

# Suicide Rates in Kansas, 2020-2021

## Technical Notes

Data Source: Mortality Database, Office of Vital Statistics, Kansas Department of Health and Environment

Statistical Methods: Age-specific or age-adjusted rates and 95% confidence intervals (95% CI) were provided. Age-adjusting was completed using direct standardization and the 2000 US Standard population. Non-overlapping 95% CIs are considered significant for rate comparisons. Changes in rates between 2020 and 2021 were analyzed by finding the absolute change (2021 rate-2020 rate) and relative change ( $([2021 \text{ rate}-2020 \text{ rate}]/2020 \text{ rate} \times 100)$ ).

## Summary of Findings

### Overall

- 2021 had more suicide deaths than 2020 (555 vs 529), but the difference was not statistically significant
- In 2021, Males made up 84% of suicides and their rate (37.8 per 100,000 residents) was 5 times higher than that of females (7.5 per 100,000 residents)
- The age group 25-34 years had the highest rates for both 2020 and 2021 (29.8 per 100,000 and 32.0 per 100,000 respectively)
- In 2021, White, non-Hispanic persons had the highest rate, though was not significantly different from other race/ethnicities
- In 2021, counties with Rural peer county designations had the highest rate (28.9 per 100,000) but was not statistically higher than other peer county groups
- For both 2020 and 2021, rate of firearm suicides was significantly higher than other suicide mechanism rates

### Rate Changes

- From 2020 into 2021, the overall suicide rate increased 5.6%
- The Male suicide rate increased 13.5% in 2021
- The rate for age group 75 years and older had the highest rate increase among all age groups
- The Black, non-Hispanic rate had the highest increase in 2021 for not just the race/ethnicities but also among all characteristics
- Both Rural and Densely-Settled Rural peer county group rates increased 30.8% and 39.1%, respectively
- Firearm suicide rate continue to increase in 2021 with a 12.4% increase

## Data and Interpretation

### Kansas Statistics

Table 1. Frequency and Rates of Suicide Deaths by Characteristic, Kansas, 2020-2021

Characteristic	2020		2021	
	N (%)	Rate* per 100,000 Residents (95%CI)	N (%)	Rate* per 100,000 Residents (95%CI)
<b>Overall</b>	529	21.3 (19.5, 23.2)	555	22.5 (20.6, 24.4)
<b>Sex</b>				
<b>Male</b>	417 (78.8)	28.6 (25.8, 31.4)	467 (84.1)	37.8 (34.3, 41.3)
<b>Female</b>	112 (21.2)	8.1 (6.6, 9.6)	88 (15.9)	7.5 (5.9, 9.1)
<b>Age Group*</b>				
<b>10-18yrs</b>	31 (5.9)	8.7 (5.6, 11.7)	37 (6.7)	10.3 (7.0, 13.7)
<b>19-24yrs</b>	71 (13.4)	27.8 (21.4, 34.3)	69 (12.4)	27.2 (20.8, 33.7)
<b>25-34yrs</b>	114 (21.6)	29.8 (24.3, 35.2)	122 (22.0)	32.0 (26.3, 37.7)
<b>35-44yrs</b>	85 (16.1)	23.5 (18.5, 28.5)	97 (17.5)	26.6 (21.3, 31.9)
<b>45-54yrs</b>	82 (15.5)	25.0 (19.6, 30.4)	78 (14.1)	24.1 (18.7, 29.4)
<b>55-64yrs</b>	70 (13.2)	18.8 (14.4, 23.3)	60 (10.8)	16.4 (12.2, 20.5)
<b>65-74yrs</b>	42 (7.9)	15.4 (10.8, 20.1)	48 (8.7)	17.0 (12.2, 21.8)
<b>75yrs and older</b>	34 (6.4)	16.7 (11.1, 22.3)	44 (7.9)	21.4 (15.1, 27.7)
<b>Race/Ethnicity</b>				
<b>White, Non-Hispanic (NH)</b>	441 (83.8)	19.7 (17.8, 21.6)	460 (83.2)	24.2 (21.9, 26.5)
<b>Black, NH</b>	21 (4.0)	10.6 (5.9, 15.4)	29 (5.2)	19.2 (12.0, 26.4)
<b>American Indian/ Alaska Native, NH</b>	8 (4.5)	-	-	-
<b>Hispanic</b>	51 (9.7)	13.3 (9.5, 17.0)	55 (10.0)	17.9 (12.3, 23.0)
<b>Other, NH†</b>	5 (1.0%)	-	-	-
<b>Population Density §</b>				
<b>Frontier</b>	21 (4.0)	20.8 (11.2, 30.0)	21 (3.9)	23.0 (12.3, 33.8)
<b>Rural</b>	39 (7.4)	18.8 (12.6, 24.9)	53 (9.6)	28.9 (20.8, 37.1)
<b>Densely-Settled Rural</b>	75 (14.2)	15.7 (12.0, 19.4)	96 (17.3)	25.6 (20.3, 30.8)
<b>Semi-Urban</b>	93 (17.6)	20.4 (16.1, 24.8)	85 (15.3)	21.5 (16.7, 26.2)
<b>Urban</b>	301 (56.9)	18.2 (16.1, 20.3)	300 (54.1)	21.0 (18.6, 23.4)
<b>Mechanism of Injury</b>				
<b>Firearm</b>	313 (59.2)	12.1 (10.7, 13.5)	344 (63)	13.6 (12.1, 15.0)
<b>Suffocation</b>	128 (24.2)	5.6 (4.6, 6.6)	127 (23.2)	5.6 (4.6, 6.5)
<b>Poisoning or Overdose</b>	59 (11.2)	2.4 (1.8, 3.1)	57 (10.4)	2.3 (1.7, 2.9)
<b>Other ¶</b>	29 (5.5)	1.2 (0.8, 1.6)	18 (3.3)	-

Counts under 5 are suppressed and rates are suppressed for counts less than 20.

\*Age Adjusting: Rates and 95% confidence intervals (95% CI) for all characteristics with the exception of Age Group were age-adjusted using direct standardization and the 2000 US Standard population. Non-overlapping 95% CIs are considered significant for rate comparisons.

†Other race includes: Asian/Pacific Islander, Multiracial or other

§ Population Density by Kansas Peer County Groups: Frontier less than 6 persons per square mile (ppsm); Rural 6.0-19.9 ppsm; Densely-settled rural 20.0-39.9 ppsm; Semi-Urban 40.0-149.9 ppsm; and Urban 150.0 or more ppsm  
 ¶ Other mechanisms of injury include cut/pierce, drowning, fall, traffic, or other

Table 2. Relative Change of Suicide Rates by Selected Characteristics, Kansas, 2020-2021

Characteristic	Relative Change† (%)	Direction
<b>Overall</b>	5.6%	↑
<b>Sex</b>		
<b>Male</b>	13.5%	↑
<b>Female</b>	21.1%	↓
<b>Age Group</b>		
<b>10-18yrs</b>	18.4%	↑
<b>19-24yrs</b>	2.9%	↓
<b>25-34yrs</b>	7.0%	↑
<b>35-44yrs</b>	14.2%	↑
<b>45-54yrs</b>	4.7%	↓
<b>55-64yrs</b>	13.7%	↓
<b>65-74yrs</b>	14.1%	↑
<b>75yrs and older</b>	29.7%	↑
<b>Race/Ethnicity</b>		
<b>White, NH</b>	4.8%	↑
<b>Black, NH</b>	54.8%	↑
<b>American Indian/ Alaska Native, NH</b>	-	
<b>Hispanic</b>	17.8%	↑
<b>Other, NH†</b>	-	
<b>Population Density</b>		
<b>Frontier</b>	6.5%	↓
<b>Rural</b>	30.8%	↑
<b>Densely-Settled Rural</b>	39.1%	↑
<b>Semi-Urban</b>	10.0%	↓
<b>Urban</b>	0.5%	↓
<b>Mechanism of Injury</b>		
<b>Firearm</b>	12.4%	↑
<b>Suffocation</b>	No change	
<b>Poisoning or Overdose</b>	4.2%	↓
<b>Other ¶</b>	-	

† Relative change was calculated using the equation: (2021 rate–2020 rate)/2020 rate x 100.