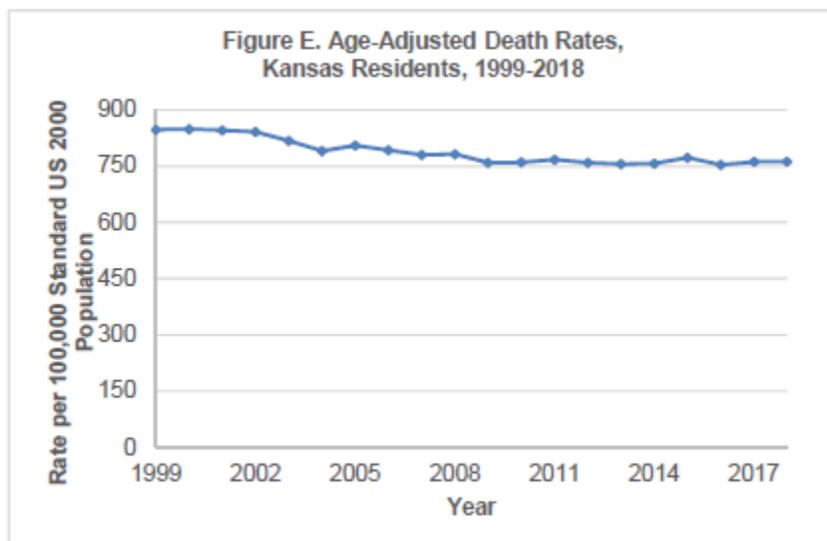


General Mortality

There were 27,213 Kansas resident deaths recorded in 2018, an increase of 1.8 percent from the 26,725 deaths recorded in 2017. The Kansas crude death rate in 2018 was 934.7 deaths per 100,000 population, which was 8.2 percent higher than the estimated U.S. crude rate⁵ of 864.2 deaths per 100,000 population (Tables E1, E3, Figure E1).

The Kansas age-adjusted death rate (see Technical Notes for a discussion of age-adjusted rates) for 2018 was 762.1 deaths per 100,000 standard U.S. 2000 population, up 0.1 percent from 761.3 in 2017. The age-adjusted death rate for males (887.4) was 35.7 percent higher than that for females (653.8) (Table E3).



The Kansas age-adjusted death rate in 2018 was higher than its twenty-year low (for 1999-2018) of 753.5 in 2016, but was still 10.2 percent below its peak for the period (849.0, in 2000) (Figure E) (Figure E2, Table E3).

Age at Death

The average age at death of Kansas residents in 2018 was 74.3 years, an increase of 0.1 percent from 74.2 in 2017 (Table E4).

Average age at death varied by sex and population group. In 2018, males died 6.5 years younger than females (71.1 versus 77.6 years). The average age at death for the White non-Hispanic population was 75.7 years, 10.6 years higher than that of the Black non-Hispanic population (65.1 years), and 15.2 years higher than that of the Hispanic population (60.5 years) (Table E4).

⁵ Ahmad FB, Bastian B. Quarterly provisional estimates for selected indicators of mortality, 2017-Quarter 4, 2018. National Center for Health Statistics. National Vital Statistics System, Vital Statistics Rapid Release Program, 2019.

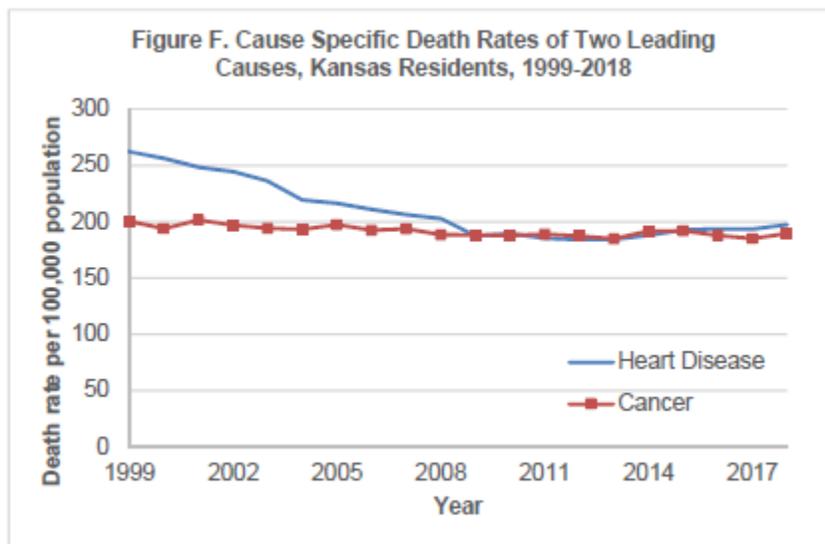
Over 60 percent (60.3) of White non-Hispanic Kansas residents who died in 2018 were 75 years of age or older, while only 35.9 percent of deceased Black non-Hispanic residents and 35.0 percent of deceased Hispanic residents had reached the age of 75 (Table E4).

Leading Causes of Death

The 10 leading causes of death in Kansas remained unchanged from 2017 to 2018, though their order changed in some cases. Suicide and pneumonia and influenza changed places as 8th and 9th leading causes (suicide ranked 9th in 2018) but all other rankings in the ten leading causes remained unchanged.

The ten leading causes of death accounted for 70.9 percent of all Kansas resident deaths in 2018. Age-adjusted rate changes from 2017 to 2018 were not statistically significant for any of the ten leading causes of death, as indicated by overlapping 95% confidence intervals.

Historical cause-specific (crude) death rates over the past twenty years illustrate the convergence of heart disease and malignant neoplasms (cancer) mortality (Figure F). Mortality due to both diseases has declined over the period 1999-2012, but heart disease death rates declined much more rapidly than cancer death rates. Since 2012, heart disease death rates have gradually increased, while cancer death rates have fluctuated. In 2018, the heart disease death rate was 197.3 deaths per 100,000 population, while the cancer death rate was 189.4 per 100,000 population (Table E8, Figure E3).



Age at Death for Leading Causes

For any given cause of death, there can be wide variations in average age of death by sex of decedent. Males and females who died from malignant neoplasms did so at about the same ages (71.8 and 72.1 years, respectively), but males who died from heart disease did so at younger ages than did females (75.1 and 81.9 years, respectively). Males dying from chronic lower respiratory disease were slightly younger than females dying of that cause (75.5 and 78.2 years, respectively), but males dying of cerebrovascular disease were about five years younger than females dying of the same cause (77.1 and 82.2 years, respectively). Males who died from suicide were about the same age as females who died of that cause (42.9 and 42.6 years, respectively), but males died

from unintentional injuries at much younger ages than females (54.9 and 64.6 years, respectively). Alzheimer's disease killed at the highest average ages for males and females (85.7 and 87.5 years respectively) (Table E7).

The leading causes of death also varied by age-group. In 2018, the leading cause of death for infants (up to one year of age) was congenital anomalies. For age-groups 1-4, 5-14, 15-24, and 25-44 the leading cause of death was unintentional injuries. For age-groups 45-64 and 65-84 the leading cause of death was cancer, and for ages 85 and above the leading cause of death was heart disease (Figure E4).

For the 15-24 and 25-34 age-groups, unintentional injuries were followed by suicide and homicide as leading causes of death. These three causes accounted for 77.8 percent of deaths in this age group (Table E6).

Infectious Disease

Six hundred twenty-six (626) Kansas residents died of pneumonia or influenza in 2018, for an age-adjusted death rate of 17.0 per 100,000 population (Table E9). Since 1999, the yearly count of resident pneumonia and influenza deaths has varied from a high of 740 to a low of 518. The age-adjusted pneumonia and influenza death rate in the period has varied from a high of 24.1 to a low of 14.3 deaths per 100,000 population. These numbers are not strictly comparable to the influenza and pneumonia statistics posted on the KDHE website, as they are based on a calendar year, while the latter are based on a September-May flu season. Furthermore, the rates reported on the KDHE website are crude rates, while the rates reported here are age-adjusted rates.

Twenty-one (21) Kansas residents died of HIV/AIDS in 2018, for an age-adjusted death rate of 0.6 per 100,000 population (Table E6). This surpasses the Healthy People 2020 target (HIV-12) of reducing the rate to 3.3 HIV/AIDS deaths per 100,000 population.

Cancer

Cancer was responsible for 5,513 Kansas resident deaths in 2018, for an age-adjusted death rate of 153.8 per 100,000 population (Table E8). This surpasses the Healthy People 2020 target for cancer deaths (C-1) of 160.6 per 100,000 population.

Ischemic Heart Disease

Ischemic heart disease was responsible for 3,347 Kansas resident deaths in 2018, for an age-adjusted death rate of 91.6 per 100,000 population (Table E10). This surpasses the Healthy People 2020 target for reducing coronary heart disease deaths (HDS-2, which has the same definition as used here for ischemic heart disease), to 100.8 per 100,000 population.

Cerebrovascular Disease

Kansas age-adjusted death rates from cerebrovascular disease decreased to 35.3 per 100,000 population in 2018, down 4.3 percent from a rate of 36.9 per 100,000 population in 2017. Since 1999, death rates due to cerebrovascular disease have declined by 36.6 percent (Table E8, Figure E3).

Healthy People 2020 uses the word "stroke" to include all the ICD-10 codes included in this report in the cerebrovascular disease category. The Healthy People 2020 target for stroke (HDS-3) is to

reduce deaths to 33.8 deaths per 100,000 population. To meet this target, Kansas resident cerebrovascular disease deaths would have to decline from 1,327 in 2017 to about 1,207 by 2020 (Table E12). (The exact number would depend on decedent age distributions and on future changes to the Kansas population.)

External Causes

In 2017, the age-adjusted unintentional injury death rate was 47.8 deaths per 100,000 population, a decrease of 3.0 percent from the rate of 49.3 in 2017. The 2018 rate was the second highest unintentional injury death rate in the past twenty years (Table E8, Figure E3).

Motor-vehicle injuries resulted in 406 deaths in 2018 (394 traffic and 12 non-traffic), accounting for 26.9 percent of 1,512 unintentional injury deaths. This was a decrease of 9.2 percent from 447 motor-vehicle injury deaths in 2017 (Table E13).

The motor-vehicle traffic injury death rate in 2018 was 13.8 deaths per 100,000 population (age-adjusted).⁶ This falls short of the Healthy People 2020 target (IVP-13.1) of 12.4 deaths per 100,000 population. Meeting the CDC Winnable Battles target of 9.5 deaths per 100,000 population by 2015 would have required a reduction in motor-vehicle traffic injury deaths to about 277.

Unintentional falls were responsible for 419 Kansas resident deaths in 2018 for an age-adjusted death rate of 11.3 per 100,000 population. The Healthy People 2020 target for fall related deaths (IVP-23.1) is 7.0 per 100,000 population. Meeting this target would require a reduction to about 204 unintentional fall deaths by 2020. The exact number would depend on decedent age distributions and on future changes to the Kansas population.

Kansas recorded 555 resident suicide deaths in 2018, up 2.0 percent from 544 suicide deaths in 2017, and the highest number of suicides in the last twenty years (1999-2018). The suicide age-adjusted death rate increased from 18.8 deaths per 100,000 population in 2017 to 19.2 deaths per 100,000 population in 2018. Although the single-year change in rate was not statistically significant, the 2018 suicide rate was the highest in the last twenty years (Tables E8, E31).

Almost four-fifths (78.9%) of suicide victims were male. The three age groups with the largest number of suicides were 35-44 (105 deaths), 25-34 (103 deaths), and 15-24 (101 deaths). The three most common methods of suicide were firearms (292 deaths), suffocation (165 deaths), and poisoning (72 deaths) (Tables E8, E14, E22).

Kansas recorded 159 resident homicide deaths in 2018, lower than the 179 homicide deaths in 2017, but still the second highest number of homicides in any of the last twenty years (1999-2018). The homicide age-adjusted death rate decreased from 6.2 deaths per 100,000 population in 2017 to 5.9 deaths per 100,000 population in 2018. Although the single-year change in rate was not statistically significant, the 2018 homicide rate was the second-highest in the last twenty years. Most homicides (123, or 84.8% of homicides where the method was known) were committed using firearms (Table E8, E14, Table E31).

⁶ Age-adjusted rates for deaths due to unintentional motor vehicle accidents and unintentional falls were calculated from data presented in Table E13.

YPLL 75 Statistics

Mortality in Kansas was responsible for 197,527 years of potential life lost before age 75 in 2018 (see Technical Notes – Years of Potential Life Lost). Cancer, unintentional injury, and heart disease accounted for the most years of potential life lost (37,784, 30,360, and 26,285 years lost, respectively). Men lost more than twice the potential years of life to unintentional injuries than did women (20,586 years and 9,753 years, respectively) (Table E20).

Tobacco and Mortality

Tobacco use contributed to 4,657 deaths in Kansas in 2018 (25.0 percent of the deaths where the tobacco contribution was known and reported on the death certificate). Tobacco use was a contributing factor in 30.7 percent of male deaths, and in 19.6 percent of female deaths. The causes of death showing the largest tobacco contribution were cancer of the trachea, bronchus and lung (86.7%), chronic lower respiratory disease (80.8%), ischemic heart disease (36.6%), and diabetes mellitus (27.9%). (Table E21) Physicians and coroners can state on the death certificate whether tobacco contributed to the death. Because information may not be available at the time the death certificate is completed, tobacco's contribution may be subject to some under-reporting.