



Kentucky Substance Use Research & Enforcement

Using data to drive public safety and public health efforts against substance use across the Commonwealth

Brief: Substance use among Kentucky residents aged 18 years and younger, 2017–2021

Released October 2022





Produced by the Kentucky State Police Intelligence Branch and the Kentucky Injury Prevention and Research Center as bona fide agent for the Kentucky Department for Public Health.

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DATA SOURCES AND DEFINITIONS

Population-based data sets were used to assess drug overdose-related events among Kentucky residents aged 18 years and younger from 2017–2021. Data sources included: 1) Kentucky Outpatient Services Database Files, Office of Health Data and Analytics, Cabinet for Health and Family Services; 2) Kentucky Inpatient Hospitalization Claims Files, Office of Health Data and Analytics, Cabinet for Health and Family Services; and 3) Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services. All data remain provisional and subject to change. Definitions for drug overdose-related events are listed in Table 1.

Table 1. Drug overdose-related definitions

	Emergency Department (ED) Visits	Inpatient Hospitalizations	Deaths
Heroin	T40.1	T40.1	T40.1
Opioids	T40.0, T40.2, T40.3, T40.4, T40.60, T40.69	T40.0, T40.2, T40.3, T40.4, T40.60, T40.69	T40.0, T40.2, T40.3, T40.4, T40.6
Methamphetamine			Text scan
Cocaine	T40.5	T40.5	T40.5
Fentanyl and Fentanyl Analogs			T40.4 and text scan; Fentanyl Analogs: Methylfentanyl, Methoxybutyrylfentanyl, Acetylfentanyl, Acrylfentanyl, Hydroxythiofentanyl, Butyrylfentanyl, Carfentanil, Furanylfentanyl, Para_1, Para_2, U47700
Marijuana	T40.7X1, T40.7X2, T40.7X3, T40.7X4, T40.7X5	T40.7X1, T40.7X2, T40.7X3, T40.7X4, T40.7X5	T40.7
General Drug Overdoses	T36-T50, T36.9, T37.9, T39.9, T41.4, T42.7, T43.9, T45.9, T47.9, T49.9	T36-T50, T36.9, T37.9, T39.9, T41.4, T42.7, T43.9, T45.9, T47.9, T49.9	X40-X44, X60-X64, X85, Y10-Y14
Notes	The codes listed above are relevant ICD-10-CM codes. Drug overdose-related emergency department visits represent initial encounters of care among Kentucky residents and could be greater than the number of individual patients treated.	The codes listed above are relevant ICD-10-CM codes. Drug overdose-related hospitalizations represent initial encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities.	The codes listed above are relevant ICD-10 codes. Deaths are based on drug overdose-related deaths among Kentucky residents. Deaths may involve more than one drug.



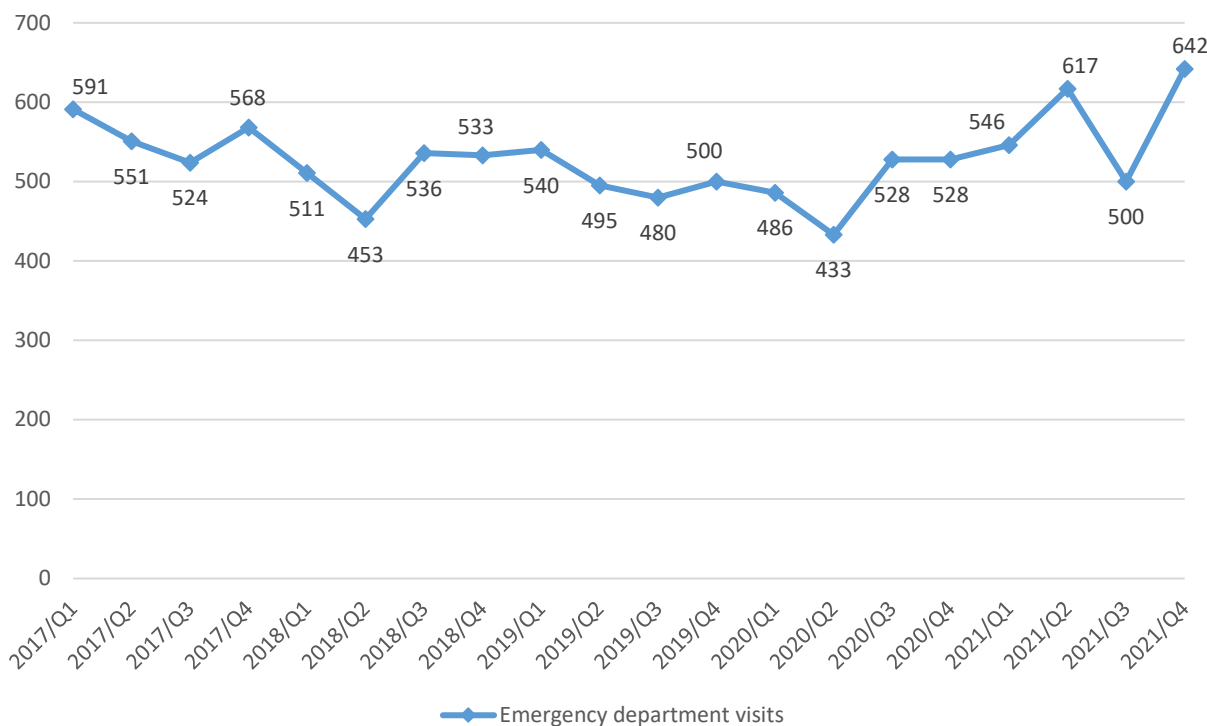
Drug overdose-related emergency department visits: Kentucky residents aged 18 years and younger, 2017–2021

From 2017–2021, Kentucky residents 18 years and younger made 10,562 drug overdose-related emergency department (ED) visits. Annual counts comparing ED visits among residents aged 18 years and younger to those of residents 19 years and older are displayed in Table 2. Quarterly ED visit trends among residents 18 years and younger from 2017–2021 are displayed in Figure 1.

Table 2. Annual drug overdose-related ED visits among Kentucky residents aged 18 years and younger compared to those 19 years and older, 2017–2021

Year	18 years and younger	19 years and older
2017	2,234	12,120
2018	2,033	9,899
2019	2,015	9,403
2020	1,975	10,982
2021	2,305	10,686

Figure 1. Drug overdose-related ED visits among Kentucky residents aged 18 years and younger, 2017–2021



The most common drug types reported for drug overdose-related ED visits were non-heroin opioids (506), any stimulant (434), marijuana (342), heroin (66), and cocaine (13). Characteristics of the encounters of care for visits to the emergency department for drug overdose-related injury can be found in Table 3.

Table 3. Characteristics of drug overdose-related ED visits, 2017–2021 (n=10,562): Kentucky residents aged 18 years and younger

Characteristic		Percentage
Age		
<6 years		37%
6–11 years		5%
12–15 years		28%
16–18 years		29%
Race		
White		85%
Black		12%
Other		3%
Sex		
Female		62%
Male		38%
Ethnicity		
Non-Hispanic		97%
Location		
Metropolitan		54%
Nonmetropolitan		46%
Discharge Status		
Home/Self-care		65%
Health care facility		19%
Inpatient		14%
Other		2%

Drug overdose-related emergency department visits represent initial encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Location is defined as metro (counties containing metropolitan statistical areas with populations of 50,000 or higher) and nonmetro (those with less than 50,000 in any urban cluster population) per the 2013 National Center for Health Statistics urban–rural classification based on patient county of residence. 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. Data source: Kentucky Outpatient Services Database Files, Office of Health Data and Analytics, Cabinet for Health and Family Services. This project is supported by Cooperative Agreement Number NU17CE924971 (Centers for Disease Control and Prevention). Contents are solely the responsibility of the authors and do not necessarily represent the official views of the funders.



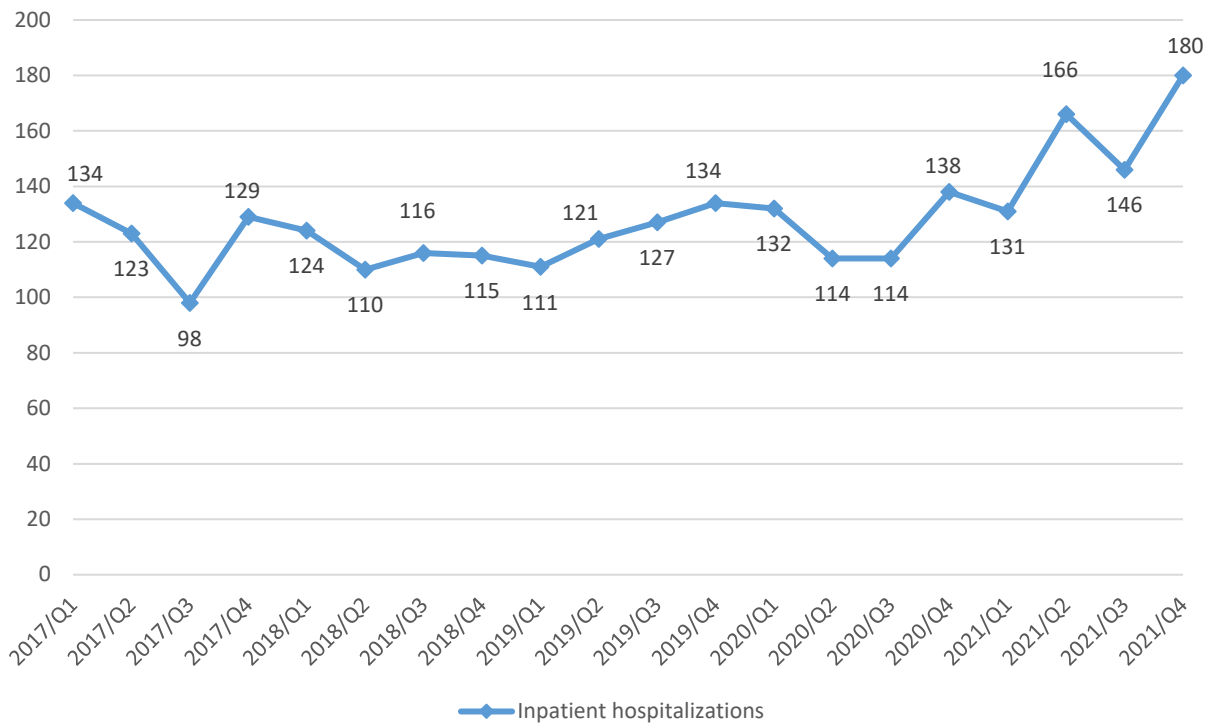
Drug overdose-related inpatient hospitalizations: Kentucky residents aged 18 years and younger, 2017–2021

From 2017–2021, Kentucky residents 18 years and younger experienced 2,563 drug overdose-related inpatient hospitalizations. Annual counts comparing inpatient hospitalizations among residents aged 18 years and younger to those of residents 19 years and older are displayed in Table 4. Quarterly emergency department visits among residents aged 18 years and younger from 2017–2021 are displayed in Figure 2.

Table 4. Annual drug overdose-related inpatient hospitalizations among Kentucky residents aged 18 years and younger compared to those 19 years and older, 2017–2021

Year	18 years and younger	19 years and older
2017	484	5,820
2018	465	5,035
2019	493	4,568
2020	498	4,581
2021	623	4,230

Figure 2. Drug overdose-related inpatient hospitalizations among Kentucky residents aged 18 years and younger, 2017–2021



The most common drug types reported for drug overdose-related inpatient hospitalizations were any stimulant (136), nonheroin opioids (132), marijuana (50), heroin (13), and cocaine (11). Characteristics of the inpatient hospitalization encounters of care for drug overdose-related injury can be found in Table 5.

Table 5. Characteristics of drug overdose-related inpatient hospitalizations, 2017–2021 (n=2,563): Kentucky residents aged 18 years and younger

Characteristic		Percentage
Age		
<6 years		9%
6–11 years		3%
12–15 years		44%
16–18 years		45%
Race		
White		82%
Black		16%
Other		2%
Sex		
Female		76%
Male		24%
Ethnicity		
Non-Hispanic		96%
Location		
Metropolitan		68%
Nonmetropolitan		32%
Discharge Status		
Home/Self-care		67%
Health care facility		30%
Hospice		1%
Other		2%

Drug overdose-related hospitalizations represent initial encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Location is defined as metro (counties containing metropolitan statistical areas with populations of 50,000 or higher) and nonmetro (those with less than 50,000 in any urban cluster population) per the 2013 National Center for Health Statistics urban–rural classification based on patient county of residence. 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. Data source: Kentucky Inpatient Hospitalization Claims Files, Office of Health Data and Analytics, Cabinet for Health and Family Services. This project is supported by Cooperative Agreement Number NU17CE924971 (Centers for Disease Control and Prevention). Contents are solely the responsibility of the authors and do not necessarily represent the official views of the funders.

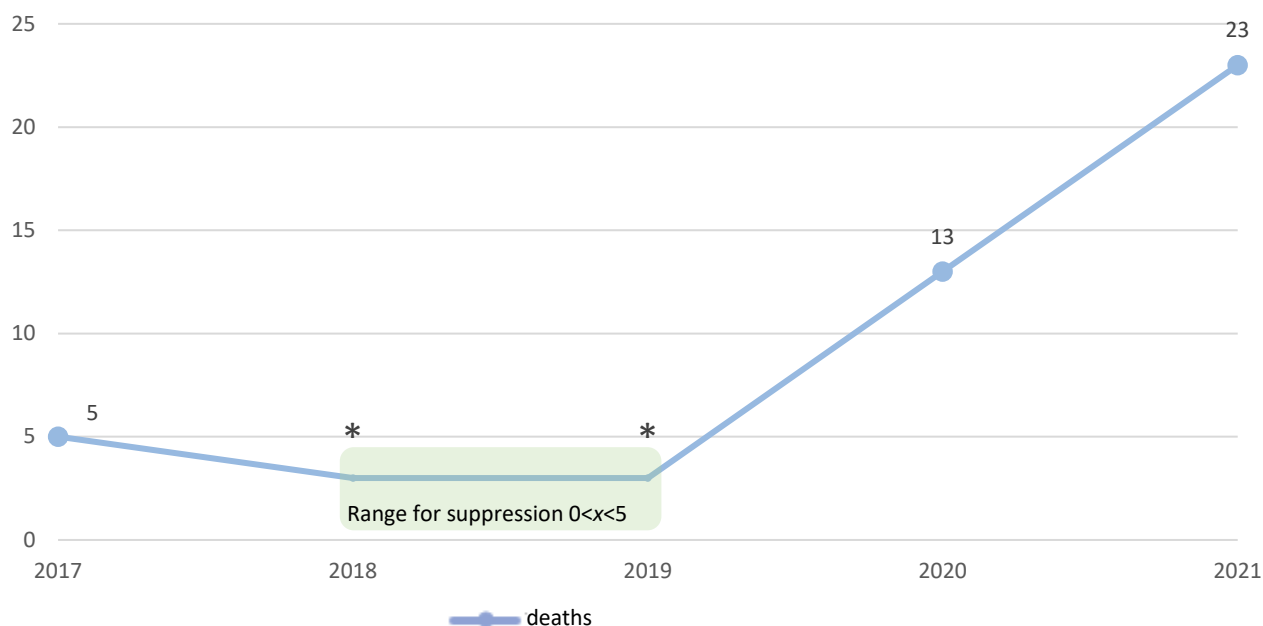
Drug overdose-related deaths: Kentucky residents aged 18 years and younger, 2017–2021

From 2017–2021, 49 Kentucky residents aged 18 years and younger died from a drug overdose. Annual counts comparing deaths of residents aged 18 years and younger to those of residents 19 years and older are displayed in Table 6. Due to state data policy, quarterly death trends for Kentucky residents aged 18 years and younger from 2017–2021 are unavailable; thus, annual drug death trends are displayed in Figure 3.

Table 6. Annual drug overdose-related deaths among Kentucky residents aged 18 years and younger compared to those 19 years and older, 2017–2021

Year	18 years and younger	19 years and older
2017	5	1,472
2018	<5	1,246
2019	<5	1,312
2020	13	1,952
2021	23	2,233

Figure 3. Annual drug overdose-related deaths among Kentucky residents aged 18 years and younger, 2017–2021



*Counts greater than zero but less than five are suppressed in accordance with state data management policy.

The most common drug types reported for drug overdose-related deaths were non-heroin opioids (36), fentanyl and fentanyl analogs (29), marijuana (6), methamphetamine (9), heroin (less than five), and cocaine (less than five). Characteristics of the decedents from a drug overdose-related injury can be found in Table 7.

Table 7. Characteristics of drug overdose-related deaths, 2017–2021 (n=49): Kentucky residents aged 18 years and younger

Characteristic		Percentage
Age		
Under 11 years		12%
12–15 years		12%
16–18 years		76%
Race		
White		84%
Black		16%
Sex		
Female		47%
Male		53%
Ethnicity		
Non-Hispanic		100%
Location		
Metropolitan		65%
Nonmetropolitan		35%
Education level		
8 th grade or less		20%
9 th –12 th , no diploma		51%
High school/GED or higher		29%

Data are based on drug overdose-related deaths among Kentucky residents. Deaths may involve more than one drug. Location is defined as metro (counties containing metropolitan statistical areas with populations of 50,000 or higher) and nonmetro (those with less than 50,000 in any urban cluster population) per the 2013 National Center for Health Statistics urban–rural classification based on decedent county of residence. 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. Data source: Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services. This project is supported by Cooperative Agreement Number NU17CE924971 (Centers for Disease Control and Prevention). Contents are solely the responsibility of the authors and do not necessarily represent the official views of the funders.



Data Evaluation Survey



We would like to hear your feedback on the Kentucky Substance Use Research & Enforcement (K-SURE) briefs and other outputs you use. This will help us improve future K-SURE briefs, stakeholder engagement, dissemination, and audience receptivity. You can find the survey here:

https://uky.az1.qualtrics.com/jfe/form/SV_bDzBAIOXZprzO85



Thank you in advance!

- *The K-SURE Team* -

