The Opioid Epidemic: University of Kentucky Response

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Overdose Death Rates

1999

2014

Estimated Age-adjusted Death Rate per 100,000:
0.0 - 0.4
0.5 - 0.9
1.0 - 1.4
1.5 - 1.9
2.0 - 2.4
2.5 - 2.9
3.0 - 3.4
3.5 - 3.9
4.0 - 4.4
4.5 - 4.9
5.0 - 5.4
5.5 - 5.9
6.0 - 6.4
6.5 - 6.9
7.0 - 7.4
7.5 - 7.9
8.0 - 8.4
8.5 - 8.9
9.0 - 9.4
9.5 - 9.9
10.0 - 10.4

Designed by L. Rossen, B. Bastian & Y. Chong. SOURCE: CDC/NCH
Counties most vulnerable to rapid HIV/HCV spread if introduced: 220 counties in 26 states

Kentucky has 54 of these counties (~25% of total)

Kentucky Resident Drug Overdose Deaths and Rates, 2000-2015*

Number of drug overdose deaths

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Drug Overdose Deaths</th>
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<tbody>
<tr>
<td>2000</td>
<td>246</td>
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<tr>
<td>2001</td>
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<tr>
<td>2014</td>
<td>1069</td>
</tr>
<tr>
<td>2015</td>
<td>1220</td>
</tr>
</tbody>
</table>

Age-adjusted rate per 100,000 population

- 2000: 6
- 2001: 8.3
- 2002: 10.6
- 2003: 13.3
- 2004: 12.7
- 2005: 14.9
- 2006: 16.9
- 2007: 15.8
- 2008: 17.5
- 2009: 17.4
- 2010: 23.3
- 2011: 24.1
- 2012: 23.9
- 2013: 23.3
- 2014: 24.6
- 2015: 28.8

*Courtesy Dr. Terri Bunn, Kentucky Injury Prevention and Research Center
Kentucky Resident Neonatal Abstinence Syndrome (NAS) Numbers and Rates, 2000-2014*

Number of NAS births

Rate (Number of NAS births per 1,000 live births)

Number of NAS Births

NAS birth rate

Courtesy Dr. Terri Bunn, Kentucky Injury Prevention and Research Center
Kentucky Senate Bill 192

- Comprehensive legislation passed in 2015 session
  - Increased access to treatment
  - Authorized needle exchange program
  - Good Samaritan clause
  - Increased access to naloxone
Expanding Access to Naloxone in Kentucky: Impact of Coordinated Pharmacist Outreach and Education

• 17 training programs held across the state between June 28, 2015 and June 1, 2016
  – 1,470 pharmacists trained
  – 300 student pharmacists trained

• 1,121 pharmacists certified by Board of Pharmacy to initiate dispensing of naloxone

• Protocols now in independent and chain pharmacies

Courtesy of Dr. Trish Freeman College of Pharmacy
Naloxone Certified Pharmacists by Kentucky County
Kentucky Contract Funding (~$10.5 million)

Cabinet for Health and Family Services
- Kentucky Treatment Outcomes Study
- Targeted Assessment Program
- Adolescent Health and Recovery Treatment and Training Outcome Evaluation
- DUI Project

Department of Corrections
- Criminal Justice Treatment Outcomes

Kentucky Housing Corporation
- Recovery KY Programs, Hope Center, Healing Place

KYPRIC- Statewide Surveillance (e.g., overdose deaths)
Statewide Educational Initiative

Governor Bevin charged UK to lead a plan to improve training of health professionals across the state on better prescribing practices and identifying drug use disorders

A Statewide Inter-Professional Approach to Drug Addiction Education in Kentucky: The Kentucky Addiction Prevention Education (KAPE) Program

Feddock, Buser, Betz, Crum, Bradley, Hill, Holthouser, Kyrkanides, Griffith, Walsh, Ganzel & DiPaola
UK HealthCare Encounters with Pregnant Women with Opioid Use Complications

![Graph showing encounters with pregnant women with opioid use complications from Q1 2015 to Q1 2017. The number of encounters increases significantly from Q2 2015 to Q3 2016, reaching a peak in Q4 2016. There is a slight decrease in Q1 2017.](image-url)
PATHways (Perinatal Assistance and Treatment Home)
PATHways Experience (n=150+ since 2014)

Among all PATHways moms-to-be:
- No illicit drug use at admission to labor & delivery for 77%
- Of those with a positive UDS, only 1 tested positive for opioids
- For every group session attended, women were 13-18% more likely to be drug-free at each follow-up visit after delivery

Among all PATHways babies:
- 97% cared for by their mothers needed no medication for treatment of opioid withdrawal
- Length of Stay ~6 days with care-by-mother vs. 23 days in NICU*
- 62.5% breastfeeding at discharge compared to 20% in the NICU*
- 90% babies discharged into maternal or family-supported care

*NICU – Neonatal Intensive Care Unit
UK Healthcare Addiction Medicine Service

• Behavioral Health Team working for the past year on development of an Addiction Medicine proposal

• Executive leadership approved proposal to launch a hospital-wide Addiction Medicine Service in early 2017

• Work is underway to hire and train staff to develop a multidisciplinary inpatient and outpatient service to treat opioid use disorder with evidence-based practices
Substance Abuse Research Funding FY 2016

- National Institutes on Drug Abuse is the largest source of UK National Institutes of Health funding with $13 million
- $1.2 million from National Institutes on Alcohol Abuse and Alcoholism
- $27.8 million of UK total grant awards (~10%) are substance abuse-related

![Diagram of National Institute on Drug Abuse funding from FY2011 to FY2016]
Development of Novel Treatments for Opioid Use Disorder

PROBUPHINE: a six-month implant of buprenorphine intended for stable patients. FDA approved 2016

CAM2038: sustained-release weekly and monthly injectable

UK researchers led national Phase II and Phase III. FDA approval anticipated Q1 2018
Social Networks among Appalachian People: SNAP Study:

- Longitudinal study to determine vulnerabilities to prescription opioid abuse in rural Appalachia
- 500 rural out-of-treatment drug users (w/ and w/injection) recruited and followed regularly
- Purpose: determine prevalence and incidence of HCV, HIV and HSV-2 and other risk behaviors in relation to social network characteristics among rural prescription drug users

Young, Rudolph, Quillen and Havens. *J Epidemiol and Community Health*, 2014
Social Network Analysis of Hepatitis C Transmission

Courtesy of Dr. Jennifer Havens Center on Drug and Alcohol Research
Planned Projects to Address the Opioid Epidemic in Rural Appalachia

Pending NIDA Project to introduce and expand evidence-based practices for treatment of opioid use disorder in the Gateway and KY River Districts

CURES money may support clinical treatment efforts

Randomized trial between Pike versus Perry County to treat Hepatitis C-infected individuals and introduce other harm reduction approaches

-discussed with Congressman Rogers and Governor Bevin as a potential partnership between NIDA and Kentucky