Opioids in America: a view from the E.D.

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1. Opioids in the ED: 2 vignettes
2. The scope of the problem
3. The effect on children and adolescents
4. A review of opioid guidelines
Some background...
Vignette 1: Jason
Vignette 2: Eight hours in New Bedford

• 3 patients with little in common: African American at home with boyfriend, Caucasian female at a party, Portuguese fisherman in a parking lot
• 3 patients under age 40
• 3 patients with a common end: found down with drug paraphrenalia, PEA/asystolic arrest, unable to revive
• This is what an epidemic looks like
Scope of the problem: prescription opioid deaths

National Overdose Deaths
Number of Deaths from Prescription Opioid Pain Relievers

Source: National Center for Health Statistics, CDC Wonder
Scope of the problem: heroin deaths

National Overdose Deaths
Number of Deaths from Heroin

Source: National Center for Health Statistics, CDC Wonder
How deadly is this outbreak?

Deaths: 3 years of Ebola vs. US opioid overdoses in 2014

- Ebola Deaths 2013-2016: 11,315
- US Deaths, Opioid Rx OD: 18,893
- US Deaths, Heroin OD: 10,574
- US Deaths, opioids total: 29,467
This outbreak has a vector...
US Opiate prescriptions: 1991-2013

US opiate prescriptions

250 million
220
150
100
76 million
1991
50
0
1991  '92  '94  '96  '98  '00  '02  '04  '06  '08  '10  '12

207 million 2013

SOURCES: IMS Health, National Institutes of Health  PATRICK GARVIN/GLOBE STAFF
But this is an just a problem in adult patients, right?
Opioid misuse: a pediatric outbreak

• Between 1994 and 2007, opioid prescriptions for children and adolescents doubled
• Between 1999 and 2015, overdose deaths in pediatric patients doubled
• Hospitalization for opioid related problems skyrocketed in the same period
• 6% of children from 12 to 17 years of age report nonmedical opioid use in the past year
• 13% of high school seniors have used opioids nonmedically
Hospitalizations for opioid poisonings

Figure 1. Weighted National Estimates of Temporal Trends in Hospitalizations for Prescription Opioid Poisonings Stratified by Age Category

- 1-4 years of age
- 10-14 years of age
- 15-19 years of age

Incidence per 100,000 children

Hospitalizations for opioid poisonings

Figure 3. Weighted National Estimates of Temporal Trends in Hospitalizations for Illicit vs Prescription Opioid Poisonings in the Group Aged 15 to 19 Years

- **Heroin**
- **Prescription opioids**

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Overdose deaths in adolescents

Figure 1. Drug overdose death rates for adolescents aged 15–19, by sex: United States, 1999–2015

- Male
- Total
- Female
Nature of problem: two groups in need

- Group 1: those who need relief from severe pain
  - cancer
  - sickle cell pain crises
  - osteogenesis imperfecta
  - other deforming/debilitating conditions

- Group 2: those who are using opioids inappropriately and are at risk of harm
A solution requires balance

Goal

Stop Misuse, Prevent & Treat Addiction

Goal

Treat Severe Pain Effectively & Safely
Approaches to stem the tide

• Reduce the reservoir of opioids
  – Curtail overprescribing
  – Shrink depots of opioids (e.g. medicine cabinets)

• Target opioids to those that need them
  – Prescribing guidelines (CDC, professional organizations)

• Spare opioid exposure to patients at risk
  – Screening tools and practices (SBIRT)
  – Monitoring/prediction tools
  – Non-opioid pain strategies

• Enhance treatment for those suffering from addiction
  – Naloxone programs
  – Improved access to addiction treatment
Why do adolescents and children misuse opioids?

• 70% begin by self-treating medical conditions
  – pain and somatic complaints
  – anxiety
  – depression
  – sexual victimization

• 30% begin recreationally
  – sensation seeking
  – rule breaking
  – aggressive behaviors
Who is at risk?

- Children experiencing stress or exposure to drug use
- Depression and psychiatric comorbidities
- Certain personalities (thrill seeking, impulsivity, etc.)
- Permissive familial attitudes toward opioids
- Exposure/availability of opioids in the home (contagion of the medicine cabinet)
- Exposure to opioids for legitimate reasons
Illustration of exposure

Adult Prescriptions

Street supply

Medicine cabinet

Pediatric prescriptions
What can I do in my practice?

A look at the guidelines...
intended for “primary care” physicians treating
chronic pain (>3 months)
- not from active cancer
- not involved in palliative care
- not at end-of-life
- not postsurgical (?)

- Not based on pediatric evidence or specifically targeted to pediatric practice
CDC literature review questions

1. Is long term opioid use beneficial?
2. Is long term opioid use associated with harm (and to whom)?
3. Are different opioid formulations/dosages associated with different levels of harm?
4. Can decision instruments predict harm/misuse?
5. Is an opioid prescription for acute pain correlated with long term use?
CDC literature review questions

1. Beneficial?
   No data on whether long term use is beneficial

2. Harmful?
   Yes, with increasing risk to certain subpopulations

3. Formulations/doses matter?
   Yes, ER formulations and higher doses more harmful

4. Predictable?
   Some tools appear to have limited predictive power

5. Risk of opioid Rx for acute relief leading to chronic use?
   Yes
**CDC Recommendations**

**Determining When to Initiate or Continue Opioids for Chronic Pain**

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.

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.

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.

**Opioid Selection, Dosage, Duration, Follow-Up, and Discontinuation**

4. When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.

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)/day, and should avoid increasing dosage to ≥90 MME/day or carefully justify a decision to titrate dosage to ≥90 MME/day.

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 seven days will rarely be needed.

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 other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.

**Assessing Risk and Addressing Harms of Opioid Use**

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/day), or concurrent benzodiazepine use, are present.

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.

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.

11. Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.

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.
CDC recommendations, condensed

- favor non-opioid therapies
- use as little opioids for as short a period of time as possible
- establish goals with patients
- assess risk before and during therapy
“Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should use the lowest effective dose of immediate release opioids... three days or less will often be sufficient; more than seven days will rarely be needed.”
“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…and periodically during opioid therapy… from every prescription to every 3 months.”
“Thank you for that irrelevant prattle, but what about the children??”

- CDC guidelines for adults based on evidence about adults
- Evidence about best practices for pediatric population is limited but growing
- At least one state (Washington) has issued recommendations about opioid prescribing for children and adolescents
Washington guidelines for opioids in pediatrics

1. Prescribers should be pediatric experts
2. “avoid opioids in the vast majority of chronic non-cancer pain… as evidence of safety and efficacy is lacking.”
3. Opioids should be used for limited to conditions where pathophys. explains pain and there is clear endpoint
4. Opioids are indicated in some chronic pain conditions (EOL, O.I., etc)
5. “put safety first”
   1. Limit total amount dispensed
   2. Educate parents/patients about administration and storage
   3. Adolescents should undergo screening for S.A. risk
6. Consult pediatric pain specialist when chronic pain problems… are complicated or persistent…”
Questions?