



Kentucky Substance Use Research & Education

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

Brief 40: Six Major Overdose-Related Substances and General Overdose-Related Events in Kentucky, January 1, 2020–June 30, 2025

Based on data from possession and trafficking citations, drug overdose-related deaths, emergency department visits, hospitalizations, submissions to the state police lab, and general drug overdose-related events



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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 Evaluation Survey



We would like to hear your feedback on the Kentucky Substance Use Research & Education (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:

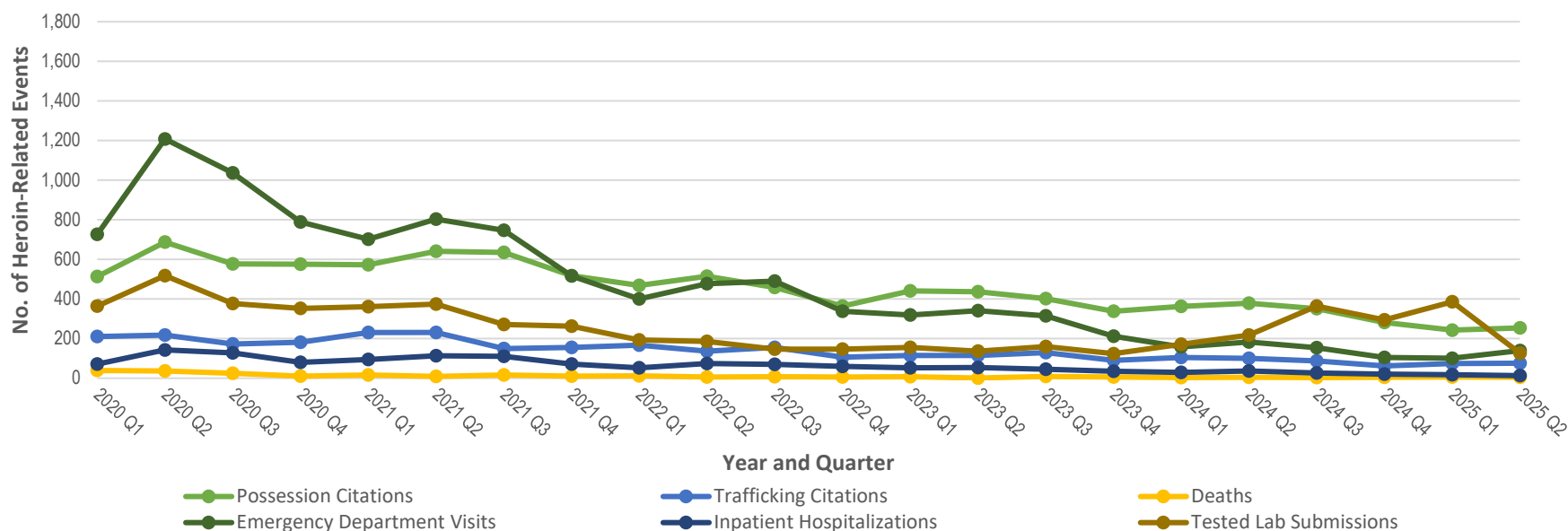
https://qualtricsxm6yh3ssdyd.qualtrics.com/jfe/form/SV_5vCcuHwyEuC7dly



Thank you in advance!

The K-SURE Team

Heroin-Related Events



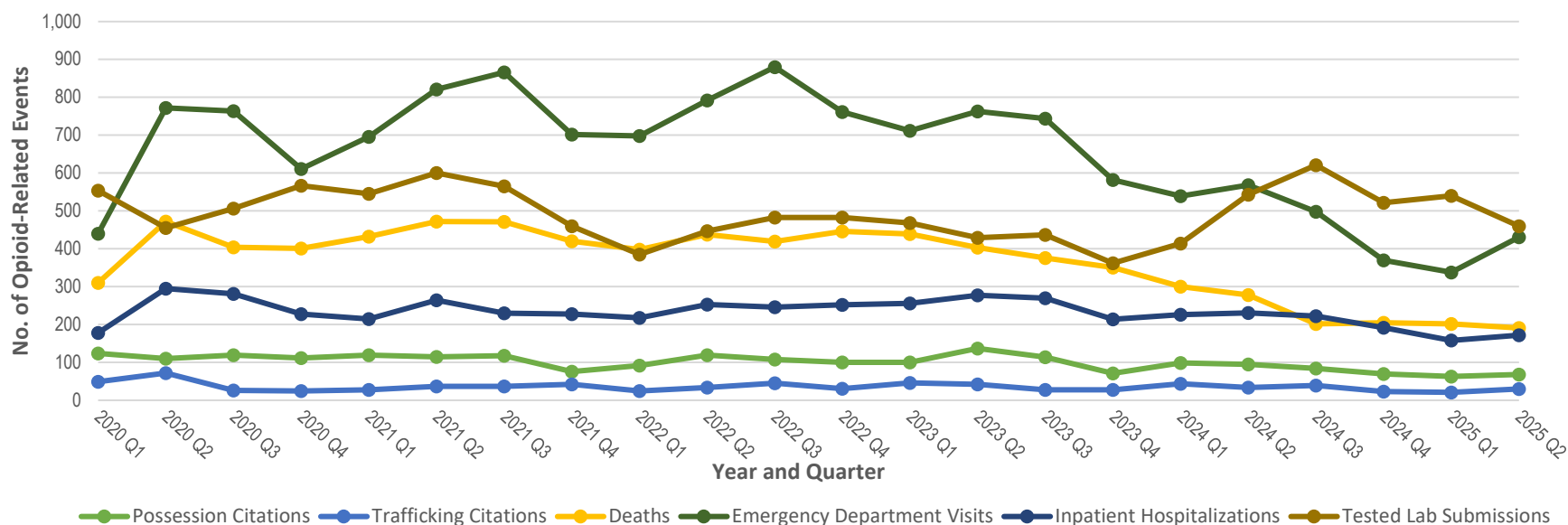
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Death data are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations 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; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s).

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

Key Findings:

- Heroin possession citations decreased by 50.6% from Q1 2020 through Q2 2025 and by 4.5% from Q1 2025 through Q2 2025.
- Heroin trafficking citations decreased by 64.5% from Q1 2020 through Q2 2025 and increased by 1.4% from Q1 2025 through Q2 2025.
- Kentucky resident heroin-related deaths declined by 87.2% from Q1 2020 through Q2 2025 and by 16.7% from Q1 2025 through Q2 2025.
- Heroin-related emergency department (ED) visits declined by 80.7% from Q1 2020 through Q2 2025 and increased by 38.6% from Q1 2025 through Q2 2025.
- Heroin-related inpatient hospitalizations declined by 81.7% from Q1 2020 through Q2 2025 and by 23.5% from Q1 2025 through Q2 2025.
- Tested lab submissions that positively identified heroin decreased by 65.4% from Q1 2020 through Q2 2025 and by 67.4% from Q1 2025 through Q2 2025.

Opioid-Related Events



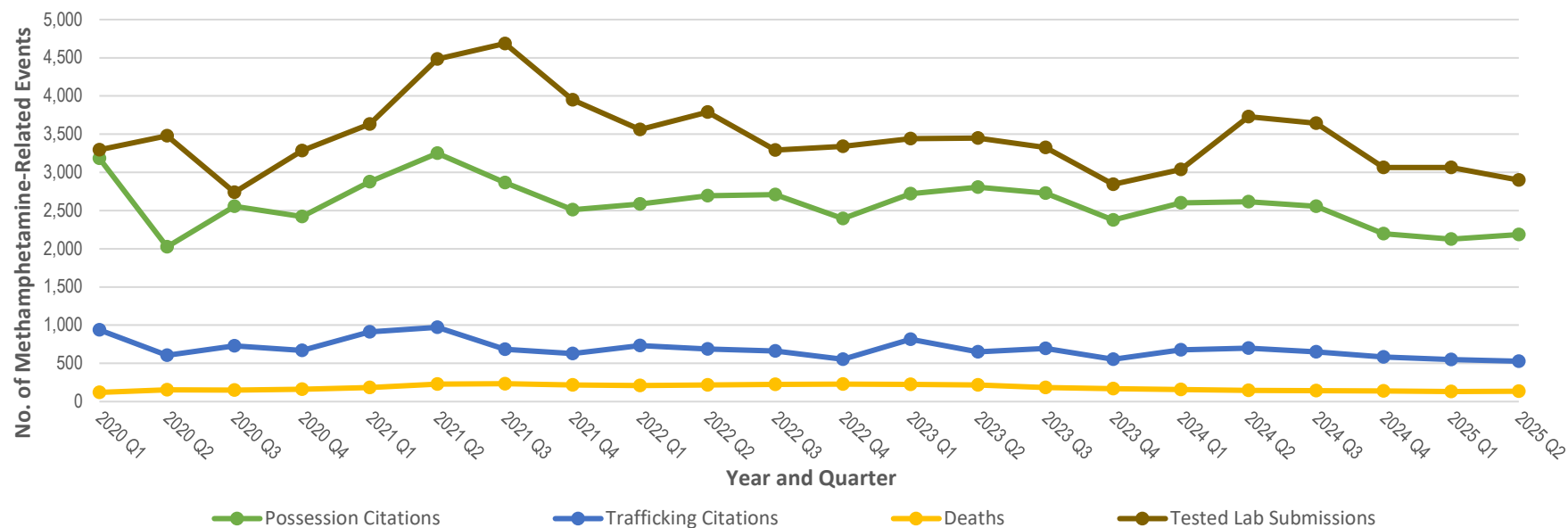
Data are provisional and subject to change. Opioid-related events reflect non-heroin- and non-fentanyl-related opioids. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Death data are based on drug overdose-related 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; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s).

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Key Findings:

- Opioid possession citations decreased by 45.2% from Q1 2020 through Q2 2025 and increased by 7.9% from Q1 2025 through Q2 2025.
- Opioid trafficking citations decreased by 38.8% from Q1 2020 through Q2 2025 and increased by 42.9% from Q1 2025 through Q2 2025.
- Kentucky resident opioid-related deaths decreased by 38.4% from Q1 2020 through Q2 2025 and by 5.4% from Q1 2025 through Q2 2025.
- Opioid-related ED visits decreased by 2% from Q1 2020 through Q2 2025 and increased by 27.5% from Q1 2025 through Q2 2025.
- Opioid-related inpatient hospitalizations declined by 3.4% from Q1 2020 through Q2 2025 and rose by 8.9% from Q1 2025 through Q2 2025.
- Tested lab submissions that positively identified opioids decreased by 17% from Q1 2020 through Q2 2025 and by 14.8% from Q1 2025 through Q2 2025.

Methamphetamine-Related Events

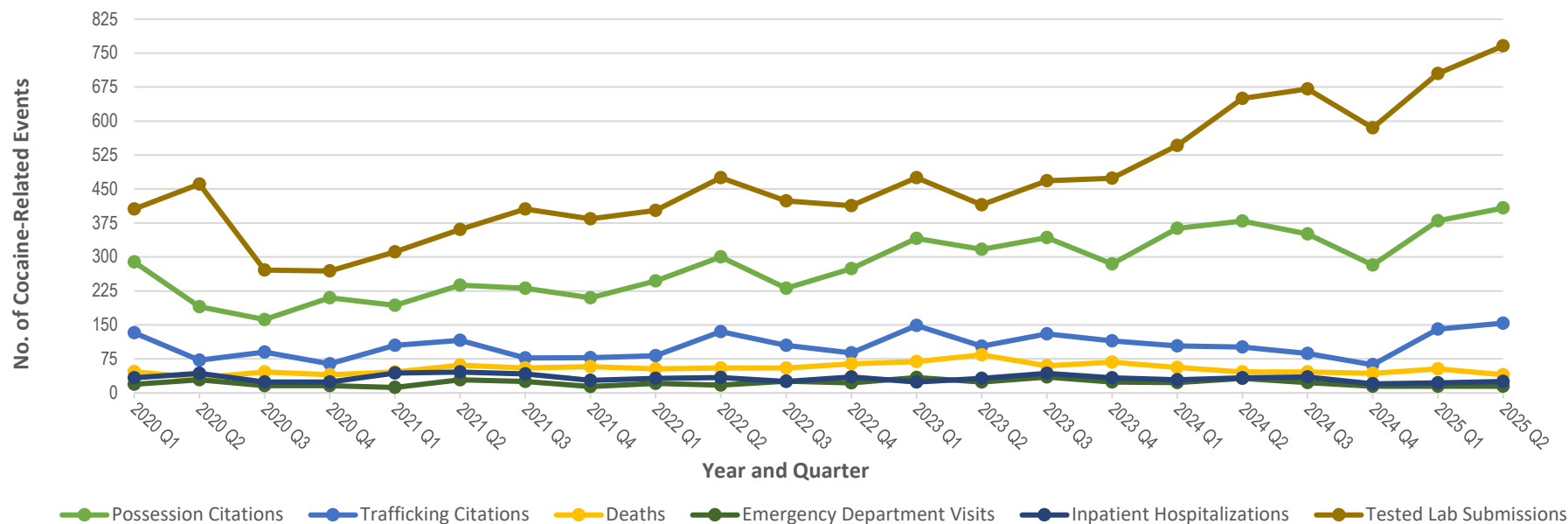


Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Death data are based on drug overdose-related deaths among Kentucky residents. Tested lab submission data represent those substances submitted to the lab for identification purposes; quantity is not reflected. Lab data represent submissions tested within the corresponding time; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s). 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:

- Methamphetamine possession citations decreased by 31.4% from Q1 2020 through Q2 2025 and increased by 2.8% from Q1 2025 through Q2 2025.
- Methamphetamine trafficking citations decreased by 43.7% from Q1 2020 through Q2 2025 and by 4.2% from Q1 2025 through Q2 2025.
- A 12.5% increase in methamphetamine-related overdose deaths was observed among Kentucky residents from Q1 2020 through Q2 2025; all involved the use of more than one drug (polydrug use). A 1.5% increase in deaths occurred from Q1 2025 through Q2 2025.
- Tested lab submissions positively identifying methamphetamine decreased by 12% from Q1 2020 through Q2 2025 and by 5.4% from Q1 2025 through Q2 2025.

Cocaine-Related Events



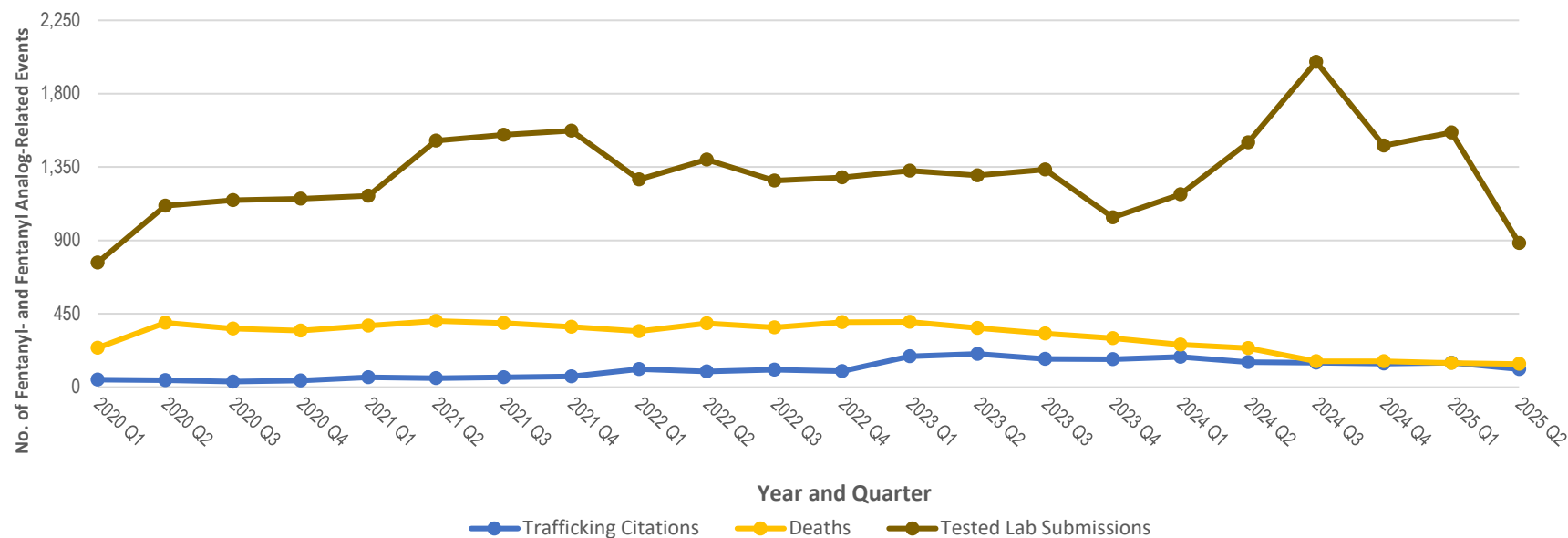
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Death data are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations 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; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s).

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

Key Findings:

- Cocaine possession citations increased by 41.2% from Q1 2020 through Q2 2025 and by 7.4% from Q1 2025 through Q2 2025.
- Cocaine trafficking citations increased by 15.8% from Q1 2020 through Q2 2025 and by 9.2% from Q1 2025 through Q2 2025.
- Cocaine-related deaths decreased by 14.9% from Q1 2020 through Q2 2025 and by 24.5% from Q1 2025 through Q2 2025.
- Cocaine-related emergency department visits decreased by 21.1% from Q1 2020 through Q2 2025; no change was observed from Q1 2025 through Q2 2025.
- Cocaine-related inpatient hospitalizations declined by 24.2% from Q1 2020 through Q2 2025; a 13.6% increase was observed from Q1 2025 through Q2 2025.
- Tested lab submissions positively identifying cocaine increased by 88.7% from Q1 2020 to Q1 2025 and by 8.7% from Q1 2025 through Q2 2025.

Fentanyl- and Fentanyl Analog-Related Events



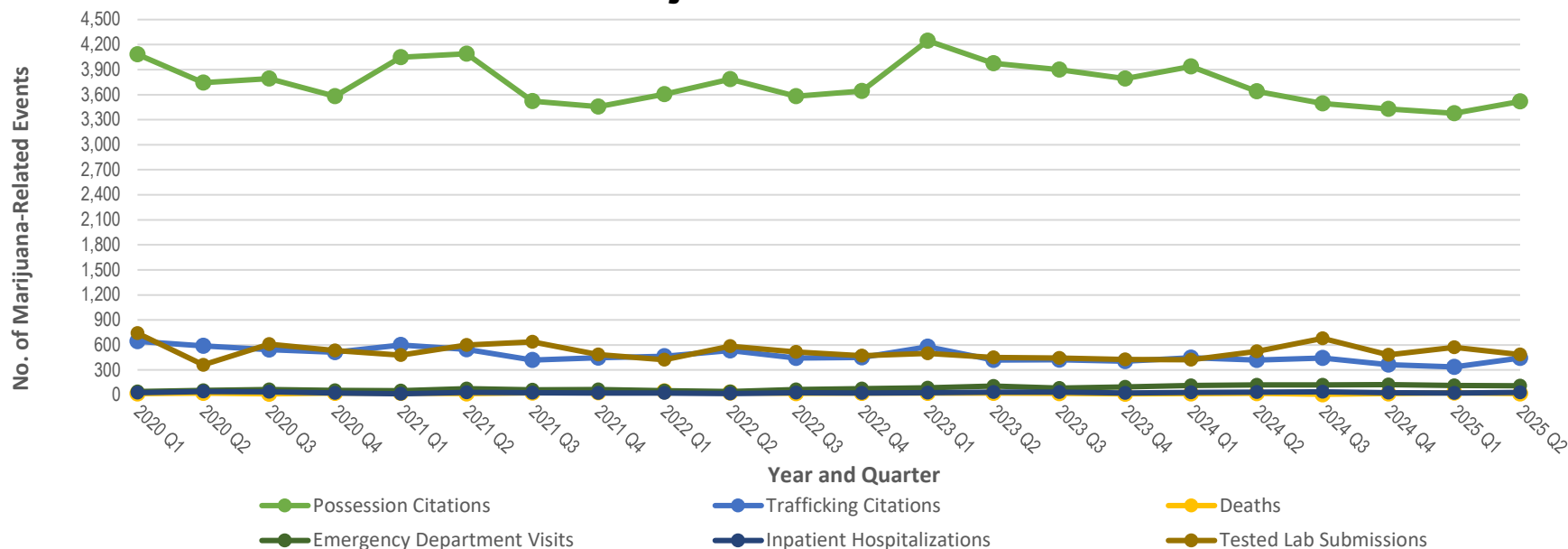
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. There are no Kentucky Revised Statute codes for fentanyl possession. Death data are based on drug overdose-related deaths among Kentucky residents. 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; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s).

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:

- Notably, fentanyl and fentanyl analog trafficking citations increased 139.1% from Q1 2020 through Q2 2025 and decreased by 26.2% from Q1 2025 through Q2 2025. Citations related to fentanyl and its analogs may be underestimated, as fentanyl is often associated with polydrug use and laboratory testing is often needed to confirm its presence.
- Fentanyl- and fentanyl analog-related deaths decreased by 41.3% from Q1 2020 through Q2 2025 and by 4.1% from Q1 2025 through Q2 2025.
- Tested lab submissions positively identifying fentanyl and fentanyl analogs rose by 15.7% from Q1 2020 through Q2 2025 and declined by 43.5% from Q1 2025 through Q2 2025.

Marijuana-Related Events



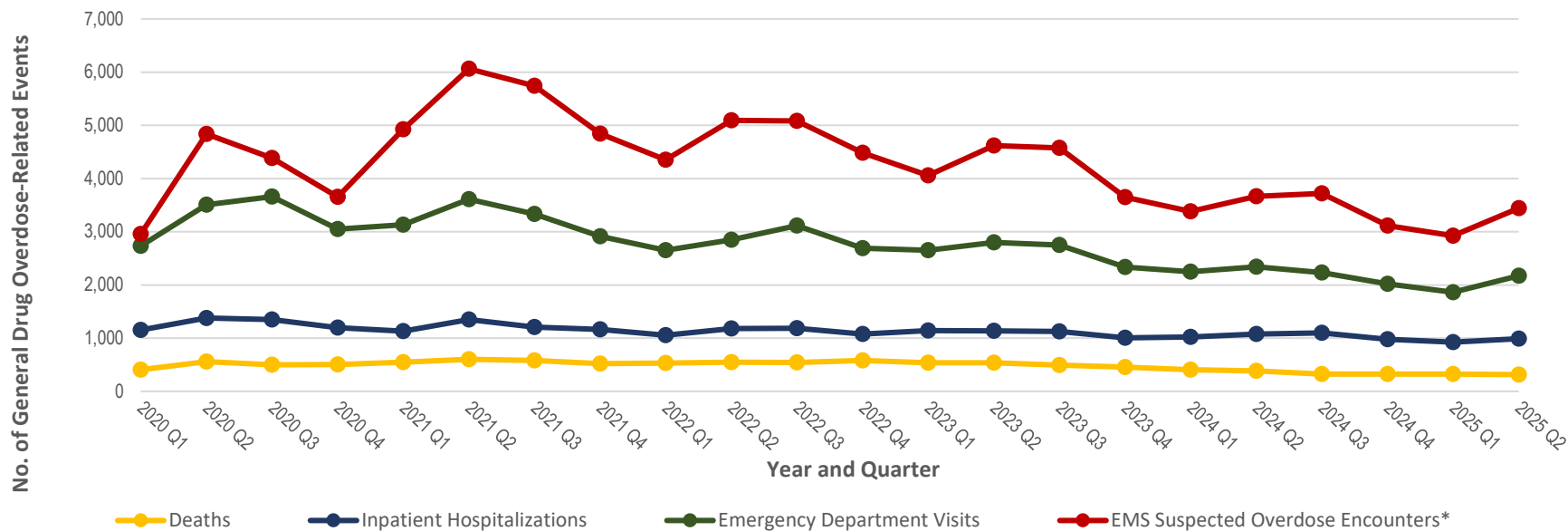
Data are provisional and subject to change. The number of citations could be greater than the number of individuals cited; citations are with over 90% of law enforcement agencies reporting. Death data are based on drug overdose-related deaths among Kentucky residents. Drug overdose-related hospitalizations 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; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s).

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

Key Findings:

- Marijuana possession citations declined by 31.8% from Q1 2020 through Q2 2025 and rose by 4.2% from Q1 2025 through Q2 2025.
- Marijuana trafficking citations declined by 34.6% from Q1 2020 through Q2 2025 and rose by 32% from Q1 2025 through Q2 2025.
- Marijuana (cannabis)-related deaths increased by 50% from Q1 2020 through Q2 2025 and decreased by 35.7% from Q1 2025 through Q2 2025; all involved polydrug use.
- Marijuana-related emergency department visits increased by 35.8% from Q1 2020 through Q2 2025; a 4.3% decline was observed from Q1 2025 through Q2 2025.
- Marijuana-related inpatient hospitalizations increased 13.8% from Q1 2020 through Q2 2025 and by 37.5% from Q1 2025 through Q2 2025.
- Tested lab submissions positively identifying marijuana decreased 18.2% from Q1 2020 through Q2 2025 and by 15.2% from Q1 2025 through Q2 2025.

General Drug Overdose-Related Events



Data are provisional and subject to change. Death data 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 may exceed the number of individual patients treated, are identified through scans of free-text, clinical, and medication fields (including naloxone/Narcan administration with an indicated positive response), are limited to events with an incident state of Kentucky, and are based on an any-drug case definition (adapted from the Rhode Island ESOOS opioid case definition) last revised in May 2025.

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

Key Findings:

- Statewide drug overdose-related deaths decreased by 22% from Q1 2020 through Q2 2025 and by 3.7% from Q1 2025 through Q2 2025.
- Drug overdose-related hospitalizations declined by 13.9% from Q1 2020 through Q2 2025 and rose by 7.2% from Q1 2025 through Q2 2025.
- Drug overdose-related ED visits decreased by 20.6% from Q1 2020 through Q2 2025 and increased by 16.6% from Q1 2025 through Q2 2025.
- Emergency medical services (EMS) suspected drug overdose-related encounters increased by 16.3% from Q1 2020 through Q2 2025 and by 17.6% from Q1 2025 through Q2 2025.
- Among law enforcement agencies currently reporting, 4,415 naloxone doses were administered from December 12, 2018, through June 30, 2025 (data not shown).

K-SURE Data Matrix

	Emergency Department (ED) Visits	Inpatient Hospitalizations	Deaths	Possession Citations	Trafficking Citations	Crime Lab Submissions
Heroin	T401	T401	T401	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.
Opioids	T400, T402, T403, T404, T4060, T4069	T400, T402, T403, T404, T4060, T4069	T400, T402, T403, T404, T406	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	
Methamphetamine			Text scan	KRS: 42187, 42188, 42215, 42216	KRS: 42113, 42114, 42290, 42291, 42364, 42365, 42366, 42367	
Cocaine	T405	T405	T405	KRS: 35320, 35321, 42193, 42194, 42203, 42204	KRS: 35300, 35301, 42103, 42104, 42368, 42369, 42370, 42371	
Fentanyl and Fentanyl Analogs			T404 and text scan; Fentanyl Analogs: Methylfentanyl, Methoxybutyrylfentanyl, Acetylfentanyl, Acrylfentanyl, Hydroxythiofentanyl, Butyrylfentanyl, Carfentanil, Furanylfentanyl, Para_1, Para_2, U47700		KRS: 42465, 42472, 42474, 42476, 42478, 42590, 42593, 42596, 42599	

Marijuana	T407X1, T407X2, T407X3, T407X4, T407X5	T407X1, T407X2, T407X3, T407X4, T407X5	T407	KRS: 42330	KRS: 42301, 42302, 42311, 42312, 42321, 42322	
General Drug Overdoses	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			
Data Sources	Kentucky Outpatient Services Database Files, Office of Data Analytics, Cabinet for Health and Family Services: Frankfort, Kentucky	Kentucky Inpatient Hospitalization Claims Files, Office of Data Analytics, Cabinet for Health and Family Services: Frankfort, Kentucky	Kentucky Death Certificate Database, Office of Vital Statistics, Cabinet for Health and Family Services: Frankfort, Kentucky	Kentucky Open Portal System, Kentucky State Police: Frankfort, Kentucky	Kentucky Open Portal System, Kentucky State Police: Frankfort, Kentucky	Kentucky State Police Crime Laboratory: Frankfort, Kentucky
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. Data are provisional and subject to change.	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. Data are provisional and subject to change.	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. Data are provisional and subject to change.	Possession citations reflect violations of Kentucky Revised Statutes. 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. 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; submission date is not reflected. Testing of submissions is based on those items supporting the highest-tier charge(s). Data are provisional and subject to change.