Kansas Department of Health and Environment

KHSR

Kansas Health Statistics Report

No. 88– July 2021

Health of Cancer Survivors in Kansas

Background

According to the Centers for Disease Control and Prevention (CDC), the term cancer survivor refers to a person who has been diagnosed with cancer, from the time of diagnosis throughout his or her life.[1] Cancer survivors often face many challenges because of their cancer diagnoses and treatments.[2] Moreover, cancer survivors are at higher risk for recurrence and developing second cancers due to effects of treatment, lifestyle behaviors, genetics or risk factors that contributed to the first cancer.[3] Other concerns may arise in cancer survivors like cognitive decline, emotional issues, and physical limitations.[4]

There is a necessity to address the needs of cancer survivors and provide care to reduce disability, other health outcomes related to this cancer diagnosis or its treatment, and cancer recurrence and progression. In a revision of the National Comprehensive Cancer Control Program (NCCCP) survivorship activities, Rohan and colleagues reported numerous themes and topics reported to CDC by NCCCP awardees, such as tobacco cessation services for cancer survivors, nutrition and physical activity, psychosocial care and mental health, survivorship care plans, palliative care, and patient navigation (PN) and community health workers (CHW) efforts.[5] Additionally, Health People 2030 aims to increase the mental and physical health-related quality of life of cancer survivors. The objective is under research to develop evidence-based interventions to develop these interventions. [6]

Starting from 2016, Kansas Comprehensive Cancer Prevention and Control Program (KS CCCP) included the cancer survivorship module in the Kansas Behavioral Risk Factor Surveillance System (KS BRFSS) questionnaire. The purpose of the survivorship module was to track progress towards the state plan goal for cancer survivorship. These questions aim also to inform strategies to improve treatment and quality of life for cancer survivors.

Financial hardship is another pressing issue among cancer survivors; previous research has shown that approximately 30 percent of cancer survivors report experiencing financial hardship and bankruptcy rates that are 2.5 times higher than those of people without a history of cancer.[7] As a result of growing expenses, even patients with insurance may require financial assistance from government or nonprofit national copayment assistance organizations to guarantee access to therapy and to mitigate the financial burden of cancer care. The primary group of population that were affected are those who are “uninsured” or “underinsured”.[8] However, one study also suggested some cancer patients experienced restrictions in their cancer care coverage through their insurance type.[9]

The aim of the current report is to highlight the outcomes of the cancer survivorship module applied in KS BRFSS over three years, 2016-2018, and examine the significance of changes of these outcomes across the three years.

Inside

Methodology

The Kansas Behavioral Risk Factor Surveillance System (KS BRFSS) is a random digit-dial population-based survey of non-institutionalized adults 18 years and older living in private residences or college housing with landline and/or cell phone service in Kansas. Starting from 2016, Kansas Comprehensive Cancer Control and Prevention Program (KS CCCP) included the cancer survivorship module in the Kansas BRFSS questionnaire. The module questions collected information on whether the cancer survivors, who completed their treatment, received treatment summaries and survivorship care plans, faced financial hardship due to cancer, participated in clinical trials, and/or if they had their pain managed. The survivorship care plan referred to instructions from a healthcare professional on where the survivors should return or who they should see for routine cancer check-ups after completing their treatment.

In addition to the survivorship module, the KS CCCP added another set of questions to the 2018 KS BRFSS to collect more detailed information about the financial hardship among cancer survivors, i.e., inability to get a cancer screening test; inability to get a cancer diagnostic test if they were recommended to do; or if they experienced a financial hardship such as borrowing money or going into debt because of their cancer, its treatment, or the late effects of treatment. These questions were asked to any respondent with cancer.

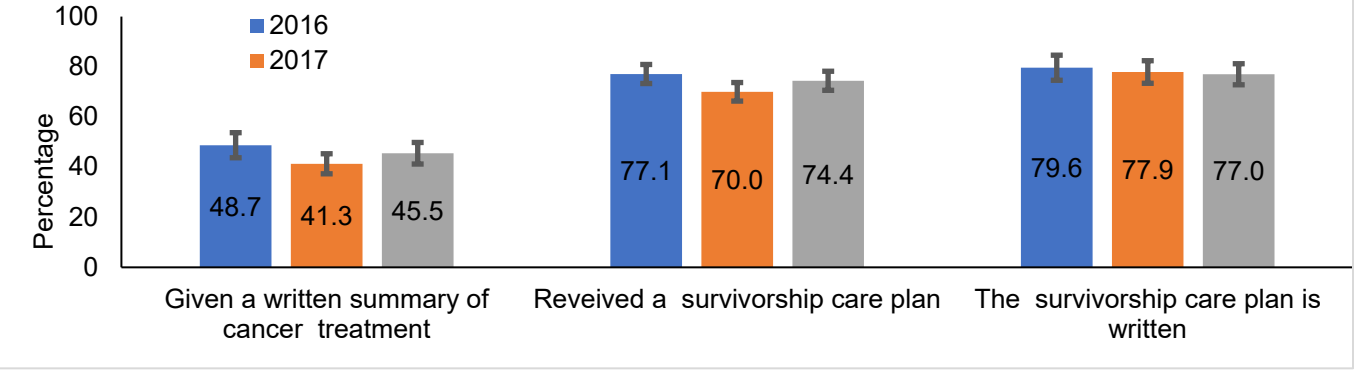
Prevalence estimates and 95 percent confidence intervals (95% CI) were calculated using weighted survey data analysis procedures in SAS 9.4. Statistically significant differences in prevalence estimates across years were indicated by non-overlapping 95% confidence intervals.

Results

The weighted percentages of cancer survivors in Kansas were 11.5%, 12.0%, and 12.2%, in 2016, 2017, and 2018, respectively. During 2016-2018, less than half of cancer survivors received a summary of their treatment from their health care providers. The percentage of cancer survivors who received a summary of their treatment ranged from 41.3% (2017) to 48.7% (2016), without significant differences between the three years (Figure 1).

The percentage of cancer survivors who received a survivorship care plan ranged from 70.0% (2017) to 77.1% (2016), without significance differences between the three years (Figure 1). The great majority of those who received a survivor care plan (77.0%-79.6%) received it written down or printed on paper format during 2016-2018, also without significant differences between the three years (Figure 1).

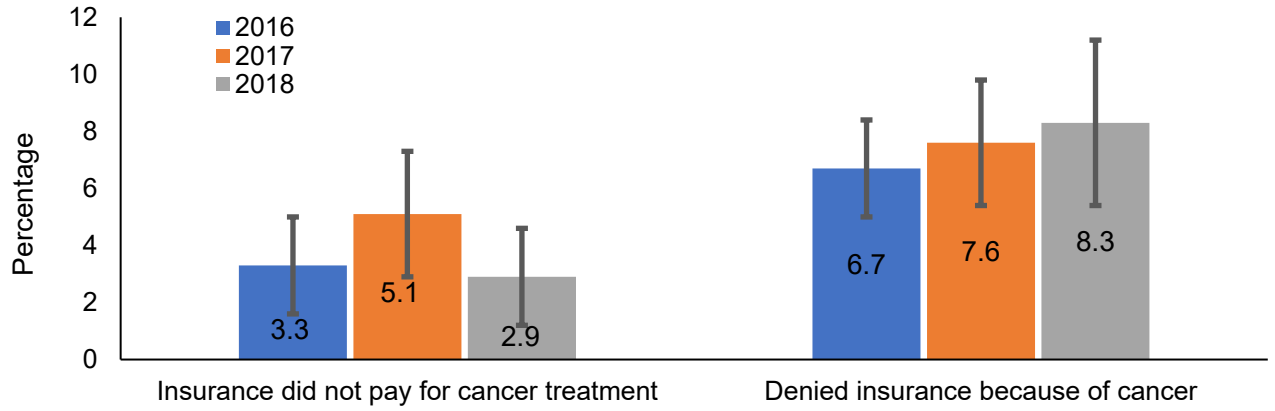
Figure 1. Receiving treatment summary and survivorship care plan among cancer survivors, KS BRFSS 2016-2018



Source: 2016-2018 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

As for the financial burden from cancer, insurance did not pay for all or part of cancer treatment for a small percent of Kansas cancer survivors (2.9%-5.1%) with their most recent diagnosis of cancer, whereas a little bit higher percentage of Kansas cancer survivors were denied insurance because of cancer (6.7%-8.3%) during 2016-2018. There were no significant differences between the three years regarding these two components of hardship (Figure 2).

Figure 2. Financial hardship among cancer survivors, KS BRFSS 2016-2018

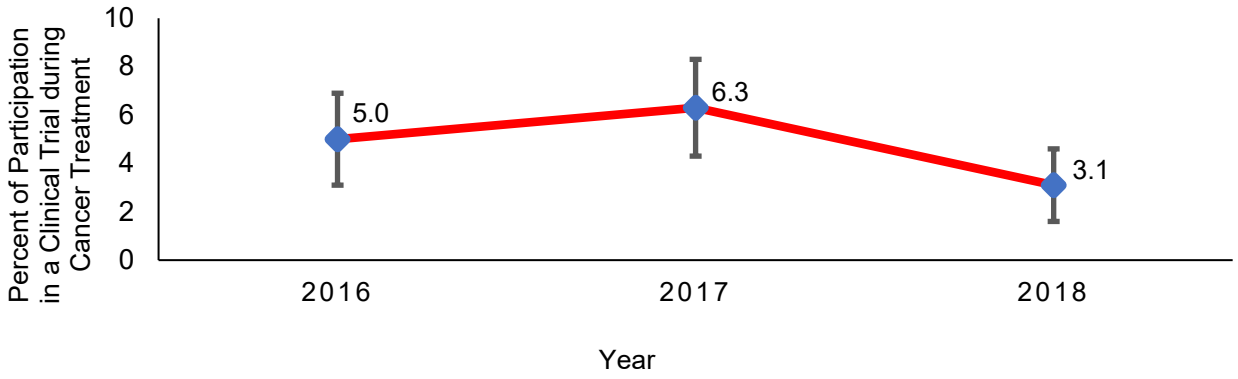


Source: 2016-2018 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

In 2018, only 2.5 percent of cancer survivors in Kansas were unable to obtain cancer screening due to cost, while about 10.6 percent were unable to obtain recommended cancer screening testing due to cost, and about 8.6 percent of cancer survivors experienced financial hardship due to cancer, treatment or late effects of treatment.

The percentage of cancer survivors who participated in a clinical trial during their course of treatment ranged from 3.1% (2018) to 5.0% (2016), there were also no significant differences between the three years (Figure 3).

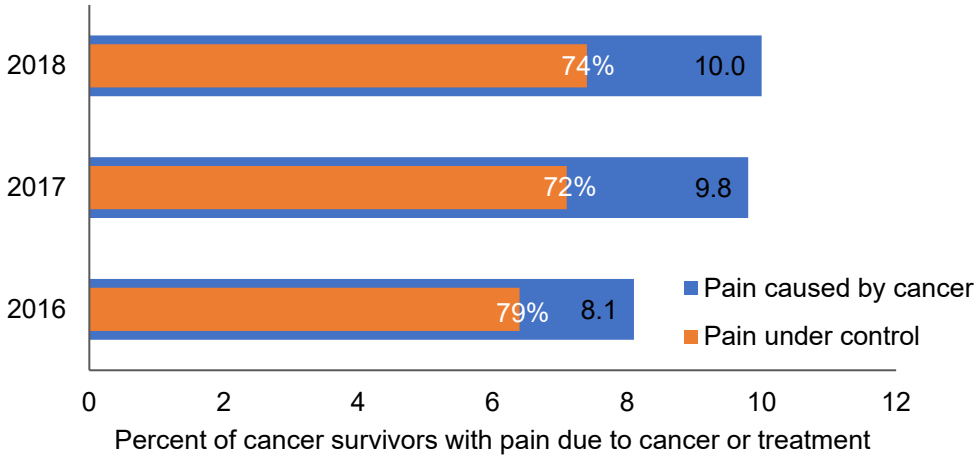
Figure 3. Participating in a clinical trial during the course of cancer treatment among cancer survivors, KS BRFSS 3016-2018



Source: 2016-2018 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

During 2016-2018, the percentages of cancer survivors who experienced pain caused by cancer or cancer treatment (Figure 4) ranged from 8.1% (2016) to 10.0% (2018). The majority of those with pain got their pain under control (72.3%-78.6%) with or without medication. These percentages did not differ significantly between the three years.

Figure 4. Pain Management among cancer survivors, KS BRFSS 2016-2018



Source: 2016-2018 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

Discussion

The percentage of cancer survivors among Kansas adults ranged from 11.5%-12.2% during the period 2016-2018, this extrapolates to about 266,000 adult Kansans. The high number of this population underscores the importance of providing the appropriate medical care, preventive services and lifestyle options.

The reported outcomes indicate that less than half of the cancer survivors who completed their treatments ever received their written summary which is critical in receiving appropriate follow-up care. This highlights that health education of primary care physicians and oncologists on guidelines about treatment and survivor care would be beneficial for cancer survivors in understanding their treatment situation, which can mitigate the stress that they may have from the disease and condition of uncertainty.

Although a small percentage of cancer survivors in Kansas were denied insurance because of cancer (6.7%-8.3%) during 2016-2018, the impact of potentially high-costs associated with cancer diagnosis and treatment may be overwhelming. Increased access to survivorship support resources will be very helpful in improving the financial distress among cancer survivors. The percentage of cancer survivors who participated in clinical trials is also small (3.1%-6.3%); participation in a clinical trial for cancer treatment would help medical research to identify better and effective treatment options.[10] About three quarters of cancer survivors who experienced pain due to cancer were able to control their pain with or without medication; this shows the potential for more cancer survivors getting their pain under control.

Kansas Comprehensive Cancer Control Program (KS CCCP) participates in the CDC initiatives and programs to address the cancer survivorship concerns in Kansas. This includes objectives in the KS CCCP core grant, the cancer survivorship supplement to KS CCCP, and the pilot project “Improving the Health and Wellness of Cancer Survivors in Rural Communities”. The covered objectives include: 1) increase the percent of cancer survivors whose pain is under control; 2) increase the percent of

survivors who received a treatment summary or care plan; 3) increase the number of trainings on cancer survivorship for health professionals and para-professionals; and 4) decrease the percent of cancer survivors with physically unhealthy days. The pilot project “Improving the Health and Wellness of Cancer Survivors in Rural Communities” focused specifically on patient navigation (PN) and tele-mentoring strategies (through Project ECHO) to increase coordination and the movement of knowledge between specialists and Primary Care Providers (PCPs). The program addresses the rural/urban disparities in cancer survivorship. PN and Project ECHO are promising approaches to improving cancer survivor care in rural areas. Patient Navigation, with its focus on removing barriers to care across the health care continuum, can better connect specialists with PCPs for smooth care transition for patients. Project ECHO, with its focus on moving specialized knowledge to rural PCPs using case-based communities of practice, can serve as a force multiplier, enhancing the knowledge base and skill sets of multiple PCPs in multiple locations.

Furthermore, KS CCCP work with the Kansas Cancer Partnership, a network of partners who are interested in reducing the burden of cancer in Kansas and improving the quality of life among cancer survivors. This involves adopting objectives in the State Cancer Plan that aim to improve the physical and mental health of cancer survivors, increase the number of cancer survivors who received treatment summaries and survivorship care plans, and improve the Kansas scorecard for access to Palliative Care services, as measured by Center to Advance Palliative Care (CAPC).

In conclusion, results from this analysis indicate that ongoing education on guidelines regarding treatment and survivor care for primary care physicians and oncologists would be beneficial. Receiving a treatment summary and follow up care plan will help cancer survivors to identify their steps forward and provide them with more options for a better lifestyle. Increased access to survivorship support resources will mitigate the burden of cancer treatment among cancer survivors and improve their quality of life. Also, more participation in clinical trials and access to experts in pain management are needed for optimal cancer survivor health. Finally, it is reassuring that about three quarters of cancer survivors who experienced pain have their pain under control with or without medication.

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Association between Diabetes and Tooth Loss in Kansas, 2018 Kansas Behavioral Risk Factor Surveillance System

Background

Periodontal disease (gum disease) refers to the infection and inflammation of the tissues surrounding and supporting the teeth; is usually caused by poor oral hygiene that allows plaque to build up on teeth, spread and damage the gum or even destroy the bone [1]. Periodontal disease is a prevalent public health problem both in the states and in Kansas. According to a pooled analysis of the National Health and Nutrition Examination Surveys (NHANES) 2009-2014 data, 42.2% of US adults age 30-79 years old had some form of periodontitis (relative serious form of periodontal disease) [2]. In Kansas, periodontitis was estimated to affect 43.3% of adults age 30-79 years old [2]. Periodontal disease and tooth decay (destruction of the outer layer of teeth), without treatment, can lead to permanent tooth loss. Diabetes is a known risk factor for periodontal disease. High glucose level in saliva can contribute to tooth decay or periodontal disease. On the other hand, infections to the gum line may impair blood glucose control and make diabetes harder to manage [3]. However, diabetes management recommendations usually lack oral health components. This study examines the association between diabetes and tooth loss due to periodontal disease or tooth decay in Kansas.

Methods

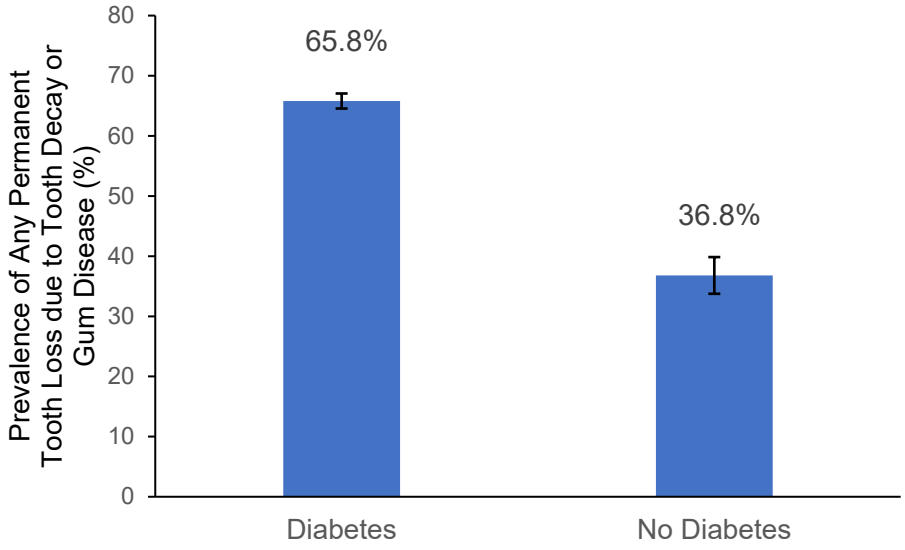
Data from the 2018 Kansas Behavior Risk Factor Surveillance System (KS BRFSS) was analyzed in SAS 9.4 software to assess the prevalence of diabetes and tooth loss due to periodontal disease or tooth decay among adults age 18 years and older. Respondents were categorized as having doctor-diagnosed diabetes if they answered "yes" to the question, "Has a doctor, nurse, or other health professional ever told you that you had diabetes?" Respondents were considered as having at least one permanent tooth loss due to periodontal disease or tooth decay if their responses were among "1 to 5", "6 or more but not all", and "all" for the core question, "Not including teeth lost for injury or orthodontics, how many of your permanent teeth have been removed because of tooth decay or gum disease?". SAS complex survey (weighted analysis) procedures were used to calculate the prevalence estimates and 95% confidence intervals (CIs). The prevalence estimates are also stratified by diabetes status, age groups, sex, race/ethnicity, education attainment, annual household income, insurance status, population density peer groups, and smoking status. Logistic regression was used to estimate prevalence odds ratios for any permanent tooth loss in relation to diabetes diagnosis adjusting for socio-demographic and behavior factors.

Results

In 2018, 11.6% of adult Kansans age 18 years and older reported ever diagnosed with diabetes. An estimated 869,128 (40.1%) adult Kansans had lost at least one permanent tooth due to tooth decay or gum disease, including 5.7% who lost all permanent teeth, 9.4% who lost six or more but not all permanent teeth, and 25% who lost one to five permanent teeth. The prevalence of losing any permanent tooth due to tooth decay or gum disease is significantly higher among adults with diabetes

(65.8%, 95% CI: 62.8% - 68.9%) as compared to adults without diabetes (36.8%, 95% CI: 35.6% - 38.1%). (Figure 1)

Figure 1 Prevalence of any permanent tooth loss due to gum disease or tooth decay by diabetes status in Kansas adults age 18 years and older: 2018 Kansas Behavioral Risk Factor Surveillance System.



Significantly higher prevalence of losing any permanent tooth due to tooth decay or gum disease are seen among those at older age, those with high school education or less, those who live in rural counties, those with annual household income less than $25,000, those without insurance, and ever smokers. Non-Hispanic Blacks were also more likely to have tooth loss due to tooth decay or gum disease than non-Hispanic Whites. (Table 1)

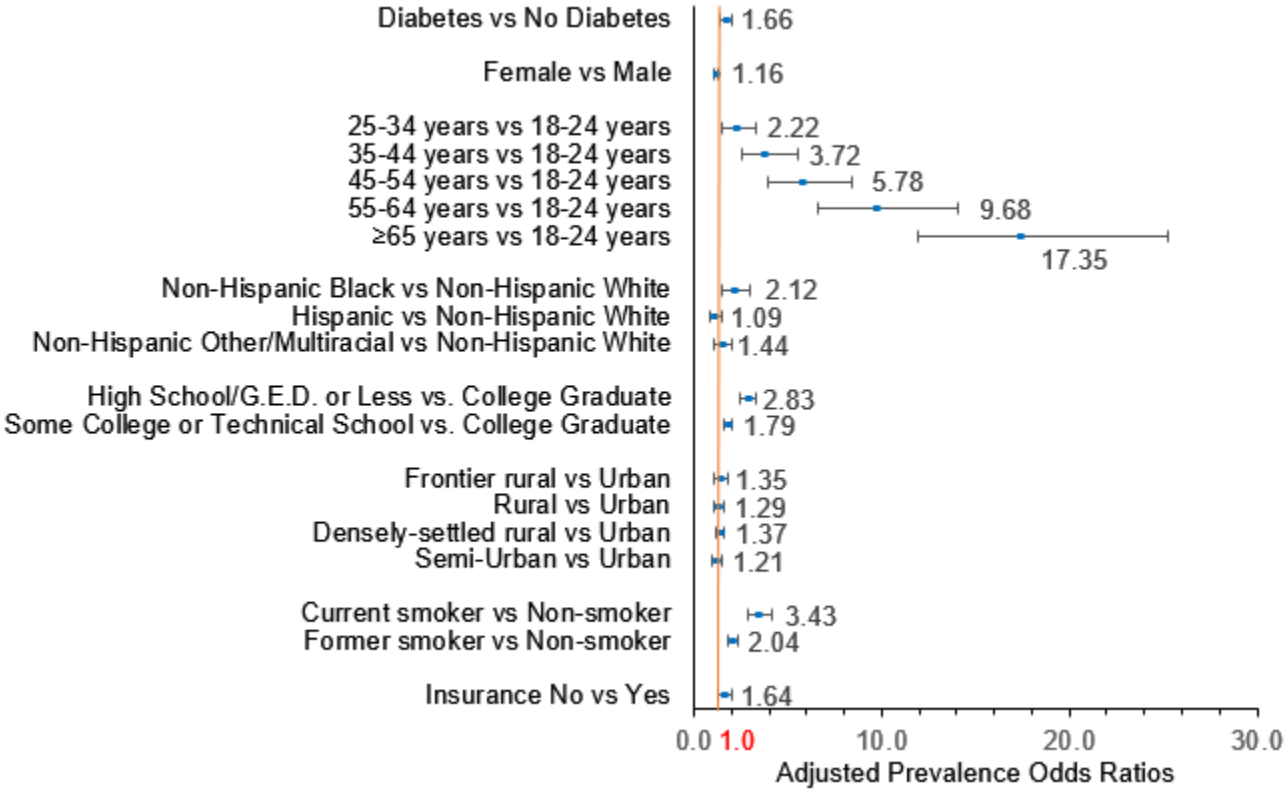
The odds of having any permanent teeth removed due to tooth decay or gum disease was significantly higher among adults with diabetes as compared to those without diabetes (POR=1.7 95% CI: 1.4 – 2.0) after controlling for the demographic and behavioral characteristics. Older, uninsured non-Hispanic Black ever smokers who had lower level of education and lived in rural settings are associated with increased odds of losing permanent tooth due to tooth decay or gum disease. (Table 1; Figure 2)

Table 1 Prevalence and adjusted prevalence odds ratios of having any tooth loss due to gum disease or tooth decay, 2018 KS BRFSS

Any Tooth Loss due to Gum Disease or Tooth Decay	Unweighted Frequency (N)	Weighted Prevalence (%)	95% Confidence Interval	Adjusted Prevalence Odds Ratios**	95% Confidence Interval
Overall	4,903	40.1	39.0-41.3		
Diabetes Status					
Yes	1,012	65.8	62.8-68.9	1.66	1.39-2.00
No	3,886	36.8	35.6-38.1	1.00	
Sex					
Female	2,697	41.2	39.6-42.8	1.16	1.02-1.31
Male	2,206	39.1	37.4-40.7	1.00	
Age Groups					
18-24 years	73	12.8	9.7-15.9	0.06	0.04-0.08
25-34 years	234	23.5	20.4-26.5	0.13	0.10-0.16
35-44 years	379	33.1	30.0-36.3	0.21	0.18-0.26
45-54 years	619	41.2	38.3-44.0	0.33	0.28-0.39
55-64 years	1,119	55.2	52.8-57.6	0.56	0.48-0.65
≥65 years	2,479	65.3	63.6-67.0	1.00	
Race/Ethnicity*					
Black, non-Hispanic	265	50.7	45.2-56.2	2.12	1.52-2.96
Hispanic	188	39.7	34.8-44.5	1.09	0.80-1.47
Other/Multi-Race, non-Hispanic	192	45.0	39.7-50.3	1.44	1.04-2.00
White, non-Hispanic	4,207	36.9	35.6-38.1	1.00	
Education					
High School/G.E.D. or Less	2,017	52.6	50.4-54.9	2.83	2.43-3.30
Some College or Technical School	1,510	38.6	36.6-40.6	1.79	1.55-2.06
College Graduate	1,365	26.4	24.9-27.9	1.00	
Annual Household Income					
Less than $15,000	444	59.9	55.0-64.8	-	
$15,000 to $24,999	790	53.6	49.8-57.4	-	
$25,000 to $34,999	561	49.9	45.7-54.1	-	
$35,000 to $49,000	702	43.5	40.2-46.8	-	
$50,000 or more	1,566	29.5	27.9-31.0	-	
Population Density					
Frontier rural	339	49.2	44.5-53.9	1.35	1.03-1.78
Rural	597	46.1	42.6-49.7	1.29	1.07-1.56
Densely-settled rural	929	46.6	43.8-49.4	1.37	1.16-1.63
Semi-Urban	704	39.5	36.5-42.6	1.21	1.00-1.46
Urban	2,334	36.8	35.2-38.4	1.00	
Health Insurance					
Yes	4,421	39.3	38.1-40.5	0.61	0.48-0.76
No	469	46.4	42.4-50.5	1.00	
Smoking Status					
Current Smoker	951	60.4	57.1-63.6	3.43	2.86-4.12
Former Smoker	1,672	54.2	51.9-56.6	2.04	1.77-2.34
Non-Smoker	2,099	28.5	27.1-29.9	1.00	

* Prevalence estimates are age-adjusted to the U.S. 2000 standard population.
** Logistic regression model includes age, sex, race/ethnicity, education, population density, insurance, smoking status, and diabetes status. Annual household income is not included due to correlation with insurance status.
Source: 2018 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Figure 2 Adjusted prevalence odds ratios of losing at least one permanent tooth due to gum disease or tooth decay by diabetes status, socio-demographic, and behavioral characteristics: 2018 KS BRFSS.



Conclusions

Having diabetes is associated with increased odds of having any permanent tooth removed due to tooth decay or gum disease in Kansas, even after controlling for socio-demographic and behavior characteristics. Good oral hygiene and regular dental visits should be an important part of diabetes care. Treating periodontal diseases and tooth decay can be beneficial especially for people with diabetes to improve glucose control and prevent permanent tooth loss [3]. Disparities exist for Kansans who suffer from tooth loss because of tooth decay or gum disease with respect to socio-demographic and behavioral characteristics: older, non-Hispanic Blacks, with lower education and annual household income, living in rural counties without insurance, ever smokers. Interventions/public messaging regarding diabetes and oral health should focus more attention on and tailor towards these disadvantaged sub-groups.

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Announcements

Kansas PRAMS 2019 Surveillance Report Reveals Current Trends in Maternal and Infant Health

The Kansas Pregnancy Risk Assessment Monitoring System (PRAMS) has released its third annual surveillance report. PRAMS is a survey of Kansas women with a recent live birth. The PRAMS questionnaire provides more detailed information about the health and experiences of Kansas women before, during, and shortly after pregnancy, than is available from the infant's birth certificate. This includes information about potential protective factors and risk factors for maternal and child health, including social support, stress, safety, mental health conditions, breastfeeding, and healthcare use.

PRAMS data from 2017 to 2019 provided insight into current trends in maternal and infant health:

- The prevalence of self-reported gestational hypertension, preeclampsia, or eclampsia increased significantly, from 11.8% among Kansas women with a live birth in 2017, to 16.1% among women with a live birth in 2019.
- The prevalence of self-reported prenatal care initiation in the first trimester of pregnancy increased significantly, from 85.7% among women with a live birth in 2017, to 90.0% among women with a live birth in 2019.
- The prevalence of reporting that the infant was placed to sleep without soft objects or loose bedding increased significantly, from 44.3% among women with a live birth in 2017, to 54.1% among women with a live birth in 2019.
- Socioeconomic disparities were observed across a wide range of indicators, including unintended pregnancy, timing of prenatal care initiation, cigarette smoking, stress experienced in the year before the birth, breastfeeding for at least 8 weeks, postpartum depressive symptoms, and indicators related to infants' sleep habits.
- Racial disparities persist. For instance, non-Hispanic Black women had a higher prevalence of self-reported gestational hypertension, preeclampsia, or eclampsia; unintended pregnancy; and partner-related stress in the year before the birth; compared to non-Hispanic White women.
- While most women reported placing their infants to sleep on their backs most often (84.4% of Kansas women with a live birth in 2019), fewer women reported placing the infant to sleep on a separate approved sleep surface, room sharing without bed sharing, or placing the infant to sleep without soft objects or loose bedding.

The information from PRAMS can be used to guide public health strategy and policy. To view the full report, visit: https://www.kdheks.gov/prams/downloads/Kansas_PRAMS_2019_Surveillance_Report.pdf

Kansas Infant Mortality Report Released

The Kansas Department of Health and Environment has released the *2019 Infant Mortality and Stillbirth Report.* This report provides a long-term assessment of trends in fetal and infant mortality.

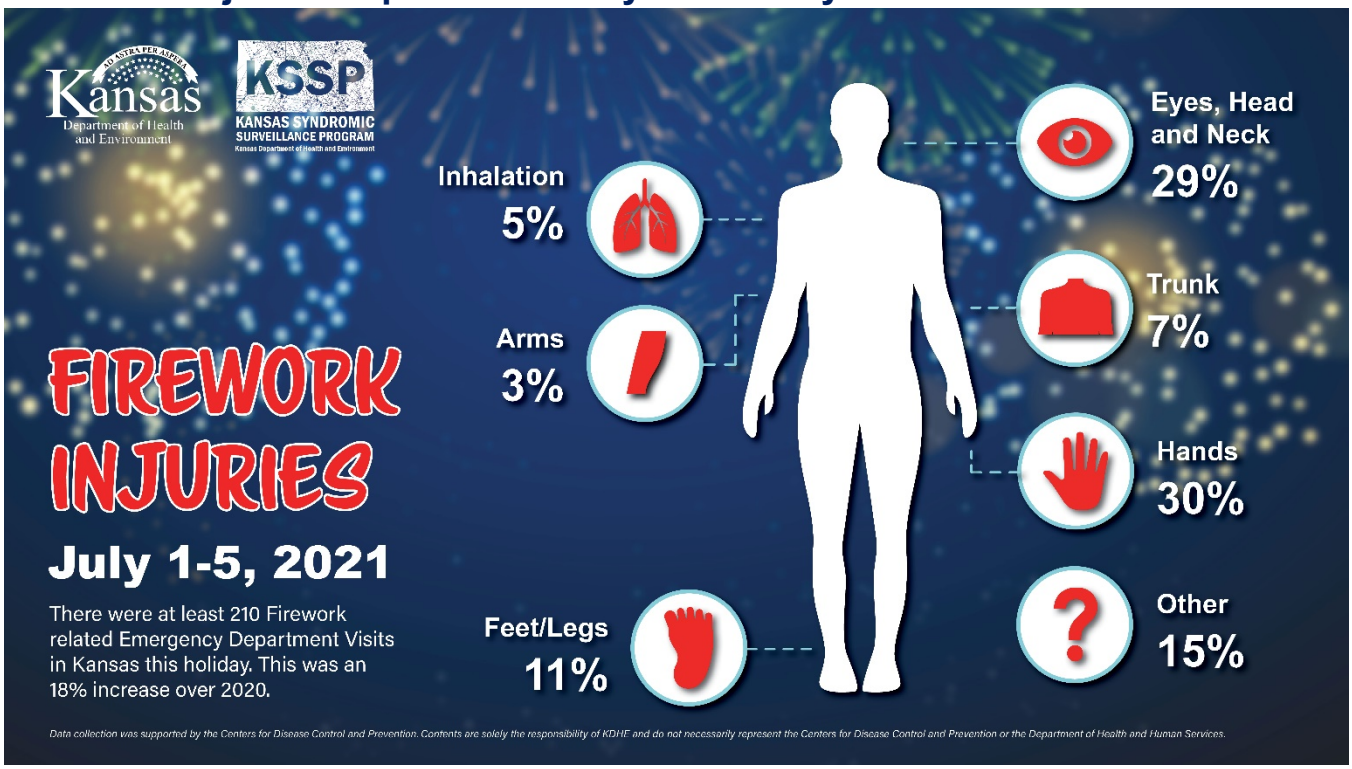
Key findings include:

- In 2019, there were 5.4 stillbirths at 20 weeks or more of gestation, per 1,000 live births plus stillbirths at 20 weeks or more of gestation. This was unchanged from the 2018 rate. Since 2000, the overall trend for stillbirths has been increasing.

- The infant mortality rate in Kansas decreased from 6.4 infant deaths per 1,000 live births in 2018, to 5.3 infant deaths per 1,000 live births in 2019. Since 2007, the overall trend for infant mortality has been decreasing.
- From 2000 to 2019, the infant mortality rate decreased among non-Hispanic White births and non-Hispanic Black births. No statistically significant trends in infant mortality were seen among Hispanic births.
- The infant mortality rate among non-Hispanic Black births remained at least twice that of non-Hispanic White births for most years from 2000 to 2019.
- During 2015-2019, the leading cause of infant mortality was congenital anomalies (23.9% of infant deaths), followed by Sudden Unexpected Infant Death (SUID) (19.0%), short gestation and low birth weight (17.3%), and maternal complications of pregnancy (6.1%).
- The rate of preterm-related mortality declined from 2000 to 2019. In 2015-2019, there were 190.0 preterm-related deaths per every 100,000 live births. The rate among non-Hispanic Black births (537.7 deaths per every 100,000 live births) was higher than that among non-Hispanic White births or Hispanic births.
- Perinatal deaths include stillbirths with a gestation period of at least 28 weeks, and hebdomadal deaths (less than seven days). The perinatal mortality rate declined from 2000 to 2019. In 2019, the perinatal mortality rate was 5.3 stillbirths at 28 weeks or more of gestation plus infant deaths occurring under 7 days, per 1,000 live births plus stillbirths at 28 weeks or more of gestation.

To view the full report, visit: https://www.kdheks.gov/phi/IMR/2019_IMR_Report.pdf

Fireworks Injuries Reported for July 4th Holiday



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