



KENTUCKY INJURY PREVENTION
AND RESEARCH CENTER

Informing Response: *Kentucky's Drug Overdose Trends Update*




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Faculty Disclosure

The presenter declares no conflicts of interest or financial relationships with any commercial entities that could be perceived as influencing the content of the presentation.

Learning Objectives

-  Identify the burden of drug overdose morbidity and mortality in Kentucky using the most recent available data.
-  Describe the impact of drug overdose on high-risk populations.
-  Discuss how data product insights can support harm reduction strategies, including targeted interventions and enhanced stakeholder collaboration.

Expected Outcomes

- **Deeper Insight into Kentucky's Overdose Burden:** Understand how overdose trends vary by population, substance, and region.
- **Improved Understanding of Data Methodology:** Learn how KIPRC uses data sources and analysis to develop key overdose data tools.
- **Informed, Data-Driven Decision-Making:** Gain insights to support targeted, evidence-based harm reduction efforts.



Introduction to Drug Overdose Trends in Kentucky

- Kentucky is ranked 11th in the nation for fatal overdose rates in 2024, with an age-adjusted rate of 29.9 per 100,000 persons (CDC, 2025) [*Provisional*].
- KIPRC plays a pivotal role in combatting drug-related health issues across the state and spearheading efforts in data collection, analysis, and dissemination



Who



What

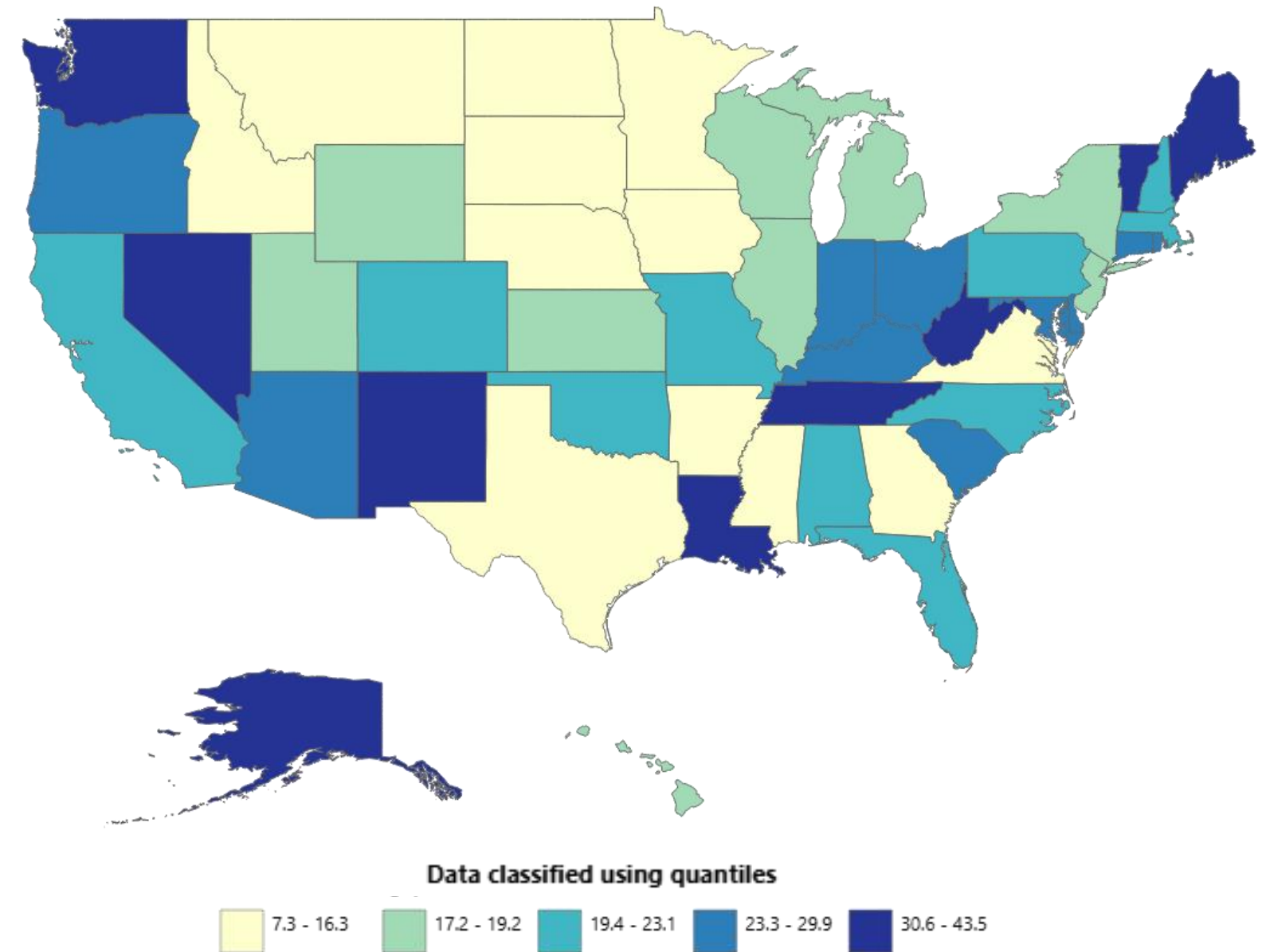


When



Where

Age-Adjusted Rate of Overdose Mortality by State, United States, 2024



Source: <https://wonder.cdc.gov>. Data pulled May 27, 2025. Data are provisional.

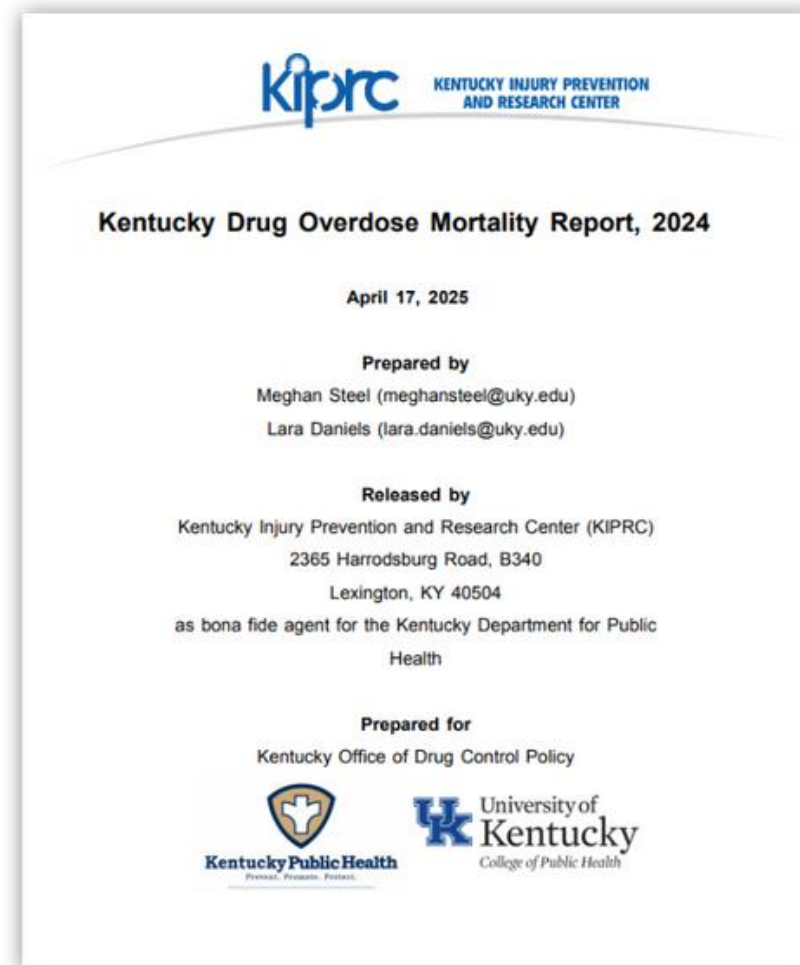
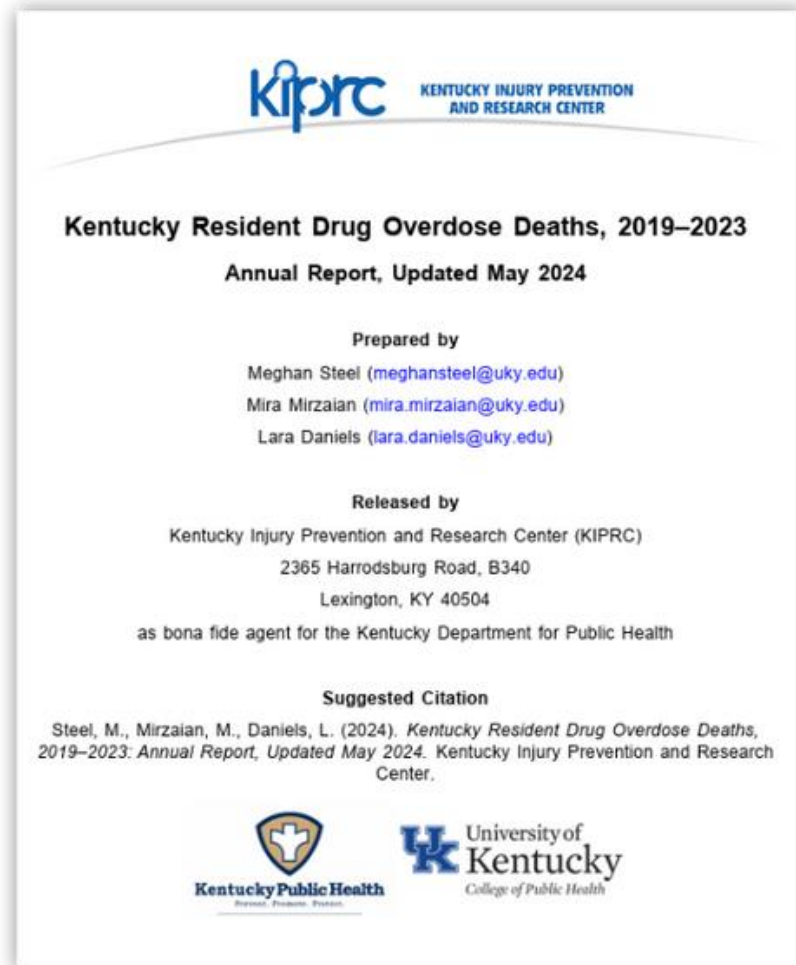
Kentucky Drug Overdose Deaths



Kentucky Death
Certificate Database

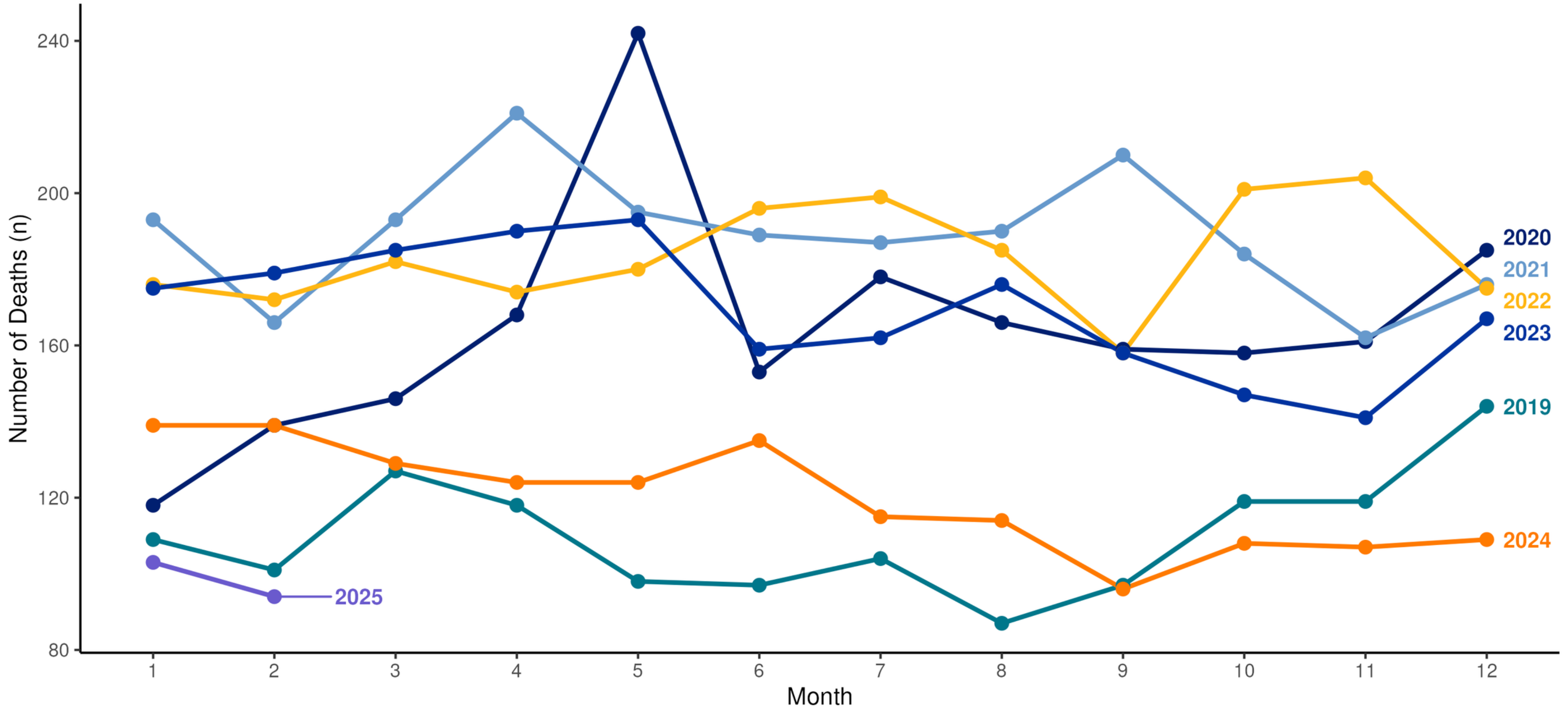


SCAN HERE for Kentucky
Overdose Surveillance
Linktree



- In 2024, **1,410** Kentucky residents died from a drug overdose, a decrease of **30.2%** from 2023, a rate of **32.0** deaths per 100,000 residents.
- Fentanyl was the drug most commonly identified through post-mortem toxicology, representing **62.3%** of total drug overdoses, a decrease of **39.4%** from 2023.
- Methamphetamine was identified in **50.8%** of total deaths, a decrease of **28.9%** from 2023.

Kentucky Resident Drug Overdose Deaths by Month and Year, 2020–February 2025



Data for January, February, and March 2025 are known to be incomplete.
Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health.
Drug overdose deaths include events with an underlying cause of death code of X40–X44, X60–X64, X85, or Y10–Y14.
Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services.
Data extracted May 2025. Data are provisional and subject to change.

Kentucky Drug Overdose Deaths

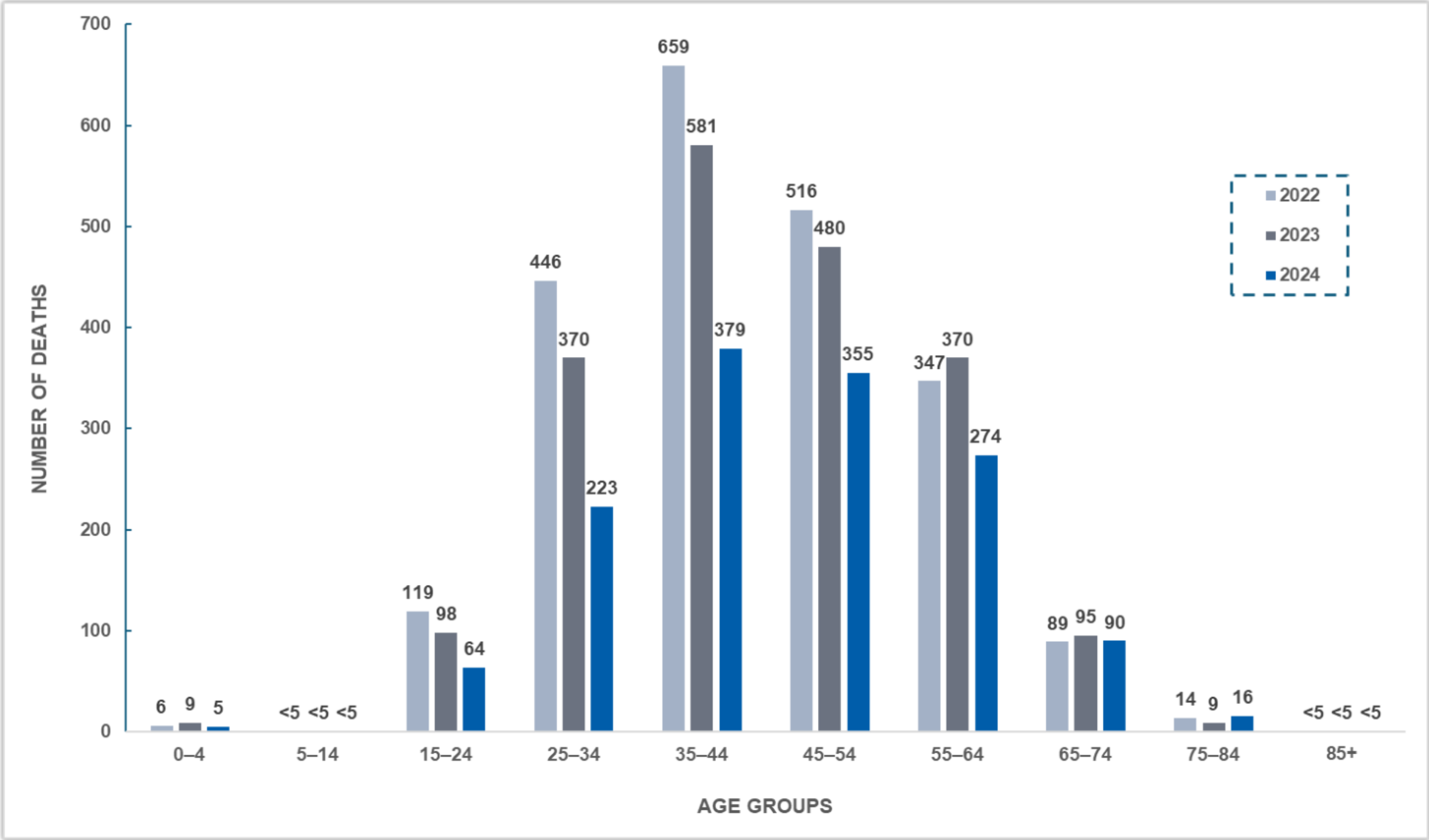


Age-Adjusted Rate for Kentucky Resident Drug Overdose Deaths by Race, 2022 – 2024

Race	2022	2023	2024
Black	67.5	69.2	43.3
White	51.3	45.7	31.6
Other	20.2	16.7	12.2

Rates are presented as the number of drug overdose deaths per 100,000 population. Data are provisional and subject to change. Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. April 2025. Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services.

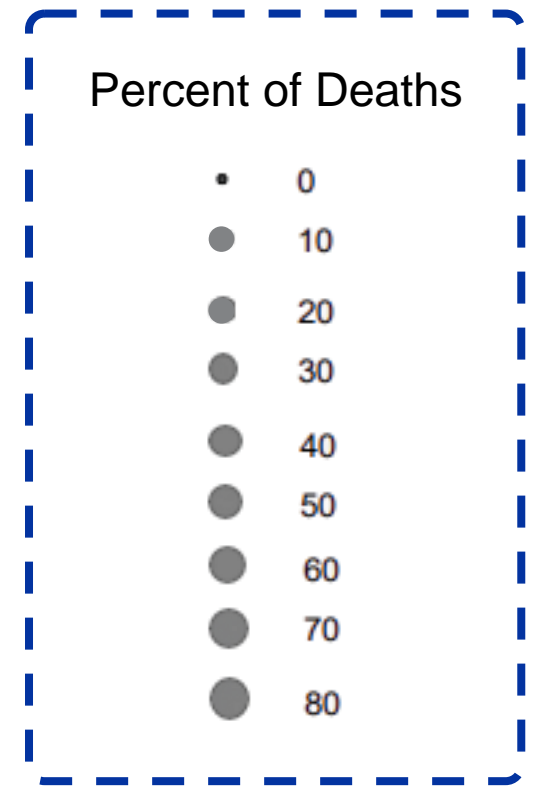
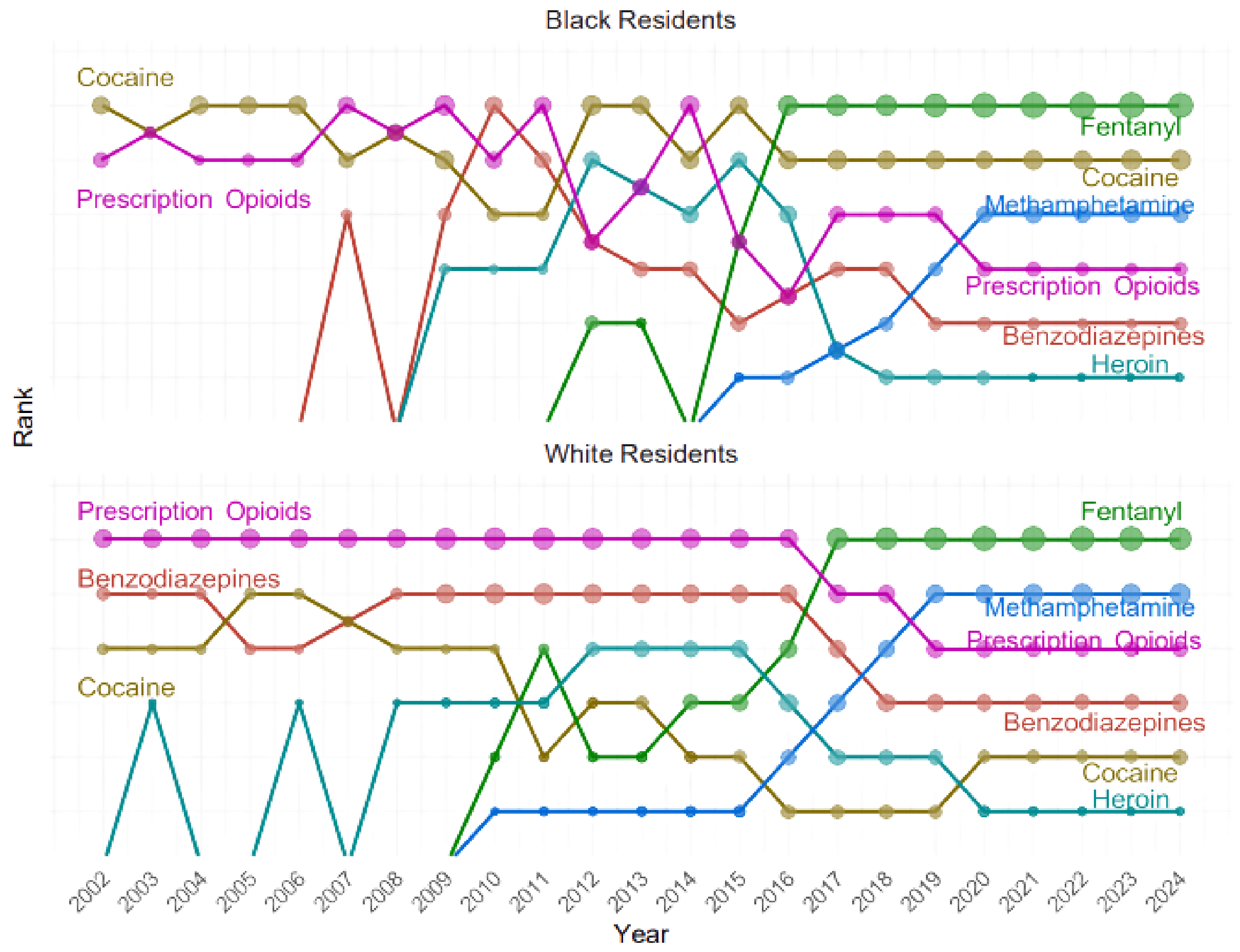
Counts of Kentucky Resident Drug Overdose Deaths by Age Group, 2022–2024



Counts greater than zero but less than five were suppressed in accordance with state data release policy. Data are provisional and subject to change. Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. April 2025. Data source: Kentucky Death Certificate Database. Kentucky Office of Vital Statistics, Cabinet for Health and Family Services.



Top Drugs Identified by ICD-10 Code on the Death Certificates of Kentucky Resident Drug Overdose Decedents by Race, 2002-2024

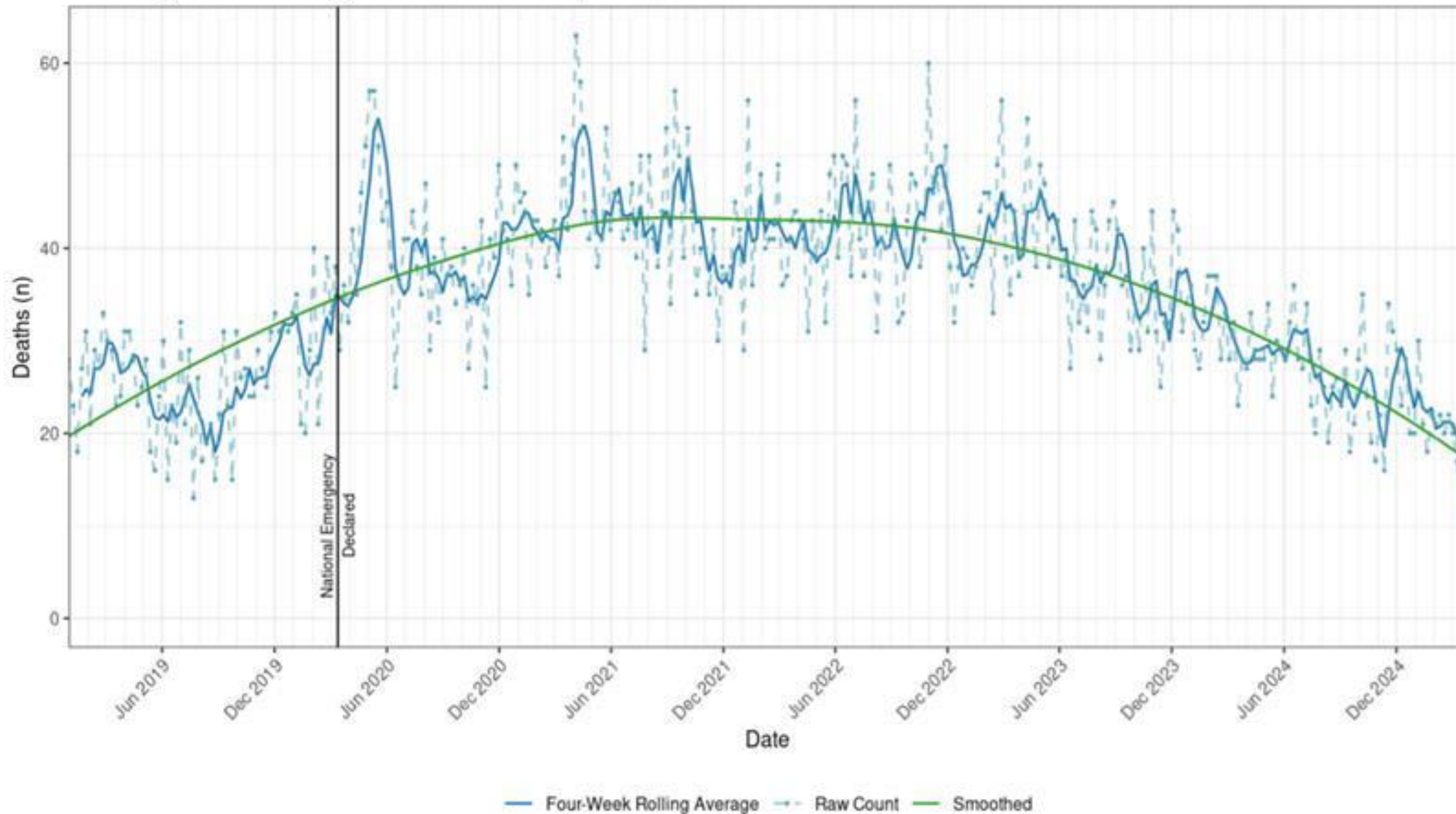


Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data are provisional and subject to change. Data extracted April 2025.



When

Kentucky Resident Drug Overdose Deaths by Week, 2019 to March 2025



The solid blue line represents the 4-week rolling average drug overdose death count. Points and dashed lines represent raw counts. The solid green line represents loess smoothing applied to the raw death counts.

Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Drug overdose deaths include events with an underlying cause of death code of X40–X44, X60–X64, X85, or Y10–Y14. Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services. Data extracted May

This project is supported by the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) as part of cooperative agreement 1 NU17CE010186 totaling \$10,814,838 with 0% financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, CDC, HHS, or the U.S. government. For more information, please visit [CDC.gov](https://www.cdc.gov).

Kentucky Drug Overdose Deaths



Where

Kentucky Counties with the Highest Rates of Drug Overdose Deaths among Residents in 2024

Kentucky County	Rate of Drug Overdose Deaths per 100,000 Residents	Count of Drug Overdose Deaths
1 Lee	156.0	12
2 Knott	134.6	18
3 Breathitt	129.6	16
4 Powell	109.8	12
5 Estill	85.4	11

Counties with rates based on counts less than 10 have been excluded from this list. Data are provisional and subject to change. Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. April 2025. Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services.

Kentucky Counties Where the Highest Counts of Drug Overdose Deaths Involving Fentanyl Occurred, as Identified through Toxicology in 2024

Kentucky County	Drug Overdose Deaths Involving Fentanyl
1 Jefferson	292
2 Fayette	86
3 Kenton	32
4 Madison	24
5 Boyd	24

Counts are based on where the death occurred and not on the person's residence; thus, counts could include residents of other counties and/or states. Data are provisional and subject to change. Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. April 2025. Data source: Drug Overdose Fatality Surveillance System (DOFSS).

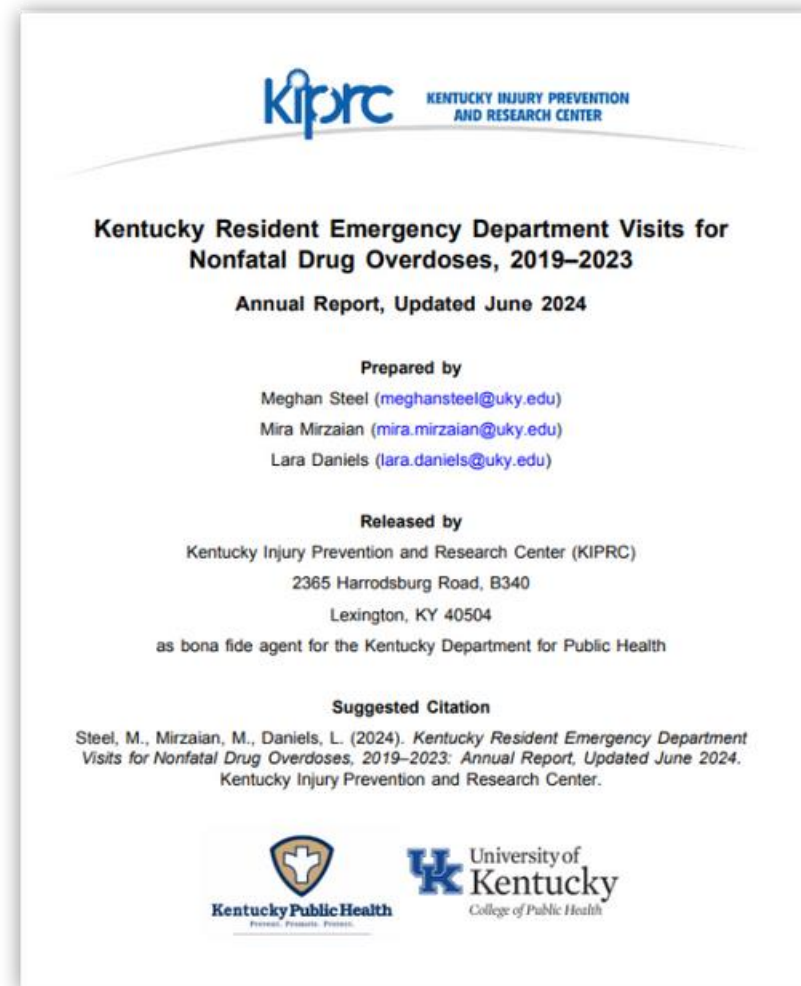
Kentucky Nonfatal Drug Overdose



Kentucky Outpatient Services Database

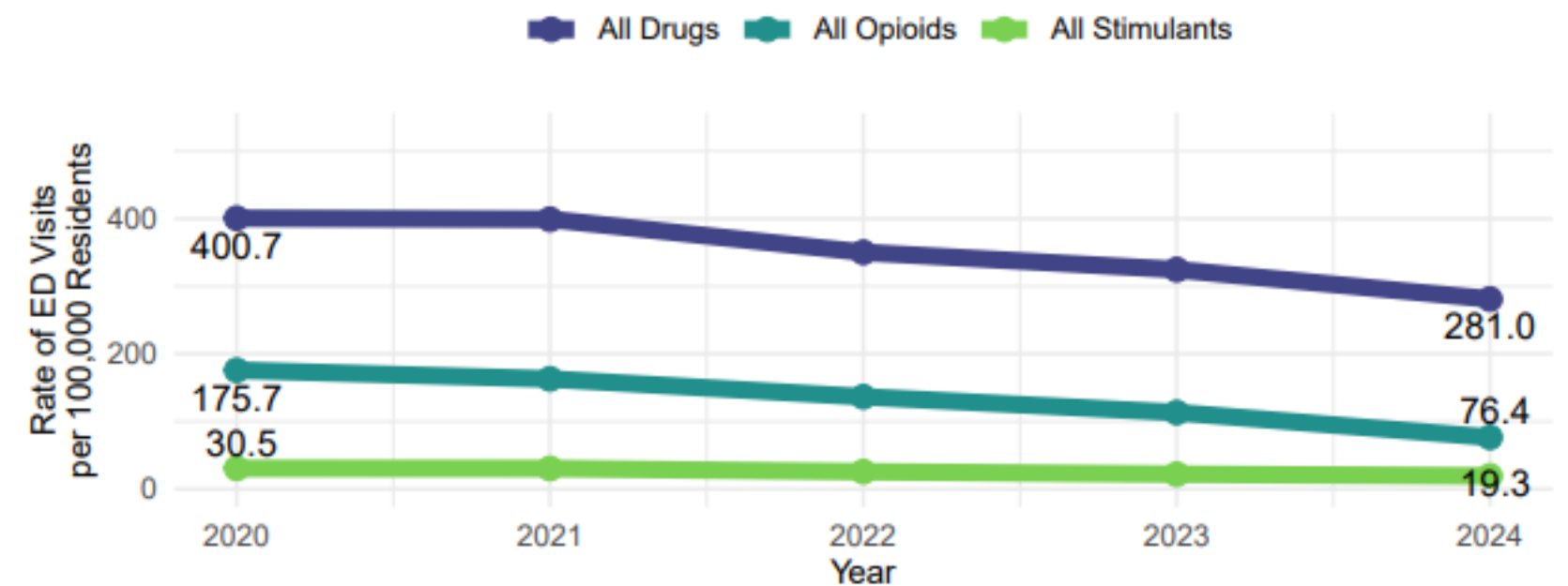


Kentucky Inpatient Hospitalization Claims Files



- In 2024, **12,207** Kentucky residents visited the emergency department for a nonfatal drug overdose, a decrease of **12.8%** from 2023.

Age-adjusted Rates of Emergency Department Visits for Nonfatal Drug Overdose among Kentucky Residents, 2019–2024

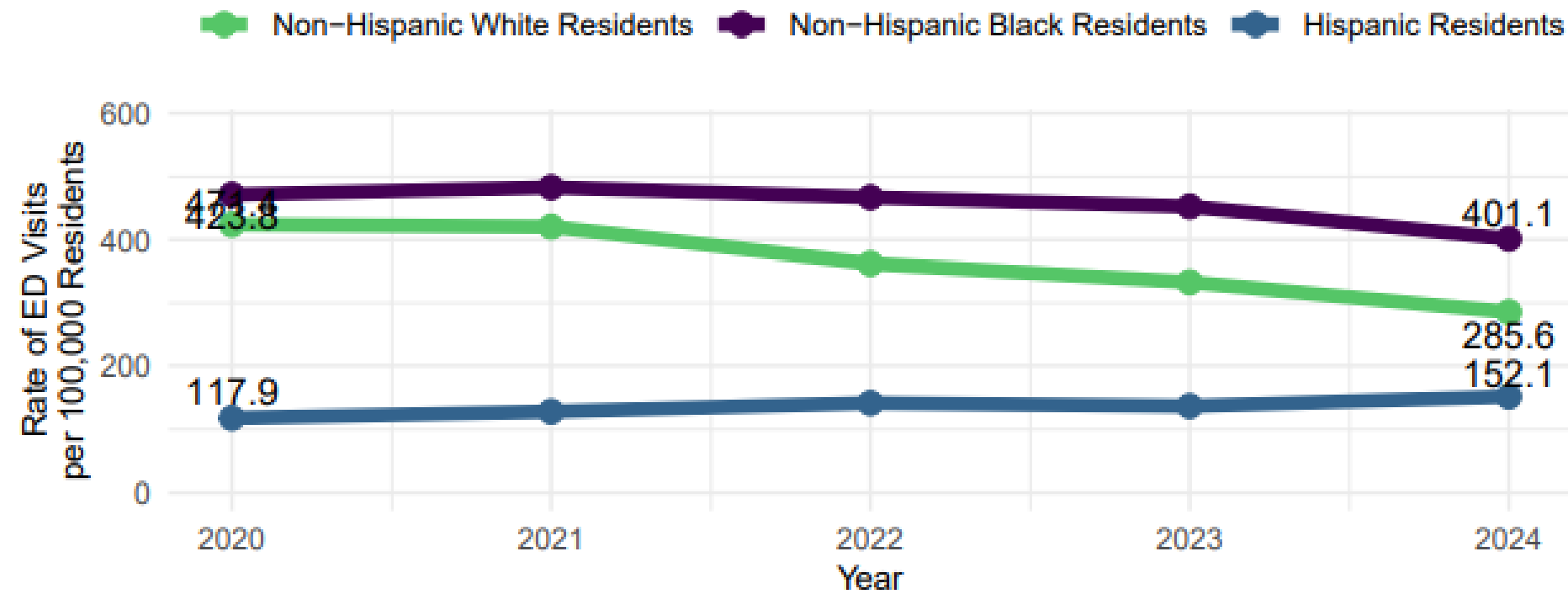


Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data sources: Kentucky Outpatient Services Database Files and Inpatient Hospitalization Claims Files, Office of Data and Analytics, Cabinet for Health and Family Services. Data extracted May 2025. Data are provisional and subject to change.

Kentucky Nonfatal Drug Overdose



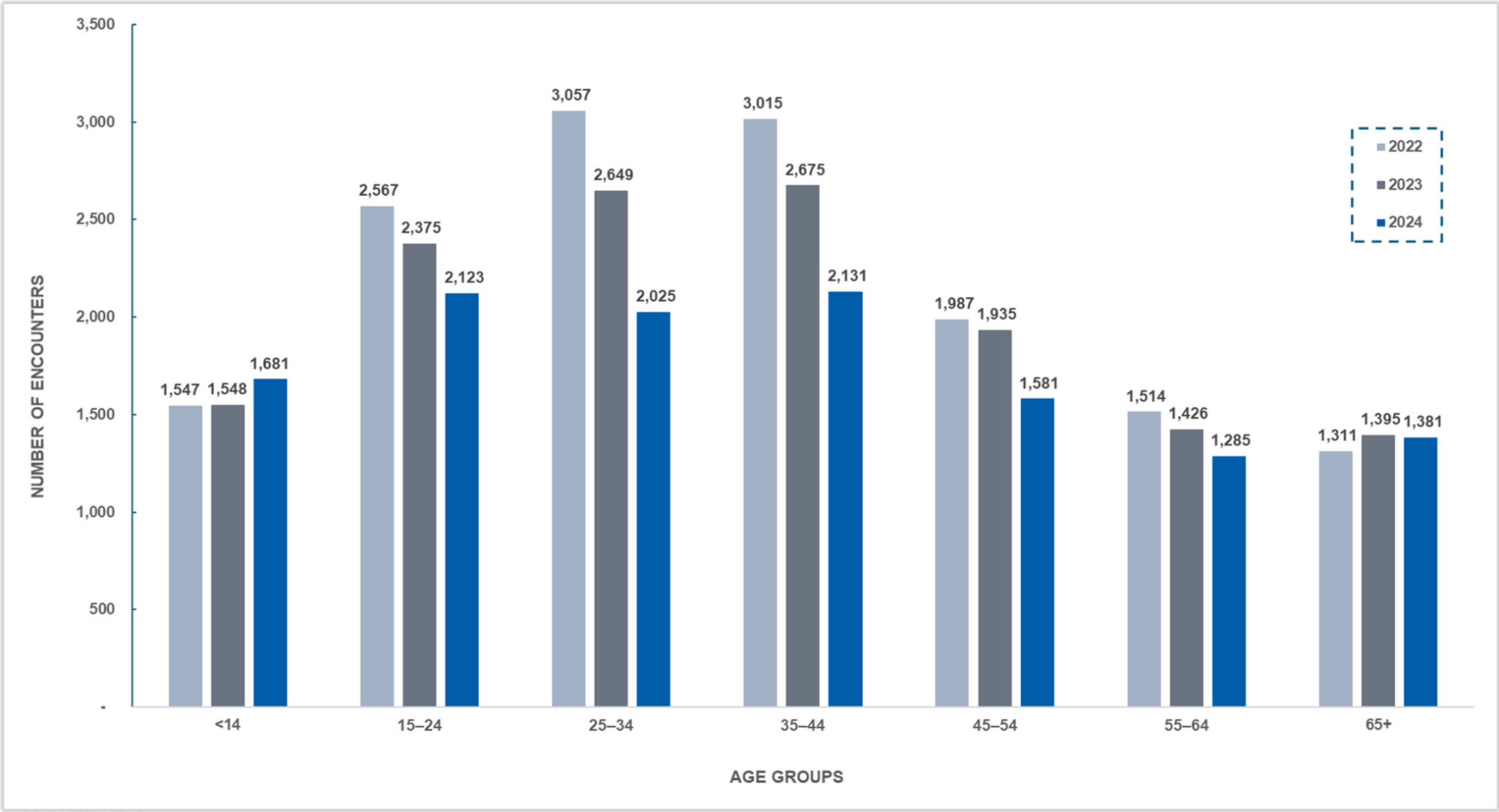
Age-adjusted Rates of Kentucky Resident Emergency Department Visits for Nonfatal Drug Overdose involving Any Drug, by Race and Ethnicity, 2020–2024



Patients of other races were excluded from this graph as their rates were not reportable for several years due to the low numbers of visits (n=1,129).
Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data sources: Kentucky Outpatient Services Database Files and Inpatient Hospitalization Claims Files, Office of Data and Analytics, Cabinet for Health and Family Services.
Data extracted May 2025. Data are provisional and subject to change.



Counts of Kentucky Resident Emergency Department Visits for Nonfatal Drug Overdose, by Age Group, 2020–2024



Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data sources: Kentucky Outpatient Services Database Files and Inpatient Hospitalization Claims Files, Office of Data and Analytics, Cabinet for Health and Family Services. Data extracted May 2025. Data are provisional and subject to change.

Kentucky Nonfatal Drug Overdose



What

Counts of Kentucky Resident Emergency Department Visits for Nonfatal Drug Overdose, by Drug Type, 2020–2024

Drug Type	2020	2021	2022	2023	2024
Heroin	4,097	3,078	1,914	1,315	686
Prescription Opioids	1,416	1,511	1,614	1,449	1,153
Synthetic Opioids	704	771	704	916	741
Fentanyl ¹	NA	558	554	777	630
Unspecified Opioids	1,315	1,627	1,649	1,303	818
Cocaine	178	207	188	214	187
Other Psychostimulants	1,101	1,078	902	730	656
Benzodiazepines	1,131	1,096	748	725	675
Cannabis	333	334	306	475	598

¹ The ICD-10 code for drug overdoses involving fentanyl was introduced on October 1, 2020. For this reason, annual counts of nonfatal drug overdoses involving fentanyl start in 2021. Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data sources: Kentucky Outpatient Services Database Files and Inpatient Hospitalization Claims Files, Office of Data and Analytics, Cabinet for Health and Family Services. Data extracted May 2025. Data are provisional and subject to change.



Emergency Medical Services Opioid Overdose Runs by Transport Outcome and Week, April 2019 to March 2025



The solid blue line represents the 4-week rolling average suspected opioid overdose encounters. Points and dashed lines represent raw counts.
The solid green line represents loess smoothing applied to the raw counts.

Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data source: Kentucky Emergency Medical Services Data, Kentucky Board of Emergency Medical Services. Data extracted May 27, 2025. Data are provisional and subject to change.

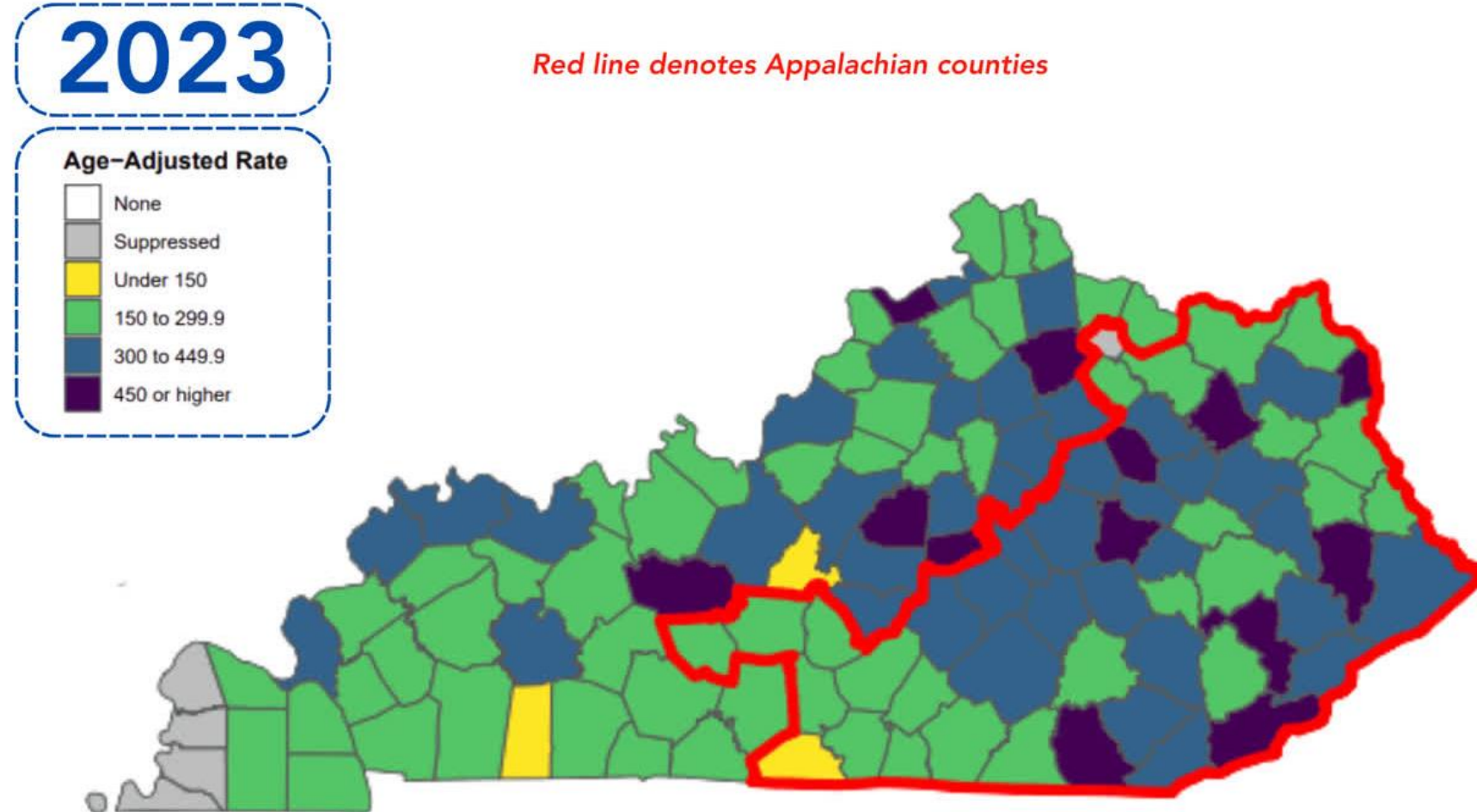
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Kentucky Nonfatal Drug Overdose



Where

Age-adjusted Rates of Emergency Department Visits for Nonfatal Drug Overdose, by Kentucky County of Residence, 2020–2024

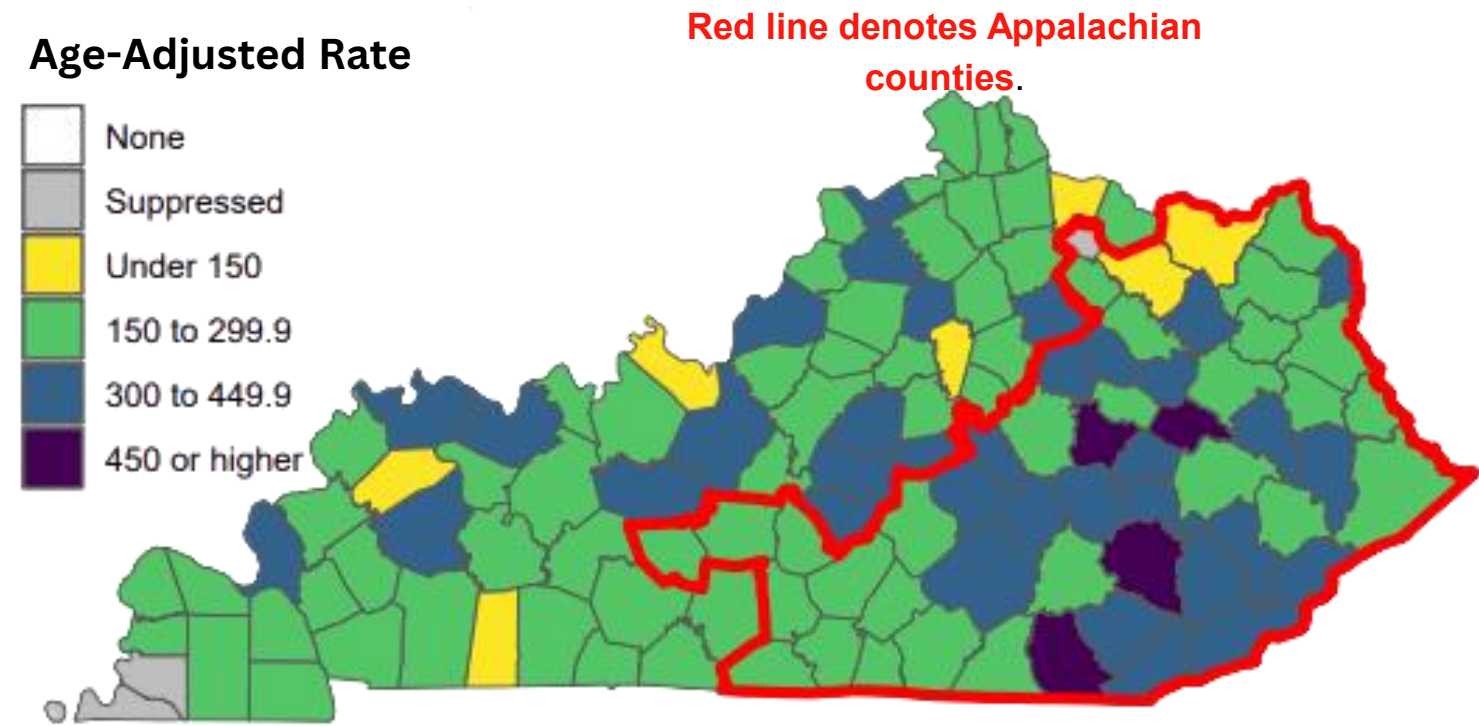


Rates are presented as the number of visits per 100,000 population.
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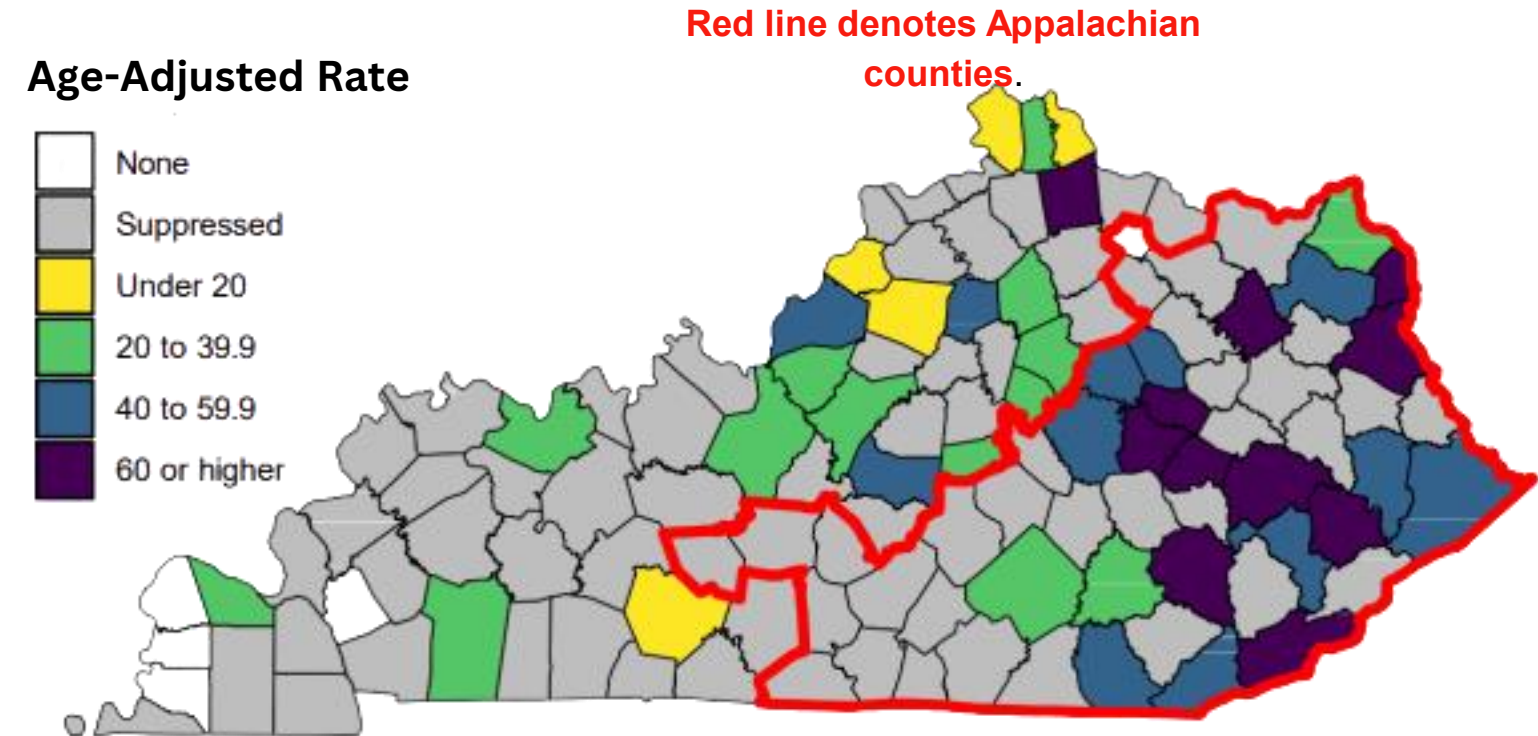
Where

Age-adjusted Rates of Emergency Department Visits for Nonfatal Drug Overdose, by Kentucky County of Residence, 2024



Rates are presented as the number of visits per 100,000 population. Produced by the Kentucky Department for Public Health. Data sources: Kentucky Outpatient Services Database Files and Inpatient Hospitalization Claims Files, Office of Data and Analytics, Cabinet for Health and Family Services. Data extracted May 2025. Data are provisional and subject to change.

Age-Adjusted Rates of Drug Overdose Deaths by Kentucky County of Residence, 2024



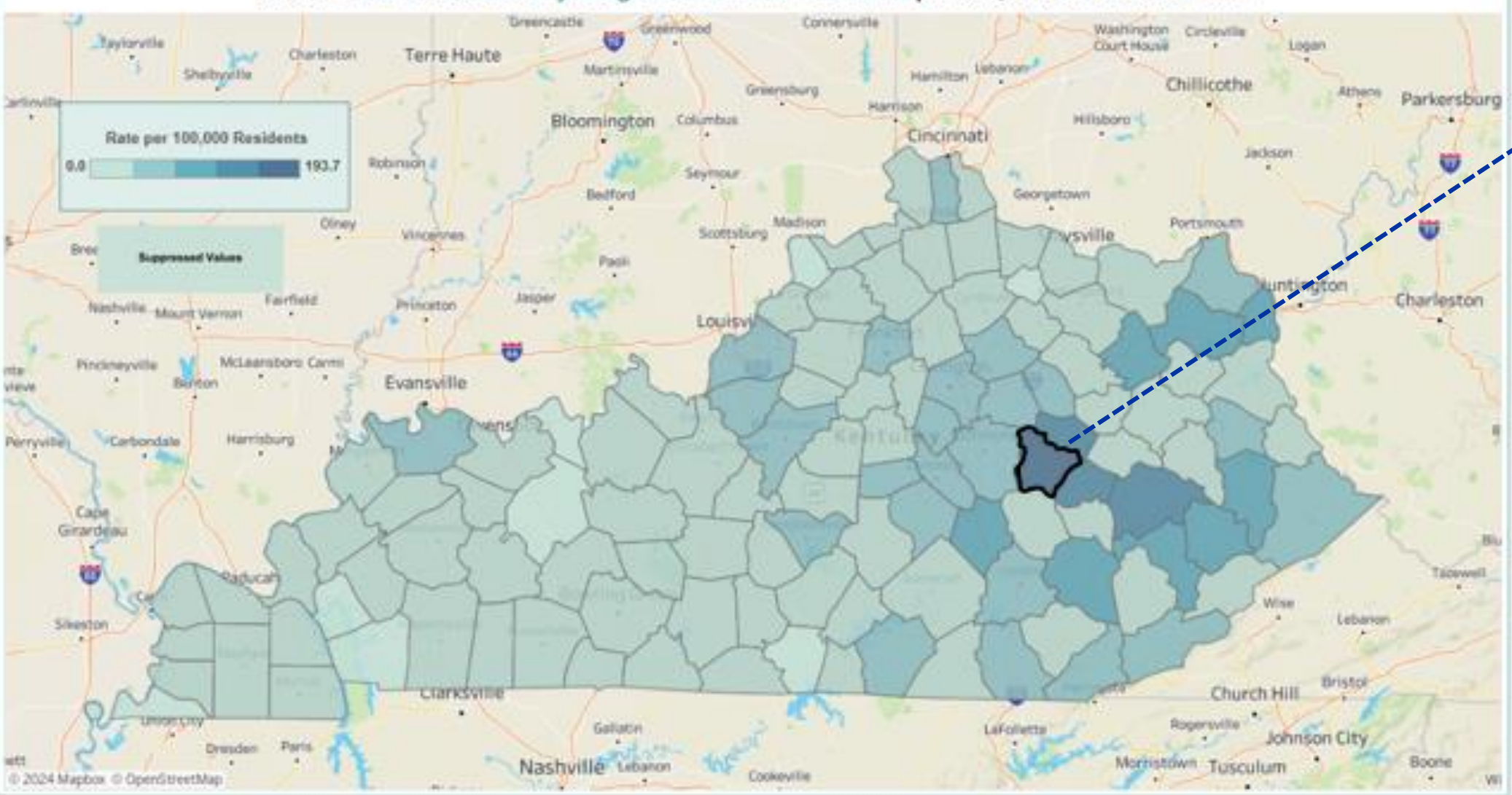
Rates are presented as the number of deaths per 100,000 population. Produced by the Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health. Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services.

KIPRC Drug Overdose 'County Profiles'

Kentucky Resident Drug Overdose and Related Comorbidity County Profiles



Rate of Fatal Overdose: Any Drug-Involved Fatal Overdose per 100,000 Residents in 2023



Counts (Rates per 100,000 Residents) for Estill County, 2023

Fatal Overdose: Any Drug-Involved Fatal Overdose

Estill	Fatal Overdose	Any Drug-Involved Fatal Overdose	2023
			27 (193.7)

* Counts greater than 0 but less than 5 are suppressed per state data release policy.
 ** Rates based on counts less than 10 are suppressed.
 (*) Rates based on counts less than 20 are considered unstable and should be interpreted with caution.
 NA indicates that the data were not available.

Geographic, Administrative, and Demographic Classifications for Estill County

Estill	Appalachian Status	Appalachian
	Area Development District (ADD)	Bluegrass
	Community Mental Health Center (CMHC)	New Vista
	Rural Category	Nonmetro
	Rural Classification (RUCC 2013)	Rural
	Rural Classification Description	Urban population of 2,500 to 19,999, adjacent to a metro area

Highlight County

Highlight County:

Year

Year:

1) Category

Category:

2) Indicator

Indicator:

Highlight Rural Classification

Highlight Rural Classification:

Highlight Appalachian Status

Highlight Appalachian Status:

Highlight Area Development District (ADD)

Highlight Area Development District (ADD):

Highlight Community Mental Health Center (CMHC)

Highlight Community Mental Health Center (CMHC):

- Hover over tooltip
- Filter by year, category, and indicator
- County highlighters

Show Data As:

Rates

Counts

Rates of Drug Overdose and Related Comorbidities for Kentucky Total		2023	2022	2021	2020	2019	2018	2017	2016
Fatal Overdose	Any Drug-Involved Fatal Overdose	44.0	48.8	50.1	43.6	29.4	28.0	33.1	31.2
	Any Opioid-Involved Fatal Overdose	34.4	37.8	39.9	35.4	22.1	21.1	24.5	21.6
	Cocaine-Involved Fatal Overdose	6.2	5.0	4.9	3.7	2.5	2.7	3.8	3.2
	Heroin-Involved Fatal Overdose	0.5	0.7	1.2	2.5	3.2	2.9	5.4	6.7
	Non-Cocaine Stimulant-Involved Fatal Overdose	19.2	21.9	22.0	15.6	9.9	7.6	7.0	4.2
	Non-Heroin Opioid-Involved Fatal Overdose	34.2	37.7	39.8	35.2	21.6	20.3	22.5	18.2
	Stimulant-Involved Fatal Overdose	24.0	25.5	25.5	18.3	12.0	9.8	10.3	7.0
Nonfatal Overdose-Related Hospital Encounters	Any Drug-Involved Nonfatal Overdose	326.9	346.2	390.2	395.2	364.6	386.4	457.7	434.9
	Any Opioid-Involved Nonfatal Overdose	111.5	131.3	155.2	168.1	135.5	144.5	194.5	176.5
	Cocaine-Involved Nonfatal Overdose	5.1	4.4	5.0	4.2	4.6	6.0	6.9	7.0
	Fentanyl-Involved Nonfatal Overdose	18.3	12.8	12.6	NA	NA	NA	NA	NA
	Heroin-Involved Nonfatal Overdose	29.9	43.0	69.2	91.9	80.5	88.6	130.6	113.4
	Methamphetamine-Involved Nonfatal Overdose	8.2	NA	NA	NA	NA	NA	NA	NA
	Non-Cocaine Stimulant-Involved Nonfatal Overdose	17.6	21.6	25.4	25.7	27.0	30.1	30.9	22.0
Total Infectious Disease-Related Hospital Encounters	Endocarditis	46.6	49.0	51.9	58.3	61.6	65.3	51.6	58.1
	Hepatitis A	4.9	6.6	7.9	11.5	37.8	71.0	5.4	5.0
	Hepatitis C	333.1	359.3	455.9	502.2	569.2	604.8	534.7	511.9
	Human Immunodeficiency Virus	108.9	113.9	104.4	106.4	124.3	117.2	107.5	106.9
Infectious Disease-Related Hospital Encounter with Co-Occurring Drug-Related Diagnosis	Endocarditis with Drug-Related Comorbidity	14.7	18.0	21.9	27.2	27.4	29.7	19.6	14.8
	Hepatitis A with Drug-Related Comorbidity	1.4	2.4	2.8	4.8	14.4	31.1	1.2	0.5
	Hepatitis C with Drug-Related Comorbidity	153.6	166.9	209.6	226.3	235.2	267.8	213.4	189.7
	Human Immunodeficiency Virus with Drug-Related Comorbidity	18.3	19.7	17.2	16.4	17.2	16.9	13.7	12.5
Nonfatal Hospital Encounter	Substance Use Disorder Diagnosis	1789.8	1747.4	1879.9	1837.3	1862.0	1865.9	1749.3	1572.7
EMS Calls Related to Nonfatal Overdose	Rate of Refusal to Transport	20.1	21.7	19.2	19.4	13.9	14.2	10.1	NA
Hospital Birth	Neonatal Abstinence Syndrome	10.5	12.6	17.2	18.9	19.5	25.1	26.4	25.4

Show Data As:

Rates

Counts

Select County

Kentucky Total

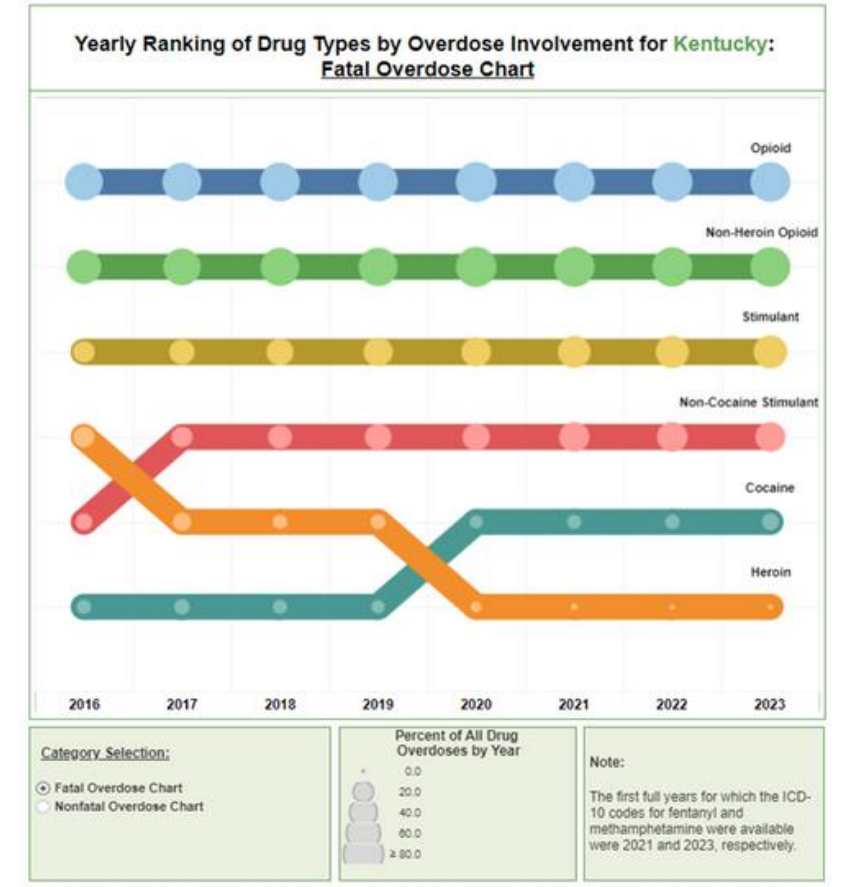
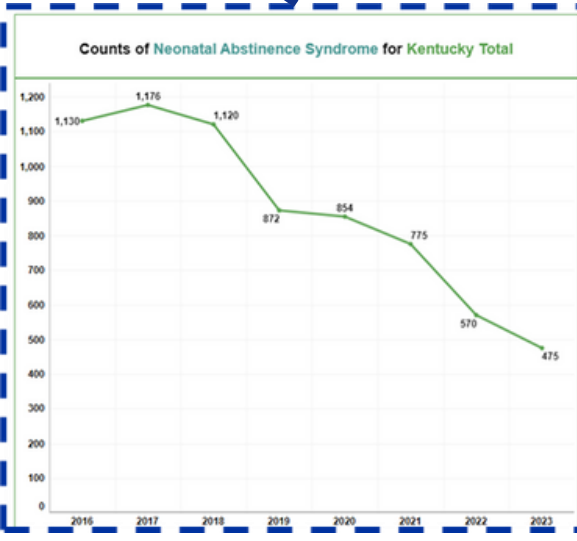
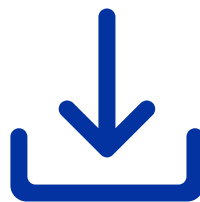
* Counts greater than 0 but less than 5 are suppressed per state data release policy.

** For hospitalization and death data, rates based on counts less than 10 are suppressed.

(*) Rates based on counts less than 20 are considered unstable.

NA indicates that the data were not available.

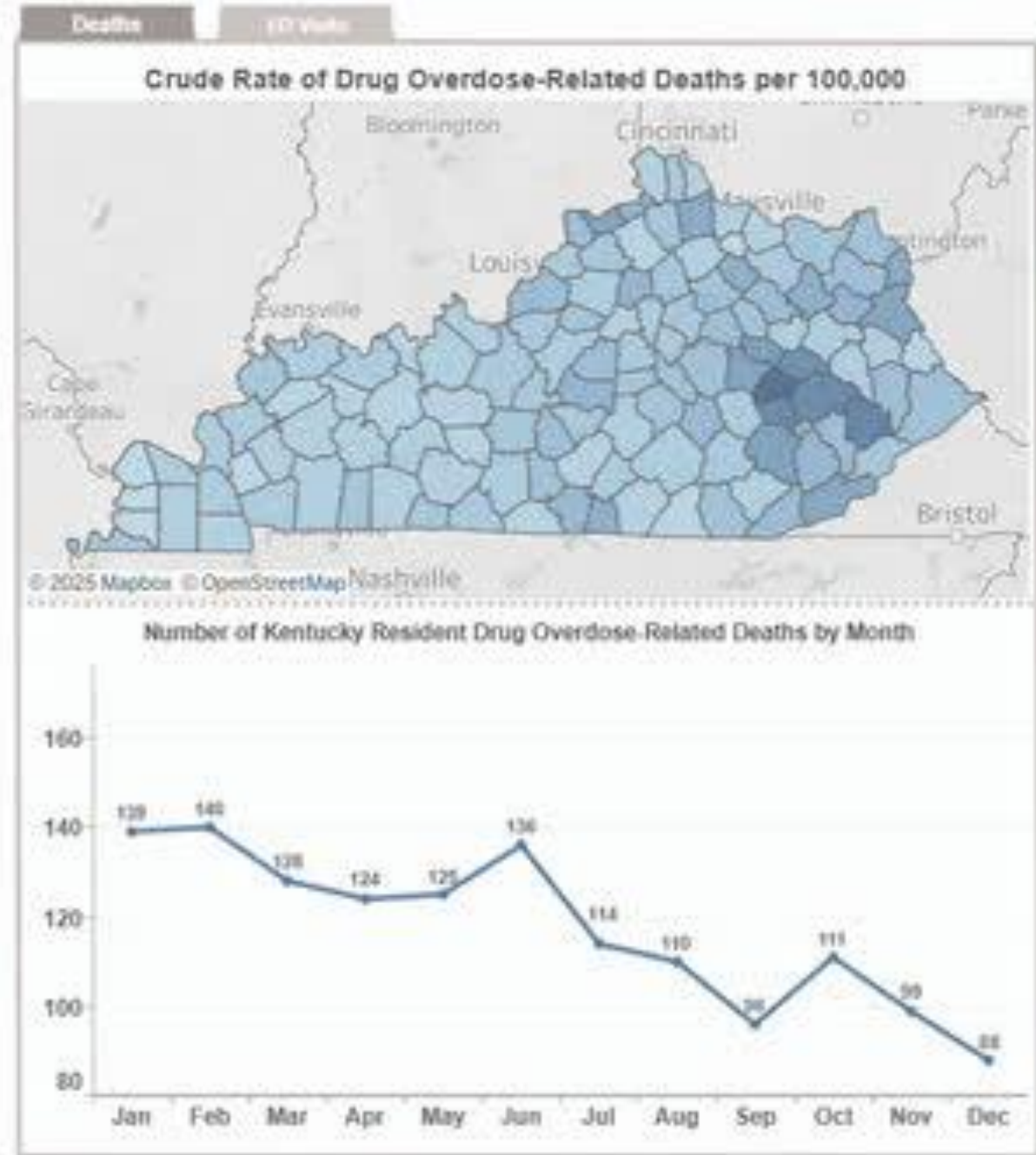
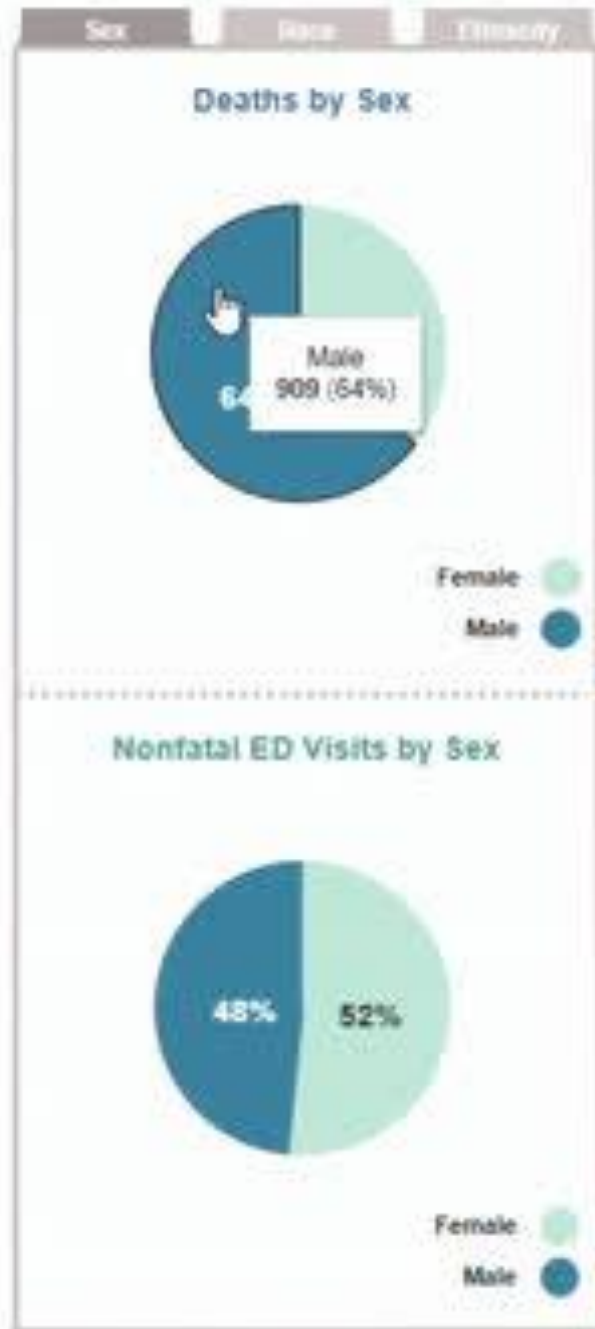
- Toggle between rates and counts
- Viewable at state and county level
- Downloadable as PDF, PowerPoint, or image



- Switch between bar and line charts
- Filter by category and indicator of interest to assess trends over time
- Visualize yearly changes

KIPRC Rolling Quarterly Dashboard

Kentucky Resident Drug Overdose Quarterly Dashboard Rolling Four Quarters (Q1 2024 – Q4 2024)



Full Methodology and Disclaimers

* Per state data release policy, numbers less than five but greater than zero have been suppressed.
 ** Rates calculated on numbers less than 10 have been suppressed.
 † Rates based on counts less than 20 are unstable and should be interpreted with caution.



Annual Dashboard

Ad-Hoc Reporting

<https://kiprc.uky.edu>

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Data Request

Click below to submit a data request. Please include all pertinent information for the request. Data requests typically take up to two weeks to complete. We will contact you at the email address you provide to confirm we have received your request and with any additional questions.

EXTERNAL LINK

Latest News & Resources

Alcohol-Related Injuries and Deaths Don't Always Go Hand in Hand

Drug Overdose and Related Concerns in County

KIPRC Annual Report 2024

Data Request

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EXTERNAL LINK

University of Kentucky

Your Name:

Your Organization:

Your Email Address:

Best Phone Number To Reach You:

NOTE: Data requests typically take at least two weeks to complete. We will contact you at the email address you provided to confirm we have received your request and with any additional questions.

Also, our data policies require suppression of counts below five. Data requests for individual counties, less common or very specific injuries, or small time frames may contain several suppressed values. We are happy to discuss the best approach for your needs.

kiprc KENTUCKY INJURY PREVENTION AND RESEARCH CENTER

Cannabis Use among Kentucky Residents by Age Group, Sex, and Race, 2018–2024

April 14, 2025

Prepared by
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Released by
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Lexington, KY 40504
as bona fide agent for the Kentucky Department for Public Health

Suggested Citation
Mirzaian, M., Daniels, L. (2025). Cannabis Use among Kentucky Residents by Age Group, Sex, and Race, 2018–2024. Kentucky Injury Prevention and Research Center.

You may receive an email from KIPRC staff with a brief follow-up survey regarding this data report; thank you in advance for helping us to improve our services.

Kentucky Public Health University of Kentucky College of Public Health

Table 1. Count of Cannabis-Related Emergency Department Visits among Kentucky Residents by Age Group, 2018–2024

	Year	Age Group		
		<18	18–24	25+
Any cannabis-related disorder	2018	857	3,314	13,479
	2019	1,077	3,451	14,486
	2020	905	3,617	14,799
	2021	1,112	4,001	16,182
	2022	1,368	4,000	16,164
	2023	1,730	4,219	16,637
	2024	1,687	4,173	16,942
Cannabis abuse, dependence, and unspecified use with intoxication	2018	53	114	401
	2019	71	78	248
	2020	77	131	344
	2021	111	100	283
	2022	125	111	286
	2023	199	137	433
	2024	180	160	500
Cannabis poisoning	2018	37	65	275
	2019	42	84	226
	2020	41	74	218
	2021	86	72	168
	2022	89	42	132
	2023	148	58	205
	2024	212	62	254
Synthetic cannabis poisoning	2018	0	0	0
	2019	0	0	0
	2020	0	0	0
	2021	*	*	*
	2022	8	11	24
	2023	17	8	39
	2024	23	13	34

*Counts greater than zero but less than five are suppressed in accordance with state data management policy. For some years, the second lowest count has been censored to protect a suppressed value.

Conclusions and Implications for Harm Reduction



- Overdose deaths and ED visits declined for the third year in a row.
- These declines are not even across all races, age groups, or regions.
- Continued surveillance is essential for identifying new patterns and adapting strategies quickly.
- Dashboards and reports help address community-level needs through timely targeted intervention strategies.
- Access to data enhances collaboration between public health, harm reduction, clinical care, and policy partners.



**KENTUCKY INJURY PREVENTION
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Produced by the Kentucky Injury Prevention and Research Center (KIPRC).

KIPRC, established in 1994, is a unique partnership between the Kentucky Department for Public Health (KDPH) and the University of Kentucky College of Public Health. KIPRC serves both as an academic injury prevention and research center and KDPH's "bona fide agent" for statewide injury prevention and control, focusing on injury prevention translation and practice.

For more information, visit <https://kiprc.uky.edu>



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