Prescription opioid misuse, use disorder and overdose: an epidemiological perspective

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Overview

• Provide foundational epidemiological data on prescription opioid misuse, use disorder, and overdose

• Discussion with panel
Rx opioids mostly commonly nonmedically used prescription drug, US, 2014

Source: SAMHSA National Survey on Drug Use and Health, 2014
Rx opioid trends, US, 2002-2014

Past Year Nonmedical Use

Source: SAMHSA National Survey on Drug Use and Health, 2002-2014
Nonmedical use of Rx opioids significant risk factor for heroin use

3 out of 4 people who used heroin in the past year misused opioids first

7 out of 10 people who used heroin in the past year also misused opioids in the past year

Opioid-related overdose deaths, US, 1999-2014

Graph showing age-adjusted rates per 100,000 population for different types of opioids over the years from 1999 to 2014.
Multiple facets of the opioid epidemic

Community Outbreak of HIV Infection Linked to Injection Drug Use of Oxymorphone — Indiana, 2015

Increasing incidence and geographic distribution of neonatal abstinence syndrome: United States 2009 to 2012
April 29, 2016

Heroin, fentanyl a deadly duo as Florida overdose deaths skyrocket
THE ROLE OF PRESCRIBING PRACTICES
Increases in Rx opioid prescribing coincide with increases in Rx opioid overdose deaths

Source: CDC/NVSS and DEA ARCOS.
Increase in use of higher potency opioids over time

Opioid overdose death and relationship with dose and multiple prescribers and pharmacies

Figure 2. Association of Number of Prescribers and Pharmacies With Risk of Unintentional Opioid Analgesic-Related Overdose Death

- Odds Ratio
- Pharmacies
- Prescribers

No. of Prescribers or Pharmacies
- 2-3
- 4-5
- ≥6

Reference was patients receiving opioids from 1 pharmacy or prescriber. Error bars indicate 95% CIs.

Figure 3. Association of Mean Daily Dosage of Opioid Analgesics With Risk of Unintentional Opioid-Related Overdose Death

- Odds Ratio
- Mean Daily Dosage, MMEs
- 20-40
- 41-80
- 81-100
- 101-200
- 201-400
- >400

Reference was patients receiving a mean of less than 20 morphine milligram equivalents (MMEs) per year. Error bars indicate 95% CIs.

Source: Baumblatt et al., JAMA IM. 2014;174:796-801.
Trends in combined opioid and benzodiazepine use, US, 2002-2014

- 41% increase in proportion of opioid recipients also receiving benzos
- ~ 50% received from same prescriber on same day
- Concomitant opioids and benzos was more common among patients on chronic opioid therapy, women, and the elderly

Source: Hwang et al., 2016. AJPM
Prevalence/risk of opioid use disorder among patients receiving opioid analgesics

- In primary care settings, prevalence of opioid dependence (using DSM-IV criteria) ranged from 3%-26% (1-3)
- In pain clinic settings, prevalence of addiction ranged from 2%-14% (3-9)
- A recent cohort study of patients with chronic noncancer pain found that long-term opioid therapy was associated with increased risk for opioid abuse or dependence compared to having no opioid prescription (10)
  - Rates of opioid abuse or dependence diagnosis ranged from 0.7% with lower-dose (≤36 MME) chronic therapy to 6.1% with higher-dose (≥120 MME) chronic therapy, versus 0.004% with no opioids prescribed.
- Data from MTF found legitimate opioid use before 12th grade associated with 33% increase in risk of future opioid misuse after high school (11)
  - Association concentrated among individuals who have little to no history of drug use and strong disapproval of illegal drug use at baseline.

Abuse and Overdose and Relationship with Prescription History

Source: Paulozzi, Zhang, Jones, Mack, J Am Board Fam Med. 2014
Source of nonmedically used Rx opioids by frequency of use, US, 2008-2011

Opioid Analgesic Prescriptions By Quarter, US Retail Pharmacies, Q4 2009-Q4 2015


* Projected based on data from Q1-Q3 2015
Opioid analgesic prescriptions dispensed from US retail pharmacies for select opioids, Q42009-Q22015

- Hydrocodone: 40.8%
- Oxycodone: 24.6%
- Tramadol: 17.8%
- Morphine: 3.7%
- Fentanyl: 2.2%

Conclusions

• Rx and illicit opioid misuse and overdose is complex and evolving

• Tensions exist between legitimate use of opioids and the need to reduce nonmedical use and diversion and associated consequences is
  – Uncertainty about the role of opioids for chronic pain adds to the complexity
  – A review for AHRQ and CDC guideline found “evidence on long-term opioid therapy for chronic pain outside of end-of-life care remains limited, with insufficient evidence to determine long-term benefits versus no opioid therapy, though evidence suggests risk for serious harms that appears to be dose-dependent.”

• Patients and non-patients are impacted by provider behaviors as well as federal, state, and local policy and programmatic initiatives

• Addressing prescribing is one component of the strategy, but we must also expand access to medication assisted treatment for opioid use disorder, increase use of naloxone to reverse overdose, and support spectrum of efforts from nonmedical use initiation prevention to opioid harm reduction activities
THANK YOU

QUESTIONS?

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