Trends and Challenges: The Kentucky Opioid Crisis

Jason Smith, MD PhD
University of Louisville
Brief Introduction

• I am by no means an expert

• I have no financial disclosures

• Jokes are meant to be light-hearted
Agenda

• Tell the Story
  • How did we get here?
• Current Problem
  • National and Kentucky Statistics
• What Do We Do?
  • Discussion
Tell the Story
Setting the Scene
ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 30,946 hospitalized medical patients who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients, Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug Surveillance Program
Waltham, MA 02154

Boston University Medical Center

Direct-to-consumer, or DTC, drug ads on TV became a thing in 1997, when the FDA approved such marketing.

- 1997 $664 million
- 2005 $3 billion annually
- 2015 > $5 billion

Only two countries permit DTC drug ads — the U.S. and New Zealand.
Education and Marketing: Purdue Pharma and OxyContin

• Approved 1995

• Sales:
  • 1996 $45 million
  • 2000 $1.1 billion
  • 2010 $3.1 billion (30% of painkiller market)

• 1996-2002 funded >20,000 pain-related educational programs

• Provided financial support to: American Pain Society, the American Academy of Pain Medicine, the Federation of State Medical Boards, the Joint Commission
Pain: The 5th Vital Sign

- History
  - Introduced by president of American Pain Society 1995
  - Embraced by VA system late 1990s
  - Became Joint Commission standard 2001
- Because
  - Recognition pain undertreated
  - Untreated pain leads to chronic pain
  - Chronic pain interferes with quality of life, is costly, and common
Americans are suffering from more chronic pain

Where did it come from?
The Stage is Set...
Predictable response...
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.
Slightly less than ½ of all patients treated with narcotics for 31 days will still be on the pain medication a year later.
Sources of Rx Opioids Among Past-year Non-Medical Users

The True Tale of America's Opiate Epidemic

DREAMLAND

SAM QUINONES

FLORIDA'S OPIOID CRACKDOWN MIGHT BE CURBING NUMBER OF PRESCRIPTIONS

The move to implement the Opioid Treatment Act in 2011 to reduce the number of opioid prescriptions among the top prescribers of the drug in the state....

OPIOID MISUSE AND OVERDOSE DEATHS ON THE RISE, STUDY FINDS

The number of people who are using opioids for nonmedical reasons and overdose deaths in the U.S. have declined from 2013 to 2015, as opioid prescriptions have decreased for the same period....

FDA APPROVES PAINKILLER OXYCONTIN FOR CHILDREN AGES 11 TO 16

The FDA has approved Johnson & Johnson's opioid pain medicine OxyContin for use in children 11 to 16 years old....

CHRONIC PAIN IS SUFFERED BY 100 MILLION AMERICANS: BUT ARE THEY BEING SUFFICIENTLY TREATED?

An estimated 100 million Americans live with chronic pain, but new research suggests that many of these patients receive insufficient treatment....

OPIOID OVERDOSES IMPose A FINANCIAL 'B U R D E N ' ON U.S. MEDICAL FACILITIES

Opioid overdoses are common and expensive....
Xalisco in the state of Nayarit in Mexico

http://articles.latimes.com/2010/feb/16/local/la-me-blacktar16-2010feb16
More drug overdose deaths now involve heroin than prescription painkillers

Number of deaths

- **Heroin**
- Commonly prescribed opioids
- Synthetic opioids (e.g., fentanyl)
Life expectancy has improved in the US, but a 2015 dip shows that might be changing

Life expectancy fell from 78.9 to 78.8 years in 2015

The last major decline was in 1993, when life expectancy fell by 0.3 years
Rates of Drug Overdose Deaths, 2015

Source: https://www.cdc.gov/drugoverdose/data/statedeaths.html
States with the highest opioid overdose death rates, 2016

<table>
<thead>
<tr>
<th></th>
<th>ALL DRUG DEATHS</th>
<th></th>
<th>OPIOID-RELATED DEATHS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>PER 100K PEOPLE (AGE-ADJUSTED)</td>
<td>TOTAL</td>
<td>PER 100K PEOPLE (AGE-ADJUSTED)</td>
</tr>
<tr>
<td>1 West Virginia</td>
<td>884</td>
<td>52.0</td>
<td>733</td>
<td>43.4</td>
</tr>
<tr>
<td>2 New Hampshire</td>
<td>481</td>
<td>39.0</td>
<td>437</td>
<td>35.8</td>
</tr>
<tr>
<td>3 Ohio</td>
<td>4,329</td>
<td>39.1</td>
<td>3,613</td>
<td>32.9</td>
</tr>
<tr>
<td>4 Washington, D.C.</td>
<td>269</td>
<td>38.8</td>
<td>209</td>
<td>30.0</td>
</tr>
<tr>
<td>5 Maryland</td>
<td>2,044</td>
<td>33.2</td>
<td>1,821</td>
<td>29.7</td>
</tr>
<tr>
<td>6 Massachusetts</td>
<td>2,227</td>
<td>33.0</td>
<td>1,990</td>
<td>29.7</td>
</tr>
<tr>
<td>7 Rhode Island</td>
<td>326</td>
<td>30.8</td>
<td>279</td>
<td>26.7</td>
</tr>
<tr>
<td>8 Maine</td>
<td>353</td>
<td>28.7</td>
<td>301</td>
<td>25.2</td>
</tr>
<tr>
<td>9 Connecticut</td>
<td>971</td>
<td>27.4</td>
<td>855</td>
<td>24.5</td>
</tr>
<tr>
<td>10 Kentucky</td>
<td>1,419</td>
<td>33.5</td>
<td>989</td>
<td>23.6</td>
</tr>
</tbody>
</table>

KY is in the Top 10...
Drug Overdose Fatality Numbers among Kentucky Residents, 2013-2017


Increasing # of deaths

- 2013: 1,003
- 2014: 1,069
- 2015: 1,264
- 2016: 1,378
- 2017 (Q4 not complete): 1,434
Increasing rate of Overdose Deaths

Drug Overdose Fatality Rates among Kentucky Residents, 2013-2017

Local Statistics

• Not an isolated problem

Accidental Overdose Deaths in Louisville/Jefferson County, by ZIP Code of residence, 2017

number of deaths

- 0 - 2
- 3 - 5
- 6 - 10
- 11 - 20
- 21 - 30

*some ZIP codes extend into adjacent counties

Data source: Jefferson County Coroner's Office
Overdose ED visits in Kentucky via Rapid Surveillance*, 2016-2017

Overdose definitions based on a combination of free-text fields and ICD-10-CM codes.

*Rapid ED surveillance data are used to monitor trends for emerging issues, rather than absolute counts.

**Rates per 10,000 ED encounters are presented, to control for changes over time in the number of facilities reporting rapid ED surveillance data.
Hospital Inpatients Discharged with a Diagnosis of HIV and a Comorbid Diagnosis of Drug Overdose, Abuse or Dependence - KY Residents, 2013 Q4 - 2017 Q3

Number of discharges

Year and Quarter of Discharge
Hospital Inpatients Discharged with a Diagnosis of Endocarditis and a Comorbid Diagnosis of Drug Overdose, Abuse or Dependence - KY Residents, 2013 Q4 - 2017 Q3

Year and Quarter of Discharge

<table>
<thead>
<tr>
<th>Year and Quarter of Discharge</th>
<th>Number of discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 Q4</td>
<td>44</td>
</tr>
<tr>
<td>2014 Q1</td>
<td>46</td>
</tr>
<tr>
<td>2014 Q2</td>
<td>37</td>
</tr>
<tr>
<td>2014 Q3</td>
<td>78</td>
</tr>
<tr>
<td>2014 Q4</td>
<td>69</td>
</tr>
<tr>
<td>2015 Q1</td>
<td>54</td>
</tr>
<tr>
<td>2015 Q2</td>
<td>72</td>
</tr>
<tr>
<td>2015 Q3</td>
<td>90</td>
</tr>
<tr>
<td>2015 Q4</td>
<td>100</td>
</tr>
<tr>
<td>2016 Q1</td>
<td>88</td>
</tr>
<tr>
<td>2016 Q2</td>
<td>111</td>
</tr>
<tr>
<td>2016 Q3</td>
<td>191</td>
</tr>
<tr>
<td>2016 Q4</td>
<td>157</td>
</tr>
<tr>
<td>2017 Q1</td>
<td>129</td>
</tr>
<tr>
<td>2017 Q2</td>
<td>181</td>
</tr>
<tr>
<td>2017 Q3</td>
<td>235</td>
</tr>
</tbody>
</table>
Economic Burden 2016

• Cost to insurers $21.4 Billion in 2016
• $6.1 billion in child and family assistance spending
• $43 billion in losses due to deaths
• $12 billion on lost productivity
<table>
<thead>
<tr>
<th>Cost</th>
<th>Private/Uninsured</th>
<th>Medicaid</th>
<th>Medicare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overdose Costs</td>
<td>$3.7</td>
<td>$5.0</td>
<td>$3.5</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td>$2.6</td>
<td>$3.7</td>
<td>$2.9</td>
</tr>
<tr>
<td>Total</td>
<td>$6.3</td>
<td>$8.7</td>
<td>$6.4</td>
</tr>
</tbody>
</table>

Health Care Costs of Opioid Abuse 2016
Opioids Use and Misuse in Kentucky’s Medicaid Population

- 40,000 adults in Kentucky's Medicaid program have a substance abuse disorder
- More than 50 percent of Medicaid enrollees with a serious mental illness also have a substance use disorder.
- More than 1,300 children were born in Kentucky between 2011 and 2014 with neonatal abstinence symptoms because of maternal substance abuse.
- Medicaid is the largest payer for births in Kentucky
- Kentucky’s Medicaid program spent $26 million on opioid use and misuse in 2013
- $10 million of this spending occurring in southeast Kentucky.
Conservative estimates indicate untreated substance abuse costs Kentucky state and local governments more than $400 million annually in public safety and health care services alone.

All Ky Public Universities split $31 million total in 2017...6 public Ky universities got nothing.
Solving the Opioid Crisis: A Critical Role for Medicaid

EYE ON WASHINGTON: CECI CONNOLLY

Among the myriad health issues that remain unresolved by policymakers in Washington is how to stanch the unrelenting toll of our nation's opioid epidemic.

Drug overdoses are now the leading cause of death for Americans under 50. In 2016, the overdose rate increased by 28 percent over the previous year, claiming 42,000 lives—or 174 each day. And in the wake of the opioid and addiction crisis, the United States has now recorded the second straight year of declining life expectancy in more than a half century.

In October, President Trump drew valuable attention to the problem by declaring a public health emergency, although it did not come with financial support for the people and communities most affected.
So What Do We Do?
Lesson #1: This is not a hospital problem.

There is no single answer to this QUESTION
Public Health Approaches to Opioid Crisis

• Primary prevention school education programs
• Safe opioid prescribing & disposal
  • Prescription Drug Monitoring Programs*
  • Drug take-back initiatives
  • Provider education (and education mandates)
  • Regulation and legal action around “pill mills”
  • Opioid prescribing limits (insurance and legislation)
• Screening, Brief Intervention and Referral to Treatment
• Abuse-deterrent opioid formulations
• Opioid Use Disorder (OUD) treatment with agonist therapy*
• Overdose response education and naloxone distribution*
  • Good Samaritan Laws
  • Laws to allow access without a prescription
TOP TEN RECOMMENDATIONS FOR ACTION

1.1 Mandate prescriber PDMP registration and use.

2.1 Work with state medical boards to enact policies reflecting the Centers for Disease Control and Prevention’s (CDC’s) Guideline for Prescribing Opioids for Chronic Pain.

3.1 Inform and support evaluation research of PBM and pharmacy interventions to address the opioid epidemic.

4.3 Secure funding for research to assess the effectiveness of innovative packaging and designs available and under development.

5.4 Provide clear and consistent guidance on safe disposal of prescription opioids; expand take-back programs.

6.1 Invest in surveillance of opioid misuse and use disorders, including information about supply sources.

7.4 Allocate federal funding to build treatment capacity in communities with high rates of opioid addiction and limited access to treatment.

8.1 Partner with product developers to design naloxone formulations that are easier to use by non-medical personnel and less costly to deliver.

9.1 Establish and evaluate supervised consumption spaces.

10.2 Avoid stigmatizing language and include information about the effectiveness of treatment and the structural barriers that exist to treatment when communicating with the public about opioid-use disorders.

THE OPIOID EPIDEMIC
From Evidence to Impact
Responding to the Crisis: Surgeon General Campaign

The US Surgeon General created a “Turn the Tide” Campaign to reverse the Opioid Epidemic.
Opioid Use Disorder Treatment

Counseling and Community Support (without medication)

Medication assisted treatment (MAT):
- Methadone*
  - Only available in Opioid Treatment Programs ("methadone clinics")
- Buprenorphine*
  - Prescriber must have “waiver” to be able to prescribe and there are limits on size of patient population

Detox is not treatment!
Benefits Of Agonist (Methadone and Buprenorphine) Treatment

- Increases retention in treatment
- Reduces illicit opioid use
- Reduces risk of overdose
- Reduces risk of HIV infection
- Reduces risk of HBV and HCV infections
- Increases rates of employment
- Decreases crime
- Increases length of life
Opioid Agonist Treatments and Heroin Overdose Deaths in Baltimore 1995-2009

Access to opioid use disorder medication assisted treatment in US

FIGURE 1—Trends in past-year opioid abuse or dependence and opioid agonist medication-assisted treatment capacity: United States, 2003-2012.

Note. OA-MAT = opioid agonist medication-assisted treatment; OTP = opioid treatment program.
Overdose Response & Naloxone Distribution

No increase in drug use; increase in drug treatment
- Galea et al. Addict Behav 2006:31:907-912
- Doe-Simkins et al. BMC Public Health 2014; 14:297

Cost effective

Reduction in overdose deaths
- Walley et al. BMJ 2013 346:f174

Should center around people who use drugs
- Rowe et al. Addiction 2015; 1301-1310
There Is More Than One Opioid Crisis
To better tackle the epidemic, Kentucky needed to know which drugs were causing lethal overdoses.

By Kathryn Casto
Filed under Opioids
Published Jan. 17, 2018

https://fivethirtyeight.com/features/there-is-more-than-one-opioid-crisis/
Drug Overdose Deaths

Number of Drug Overdose Fatalities among Kentucky Residents, 2013-2017

Produced by the Kentucky Injury Prevention and Research Center (KIPRC), as bona fide agent for the Kentucky Department for Public Health, March 2018. Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services. Data are provisional and subject to change.
Overdose deaths among Kentucky Residents, 2013-2017


---

All Overdose Deaths

Opioid Overdose Deaths

Legend:
Solving the Opioid Crisis: A Critical Role for Medicaid

EYE ON WASHINGTON: CECI CONNOLLY

AMONG THE MYRIAD HEALTH ISSUES THAT REMAIN UNRESOLVED BY POLICYMAKERS IN WASHINGTON IS HOW TO STANCH THE UNRELENTING TOLL OF OUR NATION'S OPIOID EPIDEMIC.

Drug overdoses are now the leading cause of death for Americans under 50. In 2016, the overdose rate increased by 28 percent over the previous year, claiming 42,000 lives—or 174 each day. And in the wake of the opioid and addiction crisis, the United States has now recorded the second straight year of declining life expectancy in more than a half century.

In October, President Trump drew valuable attention to the problem by declaring a public health emergency, although it did not come with financial support for the people and communities most affected by this crisis.

Threats to the ACA and Cost of Treatment
One last thing before we open for questions?
A Problem with culture

1998-2007
80 Accidents
I-75 Northside Drive

March 2\textsuperscript{nd} 2007
29 Injured, 7 Killed
Who’s at fault?
No one wakes up in the morning saying...You know what, I am going to do a bad job today and maybe kill some one.
THANK YOU