

160

Deaths (2009-2013)

1,250

Hospital Discharges

(2008-2012)

15,123

Emergency Department

Visits (2008-2012)

Type

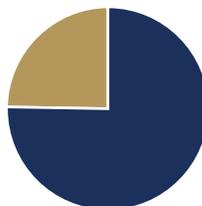
The ratio of fire to burn injury differs with increasing severity. A burn involves a substance (toxic or hot) that comes into contact with the body. Fire injuries occur from uncontrolled fires and include suffocations from smoke. Fire injuries are usually more serious resulting in extended care. Three-quarters of all fire/burn injury EDVs are burns while less than half of fire/burn injury HDs are burns. Nearly all (95%) of fire/burn injury deaths are due to fire.

Fire/Burn Injury Severity

The more than 160 fire/burn injury deaths between 2009 and 2013 represent only a fraction of fire/burn injuries in Kansas. For every fire/burn injury death in Kansas, during 2008 to 2012, there were approximately 8 times as many fire/burn injury related hospital discharges (HD) and 95 times as many fire/burn injury related emergency department visits (EDV).

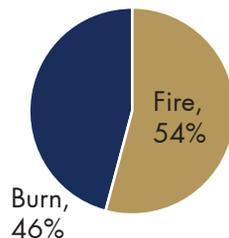
ED Visits

Fire,
24%



Burn,
76%

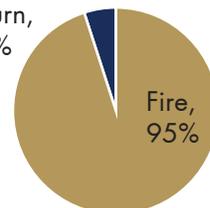
Hospital Discharges



Burn,
46%

Deaths

Burn,
5%



Fire,
95%

How To Use this Document:

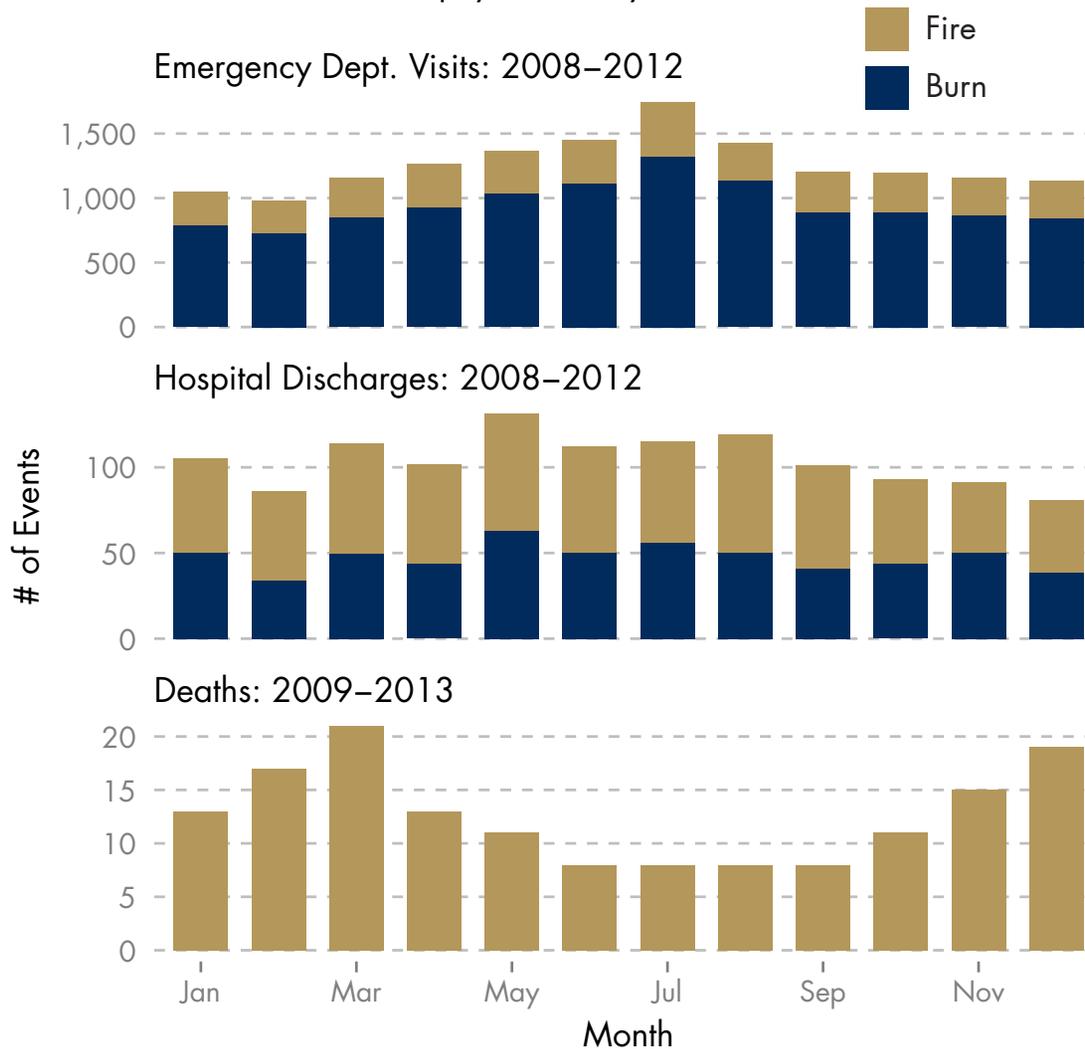
This document is intended to give readers an overview of fire/burn injuries in Kansas. Most of the numbers used to create the charts and graphs can be found in data tables at the end of this document.

Data Sources:

This document uses three databases to describe different severities of fire/burn injuries. The most serious is deaths. The two other databases reflect injuries that result in hospital care. The emergency department visit (EDV) database includes injuries that have a hospital stay of less than 24 hours, the least serious injuries. Hospital stays longer than 24 hours are hospital discharges (HD). All data for deaths refer to the 2009 to 2013 time period. All data for EDV and HD refer to the 2008 to 2012 time period.

For more information, call: (785) 291-3742
email: injury@kdheks.gov, visit: www.kdhe.ks.gov/idp

Kansas Fire/Burn Injury Counts by Month

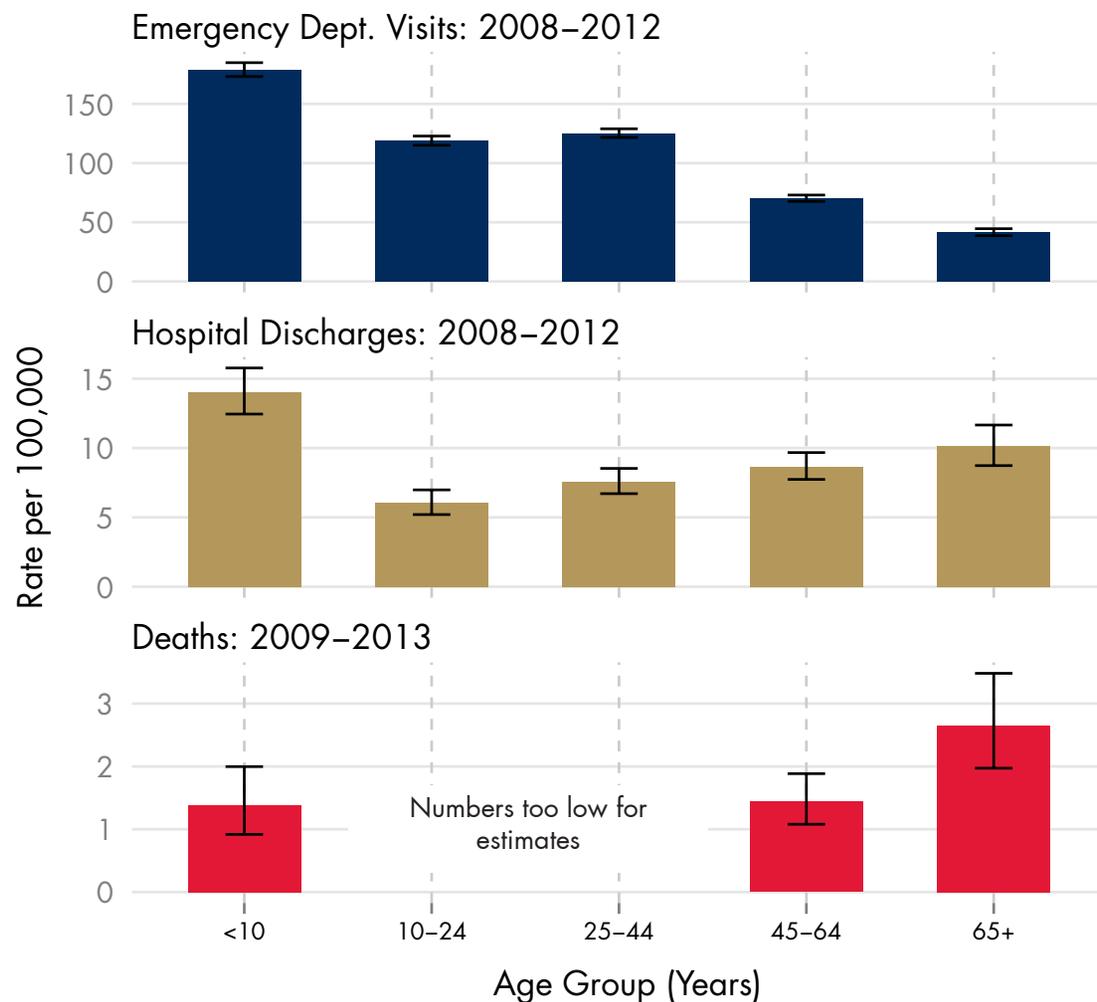


The burden of fire/burn injuries differs throughout the year. For EDV the peak time for number of events is during the summer. Most of these events occur around the month of July possibly pointing to fireworks injuries. A recent study shows that 65 percent of annual fireworks injuries occur between June 21 and July 21(1).

The distribution of fire/burn HD injuries is fairly consistent throughout the year.

Almost all deaths for fire/burn are due to fire. There are two peaks: one in March and one in December. These two months coincide with the winter when nights are longer and colder, requiring the use of heating units and lighting, both of which can increase the risk for fire(2).

Kansas Age-specific Fire/Burn Injury Rates



Fire/Burn injuries change over the lifespan. The fire/burn EDV and HD rates were highest in those younger than 10 years old. The highest fire/burn injury death rate is seen in those 65 years old and older.

Category	#Deaths	Death Rate per 100k*	95% CI	#HD	HD Rate per 100k*	95% CI	#EDV	EDV Rate per 100k*	95% CI
Type									
Fire	152	1.0	0.9-1.2	679	4.7	4.4-5.1	3,700	26.6	25.8-27.5
Burn	8	...	...	571	4.0	3.7-4.3	11,423	82.1	80.6-83.6
Age Group (in years, age-specific rates)									
<10	28	1.4	0.9-2.0	283	14.0	12.5-15.8	3,607	178.9	173.1-184.9
10-24	11	...	...	184	6.0	5.2-7.0	3,619	118.9	115.1-122.9
25-44	17	...	...	275	7.6	6.7-8.5	4,544	125.3	121.7-129.0
45-64	53	1.4	1.1-1.9	317	8.7	7.7-9.7	2,569	70.2	67.6-73.0
65+	51	2.6	2.0-3.5	191	10.1	8.7-11.7	784	41.5	38.7-44.6
Racial/Ethnic Group									
Hispanic	14	...	...	83	4.9	3.7-6.5	1,055	64.2	60.1-68.8
NH African-American	18	...	...	124	13.6	11.3-16.4	1,241	129.2	122.0-136.9
NH Asian/Pacific Islander	...	...	...	10	...	...	510	138.7	126.4-152.2
NH Native American	...	...	...	...	...	...	59	41.5	31.4-54.4
NH White	123	1.0	0.8-1.2	853	7.4	6.9-7.9	9,397	88.0	86.2-89.8

NH: Non-Hispanic

...: Suppressed due to low counts

Category	#Deaths	Death Rate per 100k*	95% CI	#HD	HD Rate per 100k*	95% CI	#EDV	EDV Rate per 100k*	95% CI
Gender									
Female	57	0.7	0.6-1.0	393	5.4	4.8- 5.9	6,707	97.5	95.2- 99.9
Males	103	1.4	1.2-1.7	857	12.1	11.3-13.0	8,414	119.7	117.1-122.3
Trauma Region									
NC	5	0.8	0.3-2.0	49	7.1	5.2- 9.6	965	163.1	152.8-173.9
NE	59	0.8	0.6-1.1	657	9.1	8.4- 9.9	6,203	86.9	84.8- 89.1
NW	5	0.9	0.3-2.3	34	7.3	5.0-10.4	626	146.4	134.8-158.7
SC	61	1.3	1.0-1.7	319	7.4	6.6- 8.3	5,351	130.6	127.1-134.2
SE	17	1.6	0.9-2.7	114	11.9	9.8-14.4	1,002	114.7	107.6-122.2
SW	13	1.6	0.9-2.8	77	10.2	8.0-12.8	976	127.9	119.9-136.3
Total	160	1.1	0.9-1.2	1,250	8.7	8.3-9.2	15,123	108.7	107-110.5

Technical Notes:

Fire/Burn injury EDVs and HDs are all unintentional and defined with the following ICD-9CM E-codes: E890-E899, E924.0-E924.9. Fire/Burn injury deaths were defined as deaths with following ICD-10 codes: X09-X19

95% CI: 95% Confidence Interval

*Fire/Burn injury rates are per 100,000 population and are age-adjusted to the 2000 U.S. Standard population using the direct method (unless noted as age specific).

Source: 2008-2012 Kansas Emergency Department and Hospital Discharge Database, Kansas Hospital Association, 2009-2013 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics.

Trauma Region: Abbreviations: NC= North Central, NE=Northeast, NW=Northwest, SC=South Central, SE=Southeast and SW=Southwest. Trauma regions are defined by the Kansas Trauma Program. For more information on the current boundaries please visit www.kstrauma.org.

References:

1. Tu Y, Granados DV. 2013 Fireworks Annual Report. Consumer Product Safety Commission; 2014. Available at: <http://www.cpsc.gov/Global/Research-and-Statistics/Injury-Statistics/Fuel-Lighters-and-Fireworks/2013FireworksReport.pdf>. Accessed October 6, 2014.
2. Baker S, O'Neill B, Ginsburg M. *The Injury Fact Book*. 2nd ed. New York: Oxford University Press; 1992.