

Kentucky Resident Drug Overdose in 2020

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Educational Need/Practice Gap

Educational Need: Timely information on drug overdose in Kentucky can help inform and evaluate evidence-based interventions.

Practice Gap: Connections between data analysts and community stakeholders must be built to improve the dissemination and utility of drug overdose statistics.

Objectives

- Describe the trends in drug overdose among Kentucky residents before and during 2020
- Discuss the data available through KIPRC and its limitations
- Utilize KIPRC data for grant applications, reporting periods, and community assessment

Expected Outcomes

By the end of this presentation, you should be able to...

- Explain recent trends in drug overdose among Kentucky residents
- Access data that meets the needs of your organization

What Is KIPRC?

- Stands for the Kentucky Injury Prevention and Research Center
- Partnership between the University of Kentucky College of Public Health and the Kentucky Department for Public Health
- Purpose: Decrease injury burden in the Commonwealth due to
 - Substance use
 - Occupational and fall hazards
 - Trauma (e.g., motor vehicle accidents, suicide, homicide, abuse, etc.)
 - Fire and other disasters
- Website: <http://www.kiprc.uky.edu>

Objectives

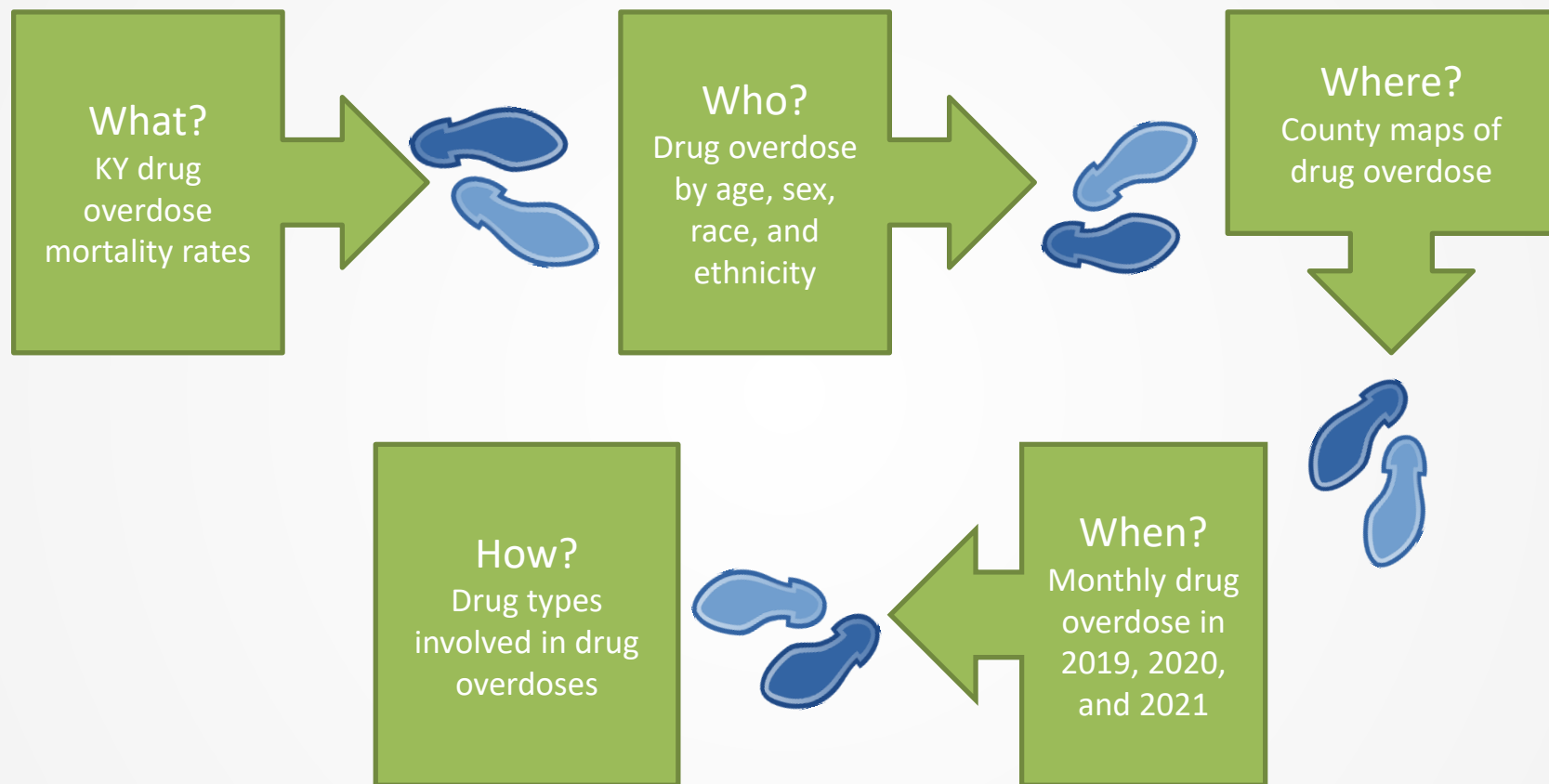
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Road Map

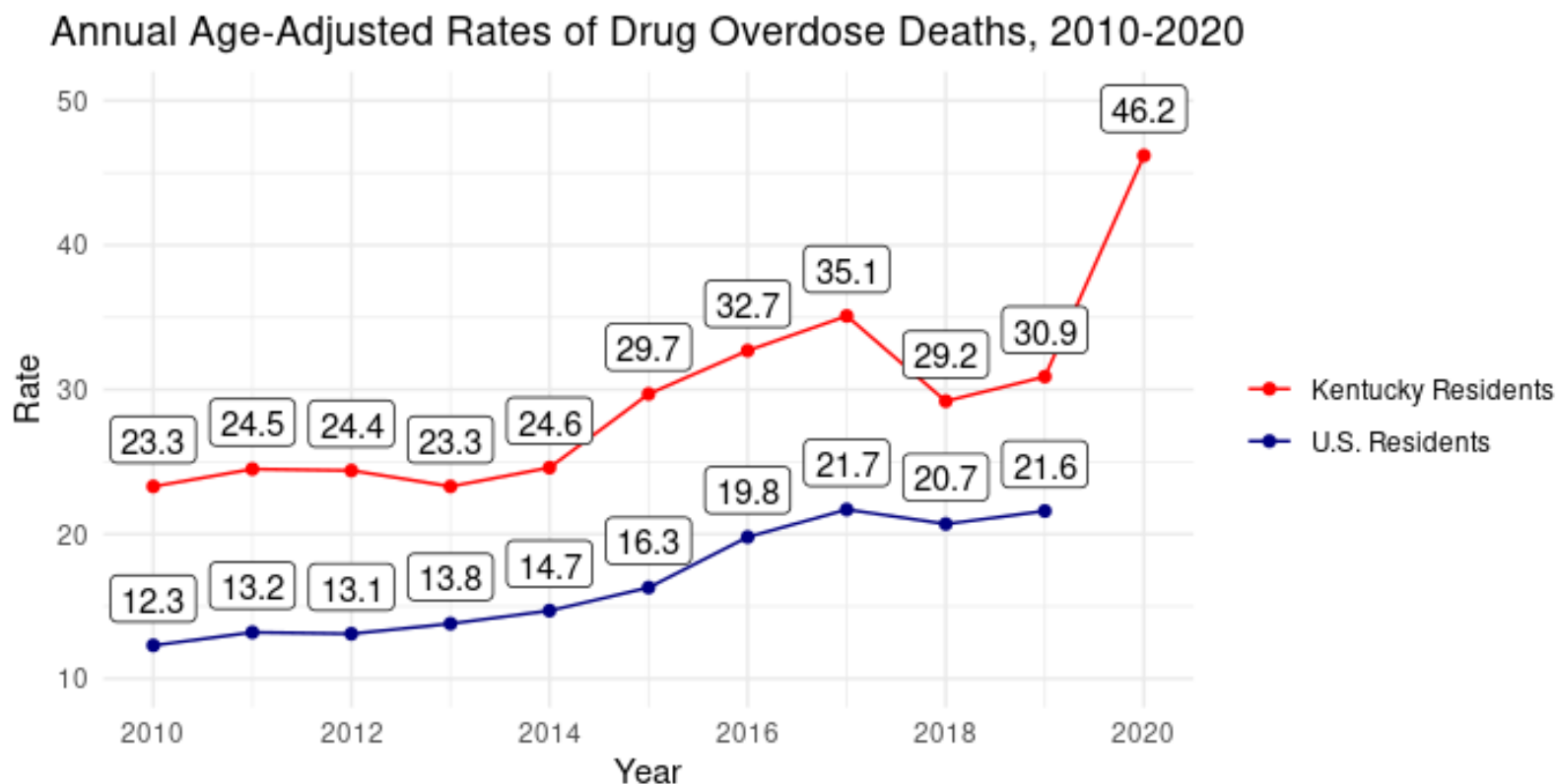


- Hospital discharge data
 - Emergency department visits
 - Nonfatal drug overdoses
- Electronic death certificates data
 - Drug overdose deaths

Road Map



Age-Adjusted Rate



The age-adjusted rate for the U.S. in 2020 was not available at the time this graph was created.

Produced by the Kentucky Injury Prevention and Research Center
as bona fide agent for the Kentucky Department for Public Health, June 2021.

U.S. data source: CDC's Wonder Dataset, Underlying Cause of Death, 1999-2019.

Kentucky data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics,
Cabinet for Health and Family Services. Kentucky data are provisional and subject to change.

Descriptive Statistics for 2020

Nonfatal Drug Overdose Emergency Department Visits*

TOTAL: 12,894

Age

Mean: **41.0 years** SD: **22.7 years**

Sex

Male: **56.1%** Female: **43.9%**

Race

White: **87.5%** Black: **10.9%**

Other: **1.6%**

Ethnicity

Hispanic: **1.5%** Non-Hispanic: **98.4%**

Drug Overdose Deaths*

TOTAL: 1,965

Age

Mean: **42.4 years** SD: **12.8 years**

Sex

Male: **69.1%** Female: **30.9%**

Race

White: **90.2%** Black: **8.7%**

Other: **1.0%**

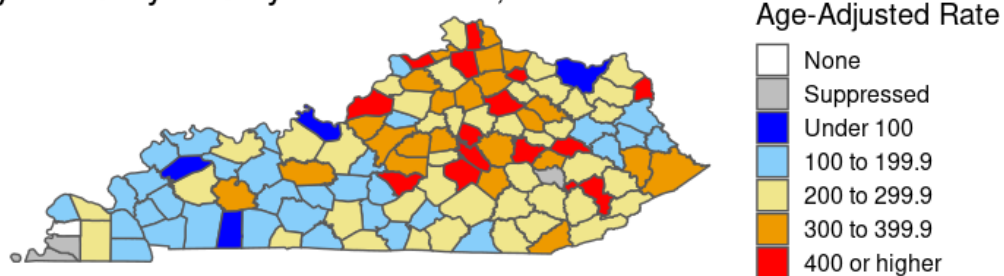
Ethnicity

Hispanic: **1.2%** Non-Hispanic: **98.7%**

*Among Kentucky residents

Geography

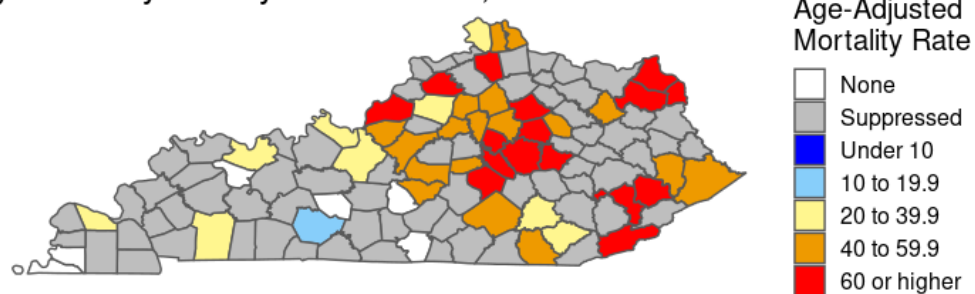
Age-Adjusted Rate of ED Visits for Nonfatal Drug Overdose
by Kentucky County of Residence, 2020



Counties with the highest rates for emergency department (ED) visits:

- 1) Estill County with 581.7 visits per 100,000 residents (n=73)
- 2) Grant County with 580.9 visits per 100,000 (n=138)
- 3) Taylor County with 551.0 visits per 100,000 residents (n=128)

Age-Adjusted Drug Overdose Mortality Rate
by Kentucky County of Residence, 2020



Counties with the highest mortality rates:

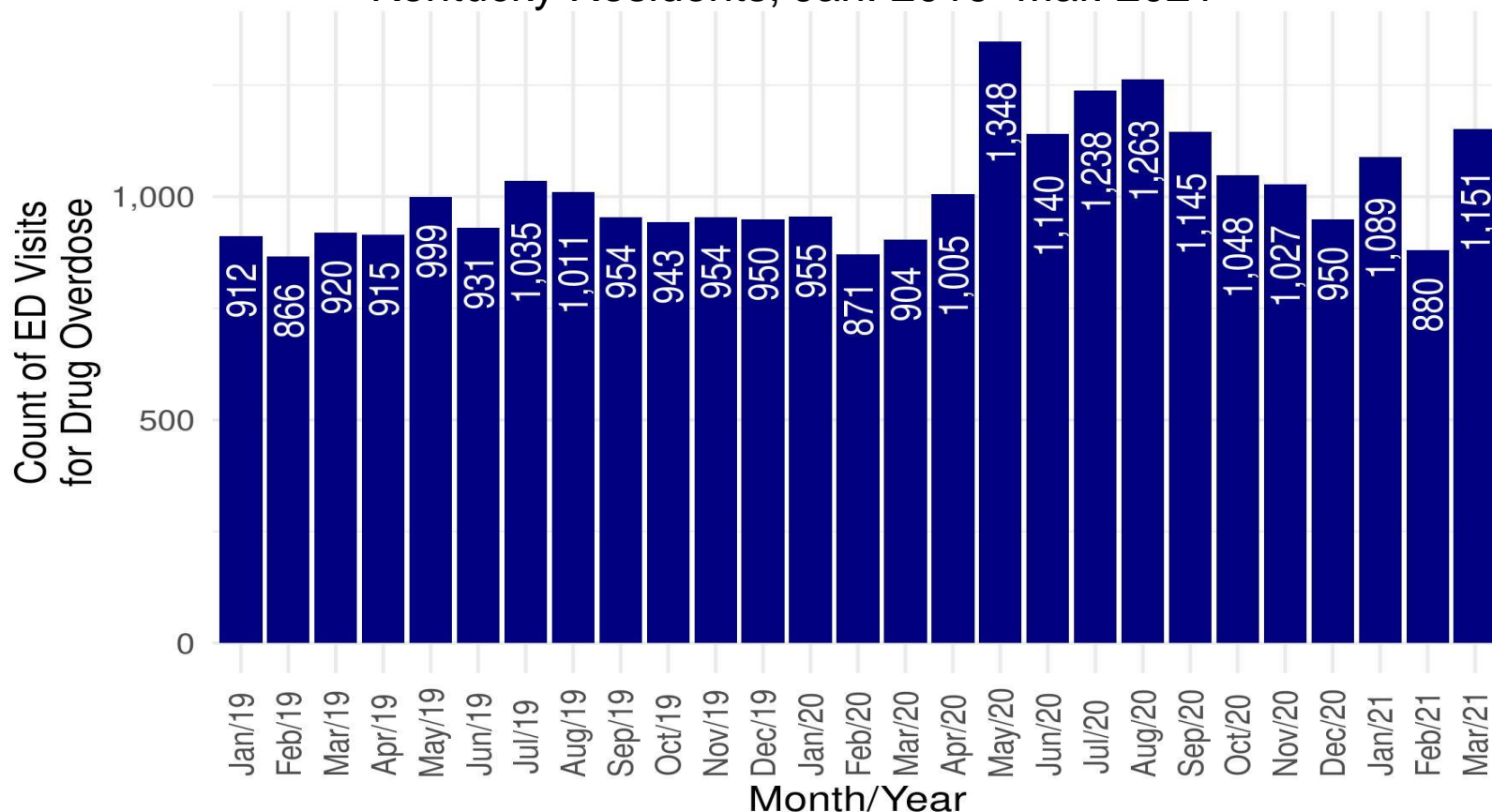
- 1) Knott County with 121.1 deaths per 100,000 residents (n=19)
- 2) Clark County with 104.3 deaths per 100,000 residents (n=35)
- 3) Bourbon County with 98.4 deaths per 100,000 residents (n=18)

Rates are expressed as the number of events per 100,000 residents. Rates based on counts less than 10 are suppressed in accordance with state data management policy. Rates based on counts less than 20 are unstable and should be interpreted with caution.

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Monthly Trends

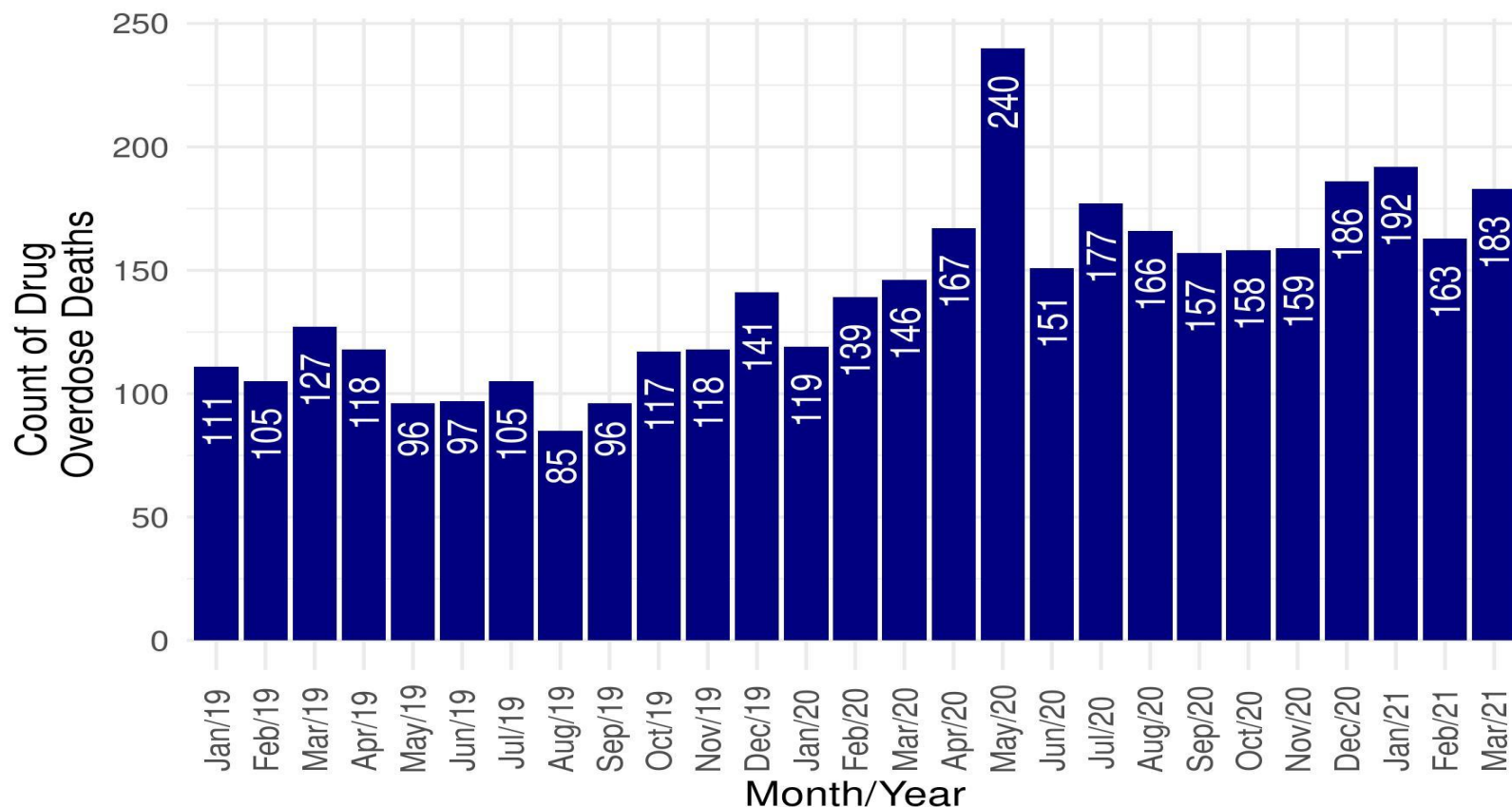
Monthly Counts of Emergency Department Visits for Nonfatal Drug Overdoses Among Kentucky Residents, Jan. 2019–Mar. 2021



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Monthly Trends

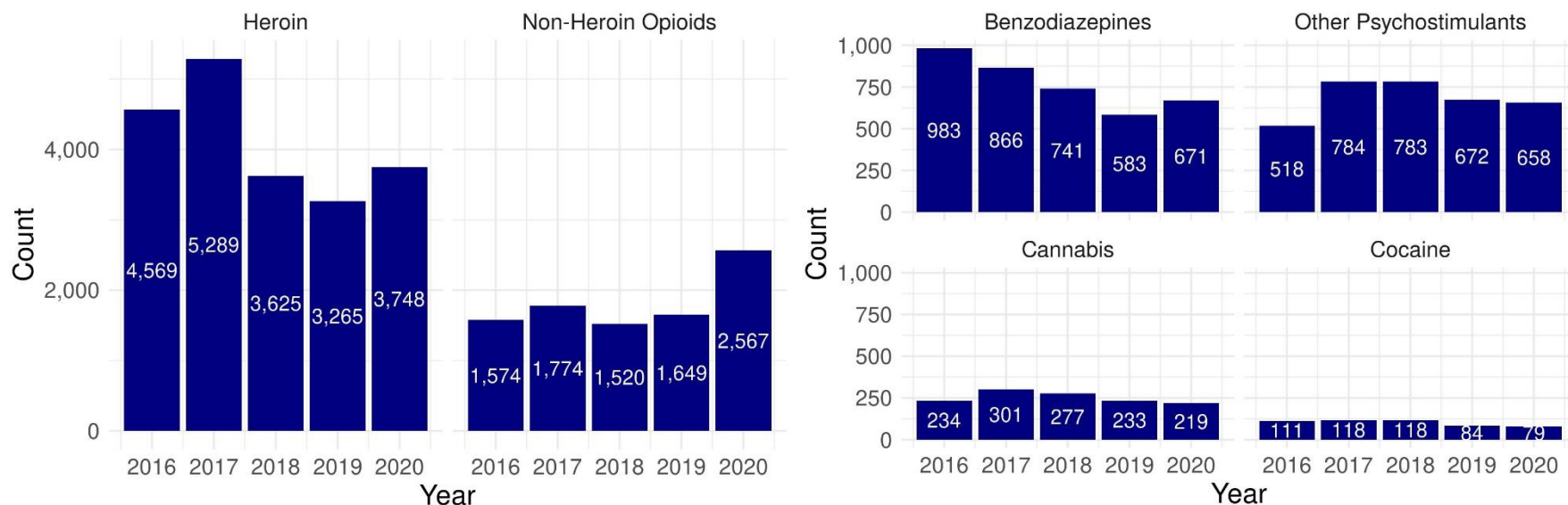
Monthly Counts of Drug Overdose Deaths Among Kentucky Residents,
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Drug Types

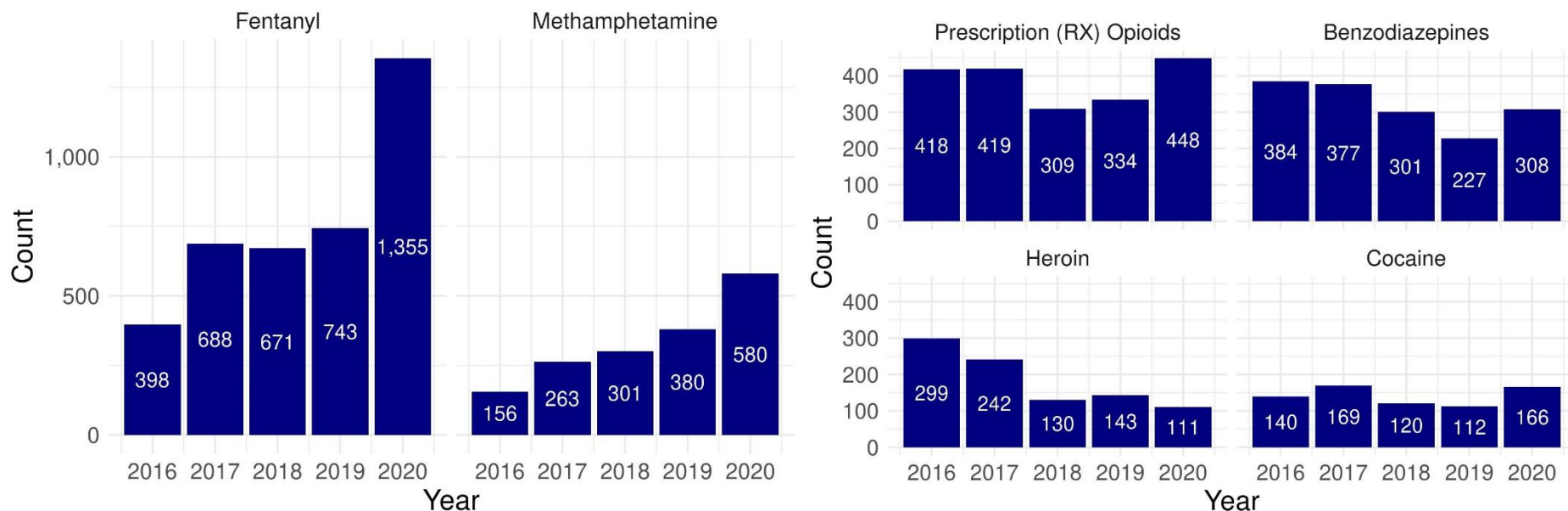
Annual Counts of Emergency Department Visits for Nonfatal Drug Overdoses Among Kentucky Residents by Drug Type, 2016–2020



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Drug Types

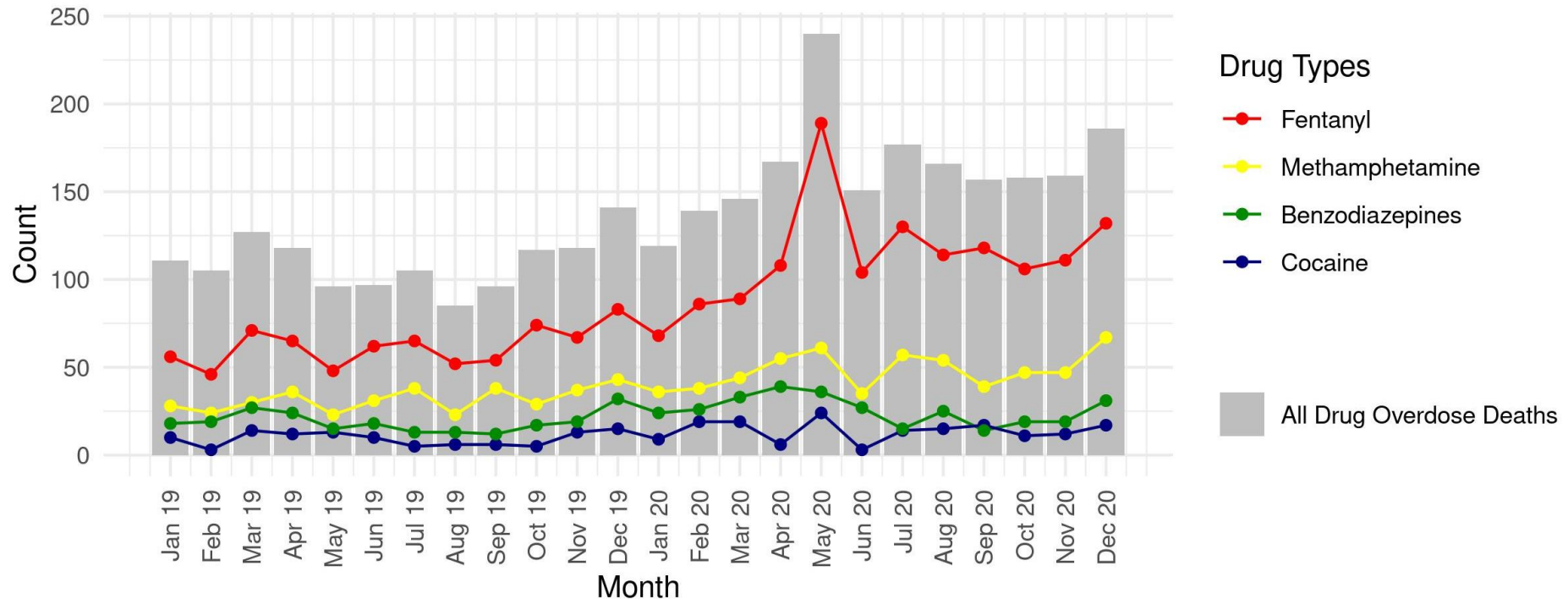
Annual Counts of Drug Overdose Deaths Among Kentucky Residents by Drug Type, 2016–2020



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Drug Types

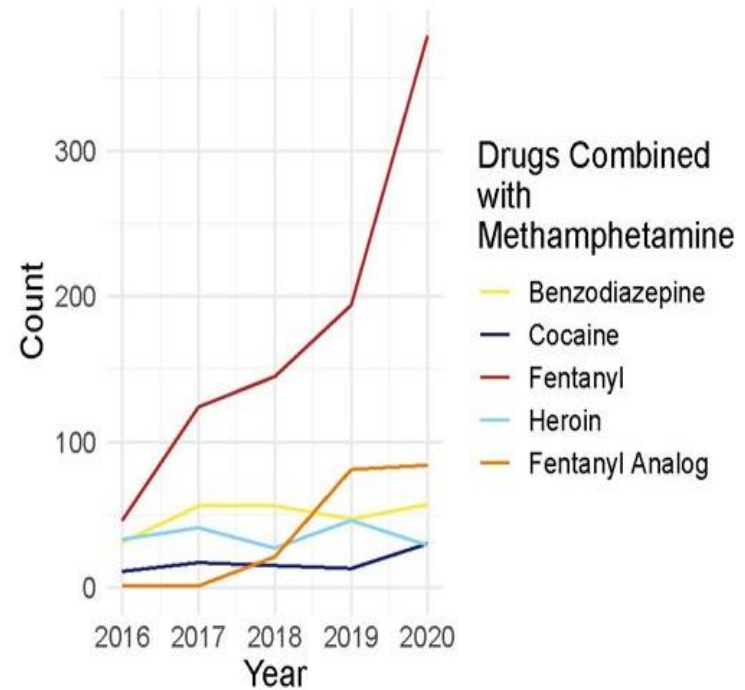
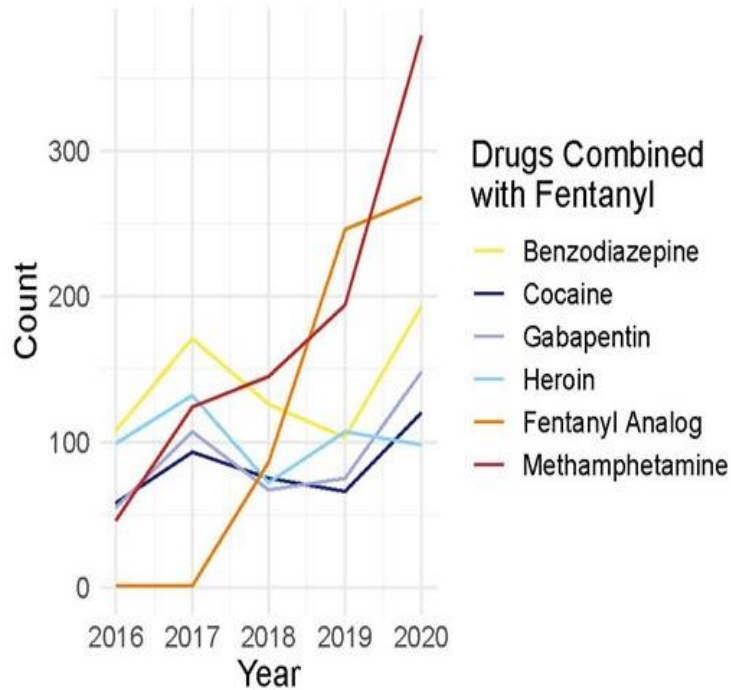
Monthly Counts of Drug Overdose Deaths Among Kentucky Residents by Drug Type, Jan. 2019–Dec. 2020



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Drug Combinations

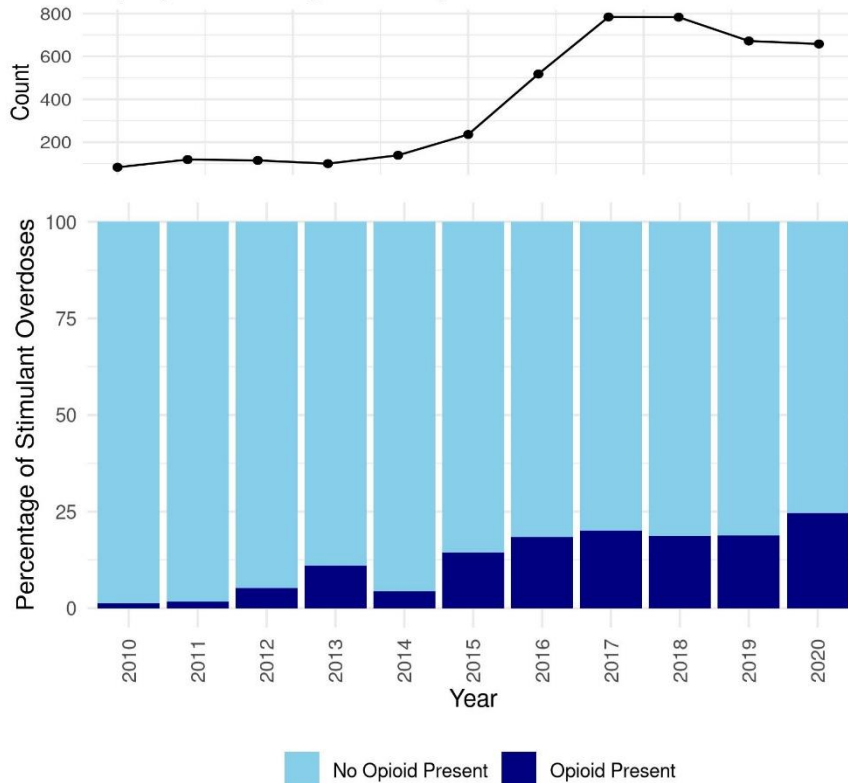
Annual Counts of Drug Overdose Deaths Involving Fentanyl and Methamphetamine in Combination with at Least One Additional Drug, 2016–2020



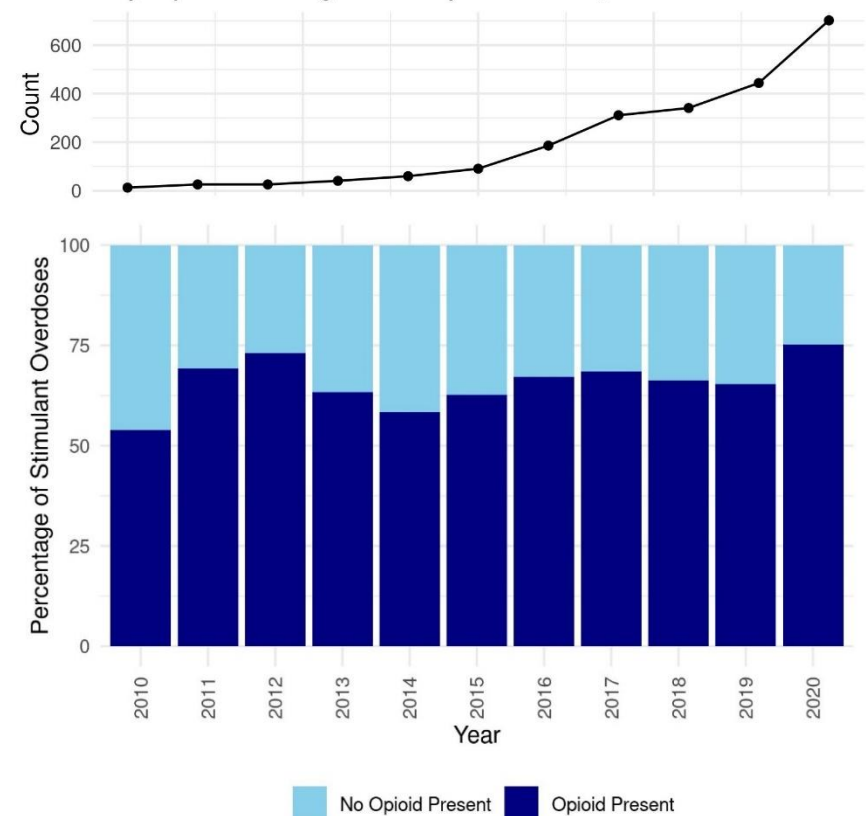
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Drug Combinations

Annual Counts of Nonfatal Psychostimulant Overdoses and the Proportion of Nonfatal Stimulant Overdoses Involving Any Opioid Among Kentucky Residents, 2010–2020



Annual Counts of Psychostimulant Overdose Deaths and the Proportion of Stimulant Overdose Deaths Involving Any Opioid Among Kentucky Residents, 2010–2020



The count of nonfatal stimulant overdoses (excluding cocaine overdoses) is based on the number of emergency department visits and likely represents an undercount of the total number of nonfatal psychostimulant overdoses among Kentucky residents. Produced by the Kentucky Injury Prevention and Research Center as bona fide agent for the Kentucky Department for Public Health, July 2021. Data are provisional and subject to change.

Definitions

Nonfatal drug overdoses included events with any diagnostic code of T36–T50. Specific drug types were identified using the following codes:

Drug Type	ICD-10 Codes
Heroin	T40.1
Non-Heroin Opioid	T40.0, T40.2–T40.4, or T40.6
Benzodiazepines	T42.4
Other Psychostimulants	T43.6
Cannabis	T40.7
Cocaine	T40.5

On October 1 of 2015, hospitals switched from the ICD-9 to the ICD-10 coding system. While there is not a direct relationship between codes in the two systems, the following definitions were used to identify drugs before and after this change.

Drug Type	ICD-9 Codes	ICD-10 Codes
Any Opioid	9650.0–9650.3, 9650.9, or E850.0–E850.2	T40.0–T40.4 or T40.6
Other Psychostimulants	9697.0–9697.3, 9697.9, or E854.2	T43.6

Definitions

Drug overdose deaths included events with an underlying cause of death code of X40–X44, X60–X64, X85, or Y10–Y14. Drug overdose deaths involving specific drug types also included the following supplemental cause of death codes:

Drug Type	ICD-10 Codes
Fentanyl	T40.4 plus a textual mention of fentanyl
Methamphetamine	T43.6 plus a textual mention of methamphetamine
Prescription (RX) Opioids	T40.0, T40.2, or T40.3
Benzodiazepines	T42.4
Heroin	T40.1
Cocaine	T40.5
Gabapentin	T42.7 plus a textual mention of gabapentin
Fentanyl Analogs	T40.4 plus a textual mention of a fentanyl analog

Disclaimers

Data are provisional and subject to change. Counts less than five and rates based on counts less than 10 are suppressed in accordance with state data management policy. Rates based on counts less than 20 are unstable and should be interpreted with caution.

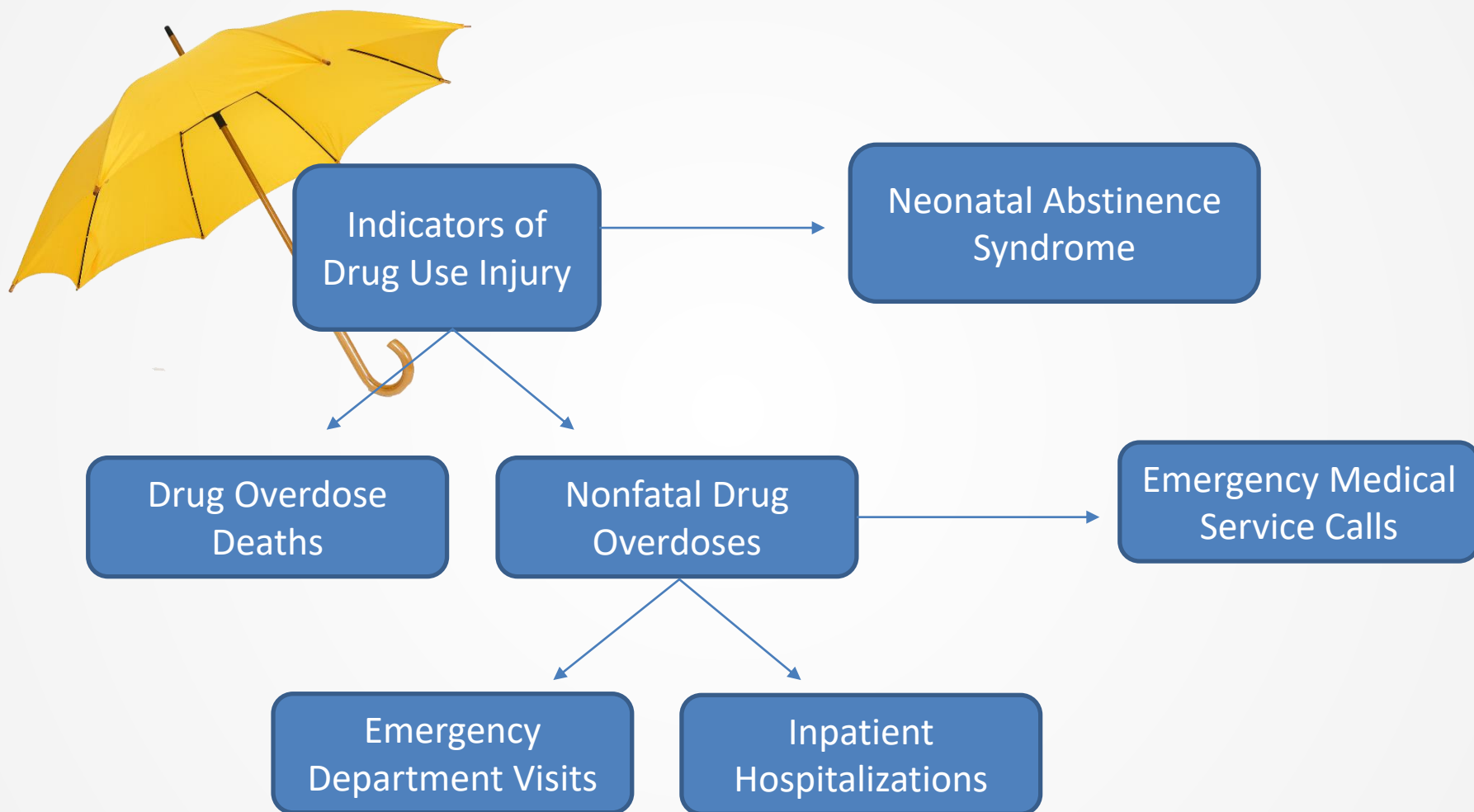
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Available Indicators



Common Stratifications



Location

- County
- Service area
- Region
- Statewide



Drug Type

- Limited by use of ICD-10 codes and text scan



Demographics

- Sex
- Age
- Race
- Ethnicity

Additional Data Sources



- KASPER: The Kentucky All Schedule Prescription Electronic Reporting database, for prescribing patterns and trends.
 - Prescriber information
 - Degree or specialty
 - Pharmacy information
 - Location
 - Prescription information
 - Drug types, dosage, refills
 - Patient information
 - Demographics, polypharmacy, prescription history
- Emergency Medical Services
 - Available sooner than other datasets
 - Used to track trends, not capture burden
 - Includes naloxone use and refusal of transport
 - Limited ability to capture demographics
 - More precise location data

Limitations

- Identifiable information, like names, addresses, or dates of birth, are not available.
- Line level data (i.e., individual entries) are not available.
- Any counts less than five and rates based on counts less than 10 are not reportable.

Limitations

- Available drug types based on ICD-10 codes
- Dataset reporting periods
 - Hospital data updated quarterly with a 3- to 6-month lag
 - Death data updated weekly with a 3-month lag
 - EMS partially updated weekly, fully updated monthly
- Nonfatal overdose can only count visits, not patients

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Online Resources

- Annual Reports on Drug Overdose
 - Reports specific to datasets
 - Emergency Department Visits
 - Inpatient Hospitalizations
 - Electronic Death Certificates
 - Detailed breakdown of statewide data
 - Demographics
 - Drug Types
- <https://kiprc.uky.edu/sites/default/files/2021-08/ED%20Report%20Updated.pdf>

Online Resources

- County profiles: Dashboard for all Kentucky counties
 - Nonfatal drug overdose
 - Drug overdose deaths
 - Hospital encounters with a diagnosis of substance use disorder
- <https://kiprc.uky.edu/resources>

How to Submit a Data Request

Email

kiprc_data_request@L.uky.edu

Include your name, organization, contact information, and a description of the data you wish to receive.

- Include desired range of dates and the demographics in which you are interested (e.g., specific age ranges, gender, etc.).

Requests typically take at least two weeks to fulfill.

Additional Resources: KyOD2A Newsletter

- Kentucky Overdose Data 2 Action (KyOD2A) Newsletter
 - *KyOD2A Happenings* offers quarterly updates on drug overdose prevention research, initiatives, reports, and resources in the Commonwealth
 - Contact KIPRCinfo@uky.edu if you wish to receive future newsletters by email

KyOD2A Happenings

USING DATA TO REDUCE THE BURDEN OF DRUG USE AND OVERDOSES IN KENTUCKY

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Thank you!

Please direct questions to
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