Learn the latest treatment strategies and multidisciplinary management options for patients with acute and chronic pain.
Addiction & Opioids
Are you Preventing This Problem?

Marvin D. Seppala, MD
Chief Medical Officer
Hazelden Betty Ford Foundation

Friday, February 17, 2017
10:00-10:30 am PT
Disclosures

• I have no financial disclosures to report
Objectives

• Describe how opioid prescribing has contributed to the opioid crisis

• Describe risk factors for opioid addiction and overdose

• Describe prevention and mitigation tools for your practice
40 y.o. Female hospital administrator

- Sober for 3 years after treatment for alcohol use disorder
- Meniscus tear, knee surgery, opioids prescribed
- Rapid escalation of opioid use, pressuring providers and doctor shopping
- Admitted to addiction treatment 6 months after surgery with threats of job loss and divorce
Question #1

Prevention of opioid addiction could have included:

A. Limiting dose and duration of opioids
B. Avoiding opioids post-surgically
C. Use of prescription drug monitoring program
D. Opioid use agreement
Physician's Quandary Related to Pain and Addiction

We have little training in addiction and we have little training in pain.

Yet pain is the most common reason for a primary care visit, and addiction is one of the most common illnesses seen in primary care.
Rates* of opioid pain reliever (OPR) overdose death, OPR treatment admissions, and kilograms of OPR sold: United States, 1999-2010

* Age-adjusted rates per 100,000 population for OPR deaths, crude rates per 10,000 population for OPR abuse treatment admissions, and crude rates per 10,000 population for kilograms of OPR sold.

www.cdc.gov/mmwr/preview/mmwrhtml/mm6043a4.htm
Overdose Risk and Opioid Dose

Overdose Deaths Involving Opioids, United States, 2000-2015

- Any Opioid
- Commonly Prescribed Opioids (Natural & Semi-Synthetic Opioids and Methadone)
- Heroin
- Other Synthetic Opioids (e.g., fentanyl, tramadol)


www.cdc.gov
Your Source for Credible Health Information
QuickStats: Rates of Drug Overdose Deaths Involving Heroin,*
by Selected Age Groups — United States, 2006–2015

Weekly / January 6, 2017 / 65(52);1497

https://www.cdc.gov/mmwr/volumes/65/wr/mm6552a12.htm?s_cid=mm6552a12_e#suggestedcitation
Pain and Opioid Prescribing in U.S.

- Over 30%, prevalence of population with acute or chronic pain
- Over 40%, prevalence of older adults with chronic pain
- Opioids are the most commonly prescribed class of medication
- Long term opioids are prescribed to 3-4% of the population
- Benefits of opioids for chronic pain are questionable and have little formal evidence
Problems With Opioids

• Opioid analgesics are commonly diverted and improperly used

• The widespread use of prescription opioids has resulted in a national epidemic of opioid addiction and overdose death

• Physician prescriptions are the primary source of diverted opioids
Opioid Physiology

• Primary analgesic effects are via mu-opioid receptors

• Mu-opioid receptors populate areas of the brain that regulate pain perception (periaqueductal gray, thalamus, cingulate cortex, insula), including emotional responses (amygdala)

• Mu-opioid receptors populate areas of the brain involved in addiction, the reward center (ventral tegmental area, nucleus accumbens)

• Mu-opioid receptors populate the brain stem, primarily in the respiratory center
Opioid Physiology

- Repeated administration results in tolerance and physiologic dependence in everyone.
- Tolerance to the analgesic and euphoric effects occurs quickly, but to respiratory depression much more slowly.
- Withdrawal is secondary to physiologic dependence.
- Only a small percentage of those exposed to opioids develop addiction.
- Once established, addiction is a separate, chronic, debilitating brain disease.
Vulnerability for Addiction

- Addiction is modulated genetically
- Genes are the primary risk factor for addiction (35-40% of total risk)
- Hereditability rates are similar to asthma, diabetes and hypertension
- There is an increased risk among adolescents due to enhanced neuroplasticity of their brains and the underdeveloped frontal cortex (self control)
- There is an increased risk due to co-occurring psychiatric illness
- There is an increased risk due to a history of trauma
### Table 3. Factors Associated with the Risk of Opioid Overdose or Addiction.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily dose &gt;100 MME*</td>
<td>Overdose,(^8) addiction(^8)</td>
</tr>
<tr>
<td>Long-acting or extended-release formulation (e.g., methadone, fentanyl patch)</td>
<td>Overdose(^{14,41})</td>
</tr>
<tr>
<td>Combination of opioids with benzodiazepines</td>
<td>Overdose(^{42})</td>
</tr>
<tr>
<td>Long-term opioid use (&gt;3 mo)(^\dagger)</td>
<td>Overdose,(^{43}) addiction(^{44})</td>
</tr>
<tr>
<td>Period shortly after initiation of long-acting or extended-release formulation (&lt;2 wk)</td>
<td>Overdose(^{45})</td>
</tr>
</tbody>
</table>

* The risk of opioid overdose increases in a dose–response manner at opioid doses of more than 20 morphine milligram equivalents (MME).
\(^\dagger\) Although addiction is associated with long-term but not short-term opioid use, the prescription of a higher quantity of opioids than is needed for acute pain contributes substantially to the availability of opioids for diversion and abuse.
\(\dagger\) Sleep-disordered breathing refers to conditions that manifest as abnormal breathing patterns during sleep and includes obstructive sleep apnea and central sleep apnea.\(^{53}\)
\(\S\) Patients with these disorders are at increased risk because the disposition of various opioid drugs is affected by hepatic and renal impairments, which reduce drug clearance and increase bioavailability.\(^{54,56}\)
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<tr>
<td>Patient-related</td>
<td></td>
</tr>
<tr>
<td>Age &gt;65 yr</td>
<td>Overdose (^{46})</td>
</tr>
<tr>
<td>Sleep-disordered breathing (\dagger)</td>
<td>Overdose (^{47})</td>
</tr>
<tr>
<td>Renal or hepatic impairment (\ddagger)</td>
<td>Overdose (^{48})</td>
</tr>
<tr>
<td>Depression</td>
<td>Overdose, addiction (^{49})</td>
</tr>
<tr>
<td>Substance-use disorder (including alcohol)</td>
<td>Overdose, (^{50}) addiction (^{49})</td>
</tr>
<tr>
<td>History of overdose</td>
<td>Overdose (^{51})</td>
</tr>
<tr>
<td>Adolescence</td>
<td>Addiction (^{52})</td>
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Risk Mitigation - General Strategies

- Limit Opioid to lowest effective dose for shortest duration
- Regular monitoring and assessment (pain and functioning)
- Screening tools (SOAPP-R, COMM)
- Prescription Drug Monitoring Programs (PDMP's)
- Urine drug screening
- Opioid agreements
- Collateral informants
Drug Diversion Prevention

• Educate patients of risk and importance of safe storage and disposal

• Prescription pad storage and monitoring

• Systems and processes for hospitals, clinics and pharmacies
Overdose Prevention

• Education of risk
• Monitoring risk factors
• Monitoring other medications
• Frequent follow up
• Use caution with high dose, long duration opioids
• Prescribe naloxone and educate family members
Preventing addiction

• Assess risk prior to opioid prescribing and use precautions (history of addiction, family history of addiction...)

• Structure medication use more strictly for those at high risk

• Monitor for aberrant behaviors and emerging signs of addiction with frequent follow up, screening and urine drug screens

• Use referral to addiction medicine specialists
The Discussion: Screen is positive or problems arise

- Learn motivational interviewing techniques
- Maintain a professional, non-judgmental stance as you would for any other illness
- Engage the patient for the long term
- Consider collateral information
- Recommend further evaluation with a specialist
- Follow up
Primary Care Triage of Chronic Pain Patients

• Primary Care
  • No history of substance use disorder
  • No major psychiatric comorbidity

• Primary Care with Consultation
  • Increased risk patient: In recovery from addiction, family history, aberrant behavior, current psychiatric disorder

• Referral to Tertiary Care (Addiction Medicine Specialist)
  • Active addiction
  • Major untreated psychiatric disorder
What Will You Do?
Please Commit to Action!

• Screen for addiction and alcoholism

• Use addiction and overdose prevention strategies

• Refer to an addiction specialist just like any other medical specialty

• Examine your prescribing practices

• Prevent diversion in your medical setting
References


Questions & Discussion