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ISSUE BRIEF

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DEATHS BY SUICIDE: DISPARITIES IN THE SUNFLOWER STATE

Issue brief #3 in a series of three on health disparities in Kansas

Suicide deaths in Kansas have increased over the past two decades, and have increased 31 percent in the last ten years alone. In 2016, suicide was the 10th leading cause of death in Kansas, and more than 500 Kansans died by suicide. This increase has occurred as other health outcomes have improved.

This issue brief describes trends and disparities that exist in suicide deaths in Kansas. It originates from the *Chartbook: Racial and Ethnic Health Disparities in a Changing Kansas*, which was published in December 2017 by the Kansas Health Institute (KHI). Kansas-specific data are from Kansas Information for Communities (KIC), a website managed by Kansas Department of Health and Environment (KDHE). The WONDER online databases from the Centers for Disease Control and Prevention (CDC) are used for national values.

Suicide often occurs because of a complex combination of factors including mental disorders, substance abuse and other treatable illnesses. It is included with drug overdoses and alcohol-related liver mortality in what have been called "Deaths of Despair" by some researchers.

Healthy People 2020 has set a goal to decrease the suicide rate to 10.2 per 100,000 population by the year 2020. As that date approaches, the United States has moved farther away from the Healthy People 2020 goal rather than nearer (*Figure 1*, page 2). In 2007, the national suicide rate was 11.3 per 100,000 population; by 2016, it had increased to 13.5. The suicide rate in Kansas also fell well short of the Healthy People 2020 goal and has increased from 13.6 in 2007 to 17.8 in 2016.

Studying suicide

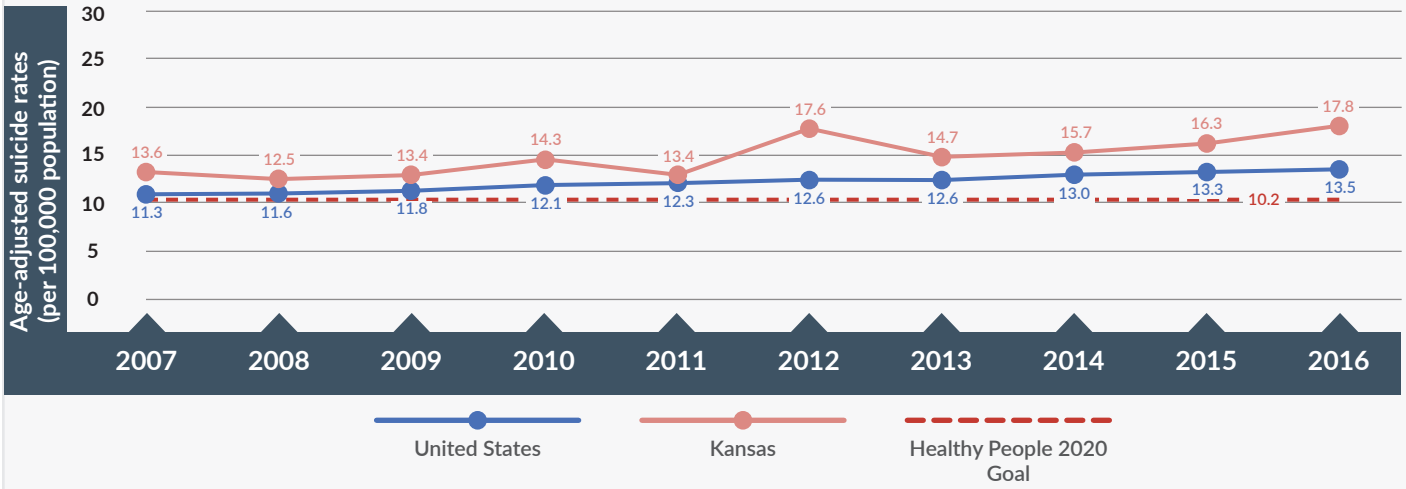
For the first time in half a century, increased suicide and drug- and alcohol-related mortality have contributed to a decrease in life expectancy in the United States for two consecutive years.

This brief focuses on disparities in suicide deaths by race/ethnicity, age, sex and geography in Kansas. Understanding disparities allows for more effective prevention to occur. When considering suicide prevention, means or method of suicide is regularly discussed. In 2016, firearms were the means for nearly half (49.8 percent) of Kansas suicides. Nationally, there are disparities in means of suicide by sub-population groups. Specifically, men and non-Hispanic Whites

KEY POINTS

- ✓ Suicide deaths in Kansas have increased 31 percent in the past decade.
- ✓ Non-Hispanic Whites in Kansas (19.1 per 100,000) were approximately twice as likely to die by suicide in 2016 than were non-Hispanic Blacks (10.5) or Hispanics, Any Race (9.5).
- ✓ Males made up over three quarters (78.3 percent) of Kansas suicide deaths in 2016.
- ✓ The least populated counties had the highest rates of suicide deaths in Kansas in 2016 (25.9 per 100,000 in frontier counties).

Figure 1. **Suicide Rates, United States and Kansas, 2007—2016**



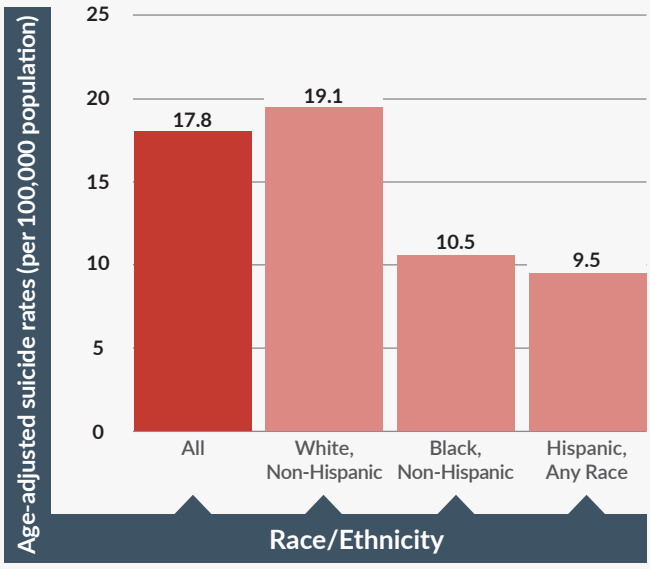
Source: KHI analysis of data from KDHE KIC and CDC WONDER, 2007—2016.

have the highest rates of suicide death by firearms. Other common means of death by suicide in Kansas in 2016 were suffocation (25.8 percent) and poisoning (16.0 percent). Due to small group sizes, means of suicide could not be assessed by the dimensions included in this brief (e.g., geography, age).

Race and Ethnicity

There are racial and ethnic disparities in suicide rates in Kansas. Non-Hispanic White Kansans experienced the highest suicide rate in 2016 (19.1 per 100,000 population) (*Figure 2*). This rate is higher than the rate for Kansans who are non-Hispanic Black (10.5) or Hispanic, Any Race (9.5). As non-Hispanic Whites in America have historically been an advantaged group—for example, they typically have had a higher average income than minority groups—this finding may be surprising.

Figure 2. **Suicide Rates by Race/Ethnicity in Kansas, 2016**



Note: Prior to 2016, the number of suicide deaths did not allow for reliable estimates for all racial and ethnic groups. Other non-Hispanics are included in All Kansans, but not shown as a separate category.

Source: KHI analysis of data from KDHE KIC, 2016.

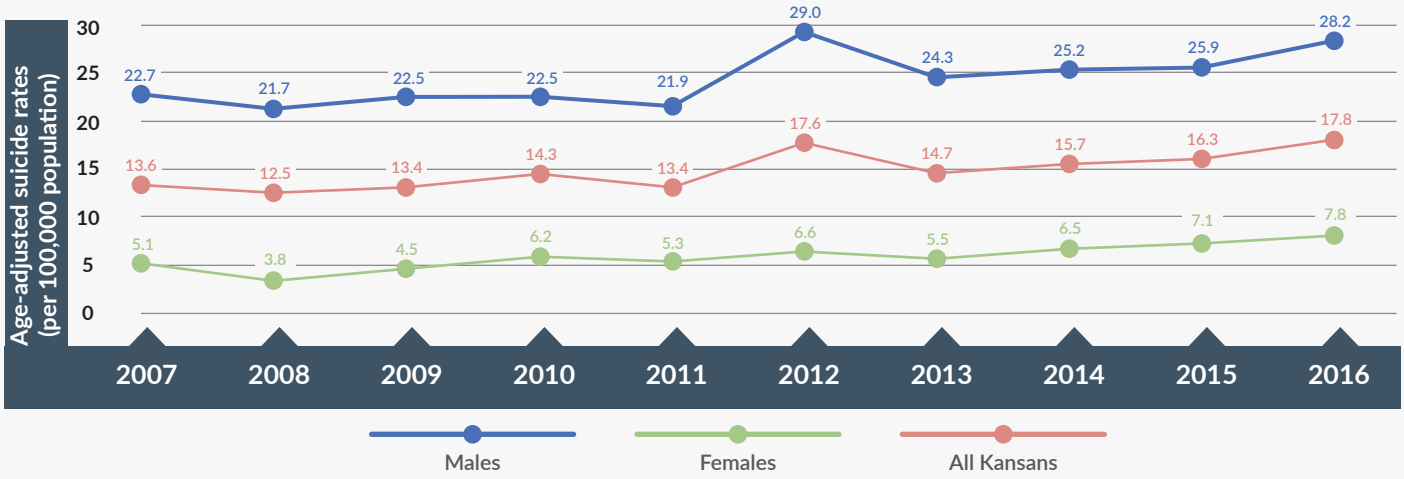
Nationally, the suicide rate has increased among the non-Hispanic American Indian/Alaskan Native population group as well. This brief does not include Kansas-specific data for this population group because the size of the population in Kansas is too small to produce reliable estimates. It is noted here as a national trend that may hold true in Kansas, and should be considered in discussions on suicide prevention in the state.

Age

Age is a dimension along which disparities can exist in suicide deaths. Kansans age 25—44 and 45—64 have consistently had high suicide rates compared to other age groups. In 2016, the highest suicide rate (26.8 per 100,000 population) in Kansas was among those age 25—44, which was significantly higher than the national rate of 16.9, and it has increased significantly from 2007, when it was 16.8. The suicide rate in 2016 for Kansans age 45—64 (22.8) also was higher than the national rate (19.2) for the same age group. Although the suicide rate for those age 15—24 is not as high, or increasing as rapidly, as the age groups discussed above, suicide was the second-leading cause of death for Kansans in this age group in 2016.

Understanding which age groups experience high rates of suicide deaths could provide an opportunity to adapt prevention services by age.

Figure 3. **Suicide Rates Among Males and Females in Kansas, 2007—2016**



Source: KHI analysis of data from KDHE KIC, 2007—2016.

Sex

Suicide was the seventh leading cause of death among males and the 10th leading cause of death among females in Kansas in 2016. Over the years, Kansas has consistently experienced a higher suicide rate for males than females (*Figure 3*). In 2016, the suicide rate for Kansas males was more than three times that for females (28.2 vs. 7.8 per 100,000 population, respectively), and males made up over three quarters (78.3 percent) of overall suicide deaths. While males—both in Kansas and nationally—have consistently higher suicide rates than females, rates for both groups have increased. The increase in suicide rates between 2007 and 2016 for Kansas females (52.9 percent) was more than twice that for Kansas males (24.2 percent). In 2016, the national suicide rate for males was 21.8 and 6.2 for females.

These differences may suggest a need to approach suicide prevention, screening and treatment in a manner that is tailored to each sex.

Geography

Geography is another factor for evaluating differences in suicide deaths. In 2013—2015, the highest suicide rate (19.7 per 100,000 population) was seen in the most sparsely populated counties across the United States.

Similarly, in 2016 the highest suicide rate in Kansas (25.9) occurred in the least-populated counties, also known as frontier counties. *Figure 4*, page 4, describes suicide rates in Kansas in 2007 and 2016 for each county classification—frontier, rural, densely settled rural, semi-urban and urban.

Further study on this issue could consider geographic variation in suicide deaths and the potential underlying factors, including access to suicide prevention resources and treatment for mental illness.

Other Population Groups

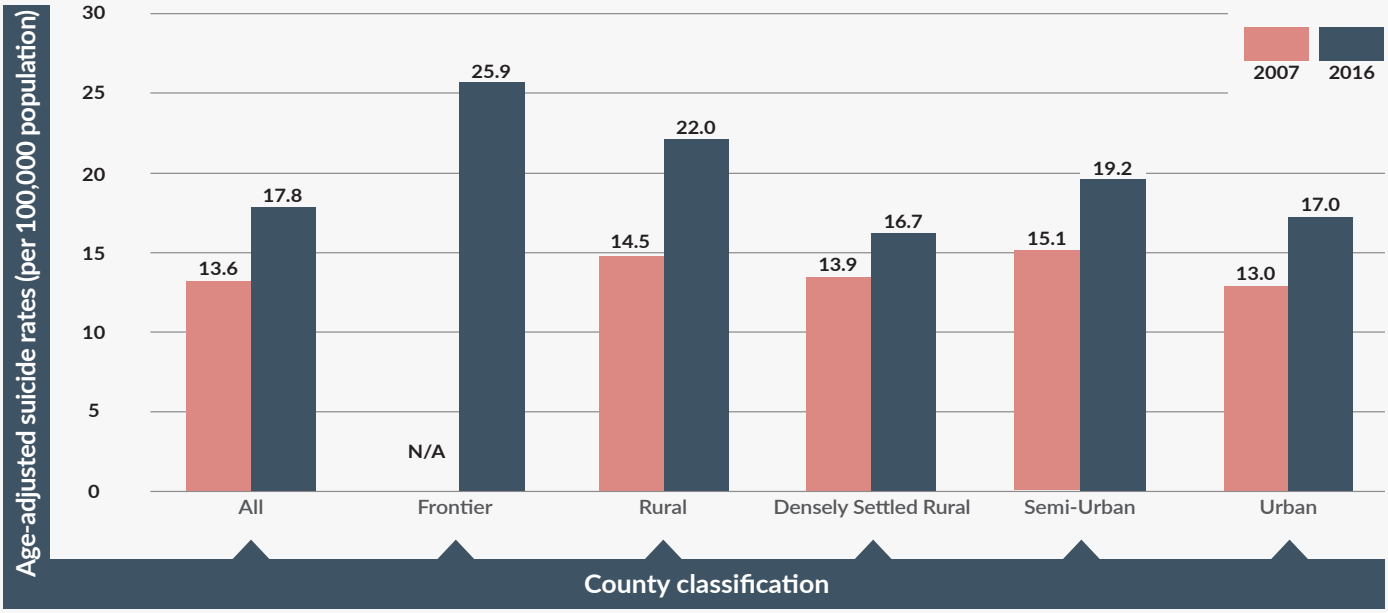
Several other population groups, for which Kansas-specific data are not readily available, also experience increased suicide deaths in the United States.

A 2014 report from the U.S. Department of Veterans Affairs stated that, after accounting for differences in age and sex, risk for suicide was 22 percent higher among veterans compared with the U.S. civilian adult population. A state-by-state breakout of these same data concluded that the Kansas veteran suicide rate in 2014 (47.0 per 100,000 population) was significantly higher than the national veteran suicide rate (38.4).

There are some occupation groups that experience higher suicide rates. A CDC report released in July 2016 coded all suicide deaths by occupation group that were reported to the National Violent Death Reporting System. The occupation group of farmers, fishing and forestry had the highest suicide rate among all occupation groups in the nation. This is relevant to discussion around suicide prevention in Kansas due to the state's focus on agriculture.

Disparities also may exist for suicide deaths in Kansas by level of educational attainment. Nationally, those with higher educational attainment had lower suicide rates than those with lower educational attainment.

Figure 4. **Suicide Rates by Geography in Kansas, 2007 and 2016**



Note: A reliable estimate of suicide deaths in frontier counties was not available for 2007.

Source: KHI analysis of data from KDHE KIC, 2016.

It has been reported that LGBTQ youth are twice as likely to have attempted suicide than their heterosexual peers, but as sexual orientation and gender identity are not systematically recorded at time of death, it is difficult to understand what disparities may exist. It is likely to become an important area for research and data collection.

Conclusion

Suicide rates are increasing in Kansas and the United States. Suicide deaths can differ by race and ethnicity, age, sex and geography. There also are other dimensions such as veteran status, occupation, educational attainment, sexual orientation and gender identity along which disparities can exist, but for which data for Kansas are not readily available. Understanding the disparities in suicide deaths is an important step to support suicide prevention and resource allocation. Further analysis on disparities in suicide attempts and ideation would help these efforts.

Suicide Prevention Lifeline

The U.S. National Suicide Prevention Lifeline is a free 24/7 service that can provide suicidal persons or those around them with support, information and local resources. The Lifeline can be reached by calling 800-273-TALK (8255), or for more information, visit suicidepreventionlifeline.org.

CHARTBOOK: Racial and Ethnic Health Disparities in a Changing Kansas

All three installments in this series on *Disparities in the Sunflower State* addressing *Socioeconomic Status*, *Infant Mortality* and *Deaths by Suicide*, along with KHI's *Chartbook: Racial and Ethnic Disparities in a Changing Kansas*, are available at khi.org.

ABOUT THE ISSUE BRIEF

This brief is based on work done by Carlie J. Houchen, M.P.H., Cheng-Chung Huang, M.P.H., and Wen-Chieh Lin, Ph.D. It is available online at khi.org/policy/article/18-09.

KANSAS HEALTH INSTITUTE

The Kansas Health Institute (KHI) delivers objective information, conducts credible research, and supports civil dialogue enabling policy leaders to make informed health policy decisions that enhance their effectiveness as champions for a healthier Kansas. Established in 1995 with a multiyear grant from the Kansas Health Foundation, KHI is a nonprofit, nonpartisan educational organization based in Topeka.

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