



# K-SURE

## **Kentucky Substance Use Research & Enforcement**

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

Brief: Five Major Overdose-Related Substances in Kentucky,  
January 1, 2017–March 31, 2020

Possession and Trafficking Citations, Drug Overdose-Related Deaths,  
Emergency Department Visits, Hospitalizations, Submissions to State Police Lab, and  
General Drug Overdose-Related Events



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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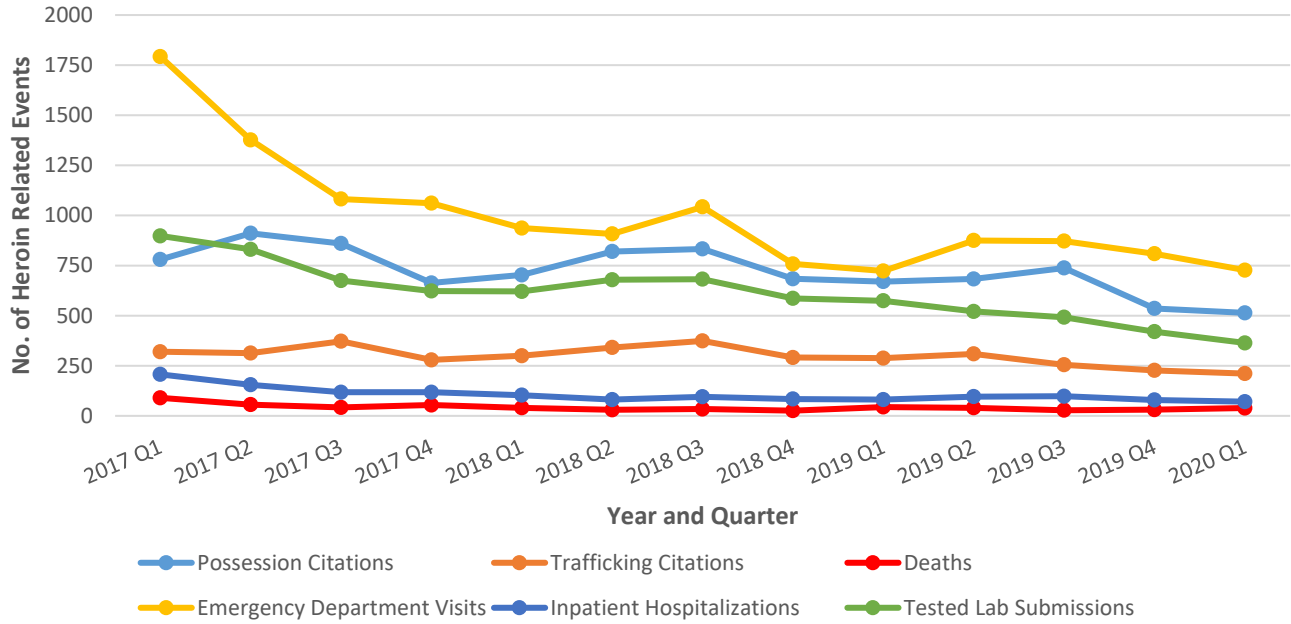


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## Heroin-Related Events



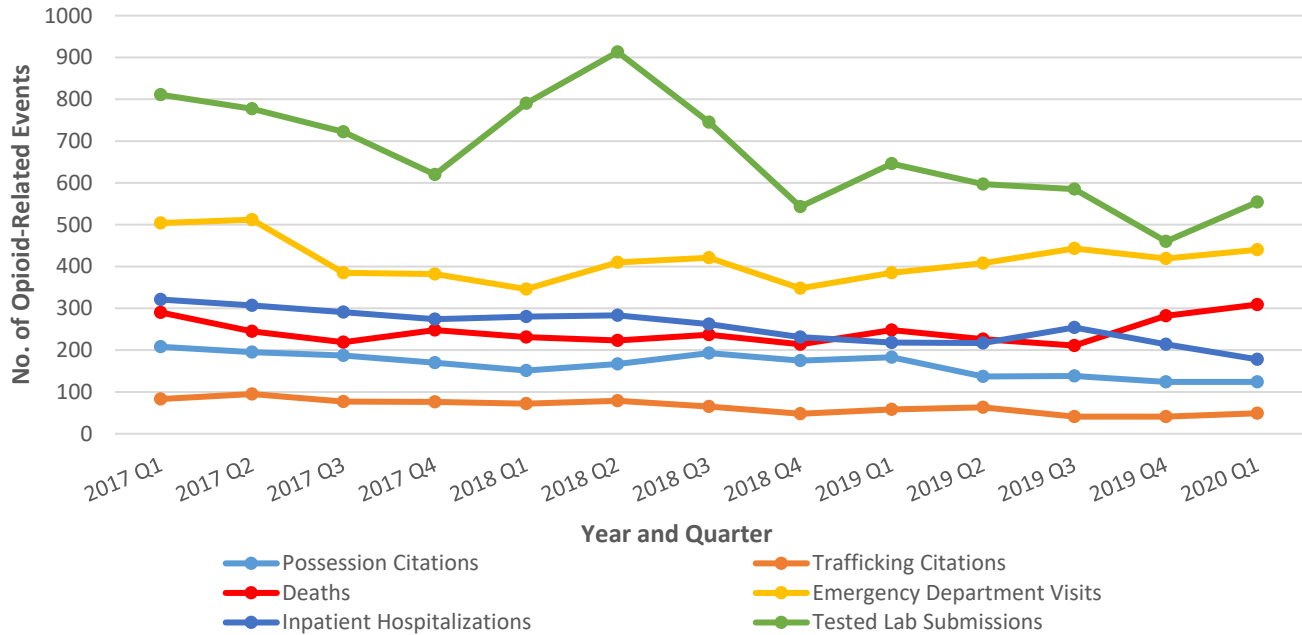
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Deaths are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Tested lab submission data represent those substances submitted to the lab for identification purposes; quantity is not reflected. Lab data represent submissions tested within the corresponding time frame; submission date is not reflected.

Data sources: Kentucky Open Portal System; Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky Outpatient Claim Files, Office of Health and Data Analytics, Cabinet for Health and Family Services; Kentucky Inpatient Hospitalization Claim Files, Kentucky Office of Health and Data Analytics Cabinet for Health and Family Services; Kentucky State Police Crime Laboratory.

### Key Findings:

- Both heroin possession and trafficking citations decreased by 34.1% each from January 2017 through March 2020.
- Kentucky resident heroin-related deaths decreased by over two-thirds (56.7%) from January 2017 through March 2020.
- Heroin-related tested lab submissions decreased 59.5% from January 2017 through March 2020.
- Overall, there was a 52.9% decrease in total heroin-related events (possession and trafficking citations, deaths, emergency department visits, hospitalizations, and tested lab submissions) from the beginning of 2017 through the end of March 2020.

## Opioid-Related Events



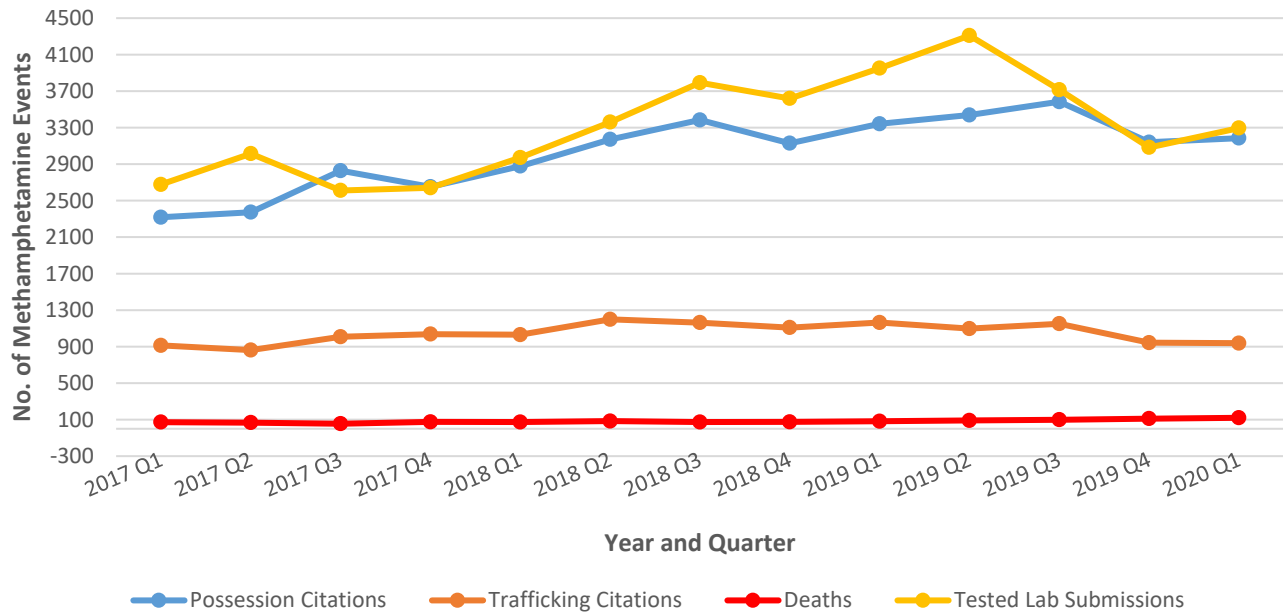
Data are provisional and subject to change. Opioid-related events reflect nonheroin opioids. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Deaths are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Tested lab submission data represent those substances submitted to the lab for identification purposes; quantity is not reflected. Lab data represent submissions tested within the corresponding time frame; submission date is not reflected.

Data sources: Kentucky Open Portal System; Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky Outpatient Claim Files, Office of Health and Data Analytics, Cabinet for Health and Family Services; Kentucky Inpatient Hospitalization Claim Files, Kentucky Office of Health and Data Analytics Cabinet for Health and Family Services; Kentucky State Police Crime Laboratory.

### Key Findings:

- Statewide opioid possession and trafficking citations decreased by 40.4% and 41.0%, respectively, from January 2017 through March 2020.
- Opioid-related emergency department visits decreased by 12.7% and hospitalizations decreased by 44.5% from January 2017 through March 2020.
- Opioid-related deaths increased by 6.6% among Kentucky residents from January 1, 2017, to March 31, 2020. Opioids remain the leading substances identified among drug overdose-related deaths (data not shown).
- Despite the 31.7% decrease in tested lab submissions positively identifying opioids, no significant changes were observed in the percentage of opioids identified among all tested lab submissions from 2017 through March 2020. Opioids accounted for nearly 9% of the total tested submissions to KSP Laboratories from the beginning of 2017 through March 2020 (data not shown).
- Opioids and their adverse effects remain prevalent throughout the Commonwealth, despite opioid-related events decreasing by 25.4% from the first quarter of 2017 through the first quarter of 2020.

## Methamphetamine-Related Events



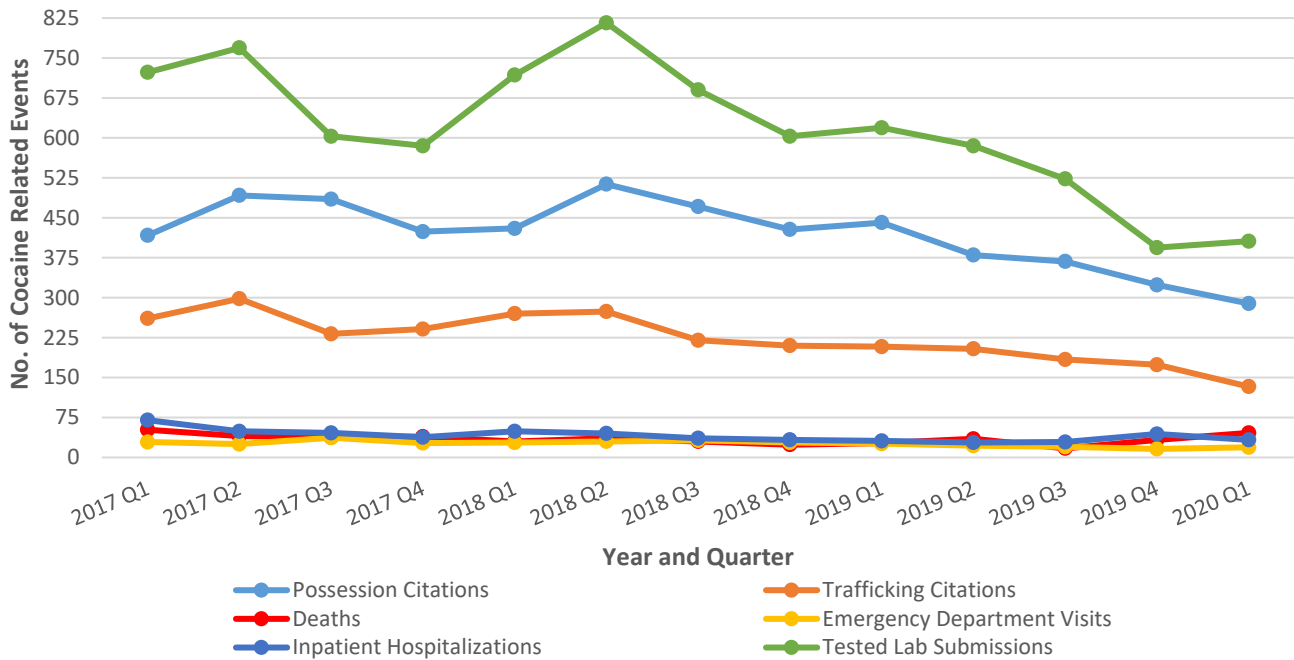
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Deaths are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Tested lab submission data represent those substances submitted to the lab for identification purposes; quantity is not reflected. Lab data represent submissions tested within the corresponding time frame; submission date is not reflected.

Data sources: Kentucky Open Portal System; Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky State Police Crime Laboratory.

### Key Findings:

- Statewide methamphetamine possession citations increased by 37.4% and trafficking citations by 2.7% from January 2017 through March 2020.
- Methamphetamine-related overdose deaths, all of which involve polysubstance use, increased 66.7% from beginning of 2017 through the end of March 2020.
- Tested lab submissions positively identifying methamphetamine increased by 23.1% from the first quarter of 2017 through the first quarter of 2020. Methamphetamine continues to be the most commonly submitted drug to Kentucky State Police Laboratories, accounting for 44.6% of the total tested submissions from the beginning of 2017 through March 2020 (data not shown).
- Methamphetamine use and distribution are a highly prevalent and continue to threaten the Commonwealth's safety and health, as methamphetamine-related events increased by an average of 26.1% from January 2017 through March 2020.

## Cocaine-Related Events



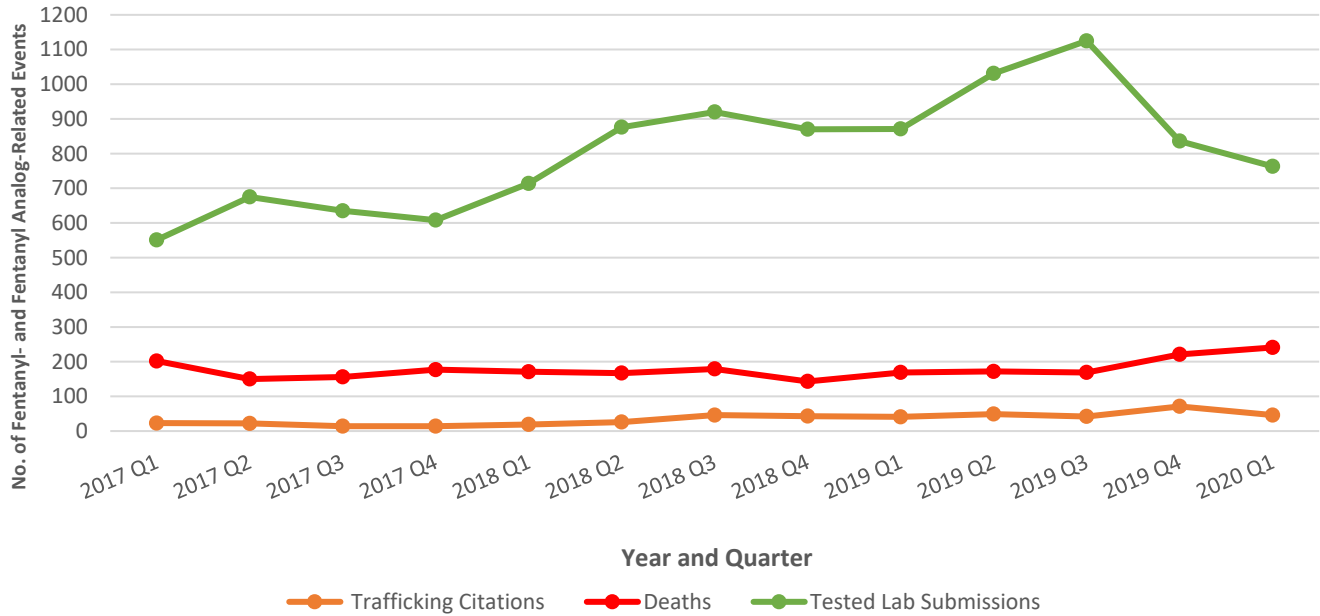
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Deaths are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Tested lab submission data represent those substances submitted to the lab for identification purposes; quantity is not reflected. Lab data represent submissions tested within the corresponding time frame; submission date is not reflected.

Data sources: Kentucky Open Portal System; Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky Outpatient Claim Files, Office of Health and Data Analytics, Cabinet for Health and Family Services; Kentucky Inpatient Hospitalization Claim Files, Kentucky Office of Health and Data Analytics Cabinet for Health and Family Services; Kentucky State Police Crime Laboratory.

### Key Findings:

- Statewide cocaine trafficking and possession citations decreased (30.7% and 49.0%, respectively) from January 2017 through March 2020.
- Cocaine-related deaths decreased by 11.5% from the beginning of 2017 through March 2020.
- Cocaine-related emergency department visits declined by more than three-tenths (34.5%) and hospitalizations by over a half (52.9%) from January 2017 through March 2020.
- Tested lab submissions positively identifying cocaine decreased by 43.8% from the first quarter of 2017 to the first quarter of 2020. Cocaine accounted for 8.3% of the total tested submissions to Kentucky State Police Laboratories from the beginning of 2017 through March 2020 (data not shown).
- Cocaine use, misuse, and distribution continues across Kentucky, where an overall 40.3% decrease in cocaine-related public health and safety events has been observed.

## Fentanyl- and Fentanyl Analog- Related Events



Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. There are no Kentucky Revised Statutes codes for fentanyl possession. Deaths are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Tested lab submission data represent those substances submitted to the lab for identification purposes; quantity is not reflected. Lab data represent submissions tested within the corresponding time frame; submission date is not reflected.

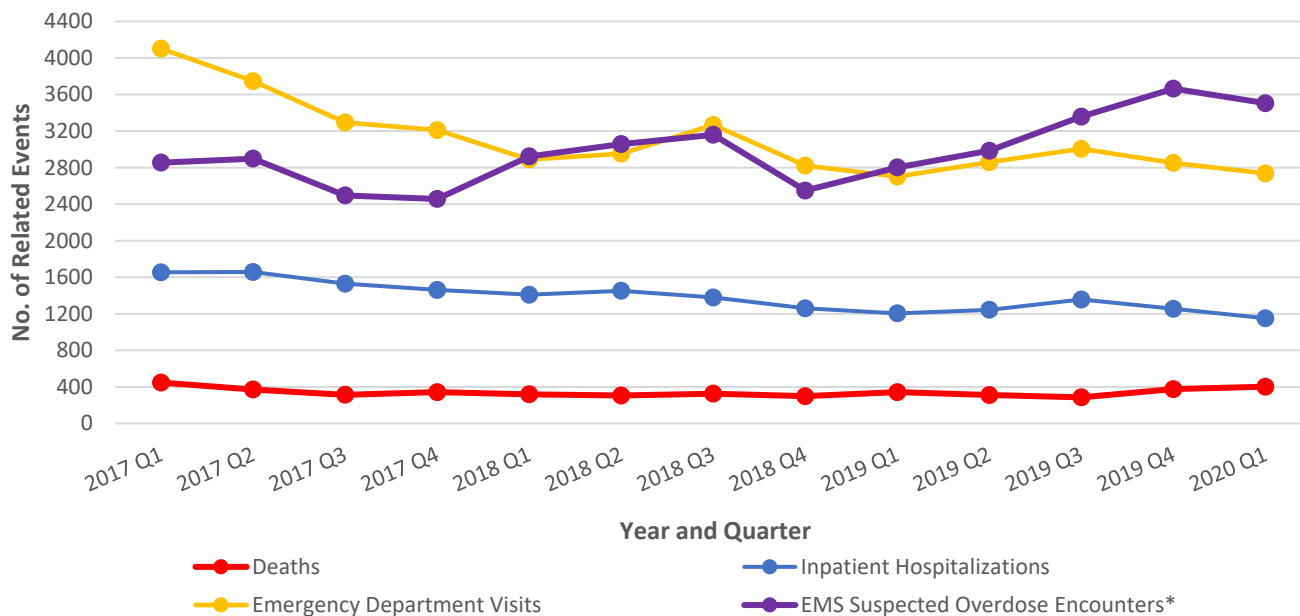
Data sources: Kentucky Open Portal System; Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky State Police Crime Laboratory.

### Key Findings:

- Statewide fentanyl and fentanyl analog trafficking citations increased 100.0% from January 2017 through March 2020. Citations related to fentanyl and its related analogs may be underestimated for various reasons. Fentanyl- and fentanyl-related analogs are often present in combination with other drug mixtures; however, laboratory testing is often needed to confirm the presence of this substance.
- Fentanyl- and fentanyl analog-related deaths increased by 19.3% from the beginning of 2017 through March 2020.
- Tested lab submissions positively identifying fentanyl and fentanyl analogs increased by 38.5% from January 2017 through March 2020. KSP Laboratories continue to see several different fentanyl derivatives, along with poly-drug mixtures including heroin/fentanyl, cocaine/fentanyl, and methamphetamine/fentanyl.
- Fentanyl and fentanyl analogs are pervasive in Kentucky—increasing the risk of overdose and exposure to individuals, families, communities, and law enforcement. Fentanyl- and fentanyl analog-related events increased 35.3% from 2017 through the first quarter of 2020 across Kentucky.



## General Drug Overdose-Related Events



\*A large emergency medical services (EMS) agency began reporting to the Kentucky State Ambulance Reporting System starting in January 2018. Data are provisional and subject to change.

Deaths are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. EMS suspected overdose encounters, which represent encounters of care and could be greater than the number of individual patients treated, are based on scans of free-text fields and medication fields (for naloxone/narcan administration with indicated positive response).

Data sources: Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky Outpatient Claim Files, Office of Health and Data Analytics, Cabinet for Health and Family Services; Kentucky Inpatient Hospitalization Claim Files, Kentucky Office of Health and Data Analytics Cabinet for Health and Family Services; Kentucky Board of Emergency Medical Services: Kentucky State Ambulance Reporting System.

### Key Findings:

- Statewide drug overdose-related deaths decreased by 10.3% from the beginning of 2017 through the first quarter of 2020.
- Emergency department visits related to drug overdose have decreased by one-third from January 2017 through March 2020.
- Drug overdose-related hospitalizations declined by 30.4% from 2017 through March 2020.
- Emergency medical services suspected drug overdose-related encounters increased by 22.8% from January 2017 through the end of March 2020.
- Overall, small reductions have been observed across the Commonwealth in regards to drug-related public health and safety events from 2017 through the first quarter of 2020; yet drug use, misuse, and distribution are still impacting all Kentuckians.
- Among the law enforcement agencies currently reporting, there were 296 naloxone administrations from January 1, 2019 through March 31, 2020 (data not shown).

# K-SURE Data Matrix



	<b>Emergency Department Visits</b>	<b>Inpatient Hospitalizations</b>	<b>Deaths</b>	<b>Possession Citations</b>	<b>Trafficking Citations</b>	<b>Crime Lab Submissions</b>
<b>Heroin</b>	T40.1	T40.1	T40.1	KRS: 35120, 35121, 42195, 42196, 42205, 42206	KRS: 35100, 35101, 42105, 42106, 42376, 42377, 42378, 42379, 42466, 42468, 42470, 42480, 42483, 42486	Tested lab submissions represent those substances submitted to the lab for identification purposes; quantity is not reflected.
<b>Opioid</b>	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	KRS: 35220, 35221, 42197, 42198, 42209, 42210, 42237, 42238, 42246	KRS: 35200, 35201, 42109, 42110, 42372, 42373, 42374, 42375, 42435, 42436, 42437, 42438, 42137, 42138	
<b>Methamphetamine</b>			Text scan	KRS: 42187, 42188, 42215, 42216	KRS: 42113, 42114, 42290, 42291, 42364, 42365, 42366, 42367	
<b>Cocaine</b>	T40.5	T40.5	T40.5	KRS: 35320, 35321, 42193, 42194, 42203, 42204	KRS: 35300, 35301, 42103, 42104, 42368, 42369, 42370, 42371	
<b>Fentanyl and Fentanyl Analogs</b>			T404 and text scan; Fentanyl Analogs: Methylfentanyl, Methoxybutyrylfentanyl, Acetylfentanyl,		KRS: 42465, 42472, 42474, 42476, 42478, 42590, 42593, 42596, 42599	

			Acrylfentanyl, Hydroxythiofentanyl, Butyrylfentanyl, Carfentanil, Furanylfentanyl, Para_1, Para_2, U47700			
<b>General Drug Overdoses</b>	T36-T50, T369, T379, T399, T414, T427, T439, T459, T479, T499	T36-T50, T369, T379, T399, T414, T427, T439, T459, T479, T499	X40-X44, X60-X64, X85, Y10-Y14			
<b>Data Sources</b>	Kentucky Outpatient Claim Files, Office of Health and Data Analytics, Cabinet for Health and Family Services	Kentucky Inpatient Hospitalization Claim Files, Kentucky Office of Health and Data Analytics, Cabinet for Health and Family Services	Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services	Kentucky Open Portal System, Kentucky State Police	Kentucky Open Portal System, Kentucky State Police	Kentucky State Police Crime Laboratory
<b>Notes</b>	Drug overdose-related emergency department visits represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated. Data are provisional and subject to change.	Drug overdose-related hospitalizations represent encounters of care among Kentucky residents and could be greater than the number of individual patients treated in acute care facilities. Data are provisional and subject to change.	Deaths are based on drug overdose-related deaths among Kentucky residents. Deaths may involve more than one drug. Data are provisional and subject to change.	Possession citations reflect violations of Kentucky Revised Statutes (KRS). The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Data are provisional and subject to change.	Trafficking citations reflect violations of Kentucky Revised Statutes (KRS). The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Data are provisional and subject to change.	Lab data represent submissions tested within the corresponding time frame; submission date is not reflected. Data are provisional and subject to change.

## Data Evaluation Survey



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

[https://uky.az1.qualtrics.com/jfe/form/SV\\_bDzBAIOXZprzO85](https://uky.az1.qualtrics.com/jfe/form/SV_bDzBAIOXZprzO85)



Thank you in advance!

- The K-SURE Team -