Case Presentation #2: The U.S. Opioid Epidemic

Case Introduction

*Formulating Policy: Strategies and Systems of Policymaking in the 21st Century*

November 19, 2018
Some Numbers
A Brief Overview of the Epidemiology

- **Key Points**
  - Trends
  - Types of Drugs
  - Intentionality of Deaths
  - Other observations

- **2017 Preliminary Data**
  - 49,000 deaths
  - Increases in heroin and fentanyl
  - Despite increases in naloxone access
  - 2018 some optimism
RISE IN OPIOID OVERDOSE DEATHS IN AMERICA

A Multi-Layered Problem in Three Distinct Waves

351,000 people died from an opioid overdose (1999-2016)

1990s mark a rise in prescription opioid overdose deaths

2010 marks a rise in heroin overdose deaths

2013 marks a rise in synthetic opioid overdose deaths

Rx OPIOIDS
Include natural, semi-synthetic, and methadone and can be prescribed by doctors

HEROIN
An illegal opioid

SYNTHETIC OPIOIDS
Such as fentanyl and tramadol are very powerful and can be illegally made

Learn more about the evolving opioid overdose crisis: www.cdc.gov/drugoverdose
U.S. Opioid Prescriptions: Still High Despite Recent Declines

Too many opioid prescriptions for too many days at too high a dose.

**TWO MANY DAYS**

Average prescription days supply

- **INCREASED 33%** from 2006 to 2015

**TWO HIGH A DOSE**

A dose of 50 MME or more per day doubles the risk of opioid overdose death, compared to 20 MME or less.

Average daily MME per person declined nationwide, but is still too high.

**TWO MANY PRESCRIPTIONS**

In 2015, there were enough prescriptions for *every American* to be medicated around the clock for three weeks.

(640 MME per person, which equals 5 mg of hydrocodone every 4 hours)

**NATIONWIDE INCONSISTENCIES**

The total amount of opioids prescribed (per person for the year 2015) varied widely from county to county.

- **1,319 MME** Average of highest 25% of US counties in 2015
- **203 MME** Average of lowest 25% of US counties in 2015
From 1999 to 2016, 197,000 people died from overdoses related to prescription opioids.

www.cdc.gov
Each day, more than 1,000 people are treated in emergency departments for not using prescription opioids as directed.
DRAMATIC INCREASES IN MATERNAL OPIOID USE AND NEONATAL ABSTINENCE SYNDROME

THE USE OF OPIOIDS DURING PREGNANCY CAN RESULT IN A DRUG WITHDRAWAL SYNDROME IN NEWBORNS CALLED NEONATAL ABSTINENCE SYNDROME (NAS), WHICH CAUSES LENGTHY AND COSTLY HOSPITAL STAYS. ACCORDING TO A NEW STUDY, AN ESTIMATED 21,732 BABIES WERE BORN WITH THIS SYNDROME IN THE UNITED STATES IN 2012, A 5-FOLD INCREASE SINCE 2000.

EVERY 25 MINUTES, A BABY IS BORN SUFFERING FROM OPIOID WITHDRAWAL.

AVERAGE LENGTH OR COST OF HOSPITAL STAY

<table>
<thead>
<tr>
<th></th>
<th>With NAS</th>
<th>Without NAS</th>
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<tr>
<td>DAYS</td>
<td>16.9</td>
<td>2.1</td>
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<tr>
<td>COST</td>
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<td>$3,500</td>
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NAS AND MATERNAL OPIOID USE ON THE RISE

FENTANYL: Overdoses On The Rise

Fentanyl is a synthetic opioid approved for treating severe pain, such as advanced cancer pain. Illicitly manufactured fentanyl is the main driver of recent increases in synthetic opioid deaths.

SYNTHETIC OPIOID DEATHS ACROSS THE U.S.

50-100x MORE POTENT THAN MORPHINE

Ohio Drug Submissions Testing Positive for Illicitly Manufactured Fentanyl

196% INCREASE FROM 2014 TO 2015

ILlicitly Manufactured Fentanyl

Although prescription rates have fallen, overdoses associated with fentanyl have risen dramatically, contributing to a sharp spike in synthetic opioid deaths.

Often mixed with heroin or cocaine with or without user knowledge.
A Consideration of Histories

- Opium around the World
- U.S. Approach to Drug Use
- U.S. History
- Demographics of Opioid Use
Defining the Problem
Many Problems; Many Ways to Define the Problem

• Supply: Manufacture
• Supply: Prescribing
• Supply: Illicit Drug Network

• Demand: Medicating Diseases of Despair
• Demand: Risk Taking among Youth, Others

• Other Frames?
Opioid Crisis: No Easy Fix to Its Social and Economic Determinants

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The accepted wisdom about the US opioid crisis singles out opioid analgesics as causative agents of harm, with physicians as unwitting conduits and pharmaceutical companies as villains.1 Although invincible for infection control, this vector model2 of drug-related harm ignores root causes. Bending economic opportunity, evolving approaches to pain treatment,3 and limited drug treatment have fueled spates in problematic substance use, of which opioid overdose is the most lethal manifestation. By ignoring the underlying drivers of drug consumption, current interventions are agnostic to trajectory. The structural and social determinants of health framework is widely understood to be critical in responding to public health challenges. Until we adopt this framework, we will continue to fail in our efforts to turn the tide of the opioid crisis.

THREE PHASES OF AN INTERTWINED EPIDEMIC

The roots of the opioid crisis are deeper than popular narrative suggest.4 In 1980, chronic pain was so frequently treated with opioids that prescribers were the second-most-dispensed drug in the United States.5 The Carter White House stated, "Dramatic, visible, and dire mass drug abuse may be involved as many as seven out of ten reports of drug-related injury or death."6 A decade later, US medicine was shaken by revelations of widespread chronic pain, mounting narco-logical practice and policy shifts.7 Previously, chronic pain was managed largely with cognitive behavioral therapy, even hypnotism. An Institute of Medicine report8 attributed the rise in chronic pain prevalence during the 1990s to the following:

1. greater patient expectations for pain relief
2. macroeconomic disorder of an aging population
3. obesity
4. increased awareness of pain and its consequences
5. increased frequency and complexity of surgery

As access limited coverage of behavioral pain therapy, bio-pharmaceutical manufacturers seized an opportunity. Pharmaceutical innovation propagated extended-release formulations, transdermal patches, nasal sprays, and oral dissolution. Medical device manufacturers drove a proliferation of novel pain-modulating implants. By 2000, chronic pain was big business. Withdrawals from the market of popular nonopioid analgesics because of cardiovascular risk andtramadol toxicity raised concerns about nonopioid alternatives.3 Short lived but debatable, some pharmaceutical marketing improperly measured addiction potential (OxyContin)9 and promoted off-label use (Actiq).10 In addition, increased provision of physicians were unregulated, doling out opioids without adequate regard for medical need.11,12 These factors are widely believed to have caused the steady rise in opioid analgesic consumption over the past three decades, while rates of overdose and addiction increased in tandem.

As of 2010, the second phase started, marked by concern over interpreting opioid analgesics and their use.13 After remaining largely stable, heroin overdose deaths spiked, tripling between 2010 and 2015.14 The vector model animates this transformation to
Assessing Case #1

• Wednesday November 21
  – Policy Alternatives

• Monday November 26
  -- Communicating with Policymakers

• Wednesday November 28
  – Decision and Conclusion
  – Memo Assignment #2 posted after class
Questions and Comments