin
   - Carfentanil
   - RX opioids
   - Other
2. Legitimate opioid consumers (RX)
   - Long-term opioid therapy v. short-term acute pain
3. A combination of #1 and #2 above

Myths about Opioid Addiction in the U.S.

- Opioid Abuse is dominated by the African-American community
- Increased opioid RX's are the cause of overdose deaths
- Addiction starts with teens using opioids



Krane E. using National Vital Statistics System of the CDC and Prevention Multiple Cause of Death files for 1999-2014. Available at Pacing Event-ADE Deep Dive Opioid Use. Partnership for Patients and Communities, US Dept. HHS. https://www.healthcarecommunities.org/ResourceCenter/PartnershipforPatientsLibrary.aspx?CategoryId=836036&EntryId=110138

US Prescription Opioid-Related Deaths

- Approximately 16,000 deaths in 2013 from Rx opioids
- Approximately 9,000 deaths in 2013 from heroin
- According to the CDC:
  - ~85% unintentional ≈ 13,600 deaths
  - ~37 unintentional deaths/day
  - ~1 unintentional death every 40 minutes
- Children/infant deaths
  - ~3,300 in 2014 (down from 5,187 in 2004)

- Centers for Disease Control and Prevention. MMWR Morb Mortal Wkly Rep. 2015;64(1):32. National Vital Statistics Reports. 2015;64(2). www.cdc.gov/nchs/.
- Chen LH, et al. QuickStats: Rates of Deaths from Drug Poisoning and Drug Poisoning Involving Opioid Analgesics—United States, 1999–2013. MMWR Morb Mortal Wkly Rep 2015;64:32. (http://origin.glb.cdc.gov/mmwr/preview/mmwrhtml/mm6401a10.htm?s_cid=mm6401a10_w)

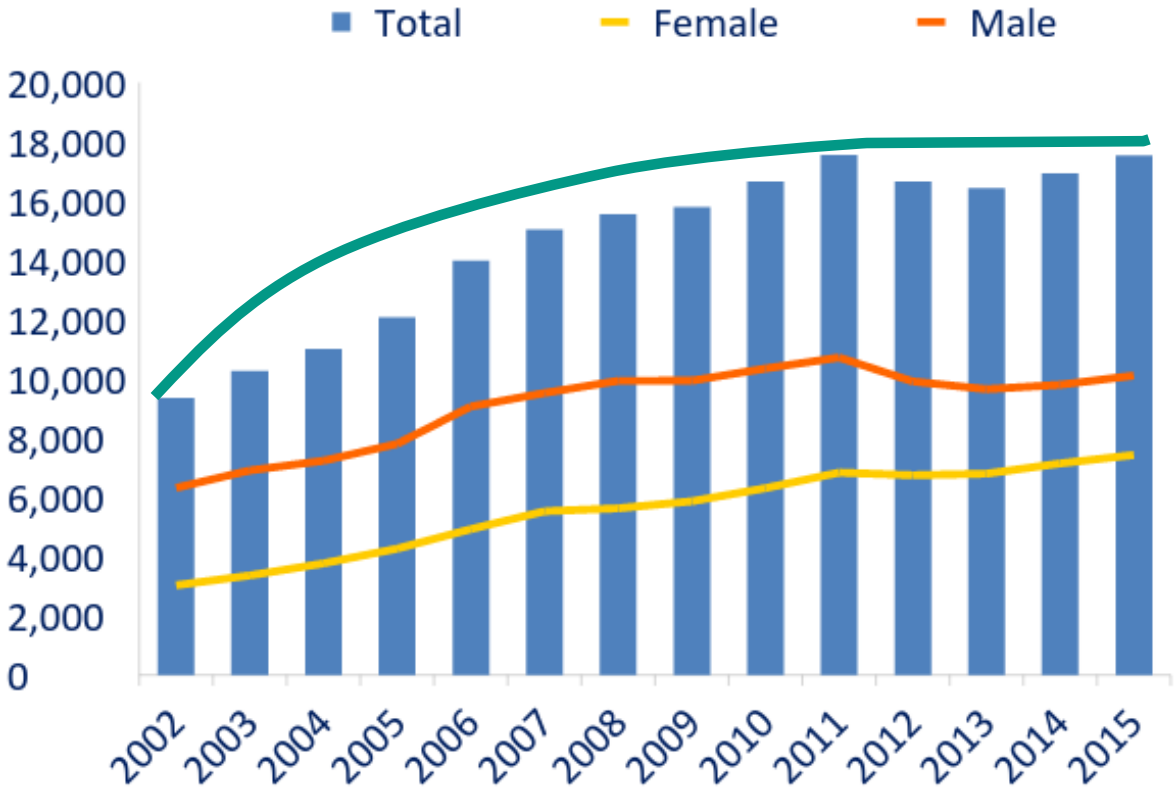
NSAID Mortality
Putting things in perspective…

Number of NSAID Deaths	16,500
Data Source	Arthritis, Rheumatism, and Aging Medical Information System (ARAMIS)1
Study Type	1999 observational study

Singh G, Triadafilopoulos G. Epidemiology of NSAID induced gastrointestinal complications. *J Rheumatol*. 1999;26(Suppl 56):18-24.

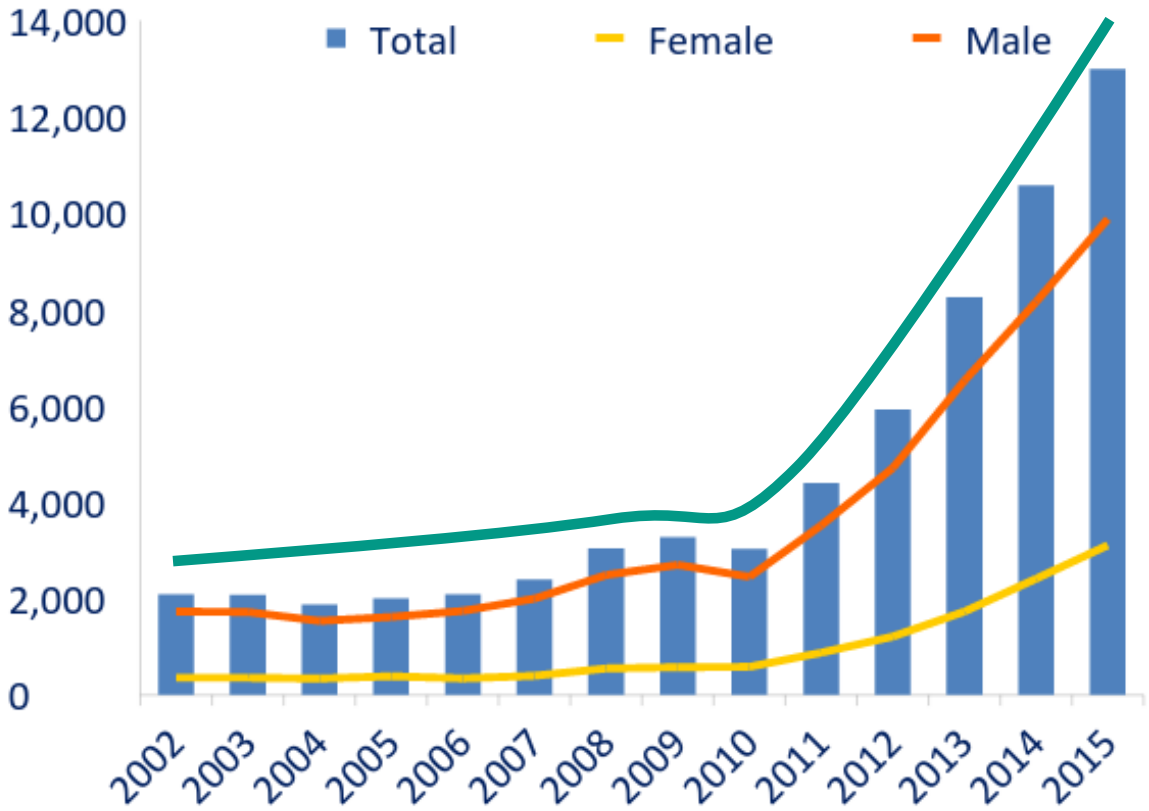
National Overdose Deaths

Number of Deaths from Prescription Opioid Pain Relievers (excluding non-methadone synthetics)



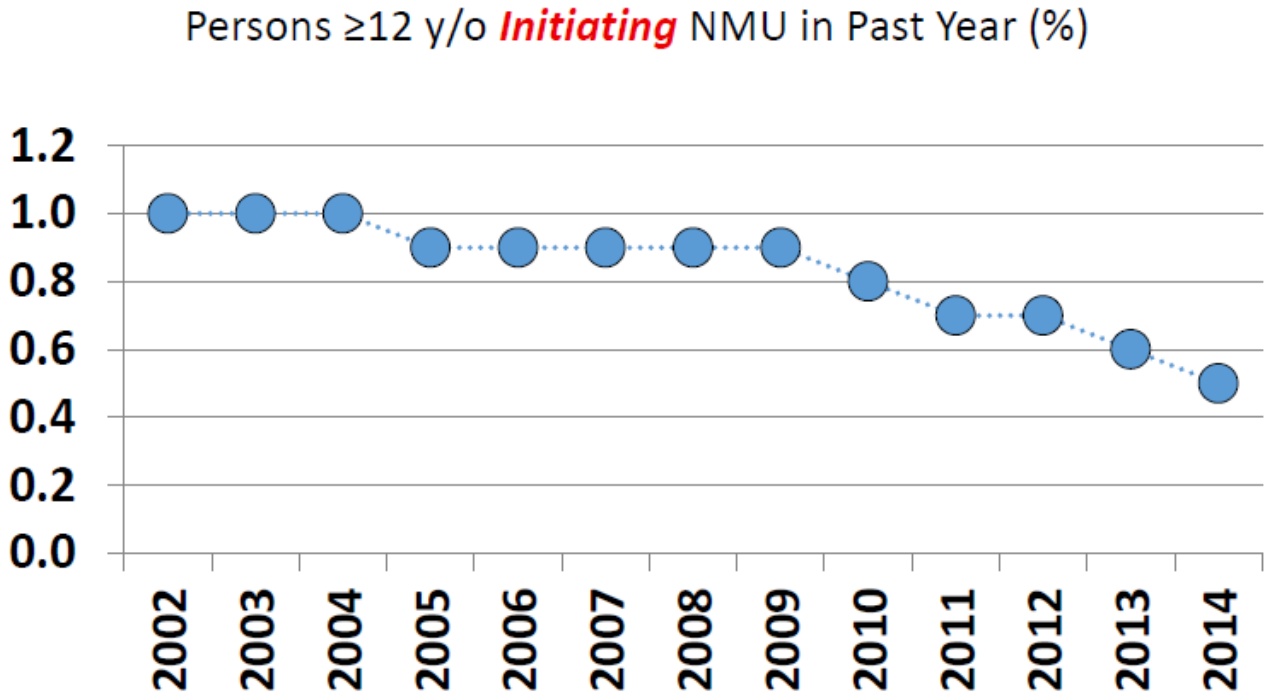
Source: National Center for Health Statistics, CDC Wonder

National Overdose Deaths
Number of Deaths from Heroin



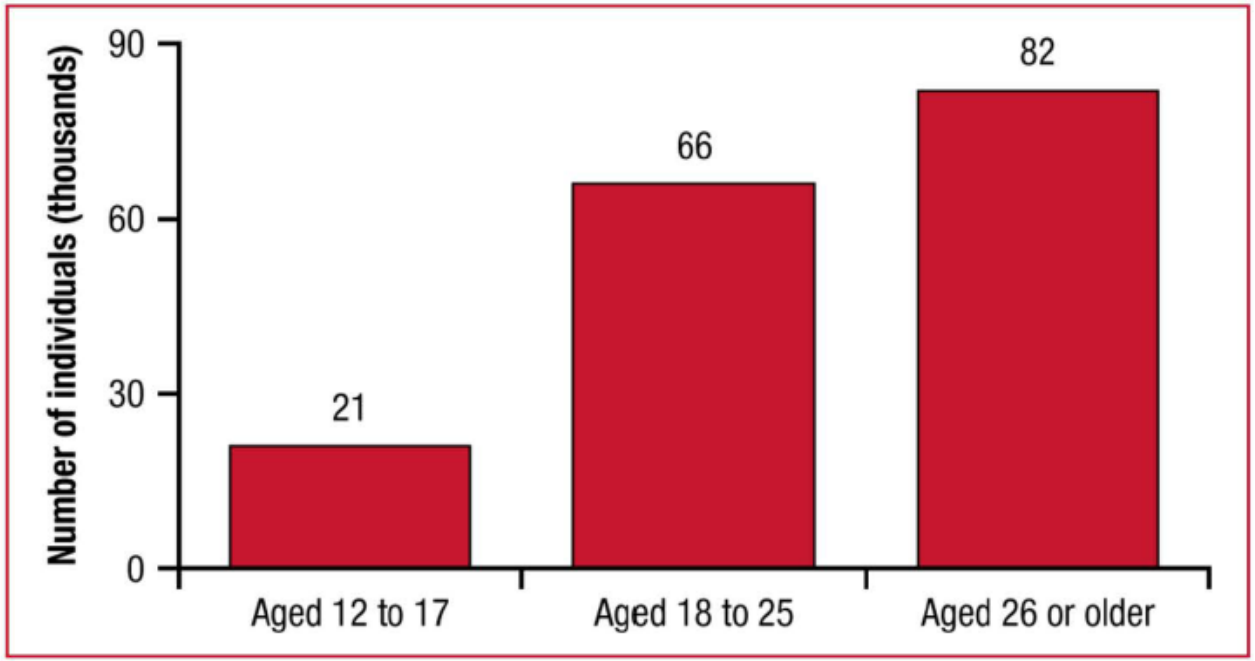
Source: National Center for Health Statistics, CDC Wonder

Opioid Analgesic Incidence Trends Nonmedical Use (NMU)



http://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs2014/NSDUH-DetTabs2014.htm#tab7-44a
National Survey on Drug and Health (NSDUH) Tables 7.44A&B

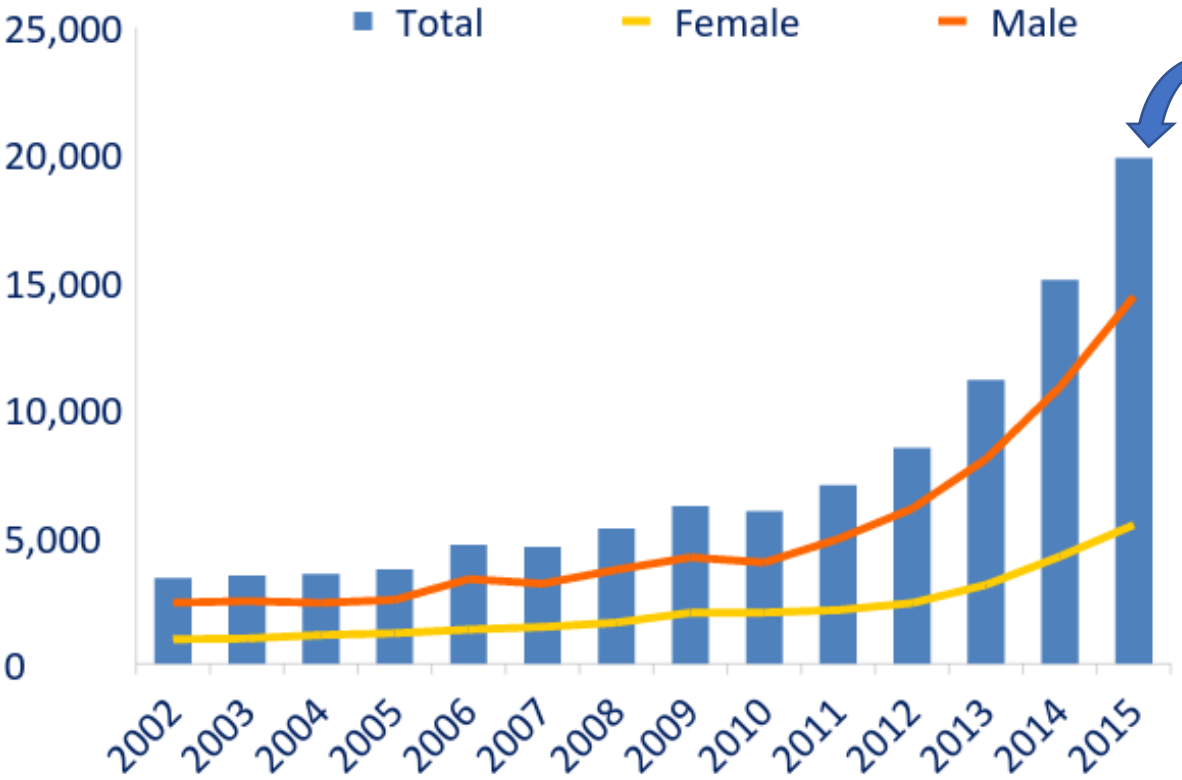
Figure 1. Past year initiation of heroin among individuals aged 12 or older, by age group: 2013



Source: SAMHSA, CBHSQ, National Survey on Drug Use and Health (NSDUH), 2013.

National Overdose Deaths

Number of Deaths from Heroin and Non-Methadone Synthetics (captures illicit opioids)



Non-methadone synthetics dominated by illicit fentanyl

Source: National Center for Health Statistics, CDC Wonder

Alternative Facts

Percentage of counties with changes in opioid prescribing — United States, 2010–2015

Opioid prescribing measures	Decrease (%)	Stable (%)	Increase (%)
MEDD per capita	49.6	27.8	22.6
Overall prescribing rate	46.5	33.8	19.6
High-dose prescribing rate	86.5	6.7	6.9
Average daily MME per prescription	72.1	25.7	2.2

Guy GP, et al. MMWR Morb Mortal Wkly Rep. 2017;66:697–704.

Are deaths due to carfentanil?

- 2015 New Hampshire data:
  - ✓351 total opioid deaths
  - ✓28 died of heroin as a single-drug overdose
  - ✓**Fentanyl was a factor in 253 of the overdose deaths!**

Costantini C, et al. "Death by Fentanyl". Documentary, aired December 3, 2016. (NH State Medical Examiner data)

- 2017 New Hampshire data (January 1-April 13, 2017):
  - ✓0 deaths from heroin alone
  - ✓18 deaths due to fentanyl
  - ✓2 deaths from a heroin-fentanyl combination
  - ✓86 deaths pending toxicology reports

Leclerc C. More people now dying from fentanyl than heroin in New Hampshire. WMUR on Demand. April 13, 2017.

Substance Abuse is Complex

Political rhetoric attempts to simplify the issues…

- Genetic
- Psychiatric
- Social
- Environmental
- Economic

Medical Problems Involving Addiction

- Diabetes
- Obesity
- Lung Cancer
- GERD[1]

1. Yoshikawa I, et al. Long-term treatment with proton pump inhibitor is associated with undesired weight gain. World J Gastroenterol. 2009; 15(38): 4794-4798.

Does formulation selection matter?

Fentanyl Patch

Fentanyl TIRF

Included with permission from Dr. Steven Passik with revisions

Addiction (ASAM-short)

- A primary, chronic disease involving brain dysfunction which encompassing reward, motivation, memory and related circuitry.
  - Includes biological, psychological, social and spiritual manifestations.
  - Compulsive reward seeking
    - relief by substance use and other behaviors
    - Examples?

https://www.asam.org/quality-practice/definition-of-addiction

Addiction is not Simply a Disease of Exposure

Exposure is necessary but not sufficient

- ✓Exposure to drug
- ✓Vulnerable person
- ✓Vulnerable time

Savage SR, Kirsh KL, Passik SD. Challenges in using opioids to treat pain in persons with substance use disorders. Addiction science & clinical practice. 2008 Jun;4(2):4.

Could this have ended badly?

Newsflash, April 2013
Louisville Player Shatters Leg During Elite 8 Game

Louisville athlete Kevin Ware, 2013

✓Exposure to drug
✓Vulnerable person
✓Vulnerable time

Aleccia J. Gruesome basketball injury for Ware a 'freak accident,' doc says. NBC News. Apr 01, 2013. http://www.wrcbtv.com/story/21842623/gruesome-basketball-injury-for-ware-a-freak-accident-doc-says

Risk Assessment Tools	Question Formats	Indications	Advantages	Disadvantages	Scoring	Validated
SOAPP[1]	5, 14, 24	1° Care, Assess for high abuse risk, suitability for long term opioid tx, preferable to ORT in high-risk populations	Best psychometrics, less susceptible to deception, 5-10 minutes	Dependent on patient reporting, Copyrighted	Numeric, simple to interpret	Yes, 14 question studied in 396 pts
SOAPP-R[2]	24	Primary Care	5 minutes, Cross-validated, Less susceptible to overt deception c/t SOAPP	Less sensitive and less specific than SOAPP	Numeric, simple to interpret	Yes, 283 pts
ORT[3]	5	Categorizes patients as low risk, moderate risk, and high risk	Less than 1 minute, simple scoring, high sensitivity & specificity when stratifying patients	1 question in the ORT is limited by patient's knowledge of family history of substance abuse	Numeric, simple to interpret	Yes, (male and female), Preliminary Validation in 185 patients at 1 pain clinic, high degree of sensitivity and specificity
DIRE[4]	7, by pt interview	risk of opioid abuse and suitability of candidates for long term opioid therapy	2 minutes, score correlates well with patient's compliance& efficacy of long term opioid therapy	Prospective validation needed	Numeric, simple to interpret	?, Retrospective validation only of 61 pts over 38 months

Strategies: Assess Abuse Risk

1. J Pain Symptom Manage 2006;32:287–93
2. J Pain. 2008 April; 9 (4): 360-372
3. Pain Med 2005;6:432–42
4. J Pain 2006;7:671–81

Opioid Misuse Tools	Question Formats	Indications	Advantages	Disadvantages	Scoring	Validated
PADT[5]	N/A	To streamline the assessment of outcomes in patients with chronic pain, 2 sided chart note based on 4-A's*	5 minutes, Documents progress over time, Complements a comprehensive clinical evaluation	Not intended to be predictive of drug-seeking behavior or predict positive or negative outcomes to opioid therapy	N/A	Further studies needed to confirm the reliability and validity, Studied in 388 patients by 27 clinician
COMM[6]	17	To assess aberrant medication related behaviors of chronic pain patients	10 minutes, Useful in assessing & reassessing adherence to opioid RX(s)	Long term reliability is unknown	Numeric	222 pts, Long term reliability is unknown, Validated in small study, needs to be replicated
ABC[7]	20 questions	Ongoing clinical assessment of chronic pain patients on opioid therapies	Concise and easy to score Studied in the VA setting	Needs validation in non-VA setting.	Score of ≥3 indicates possible inappropriate opioid based on Y/N answers	Studied 136 veterans in a multidisciplinary VA Chronic Pain Clinic

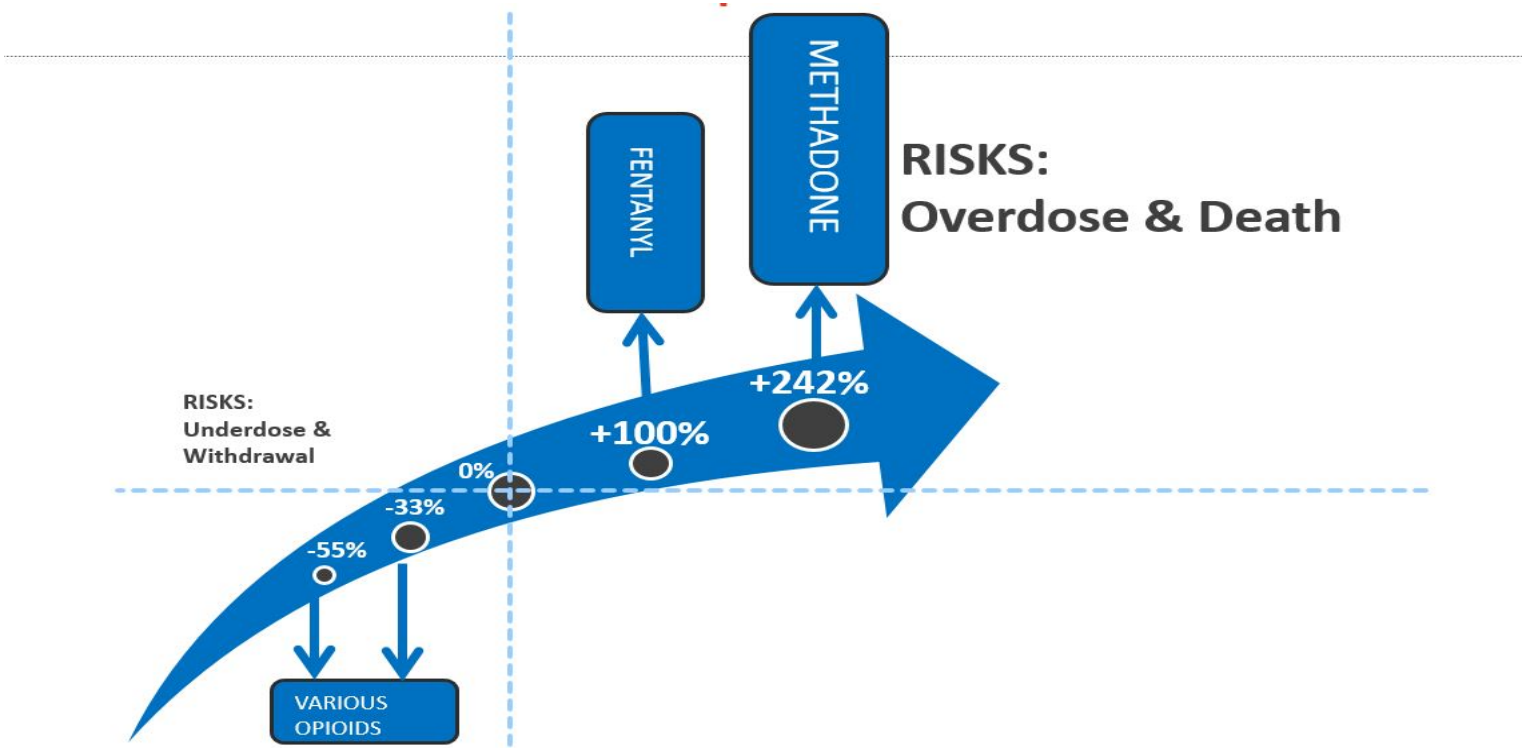
Strategies: Assess Misuse Risk

5. Clin Ther 2004; 26:552–61
6. Pain. 2007 July; 130(1-2):144-156
7. J Pain Symptom Manage 2006;32:342-351

What should pharmacist **not do**…

1. Perpetuate false information and rhetoric
2. Deny prescriptions based solely on MEDD
3. Assume that MEDD is accurate (more to come…)
4. Avoid counseling when patient “forfeits” it
5. Prejudge patients receiving chronic opioid therapy
6. Dispense opioids combined with sedative-hypnotics without carefully checking the reasons with patient and prescriber

(+/-) % Variation (Compared to Manual Calculation)



Shaw K, Fudin J. Evaluation and Comparison of Online Equianalgesic Opioid Dose Conversion Calculators. Practical Pain Management. 2013 August; 13(7):61-66. PPM 2013

CDC Advert for CDC Online Opioid Calculator

Injury Prevention & Control: Opioid Overdose

- Opioid Overdose
- Opioid Basics +
- Data +
- CDC Guideline for Prescribing Opioids for Chronic Pain −
  - For Patients
  - For Providers
  - Guideline Resources −
    - Clinical Tools
    - Patient & Partner Tools
    - Graphics
    - Posters
    - Trainings
    - Videos
    - **Mobile App**
    - Additional Resources
- Frequently Asked Questions

CDC > Opioid Overdose > CDC Guideline for Prescribing Opioids for Chronic Pain > Guideline Resources

Guideline Resources: CDC Opioid Guideline Mobile App

CDC's new Opioid Guideline App is designed to help providers apply the recommendations of CDC's Guideline for Prescribing Opioids for Chronic Pain into clinical practice by putting the entire guideline, tools, and resources in the palm of their hand. Managing chronic pain is complex, but accessing prescribing guidance has never been easier.

The application includes a Morphine Milligram Equivalent (MME) calculator*, summaries of key recommendations and a link to the full Guideline, and an interactive motivational interviewing feature to help providers practice effective communications skills and prescribe with confidence.

Free Download

The new CDC Opioid Guideline App is now available for free download on Google Play (Android devices) and in the Apple Store (iOS devices).

Download on the App Store — ANDROID APP ON Google play

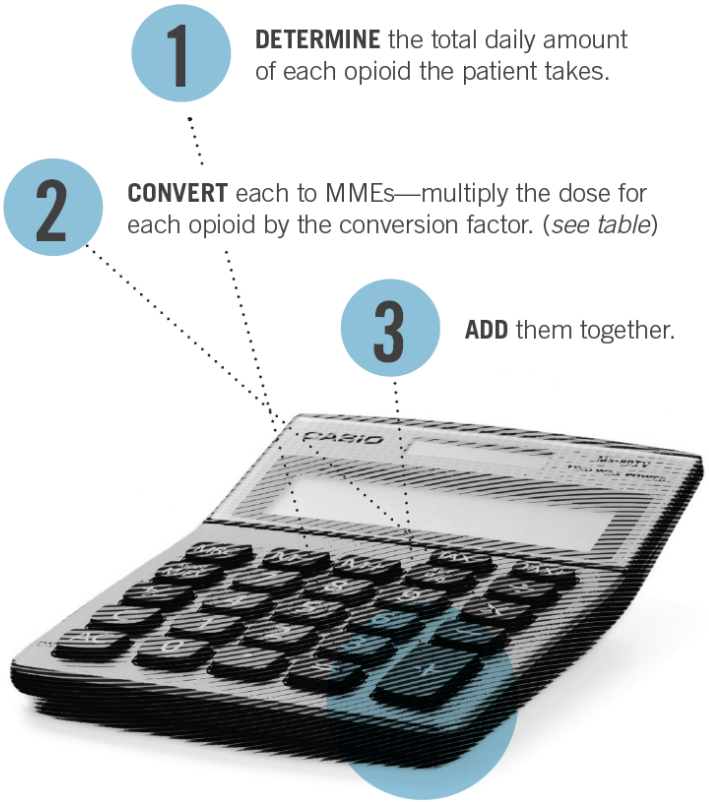
Related Pages

Guideline Resources — Guideline Resources: Posters

CDC Opioid Guideline App: Prescribe with Confidence

Opioid Prescribing Guideline Mobile App
[PDF - 652 KB]

CDC Calculator lacks accuracy with methadone conversion!



Calculating morphine milligram equivalents (MME)

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

An Actual Example from CDC Smart Phone App

Guideline Resources: CDC Opioid Guideline Mobile App	
“Morphine Equivalent” (mg)	Methadone Daily Dose (mg)
80	20
168	21
320	40
410	41

https://www.cdc.gov/drugoverdose/prescribing/app.html

Conclusion

What should we do?

Conclusions / What should pharmacists do?

1. Check PDMP
2. Participate & promote educational programs for patients, pharmacists, and other clinicians
3. Be a team player with prescribers
4. In an ideal world
   - ✓ Assess risk for OIRD, abuse, and misuse prior to discharge and when dispensing RX in community
5. Treat each patient with “individualized” approach
6. Evaluate for and provide naloxone for in-home use

Pre / Post Test #1

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Pre / Post Test #2

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Questions?