Opioid Addiction: An Emerging Epidemic

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Outline

• Trends in Opioid Prescribing and Opioid Harms
• Safe Opioid Prescribing Guidelines and Practices
• Referral and Treatment for Opioid Use Disorders
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Where We Are Now

• In the United States:
  • 116 million with some degree of chronic pain, costing up to $635 billion annually in treatment and lost productivity (IOM, 2011)
  • Recommendations in late 20th and early 21st century
    • “Fifth vital sign”
    • 2001 Pain Management Mandate (JCAHO) – required that pain be recognized, assessed, documented, and treated
    • → 4-fold increase in opioid prescriptions
  • In 2014, a total of 10.3 million persons reported using prescription opioids non-medically
  • Prevalence of opioid use disorder as high as 26% in primary care patients receiving opioids for chronic non-cancer pain

References:
Opioid Prescription Trends

Source: IMS National Prescription Audit (NPA) & Vector One ®: National (VONA).
Opioid overdoses driving increase in drug overdoses overall

Drug overdose deaths involving opioids, by type of opioid, United States, 2000-2014

Deaths involving any opioid
Natural & semi-synthetic opioids (e.g., oxycodone, hydrocodone)
Heroin
Other synthetic opioids (e.g., fentanyl, tramadol)
Methadone

Some states have more painkiller prescriptions per person than others.

Number of painkiller prescriptions per 100 people

- 52-71
- 72-82.1
- 82.2-95
- 96-143

SOURCE: IMS, National Prescription Audit (NPA™), 2012.
Drug Poisoning Death Rates by State, 2013
U.S. National Rate: 13.8 per 100,000

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death on CDC WONDER Online Database, extracted January 23, 2015.
POLYPHARMACY IN ALLEGHENY

Top 10 Drugs Recorded on Death Certificate by Year

- Heroin
- Cocaine
- Alcohol
- Alprazolam
- Morphine
- Oxycodone
- Methadone
- Hydrocodone
- Diazepam
- Fentanyl

Percentage of Cases

Year 2008 2009 2010 2011 2012 2013 2014 2015

OverdosefreePA.pitt.edu, 2015
Western PA US Attorney Recommendations

Education, Prevention and Family Intervention Committee

- **Recommendation 1**: Develop a comprehensive public awareness and education plan to reduce overdose deaths
- **Recommendation 2**: Assure access to and promote a regional hotline dedicated to overdose prevention and enhance 911 response
- **Recommendation 3**: Develop and implement an overdose prevention program for incarcerated populations
- **Recommendation 4**: Promote physician education and intervention programs

Treatment Committee

- **Recommendation 1**: Increase the number of drug and alcohol assessments and referrals to MAT for people who are incarcerated or on probation
- **Recommendation 2**: Promote efforts to increase the availability of naloxone in the community as a safe antidote for opioid overdose

Quality Improvement, Adverse Events and Interdiction Committee

- **Recommendation 1**: Utilize overdose data, on an ongoing basis, to identify and target interventions to reduce overdoses and overall drug abuse
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CDC Guideline for Prescribing Opioids for Chronic Pain - United States, 2016 (JAMA 2016;315:1624-45)

- **Target patient population**: patients with chronic pain, excluding cancer, palliative care, and end-of-life care
- **Target prescribers**: primary care clinicians
- **Process**: comprehensive literature review; review with stakeholders
- **Stakeholders** – hundreds of experts and practitioners, federal agencies, more than 150 professional and advocacy organizations, patient and provider groups, a federal advisory committee, peer reviewers, and 4000+ public comments
- **12 recommendations** in 3 key areas:
  - Determining When to Initiate or Continue Opioids for Chronic Pain (3 recommendations)
  - Opioid Selection, Dosage, Duration, Follow-up, and Discontinuation (4 recommendations)
  - Assessing Risk and Addressing Harms of Opioid Use (5 recommendations)
Recommendation 1. Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and nonopioid pharmacologic therapy, as appropriate.
Recommendation 2. Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and should consider how therapy will be discontinued if benefits do not outweigh risks. Clinicians should continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risks to patient safety.
CDC Guideline 2016: Determining When to Initiate or Continue Opioids for Chronic Pain

• **Recommendation 3.** *Before starting and periodically during opioid therapy, clinicians should discuss with patients known risks and realistic benefits of opioid therapy and patient and clinician responsibilities for managing therapy.*
Recommendation 5. When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should use caution when prescribing opioids at any dosage, should carefully reassess evidence of individual benefits and risks when increasing dosage to 50 morphine milligram equivalents (MME) or more per day, and should avoid increasing dosage to 90 MME or more per day or carefully justify a decision to titrate dosage to 90 MME or more per day.
## What is 90 mg Morphine Milligram Equivalent (MME) for Different Opioids?

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<tr>
<th>Opioid</th>
<th>Conversion Factor</th>
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<tr>
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<tr>
<td>Hydrocodone</td>
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<tr>
<td>Oxycodone</td>
<td>1.5</td>
<td>60</td>
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<tr>
<td>Fentanyl patch, $\mu$g/h</td>
<td>2.4</td>
<td>37.5</td>
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<tr>
<td>Oxymorphone</td>
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<td>Hydromorphone</td>
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Recommendation 6. Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three days or less will often be sufficient; more than 7 days will rarely be needed.
• **Recommendation 7.** Clinicians should evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh harms of continued opioid therapy, clinicians should optimize therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.
Recommendation 8. Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms. Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (50 MME/d), or concurrent benzodiazepine use are present.
Opioid Harm Mitigation Strategies

- Risk assessment
- Opioid contracts
- Urine testing (CDC recommendation 10)
- Naloxone prescription
# Opioid Risk Assessment

**Date __________________________**

**Patient Name __________________________**

## OPIOID RISK TOOL

<table>
<thead>
<tr>
<th>1. Family History of Substance Abuse</th>
<th>Mark each box that applies</th>
<th>Item Score If Female</th>
<th>Item Score If Male</th>
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<th>Item Score If Female</th>
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<tr>
<td>Bipolar</td>
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<td></td>
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<tr>
<td>Schizophrenia</td>
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<tr>
<td>Depression</td>
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</table>

**TOTAL**

**Total Score Risk Category**

- **Low risk**: 5.6% display aberrant behavior
- **High risk**: 90.9% display aberrant behavior

Naloxone

Nasal spray naloxone:

1. Take off yellow caps.
2. Screw on white cone.
3. Take purple cap off capsule of naloxone.
4. Gently screw capsule of naloxone into barrel of syringe.
5. Insert white cone into nostril; give a short, strong push on end of capsule to spray naloxone into nose: ONE HALF OF THE CAPSULE INTO EACH NOSTRIL.
6. Push to spray.

If no reaction in 3 minutes, give second dose.

Injectable naloxone:

1. Remove cap from naloxone vial and uncover the needle.
2. Insert needle through rubber plug with vial upside down. Pull back on plunger and take up 1 ml.
3. Inject 1 ml of naloxone into an upper arm or thigh muscle.
4. If no reaction in 3 minutes, give second dose.
Allegheny County Naloxone Availability - Pharmacies

- May 2015 - Dr. Karen Hacker issued a county wide standing prescription for intranasal and auto-injector naloxone

  - Allegheny County Health Dept. (Forbes Ave)
  - Duquesne Pharmacy (Centre Ave)
  - Towne Drugs (Commercial Ave)
  - Wilson’s Pharmacy (Penn Ave)
  - The Medicine Shoppe (South Ninth St)
  - UPMC Health Center Pharmacy (Locust St)
  - MWH Outpatient Pharmacy (Halket St)
  - UPMC McKeesport Outpatient (Fifth Ave)
  - Giant Eagle (Shakespeare St)
  - UPMC Presby Prescription Shop (Lothrop St)
  - Pint Size Prescriptions, Children’s Hospital (Penn Ave)
  - Hillman Cancer Center Pharmacy (Centre Ave)
  - Falk Pharmacy (Fifth Ave)
  - Lincoln Pharmacy (North Ave)
  - Forbes Pharmacy (Forbes Ave)
  - Walgreens (Library Rd.)
  - Hieber's Pharmacy (Fifth Ave)
  - Walgreens (Centre Ave)
  - Adzema Pharmacy (Perry Highway)
  - Medicap Pharmacy (Grant Ave)
  - Stanton-Negley (N Negley Ave)
  - Blackburn’s (Corbet St, Tarentum)
  - Asti’s South Hills (Mt. Lebanon Blvd)
  - McKeesport Prescription Ctr (Versailles Ave)

- Naloxone is also available at Prevention Point Pittsburgh’s clinic site which is held each Sunday from noon to 3 p.m. at 3441 Forbes Avenue in Oakland.
Recommendation 9. Clinicians should review the patient’s history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for overdose. Clinicians should review PDMP data when starting opioid therapy for chronic pain and periodically during opioid therapy for chronic pain, ranging from every prescription to every 3 months.
Pennsylvania Prescription Drug Monitoring Program (PDMP)

- [https://pennsylvania.pmpaware.net/login](https://pennsylvania.pmpaware.net/login)
- PDMP collects information about controlled substance prescription drugs dispensed to patients within the state
- System active 8/25/2016
- Schedule II, III, IV, V
- Check PDMP the first time a patient is prescribed a controlled substance OR if prescriber believes a patient may be abusing or diverting drugs.
- Requirement to document PDMP query 1  A: Yes, if it's a new prescription for that patient, the prescriber should check the PA PDMP system.
Do PDMPs Work?

Making a Difference: State Successes

New York
75%

2012 Action:
New York required prescribers to check the state’s prescription drug monitoring program before prescribing painkillers.

2013 Result:
Saw a 75% drop in patients who were seeing multiple prescribers to obtain the same drugs, which would put them at higher risk of overdose.

Florida
50%

2010 Action:
Florida regulated pain clinics and stopped health care providers from dispensing prescription painkillers from their offices.

2012 Result:
Saw more than 50% decrease in overdose deaths from oxycodone.

Tennessee
36%

2012 Action:
Tennessee required prescribers to check the state’s prescription drug monitoring program before prescribing painkillers.

2013 Result:
Saw a 36% drop in patients who were seeing multiple prescribers to obtain the same drugs, which would put them at higher risk of overdose.

Recommendation 10. When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs.
• **Recommendation 11.** Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.
Recommendation 12. Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder.
UPMC Pain Strategy

- Improve opioid care
  - Best Practices Requirements for All PCPs: 2-hour online Safe and Competent Opioid Prescribing Education (SCOPE)
  - 90/90 Plan for Selected Primary Care and Specialty Providers
- Expand multidisciplinary pain services
- Disseminate Pain Resource Nurse (PRN) Program
- Deploy the HCAHPS Pain Toolkit

Source: Executive Summary of Recommendations from the System-Wide Steering Committee for Pain Medicine
UPMC Initiatives – EpicCare Chronic Pain Synopsis Screen

- Flow sheets
- Pain scores
- Risk assessment
- Urine drug screens
- All opioids
- All benzos

- Radiology section
- Referrals to
  - Comp. Pain Program
  - PMR/PT
  - Orthopedic Surgery
  - Psych
CDC Guideline Fears

- Restricted access to pain medication
  - Clinicians will stop prescribing
- Pain will become undertreated again
- Patients will be abandoned
- Guideline will interfere with clinical decision making
- Lack of insurance coverage for recommended non-opioid therapies
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DSM-5 Opioid Use Disorder

- Taking the opioid in larger amounts and for longer than intended
- Wanting to cut down or quit but not being able to do it
- Spending a lot of time obtaining the opioid
- Craving or a strong desire to use opioids
- Repeatedly unable to carry out major obligations at work, school, or home due to opioid
- Continued use despite persistent or recurring social or interpersonal problems caused or made worse by opioid use
- Stopping or reducing important social, occupational, or recreational activities due to opioid
- Recurrent use of opioids in physically hazardous situations
- Consistent use of opioids despite acknowledgment of persistent or recurrent physical or psychological difficulties from using opioids
- *Tolerance as defined by either a need for markedly increased amounts to achieve intoxication or desired effect or markedly diminished effect with continued use of the same amount. (Does not apply for diminished effect when used appropriately under medical supervision)
- *Withdrawal manifesting as either characteristic syndrome or the substance is used to avoid withdrawal (Does not apply when used appropriately under medical supervision)

Mild = 2-3 criteria; Moderate = 4-5 criteria; Severe = 6+ criteria
Treatment for Opioid Use Disorder

• Behavioral/Psychosocial Treatment
• Medication Assisted Treatment
  • Opioid abstinence
    • Naltrexone
  • Opioid maintenance
    • Methadone
    • Buprenorphine
Pharmacotherapy: Naltrexone
Oral or IM (Depot)

- Mechanism: opioid antagonist, attenuates cravings and reduces “reward” or “high”
- Dosing: 50 mg daily oral; 380 mg IM monthly
- Contraindications: current or anticipated opioid use, liver disease, allergy to naltrexone or naloxone
- Adverse effects: liver toxicity, N/V, HA, anxiety, fatigue
Pharmacotherapy: Methadone

- Mechanism: long-acting, full agonist of the µ-opioid receptor.

- Restrictions: In US, available only for addiction treatment in highly regimented specific programs

- Dosing: variable

- Contraindications: allergy to methadone. Cautions: long QT, liver failure, dependence

- Adverse effects: overdose, constipation, wt gain, diaphoresis, sexual dysfunctions
Pharmacotherapy: Buprenorphine
(Suboxone = Buprenorphine/naloxone)

- Mechanism: Partial opioid agonist/antagonist, administered sublingually
- Dosing: variable (typical 8-16mg/d; max 32mg/d)
- Restrictions: can be administered in office based setting if physician has additional training and DEA waiver
- Contraindications: allergy. Cautions: pregnancy, liver failure, causes dependence
- Adverse effects: hepatic toxicity, constipation, diaphoresis, dependence, precipitated withdrawal if treatment initiated incorrectly
Pennsylvania Opioid Use Disorders Centers of Excellence (COE)

- 45 COE funded by state to provide medication assisted treatment
  - Phase 1 (20 COE) to start October 2016
  - Phase 2 (25 COE) to start January 2017
  - Each COE charged to:
    - Deploy Community Based Care Management Team
    - Initiate medication assisted treatment to 300+ patients in first 12 months (300 patients/COE x 45 COE = 13,500 patients)

- Information:
1. Tadiso Incorporated, Allegheny County
2. Gateway Rehabilitation Center, Allegheny County
33. Magee-Womens Hospital of UPMC
43. UPMC Presby: General Internal Medicine Clinic – Oakland
44. West Penn Allegheny Health System, Allegheny County
45. WPIC of UPMC, Allegheny County
Summary - Take Home Points

- Opioid prescriptions and harms have increased markedly in past 2+ decades
- Adherence to safe opioid prescribing guidelines has potential to decrease opioid harms and effectively treat pain
- Treatment for opioid use disorder is effective and will become more accessible
References


Questions?