Treatment of Opioid Use Disorder and Opioid Dependence

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Disclosures

• None

We will discuss...

• Some of the factors that impact the current opioid crisis, including public health and mental health aspects
• Symptoms/criteria/evaluation of opioid dependence and withdrawal
• Treatment options for opioid dependence
• Office-based opioid treatment with buprenorphine
Causes of the opioid crisis??

• Availability of prescription opioid pain medications?
• It’s easy to write a prescription, takes longer to talk with patients about non-medicine options?
• Increased focus on pain?
• Increased availability of heroin?
• Unemployment, depression, social stressors?
Age-adjusted rate of drug overdose deaths, by state — United States, 2015

America Has the Highest Drug-Death Rate in the World

Preventable deaths
In 2015, drug overdose deaths hit an all-time high: 52,404.

While a death may involve more than one drug, prescription or illicit opioids were involved in 63.1% of these deaths.
- Heroin (12,989)
- Natural or semi-synthetics (12,727)
- Fentanyl (9,580)
- Methadone (3,301)

Overall, 84.2% of drug overdose deaths were unintentional.
Annual Surveillance Report of Drug-Related Risks and Outcomes

CDC National Center for Injury Prevention and Control, 2017

There were 309 overdose deaths in Iowa in 2015.

Death rates from prescription opioid overdoses, by county, Iowa death certificate records, 2002-2014

Total MME dispensed among Iowa residents, by county, medical insurance claims, 2003-2014
Prescription Trends

- Since 2012, opioid prescribing rates have leveled off and starting declining, and high-dose prescribing rates have been declining since 2009. Healthcare providers have responded, becoming more cautious in their opioid prescribing practices.
- Prescription opioid pain relievers were formerly driving the crisis, but by 2015 they shared equal measure with heroin, synthetic opioids other than methadone (mostly illicit fentanyl), and—increasingly—coca and methamphetamines.

Mental Health Perspective

- Of the 20.5 million Americans 12 and older who had a substance use disorder in 2015:
  - 2 million had a substance use disorder involving prescription pain relievers
  - 591,000 had a substance use disorder involving heroin.
Other health consequences of opioid epidemic – hepatitis C

• Increased rates of hepatitis C, particularly in areas of the country that have been hit hard by the opioid epidemic
• After 2 decades of declining rates, the number of new hepatitis C cases climbed to ~34,000 in 2015, nearly triple the number of cases in 2010.

* Iowa does not report data on hepatitis C to the CDC.
* We estimated 35,865 to 136,900 Iowans are living with hepatitis C.
* Over 2,200 Iowans were diagnosed with HCV in 2015, a nearly three-fold increase since 2000.
* HCV diagnoses among those 30 years of age and younger were up six-fold.
* HCV diagnoses in those 30 years of age and younger were up 8.6-fold.
* CDC estimates that 45-85% of people with HCV are undiagnosed.

Hepatitis C and IVDU

• 51% of HCV+ Iowans <=30y report IVDU*.
• In Iowa:
  – 36% of enrollees in MAT-PDOA reported injecting drugs during the 30 days prior to admission
  – 40% of those clients reported having shared needles or paraphernalia with someone else in the 30 days prior to admission
• It costs $30,000/person to treat hepatitis C

*IDPH data collected since 2015
Opioids

- Opium—contains morphine and codeine
- Prescriptions
  - Morphine & codeine
  - Synthetic: methadone, oxycodone, hydromorphone
- Non-prescriptions
  - Heroin
- Effects include: analgesia through modulation of incoming pain information (brain and spinal cord), respiratory depression, sedation, constipation, tolerance, dependence

The opioid system

- Controls pain, reward, and addictive behaviors
- Mu, delta, and kappa receptors

Opioid Use Disorder, DSM 5

- A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
  1. Opioids are often taken in larger amounts or for a longer period than was intended.
  2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
  3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
  4. Opioids are taken to relieve withdrawal symptoms.
  5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.
  6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
  7. Important social, occupational, or recreational activities are given up or reduced because of opioid use.
  8. Recurrent opioid use in situations in which it is physically hazardous.
  9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
  10. Tolerance, as defined by either of the following:
      a. The user takes markedly increased amounts of opioids to achieve intoxication or desired effect.
      b. A markedly diminished effect with continued use of the same amount of the opioid.
  11. Withdrawal, as manifested by any of the following:
      a. The user has had withdrawal symptoms after a period of opioid withdrawal
      b. The user is frequently taking opioids to avoid or reduce withdrawal symptoms.
Opioid Withdrawal

- Typical symptoms include:
  - Tachycardia, GI upset, sweating, tremor, restlessness, yawning, dilated pupils, anxiety/irritability, bone or joint aches, gooseflesh skin, runny nose, tearing
- Monitoring/assessment of withdrawal
  - COWS= clinical opiate withdrawal scale
- Very uncomfortable, but not life threatening
- Symptomatic management
  - Clonidine (0.1-0.3mg q6-8h, max 1.2mg/24h)
  - Benzos/hydroxyzine for anxiety, loperamide for GI, APAP/NSAIDs for pain, ondansetron for nausea, trazodone for sleep
  - Methadone or buprenorphine

Addressing the opioid epidemic

- CDC: “We need to improve prescribing of opioids, expand treatment of addiction, and reduce access to illegal opioids.”
  - Improve opioid prescribing to reduce exposure to opioids, prevent abuse, and stop addiction.
  - Expand access to evidence-based substance drug treatment, such as Medication-Assisted Treatment, for people already struggling with opioid addiction.
  - Expand access and use of naloxone—a safe antidote to reverse opioid overdose.
  - Promote the use of state prescription drug monitoring programs, which give health care providers information to improve patient safety and prevent abuse.
  - Implement and strengthen state strategies that help prevent high-risk prescribing and prevent opioid overdose.
  - Improve detection of the trends of illegal opioid use by working with state and local public health agencies, medical examiners and coroners, and law enforcement.
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Treatment options

- MAT
  - What is it?
    - Medication-Assisted Treatment (MAT) is the use of medications, in combination with counseling, behavioral therapies, and support services to provide a “whole-patient” approach to the treatment of substance use disorders. (SAMHSA 2015)

Methadone

- Long-acting synthetic opioid, administered po
- Mu receptor agonist with higher intrinsic activity but lower affinity than morphine
- Also a glutamate receptor antagonist—may be its MOA for decreasing cravings and tolerance
- Use in opioid dependence restricted to federally-certified and state-approved opioid treatment programs (“OTPs”)
Office based opioid treatment

- OBOT refers to models of opioid agonist treatment that seek to integrate the treatment of opioid addiction into the general medical and psychiatric care of the patient
- Conceptualization of opioid addiction as a chronic medical condition
- Allows primary care providers to provide addiction treatment services in their usual clinical settings, thus expanding the availability of care
- Buprenorphine, Naltrexone

Naltrexone

- Opioid antagonist, blocks euphoric and sedative effects from opioids (and alcohol)
- PO—naltrexone
  - 25mg po on day 1, then 50mg po daily starting day 2, may go up to 150mg/day
- Injection—Vivitrol
  - 380mg IM q4 weeks
- Must be opioid free for at least 7-10 days prior to initiation (longer for methadone, buprenorphine)
- Adverse effects: nausea, headache, dizziness, anxiety, insomnia, SI, hepatocellular injury—baseline and periodic LFTs
- Following naltrexone therapy, people may be more sensitive to opioid effects

Buprenorphine

- Approved for office-based opioid treatment (DATA 2000), which reclassified it in 2002 from Schedule V to Schedule III
- “Agonist therapy”
- A weak partial mu-receptor agonist and a kappa-receptor antagonist, long-acting (24-72h)
- Safer than full agonists (e.g. methadone) because of relatively poor bioavailability and ceiling effect (incl. less resp depr at higher doses), but can be abused
- Overdose and death can still occur, particularly when combined with other CNS depressants, esp benzos
- Used alone or in combination with naloxone
Buprenorphine

- Buprenorphine/naloxone
  - Buccal film, SL film, SL tabs, transmucosal
  - Patient must be in withdrawal at induction
  - First doses are observed
  - Range: 2mg/0.5mg – 24mg/6mg daily (SL film)

- Buprenorphine alone
  - Use in treating opioid dependence is generally limited to pregnant women, for whom naloxone is contraindicated

FDA special alert

- Opioid Addiction Medications With Benzodiazepines or CNS Depressants Safety Alert September 2017
  - Based on additional review, the FDA is advising that the opioid addiction medications buprenorphine and methadone should not be withheld from patients taking benzodiazepines or CNS depressants. The combined use of these drugs increases the risk of serious adverse reactions including overdose and death; however, the harm caused by untreated opioid addiction usually outweighs these risks. Careful medication management by health care providers can reduce these risks. The FDA is requiring this information to be added to the buprenorphine and methadone drug labels along with detailed recommendations for minimizing the use of medication-assisted treatment (MAT) drugs and benzodiazepines together.

Outcomes with buprenorphine/MAT

- MAT-PDOA project under the IDPH

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<thead>
<tr>
<th></th>
<th>Admission</th>
<th>&gt; 4 months later</th>
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</thead>
<tbody>
<tr>
<td>Substance use</td>
<td>65.5%</td>
<td>28.1%</td>
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<tr>
<td>Employment</td>
<td>39.6%</td>
<td>54%</td>
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<td>Individuals living in their own apartment</td>
<td>41%</td>
<td>58.3%</td>
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<tr>
<td>Emergency room visits for substance use related issue</td>
<td>11.5%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Number of clients tested for HIV</td>
<td>74.1%</td>
<td>92.1%</td>
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Buprenorphine waiver

- Administered by SAMHSA
- 8 hours of training for physicians
- Special DEA number
- Prescribing limits, record keeping requirements

CARA

- On July 22, 2016, President Obama signed the Comprehensive Addiction and Recovery Act (CARA) into law as Public Law 114-198. One of CARA’s important provisions expands access to substance use treatment services and overdose reversal medications—including the full spectrum of services from prevention to medication-assisted treatment (MAT) and recovery support—by extending the privilege of prescribing buprenorphine in office-based settings to qualifying nurse practitioners (NPs) and physician assistants (PAs) until Oct. 1, 2021.
• Iowa NPs on waiver list—11
• Iowa PAs on waiver list—1
• Total providers listed in Iowa—57

Counseling for substance dependence
• Cognitive behavior therapy
• Motivational interviewing
• Mutual support groups like AA, NA

Harm reduction
• A set of practical strategies and ideas aimed at reducing negative consequences associated with drug use.
• Examples include:
  – Needle exchange
  – Overdose prevention and advocacy
  – Naloxone accessibility
  – HIV and hepatitis C prevention efforts
• Iowa Harm Reduction Coalition

SAMHSA website, 9/26/17
Opioid Overdose Prevention

• Naloxone reverses opioid overdose by blocking opioid receptor sites
• Administered via nasal spray or auto-injector (subcutaneous), also can be given iv or im
• Iowa pharmacists may dispense naloxone by a standing order to an individual at risk of an opioid-related overdose or a person who may be in a position to assist an individual at risk of an opioid-related overdose.

What can I do to help address the opioid crisis?

• Public awareness
• Prescribing guidelines
• Prescription monitoring
  – Are you registered with the Iowa PMP?
• Buprenorphine waiver

Summary

• Opioid misuse, opioid addiction, and accidental opioid overdose-related death are a significant and growing problem
• All members of the health care workforce can and should help address this public health crisis
• Medication-assisted treatment with buprenorphine is an evidence-based treatment for opioid dependence
  – Office-based
  – Physician Assistants can prescribe it
Resources

- CDC Information for Providers
  - https://www.cdc.gov/drugoverdose/providers/index.html
  - Guideline for Prescribing Opioids for Chronic Pain, including a Mobile App
  - Resources, training, PDMP overview
- SAMHSA (Substance Abuse and Mental Health Services Administration)
  - https://www.samhsa.gov/atod/opioids
  - Publications, clinical resources, MATx Mobile App
- PCSSMAT (Providers’ Clinical Support System for Medication Assisted Treatment)
  - http://pcssmat.org/
  - Training and clinical mentoring for prevention, identification, and treatment of opioid use disorders, including MAT waiver training

Resources

- The National Safety Council
  - Prescription Drug Abuse is an NSC priority topic
  - Educational resources for prescribers, employers, patients
- Iowa Prescription Drug Monitoring Program
  - https://pmp.iowa.gov/IAPMPWebCenter/
- Iowa Medicaid Preferred Drug List and PA Forms
  - http://www.iowamedicaidpdl.com/
- Iowa Harm Reduction Coalition
  - http://www.iowaharmreductioncoalition.org/

Thanks for your attention!