Extent of the Heroin Problem
Medical Trends

Presented to Orange County Heroin Task Force
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Heroin & Local History
What is Heroin

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• Heroin is an *opioid* drug that is synthesized from a naturally occurring substance extracted from the seed pod of the Asian opium poppy plant.

• Other *opioids* include morphine, codeine, methadone, oxycodone (OxyContin), hydrocodone (vicodin).

• Heroin is a highly addictive opioid drug.
Local History
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- 1999: Initiative to reduce medical pain and suffering
  - Joint Commission - 5th vital sign

- 1999-2010: Prescription Opioid Epidemic
  - 7 deaths/day in FL from Rx Drugs
  - Deaths quadrupled during period

- Heroin Use Decreased
  - Drug OD ➔ #1 cause of injury related deaths
    - Exceeding MVC
Deaths caused by Oxycodone parallel Grams of Oxycodone Distributed by year, Florida, 2001-2010

Grams of Oxycodone per pop

- Grams
- Deaths
National Overdose Deaths
Number of Deaths from Heroin

Figure 1. Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

- Opioid analgesics
- Heroin

Source: National Center for Health Statistics, CDC Wonder
Local History

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- 2010-2012: Heroin OD deaths doubled in 28 states
- 2012: Multi-faceted approach to reduce availability of Rx Opioids
- Up to 75% of heroin users say Rx Opiates was their entrée to opiate addiction
  - Diff than 1960’s
Meanwhile

- Increased heroin availability
- Cheap
- Same family of drugs
- Stronger “rush/high”
FL Heroin-Related Drug Deaths

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*2015 Estimate based on 6 Month Projection
District Nine - Accidental Drug Deaths
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2012: RX Only 98, RX & Illicit 19, Heroin Only 16, Other Illicit Drugs 22
2013: RX Only 73, RX & Illicit 30, Heroin Only 16, Other Illicit Drugs 45
2014: RX Only 62, RX & Illicit 51, Heroin Only 43, Other Illicit Drugs 54
Heroin-Related Deaths
Gender (District Nine)
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Years of Potential Life Years Lost

<table>
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<tr>
<th>Year</th>
<th>Total Deaths</th>
<th>Male</th>
<th>Female</th>
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<td>2012</td>
<td>26</td>
<td>22</td>
<td>4</td>
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<tr>
<td>2013</td>
<td>49</td>
<td>43</td>
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<tr>
<td>2014</td>
<td>90</td>
<td>74</td>
<td>16</td>
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<td>*2015</td>
<td>37</td>
<td>29</td>
<td>7</td>
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</table>
Heroin-Related ER Admissions
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*Jan – Mar 2015
Heroin-Related ER Admissions
Gender/Age (2012-2015)

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All Demographics Affected

Greatest increase in heroin use is seen ages 18-30
Heroin-Related ER Admissions

Cost of Care

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Approximately 10% of the Cost of Care is Reimbursed
Heroin

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- Usually in a White Powder
  - Purity is 30-60%
  - Quinine, sugar, starch, powdered milk

- Can be used:
  - Intravenous, smoked, intranasally, orally

- Highest Increase in Users:
  - 18-25yo white males
  - Increase in every demographic, race, gender, income level
Effects of Heroin

Short-term effects of Heroin

- **Central**
  - Euphoria
  - Alternately alert and drowsy state

- **Mouth**
  - Dryness

- **Skin**
  - Warm flushing

- **Respiratory**
  - Slowed breathing

- **Muscular**
  - Weakness
Short-Term Effects of Heroin

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- Initial surge of pleasurable sensation “rush”
- Dry mouth
  - Warm flushing of the skin
  - Slowed breathing
- Heavy feeling in the extremities
- Drowsy for hours
- Clouded mentation

The effects of heroin can be felt very soon after the drug is taken
Short-Term Effects of Heroin  
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- Biggest immediate risk is RESPIRATORY ARREST

- Users develop TOLERANCE
  - Requires more and more drug to get “high”
  - Users can quickly go from 5-20 mg to several 100 mg/day
  - Hard to differentiate suicide from accidental OD
  - *Tolerance to high exceeds tolerance to respiratory depression*
Long-Term Effects of Heroin

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- Addiction
- Develop collapsed veins
- Infection of heart lining and valves
- Decreased liver function
- Skin Popping → Abscesses, MRSA
- Infectious diseases
  - TB, HIV, Hepatitis C

Long-term effects of Heroin

- Central
  - Addiction
  - Tolerance
  - Dependence
- Respiratory
  - Pneumonia
- Heart
  - Infection of heart lining and valves
- Circulatory
  - Collapsed veins
- Liver
  - Decreased function
- Systemic
  - Abscesses

Long-term effects of intravenous usage
Other Health-Related Consequences

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• Heroin use increase risk of exposure to HIV/AIDS & viral hepatitis
  – Half of Hep C cases; No Vaccine
• Sharing syringes, unprotected sexual contact with infected person
• Injection drug users are highest group for acquiring hepatitis C
• Neonatal withdrawal
• Increased healthcare utilization resource

CDC: Indiana has 'one of the worst' HIV outbreaks
April 27, 2015
Withdrawal Symptoms
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- Relesestness/agitation
- Yawning
- Muscle and bone pain
- Sweating
- Insomnia
- Diarrhea
- Vomiting
- Cold flashes

Major withdrawal symptoms peak between 24-48 hours after last dose. Can last weeks to months.
Long Term Effects of Heroin Use
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Brain Imaging SPECT

Normal brain view – 39y/o top down surface view, full symmetrical activity

39 y/o—25yr. History of frequent heroin use, top down surface view marked overall decreased activity

Source: AmenClinics & New York National Guard Counterdrug Task Force Presentation
Addiction
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Can become a chronic relapsing disease

- “Your whole day is spent finding or taking drugs. You get high all afternoon. At night, you put yourself to sleep with heroin. And you live only for that. You are in a prison. You beat your head against a wall, nonstop, but you don’t get anywhere. In the end, your prison becomes your tomb.”

- “From the day I started using, I never stopped. Within one week I had gone from snorting heroin to shooting it. Within one month I was addicted and going through all my money. I sold everything of value that I owned and eventually everything that my mother owned. Within one year, I had lost everything.”
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