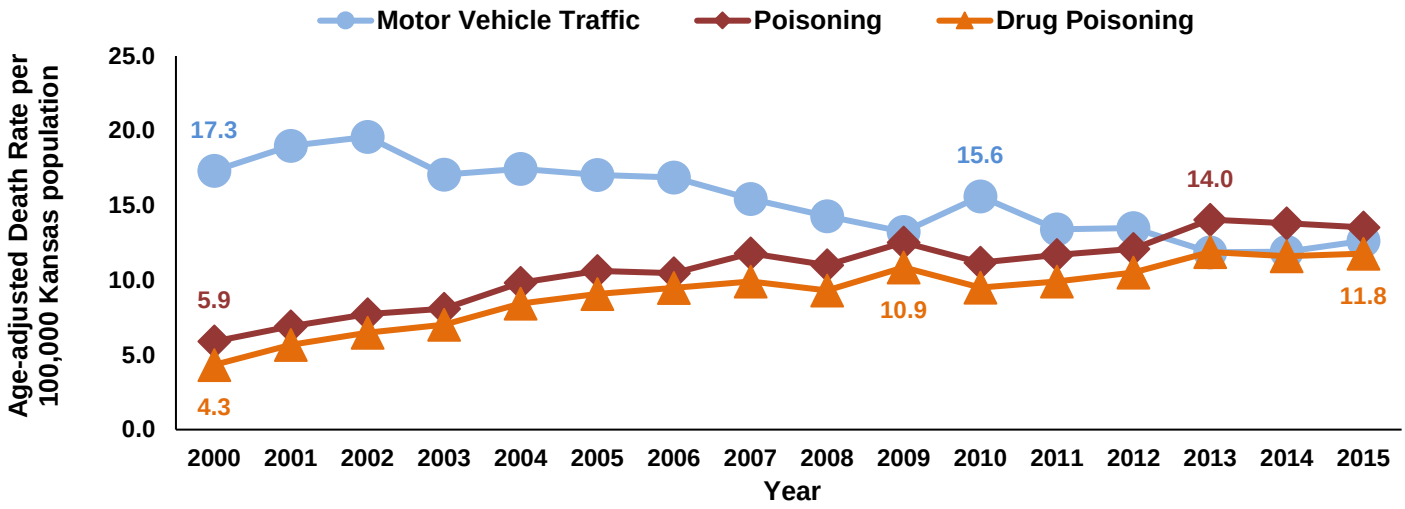
Kansas
Trends in Drug Poisoning Deaths
Special Emphasis Report: Drug Poisoning Deaths, 2000-2015

A Public Health Crisis Continues

Poisoning is the second leading cause of injury deaths in Kansas. Poisoning death rates, which include drug poisonings, surpassed motor vehicle traffic-related death rates in 2013 (Figure 1). In 2015, the most recent year of data available for poisoning-related deaths of Kansas residents, the poisoning death rate decreased to 13.5 deaths per 100,000 persons, but the drug poisoning death rate remained stable near 11.8 deaths per 100,000 persons. Although poisoning death rates have decreased for the third year in 2015, drug poisoning death rates have remained unchanged.

Figure 1. Drug poisoning death rates* compared to motor vehicle-related death rates, Kansas residents, 2000-2015*.



Drugs Caused 9 out of 10 Poisoning Deaths

In 2015, prescription drugs, illicit drugs, and over-the-counter medications, were the underlying cause of death for almost 90% of all poisoning deaths. Among these drug poisoning deaths, 67% were unintentional (also known as "accidental"), 15% were suicide or intentional self-harm, and 4% were of undetermined intent. Males had rates 1.3 times higher than females, and decedents aged 35-44 years had the highest age-specific drug-poisoning death rate of all selected age categories.

Table 1. Drug poisoning deaths: selected demographic characteristics and injury intent, Kansas residents, 2015*.

Selected Demographic or Injury Intent		Deaths	Percent	Rate per 100,000 population*	
Gender	Female	139	43%	10.2	(99% CI: 7.6 – 13.5)
	Male	188	57%	13.3	(99% CI: 10.4 – 17.0)
Age (in years)	15-24	16	15%	3.8	(99% CI: 1.4 – 8.0)
	25-34	72	13%	18.6	(99% CI: 12.2 – 27.0)
	35-44	81	12%	23.4	(99% CI: 15.8 – 33.2)
	45-54	78	12%	21.6	(99% CI: 14.5 – 31.0)
Intent	Unintentional Poisoning	254	67%	11.8	(99% CI: 9.5 – 14.5)
	Intentional Self-Harm Poisoning	57	15%	2.4	(99% CI: 1.5 – 3.7)
	Undetermined Poisoning	16	4%	0.8	(99% CI: 0.3 – 1.7)

*CI= Confidence Intervals. 0-14 age group not included due to small numbers and 55+ have rates almost half of rates in 25-34 age group. Death rates are based on the 2015 Vintage single-year of age bridged-race population estimates and the 2000-2009 revised intercensenal single-year of age bridged-race population estimates. Rates were age adjusted to the 2000 U.S. Standard Population except for age- specific rates. Data source: 2000-2015 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics. 99% CI for age-adjusted rates were computed using a Gamma Confidence Interval and 99% CI for age-specific rates were computed using a Poisson Confidence Interval with PROC STDRATE in SAS 9.4. For more details on Gamma Confidence Intervals, please see: *Fay, M. P., and Feuer, E. J. (1997). "Confidence Intervals for Directly Standardized Rates: A Method Based on the Gamma Distribution." Statistics in Medicine 16:791–801.*

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Pharmaceutical opioids remain the leading cause of drug poisoning deaths. Benzodiazepines, psychostimulants, and heroin are emerging as additional causes.

Pharmaceutical opioid pain relievers, such as hydrocodone or fentanyl, remain the leading cause of specific drug poisoning deaths; accounting for almost one-half of drug poisoning deaths. Pharmaceutical opioid-related drug-poisoning death rate increased by 28% in 2013-2015 (age-adjusted rates: 3.8 per 100,000 in 2010-2012, 4.9 per 100,000 in 2013-2015).

Figure 2. Drugs emerging in drug poisoning deaths: percent change in age-adjusted drug poisoning death rates from 2010-2012 to 2013-2015, Kansas residents.*

Drug poisoning deaths involving benzodiazepines increased by 176% in 2013-2015 (age-adjusted rate: 0.3 per 100,000 in 2010-2012, 0.9 per 100,000 in 2013-2015).

Benzodiazepines (T42.4)* 176% increase

Drug poisoning deaths involving psychostimulants, including methamphetamine, increased by 108% in 2013-2015 (age-adjusted rates: 0.8 per 100,000 in 2010-2012, 1.6 per 100,000 in 2013-2015).

Psychostimulants (T43.6)* 108% increase

Drug poisoning deaths involving heroin increased by 71% in 2013-2015 (age-adjusted rates: 0.3 per 100,000 in 2010-2012, 0.6 per 100,000 in 2013-2015).

Heroin (T40.1)* 71% increase

***Note:** Drug poisoning deaths include only deaths with an underlying cause of death as drug poisoning. Specific drug deaths include any mention of indicated drugs and are not mutually exclusive. **Data:** 2010-2015 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics. Percent change in age-adjusted rates used a log-rate ratio test with PROC STDRATE in SAS 9.4. For more details, see *Fay MP, Tiwari RC, Feuer EJ, and Zou Z. Estimating average annual percent change for disease rates without assuming constant change. Biometrics. 2006 Sep 1;62(3):847-54.*

Existing Work in Kansas to Address Drug Poisoning Deaths

- The Kansas Department of Health and Environment (KDHE) was recently funded by the Center for Disease Control and Prevention (CDC) Data-Driven Prevention Initiative (DDPI) to implement a statewide collaborative effort to reduce the misuse, abuse, dependence, and poisoning by drugs. This work includes:
  - Developing a state plan to prevent negative health outcomes associated with using prescription drugs.
  - Collaborating with the Kansas Board of Pharmacy to enhance the Kansas Tracking and Reporting of Controlled Substances (K-TRACS).
- The University of Kansas Hospital's Poison Control Center is a 24-hour toll free hotline available throughout the state, **1-800-222-1222**. Critical care nurses, medical doctors nationally certified in poisoning management, and pharmacists are available to answer questions related to drug use.
- The Kansas Tracking and Reporting of Controlled Substances (K-TRACS) operated by the Kansas Board of Pharmacy is the state's prescription drug monitoring program. Its aim is to reduce inappropriate prescribing behavior and drug abuse. Medical providers and pharmacists are among those authorized to access and use the data to reduce harms related to prescription drug use.