Cancer Survivors in Kansas

Background

Due to advances in early detection and treatment, the number of cancer survivors in the United States has increased significantly over the past 40 years from three million to nearly 12 million people [1]. Nationally, a large proportion of cancer survivors engage in unhealthful behaviors, such as smoking, that may put them at risk for new or recurrent cancer or otherwise diminish their quality of life [2]. From 1998 to 2008, approximately 130,000 Kansans were diagnosed with invasive (malignant) cancer. Relatively little is known about the current demographic, diagnostic, and behavioral characteristics of cancer survivors in Kansas.

Objectives

The purposes of this study were (1) to examine the demographic and diagnostic characteristics of cancer survivors and non-survivors in Kansas who were diagnosed between 1998 and 2008, and (2) to compare health risk behaviors, health status, and health care access between persons ever diagnosed and never diagnosed with cancer in Kansas in 2009.

Methods

For the purposes of this study, cancer survivors were defined as Kansas residents diagnosed with malignant cancer between 1998 and 2008 who did not have a date of death indicated in the Kansas Cancer Registry (KCR) database as of September 2, 2010. Records were de-duplicated so that patients with multiple records were counted as one patient record containing their first malignant tumor diagnosis. Descriptive statistics were computed to characterize the distribution of age at diagnosis, sex, race, and ethnicity of cancer survivors. T-tests and chi-square tests were used to determine statistically significant between-group differences in selected characteristics by cancer survivor status. In addition, a logistic regression main effect model calculated the odds of being a survivor based on stage of tumor at diagnosis, controlling for age at diagnosis.

In 2009, the Cancer Survivorship Module was included in the Kansas Behavioral Risk Factor Surveillance System (BRFSS). The Kansas BRFSS is an ongoing population-based telephone survey of non-institutionalized adults 18 years of age and older in Kansas. The Cancer Survivorship module is a series of four interview questions that assess whether or not someone has ever been diagnosed with cancer, the number of cancer diagnoses, age at first diagnosis, and type of cancer most recently diagnosed. Persons with a history of cancer diagnosis were defined as respondents who indicated they had ever been told by a health professional that they had cancer, excluding melanoma or other skin cancer. Distributions of demographic characteristics were calculated for those who had ever and never been diagnosed with cancer. Linear and logistic regression main effect models were fit to produce adjusted percentages (i.e., predicted population margins) which allows comparison of health risk behaviors, health status, and health care access by history of cancer diagnosis as if both groups had similar distributions of age, sex, race/ethnicity, employment status, and education level. Unadjusted prevalence estimates are useful for describing burden within a particular population subgroup. T-tests and Wald chi-square tests were used to determine statistically significant between-group differences at the $\alpha<0.05$ level.

Results

Among 130,655 Kansans diagnosed with invasive cancer between 1998 and 2008, 50.5 percent (n= 66,030) were still alive at the end of the study period. Significant group differences were observed between cancer survivors and those who were not still alive at the end of the study period for mean age at diagnosis, as well as sex, race, ethnicity, stage at diagnosis, and type of cancer (Table 1; Figures 1 and 2). The odds of not being alive at the end of the study period for those whose tumor was diagnosed at a distant stage were 12.9 (95% CI: 12.4-13.4) times the odds of those whose tumor was diagnosed at a localized stage.

Table 1. Demographic characteristics of persons diagnosed with cancer, by survivor status, Kansas, 1998-2008

Demographics	Survivor Estimate	Not a survivor Estimate	P
Mean age at diagnosis, yrs	59.9	70.5	<0.01
Mean survival time, yrs	6.5	2.1	<0.01
Sex			<0.01
Male	48.7%	54.0%	
Female	51.3%	46.0%	
Race			<0.01
White	91.1%	93.9%	
Black	3.9%	4.9%	
Other	5.1%	1.2%	
Ethnicity			<0.01
Hispanic	2.5%	1.7%	
Non-Hispanic	97.5%	98.4%	
Stage at diagnosis			<0.01
Localized	65.9%	28.8%	
Regional	20.5%	23.3%	
Distant	8.4%	34.9%	
Unstaged	5.3%	13.1%	

Source: 1998-2008 Kansas Cancer Registry

Note: For cancer survivors, mean survival time is difference between date of diagnosis and end of study period (September 2, 2010). For non-cancer survivors, mean survival time is difference between date of diagnosis and date of death.

P-values <0.05 indicate statistically significant between-group differences.

Figure 1. Leading Cancer Diagnoses among Cancer Survivors, Kansas, 1998-2008
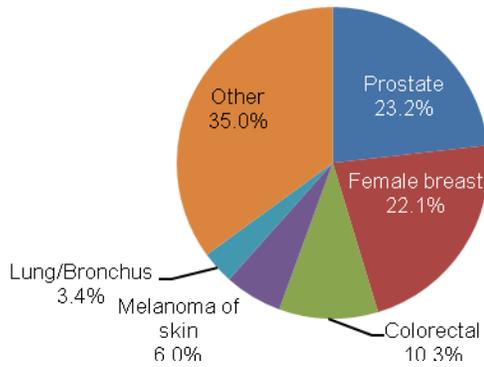

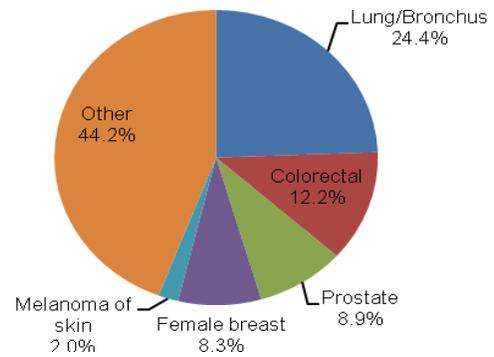Figure 2. Leading cancer diagnoses among cancer non-survivors, Kansas, 1998-2008

Table 2. Unadjusted and adjusted prevalence of health risk behaviors, health status, and health care access indicators among adults 18 years and older, by history of cancer diagnosis, Kansas, 2009

| | Unadjusted Prevalence | | | Adjusted Prevalence* | | |
| | Cancer | No cancer | | Cancer | No cancer | |
Health Risk Behaviors	% ± SE	% ± SE	P	% ± SE	% ± SE	P
Current smoker	17.7 ± 1.4	18.1 ± 0.5	0.76	19.4 ± 1.6	15.9 ± 0.9	0.02
Drank alcohol in past 30 days	37.1 ± 1.5	51.0 ± 0.6	<0.001	30.3 ± 1.7	34.1 ± 1.2	0.01
No leisure time physical activity	33.3 ± 1.5	22.4 ± 0.5	<0.001	37.0 ± 2.0	31.2 ± 1.0	<0.001
Consumed fruits and vegetables fewer than 5 times/day	78.6 ± 1.2	81.7 ± 0.4	0.01	80.7 ± 1.4	80.5 ± 0.9	0.84
Overweight/obese (BMI≥25kg/m²)	63.0 ± 1.6	65.2 ± 0.6	0.2	67.4 ± 1.9	70.2 ± 1.2	0.07
Health Status						
Self-reported fair/poor health	33.2 ± 1.5	10.5 ± 0.3	<0.001	40.4 ± 2.3	19.4 ± 1.0	<0.001
Limited in any way in any activities because of physical, mental, or emotional problems	40.3 ± 1.6	17.1 ± 0.4	<0.001	39.5 ± 2.1	23.9 ± 1.1	<0.001
Physically unhealthy days in past 30 days, no.	7.0 ± 0.4	2.7 ± 0.1	<0.001	7.5 ± 0.4	4.3 ± 0.2	<0.001
Emotionally unhealthy days in past 30 days, no.	3.5 ± 0.2	2.8 ± 0.1	0.01	3.9 ± 0.3	3.0 ± 0.2	<0.001
Days poor health interfered with usual activities in past 30 days, no.	7.0 ± 0.5	3.4 ± 0.1	<0.001	7.5 ± 0.5	5.4 ± 0.3	<0.001
Health Care Access						
Uninsured	7.4 ± 1.1	12.2 ± 0.4	<0.001	9.8 ± 1.5	11.1 ± 0.8	0.39
Do not have health care provider	5.1 ± 0.7	15.6 ± 0.5	<0.001	8.2 ± 1.3	14.8 ± 0.9	<0.001
Could not see doctor because of cost	11.0 ± 1.1	11.2 ± 0.4	0.86	15.4 ± 1.7	12.7 ± 0.8	0.08

Source: 2009 Kansas Behavioral Risk Factor Surveillance System (BRFSS), Kansas Department of Health and Environment

*Predicted population margins; adjusted for age, sex, race/ethnicity, employment status, and education level.

SE= standard error. P-values <0.05 indicate statistically significant between-group differences.

Compared to those who did not report ever being diagnosed with cancer, persons who had ever been diagnosed with cancer were significantly more likely to be older, female, and retired, and less likely to have more than high school education and to be Hispanic. Persons who had ever been diagnosed with cancer were also significantly more likely to be current smokers, to not engage in any leisure time physical activity, to self-report fair/poor health, to report more physically and emotionally unhealthy days in the past month, and to report more days where poor health interfered with usual activities (Table 2).

Discussion

The distribution of demographic and diagnostic characteristics among cancer survivors in Kansas mirrors national SEER Program data [1]. There are more than 65,000 cancer survivors in Kansas who were diagnosed with their first primary invasive tumor between 1998 and 2008, more than half of whom were diagnosed with either prostate, female breast, or colorectal cancer. Similar to national reports [2], Kansas cancer survivors engage in a number of unhealthful risk behaviors, including current smoking, lack of leisure time physical activity, inadequate fruit and vegetable consumption, and being overweight or obese.

There are several limitations to this study worth noting. Cancer survivors identified from the KCR database only include persons diagnosed with invasive cancer between 1998 and 2008. Delays in reporting processes limit the ability to include more recent incidence data, while data collected prior to 1998 is considered unreliable due to incomplete data collection. Cancer non-survivors may be underreported due to the present lack of data for persons who died after September 2, 2010. BRFSS estimates do not ap-

ply to individuals without telephone service, those who reside on military bases or within institutions, or those who are unable to complete a telephone survey. BRFSS data included in the current report are only based on sampled individuals with a landline telephone. Future BRFSS surveys will include individuals with cell phones. BRFSS prevalence estimates are self-reported and are subject to bias due to respondents' inability or unwillingness to provide accurate information about their own behaviors or characteristics.

As early detection and treatment of cancer continues to advance, the epidemiology of cancer survivors in Kansas is likely to change, necessitating its continued surveillance for public health programming development and evaluation purposes. Similarly, results from the Kansas BRFSS Cancer Survivorship Module provide important information about the health risk behaviors, health status, and health care access of cancer survivors in the state. Data can be used to help develop and evaluate interventions aimed at improving the quality of life of cancer survivors.

<div align="right">
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Recent Trends in Kansas Birth and Fertility Rates

The number of births to Kansas residents for 2011 was 39,628, two percent lower than the 40,439 births for 2010 [1]. The number of births is the lowest since 2004, when 39,553 resident births occurred. In the last decade, resident births peaked in 2007 (41,951), and have declined since then.

The 2011 Kansas resident birth rate of 13.8 births per 1,000 population is the lowest rate in the state's history. The next lowest birth rate was in 1973, at 13.9 births per 1,000 population. In recent years, the Kansas birth rate reached a modest peak in 2007, but has been slowly declining since then. A number of national reports have associated declines in birth and fertility rates to the economy [2, 3]. The association in Kansas is more difficult to discern (Figure 1). Kansas per capital income reached a peak in 2008, and then dropped [4]. By 2011 the per capita income recovered exceeding the high in 2008. Birth rates have fallen in the past three years while state per capita income rose.

Figure 1. Kansas Birth Rates and Per Capita Income, 2006-2011
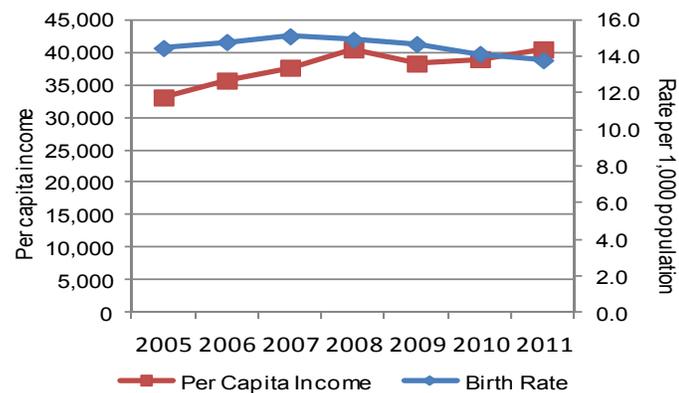
Birth rates among population groups in Kansas vary notably (Figure 2). Among major population groups, birth rates for white non-Hispanics and black non-Hispanics have been relatively flat. In recent years, birth rates for Hispanics of any race have been dropping since reaching a high of 27.7 per 1,000 population in 2006. The decrease between 2006 and 2011 was statistically significant.

Figure 2. Birth Rates and 95% Confidence Intervals by Selected Population Groups by Year, Kansas, 2005-2011
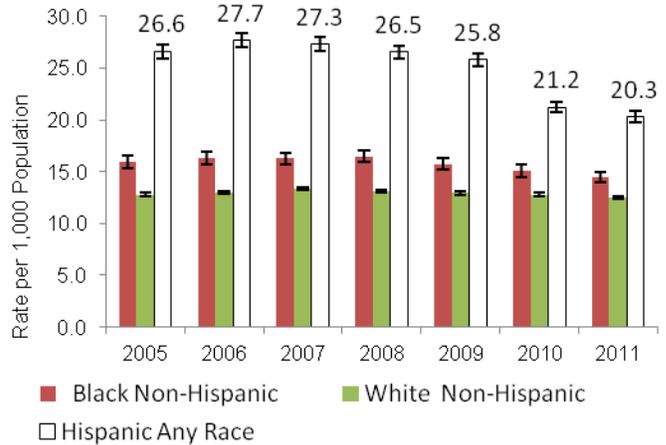
The 2011 Kansas fertility rate was 71.2 births per 1,000 women aged 15-44. This represents a 2.1 percent drop from the 2010 rate of 72.7 births per 1,000 women aged 15-44. The fertility rate for women aged 15-24 dropped by 6.4 percent from 74.0 births per 1,000 women 2010 to 69.3 in 2011. While the Kansas fertility rate has risen by 5.3 percent since 1992, the fertility rate among women 15-24 has dropped by 22.0 percent.

Fertility rates for White non-Hispanics and Black non-Hispanics have largely been flat in recent years (Figure 3). The fertility rate for Hispanics peaked in 2008 at 122.0 births per 1,000 women aged 15-44 years and has fallen by 25.7 percent to 90.6 births per 1,000 women aged 15-44 years.

Figure 3. Fertility Rates by Selected Population Group, Kansas, 2005-2011
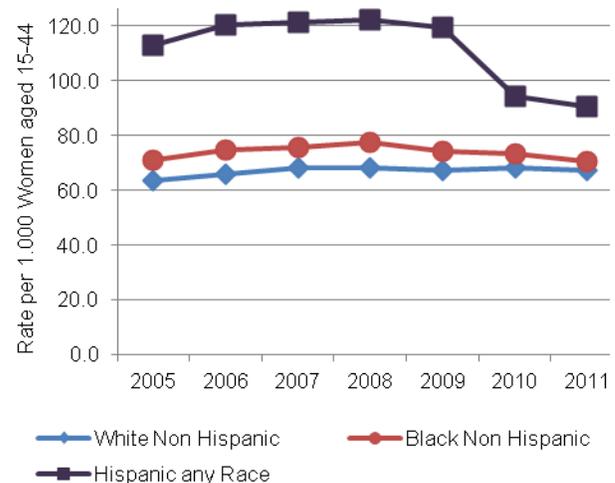
Data Sources and Methods

Data for 2005-2011 are final. Rates for 2011 are provisional. Rates for 2005 –2011 are based on Intercensal population estimates for 2005-2009, 2011 and Actual census counts for 2010.

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Preventable Hospitalizations in Kansas, 2005-2010

Introduction

In 2007, preventable hospitalizations in Kansas were identified as an issue requiring continued study [1]. It is recognized that certain diseases and conditions could be addressed through effective ambulatory care delivery, reducing the need for expensive hospital-based care. Inpatient hospital discharge data from 2000 to 2005 using nationally recognized measures (Agency for Healthcare Research and Quality (AHRQ)) were used to identify the following key priorities: low birth weight infant care; infectious conditions including bacterial pneumonia, urinary tract infections, and perforated appendix; short-term complications of diabetes and uncontrolled diabetes without complications; hypertension; and adult asthma.

The purpose of this study is to reanalyze preventable hospitalizations that were designated as a priority for Kansas, evaluate whether other conditions have risen to a level of concern, and analyze for disparities by race and ethnicity. Over the period from 2005 to 2010, the change in rates for low birth weight infants (-0.4%) and urinary tract infections (-3.5%) were relatively small. Bacterial pneumonia, uncontrolled diabetes without complications, hypertension, and adult asthma rates declined by 27.0 percent, 31.6 percent, 13.5 percent and 30.4 percent, respectively. Only rates for perforated appendix (9.8%) and short-term complications with diabetes (26.3%) increased. Bacterial pneumonia, perforated appendix, and dehydration were significantly above the national admission rate in all years. Based on this reevaluation of preventable hospitalizations in Kansas, bacterial pneumonia, perforated appendix, dehydration, and short-term complications of diabetes are most in need of being addressed in order to reduce health care costs.

Background

Preventable hospitalizations are important factors in public health because hospitalizations are the most serious and expensive aspect of health care treatment. If patients are provided with proper primary care and comply with their physician's recommendations, then hospitalization could be avoided, thus reducing costs to the health care system.

Rates for the conditions of interest were calculated using the AHRQ Prevention Quality Indicator (PQI) software, with input from inpatient hospital discharge data for Kansas community hospitals. AHRQ PQI software was developed to assist in evaluating hospital discharge data specifically focusing on conditions that can be effectively treated in outpatient settings. Even though only inpatient data are used in this study, the analysis gives insight into the quality of the health care system outside of the hospital environment.

Methods

Kansas inpatient hospital discharge data from 2005 to 2010 were provided by the Kansas Hospital Association. Calculations were completed using AHRQ PQI SAS software Version 4.1a available at http://www.qualityindicators.ahrq.gov [2]. Rates were risk adjusted for age and sex. The following conditions of interest were identified as ambulatory-care-sensitive conditions by the AHRQ program:

- diabetes, short term complications;
- perforated appendix;
- diabetes, long term complications;
- chronic obstructive pulmonary disease;
- hypertension;
- congestive heart failure;
- low birth weight;
- dehydration;
- bacterial pneumonia;
- urinary tract infection;
- angina without procedure;
- uncontrolled diabetes, without complications;
- adult asthma; and
- lower extremity amputation/diabetes patients;

Rates were calculated per 100,000 population greater than or equal to the age of 18, except for perforated appendix (per 1,000 appendicitis discharges) and low birth weight (per 1,000 neonates). Kansas rates were compared to the PQI risk adjusted rates from the Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample. Those rates for 2005 to 2009 were available at the time of the evaluation and downloaded from HCUPNET, http://hcupnet.ahrq.gov/HCUPnet.app/ [3]. Revised priorities were set based on changes in the rates from the prior study, which used data from 2000 to 2005, and on the comparison of Kansas and national rates.

Observed rates were used to analyze disparities by race and ethnicity because the Prevention Quality Indicator SAS software does not allow for risk adjustment when rates are calculated by race. Following the (AHRQ) recommendation, rates based on less than 30 cases in the numerator or denominator were not reported. This policy was set in place to ensure statistical reliability and confidentiality.

Results

The age and sex adjusted admission rates from 2005 to 2010 and the percent change are included in Table 1. Increases were seen in short-term complications of diabetes and perforated appendix. Black non-Hispanic Kansans had significantly higher observed rates of short-term complications of diabetes than White non-Hispanics or Hispanics. For perforated appendix, White non-Hispanics had higher rates than Hispanics.

Rates in Kansas were higher than the U.S. for four indicators, 2005-2009. Kansas admission rates for bacterial pneumonia, perforated appendix, and dehydration have paralleled and consistently stayed above national rates. Bacterial pneumonia and dehydration declined overall. Progress was made on uncontrolled diabetes without complication, and the condition is approaching the national level (Figure 1).

Table 1. Kansas Preventable Hospitalizations, Age and Gender Adjusted Admission Rates and Percentages, 2005-2010

Diagnosis	Rate						Percent Difference from 2005 to 2010
	2005	2006	2007	2008	2009	2010	
Diabetes, Short Term Complications	48.3	49.8	51.0	53.3	54.0	61.0	26.3%
Perforated Appendix	316.5	326.4	329.4	324.9	315.2	347.4	9.8%
Diabetes, Long Term Complications	104.6	106.1	102.2	95.1	84.9	80.0	-23.5%
Chronic Obstructive Pulmonary Disease	219.5	191.3	202.3	217.2	188.2	185.7	-15.4%
Hypertension	52.7	50.9	54.3	51.9	48.2	45.6	-13.5%
Congestive Heart Failure	368.1	348.6	342.0	289.5	281.4	275.2	-25.2%
Low Birth Weight	56.2	57.7	56.6	54.6	57.7	56.0	-0.4%
Dehydration	143.0	137.3	137.7	140.7	110.0	83.4	-41.7%
Bacterial Pneumonia	491.5	448.6	464.1	439.9	386.2	358.8	-27.0%
Urinary Tract Infection	171.9	177.2	176.5	172.9	164.7	165.8	-3.5%
Angina Without Procedure	29.5	27.8	22.6	20.5	15.9	11.5	-61.0%
Uncontrolled Diabetes, Without Complications	29.1	26.9	24.0	22.4	23.7	19.9	-31.6%
Adult Asthma	100.4	84.0	84.2	86.6	79.0	69.9	-30.4%
Lower Extremity Amputation/ Diabetes Patients	26.8	28.5	25.2	26.0	23.0	22.2	-17.2%

Figure 1. Prevention Quality Indicators Rates for Uncontrolled Diabetes, without Complications, 2005-2010

	2005	2006	2007	2008	2009	2010
Kansas	29.1	26.9	24.0	22.4	23.7	19.9
US	20.4	21.6	21.1	22.1	22.0	

Discussion

Declines in preventable hospitalizations observed could potentially be attributed to effective ambulatory care delivery. Evaluation of the PQIs allows for identification potential of areas where medical care is inadequate or the current system is ineffective. The best interventions include moderating triggers that exacerbate conditions, pharmacological management, monitoring of the condition, patient education, early treatment, and patient compliance

The decreases in hospitalization rates for selected conditions previously identified by Saadi et. al. that proper preventive health care is improving in Kansas. Conditions that need continued emphasis are the ones where rates have increased since the 2000-2005 timeframe (i.e., perforated appendix and short-term complications of diabetes) and where rates continue to be above the national rate (i.e., bacterial pneumonia, perforated appendix, and dehydration). Prevention and control recommendations are appropriate primary care and patient compliance.
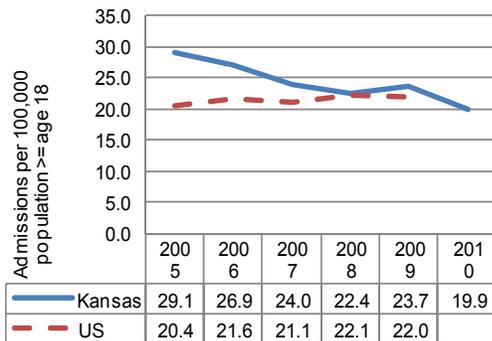
Rates for short-term complications from diabetes increased 26.3 percent from 2005 to 2010. This is a continued increase from the trend observed from 2000 to 2005. Rates for bacterial pneumonia declined 27.0 percent after fluctuating between 2000 and 2005. Perforated appendix rates have varied since 2000, but overall there has been a 9.8 percent increase since 2005. Admission rates for dehydration were 41.7 percent lower in 2010 than in 2005. The decline began in 2002, peaking at 162.0 per 100,000 population greater than or equal to age 18.

This analysis is for inpatient hospitalizations in Kansas. Thus, although the results can be used to make generalizations about the health care system in Kansas, they are not to be used as an exact comparison to the outpatient setting. In addition, having a limited number of cases for certain preventable conditions makes analysis of disparities in race and ethnicity unreliable.

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Demographic Characteristics of Hypothermia-Related Decedents during the 2011-2012 Cold Season in Kansas

Objectives

In the United States, the annual incidence rate of hypothermia-related deaths is low (4/1,000,000 population) [1]. Hypothermia causes approximately 600 deaths a year [2] and affects particularly the elderly, the very young, the homeless, and people with altered mental state [1]. However, death due to exposure to excessive natural cold (ICD-10=X31) is preventable [1, 3, 4]. Hypothermia is defined as a core body temperature less than or equal to 95° F. Symptoms include lethargy, weakness, loss of coordination, confusion, uncontrollable shivering, and reduced respiratory and heart rate [4].

In Kansas, from 2005 to 2010, there were 33 resident deaths due to exposure to natural cold, an average of 5.5 deaths per year. In 2011, there were an additional seven deaths due to exposure to cold. The purpose of this report is to describe the demographic characteristics of those decedents.

Methods

For the purpose of this analysis, copies of death certificates submitted to the Office of Vital Statistics (OVS) at the Kansas Department of Health and Environment (KDHE) were reviewed. Criteria for selection included all deaths that that occurred between October 1, 2011 and April 30, 2012 where exposure to natural cold (ICD-10 Code= X31) was listed as the immediate or underlying cause of death.

Results

From October 1, 2011 to April 30, 2012, there were seven resident deaths in Kansas due to hypothermia following exposure to natural cold. Two of the decedents were female and five were male (Table 1). The mean age at death was 55 for women and 66 for men. The youngest decedent was 28 years old and the oldest was 91 years old (Table 2). Except for one where race and ethnicity were not reported, all were white and non-Hispanic. Four decedents died outdoors or outside of their home, two died in a medical facility, and one was found at home with no functioning heating system (Table 3). Three had dementia or intoxication as contributing cause of death. Five had high school level of education or less (Table 4).

Table 1. Distribution of Decedents by Sex

Sex	Frequency	Percent
F	2	28.6 %
M	5	71.4 %
TOTAL	7	100.0 %

Table 2. Age of Decedents by Sex

Sex	Frequency	Mean	Range
Male	2	55.5	52.0 - 59.0
Female	5	66.0	28.0 - 91.0

Table 3. Distribution of Decedents by Place of Death

Place of Death	Frequency	Percent
ER/Outpatient	1	14.29 %
Inpatient	1	14.29 %
Other	4	57.14 %
Own Residence	1	14.29 %
TOTAL	7	100.00 %

Table 4. Distribution of Decedents by Level of Education

Education	Frequency	Percent
8th grade or less	2	28.57 %
High School graduate or GED	3	42.86 %
Some college credits - No degree	1	14.29 %
Unknown	1	14.29 %
TOTAL	7	100.00 %

Discussion

Following guidelines from the National Center for Health Statistics (NCHS) regarding publication of mortality rates for fewer than 20 cases [5], only counts are presented in this report. Those guidelines stipulate that rates for fewer than 20 cases are highly unstable. However, this report could be useful to public health professionals as it provides timely information on a highly preventable cause of injury, illness, and death. Also, it would be beneficial to correlate the death reports with recorded climatic data. This will allow not only confirmation of the exposure but also identification of risk factors associated with climatic patterns. One should also take into consideration the non-fatal injuries and illnesses that occur during cold weather. Indeed, from November 1, 2011 to March 15, 2012, Kansas hospitals through the EMResource reporting system voluntarily reported 164 injuries and illnesses due to exposure to the cold weather. This number is most likely an undercount since not all hospitals reported their cases. However, it provides a glimpse of the burden of cold weather on the state's healthcare facilities.

Conclusions

Despite the fact that Kansas and other states in the midwest experienced a very mild winter during the 2011-2012 season (the northeastern region of Kansas registered less than four inches of snow for the whole season [6]), seven Kansas residents died following exposure to environmental cold. All decedents had known risk factors including altered mental state (dementia or intoxication), old age, or being male. Therefore, several or all of these deaths might have been prevented. Public health interventions tailored to persons at increased risk for death and injury due to exposure to excessive natural cold are needed in Kansas. Further data analyses are warranted to better understand the risk factors associated with local weather patterns, geography, built environment, and other socioeconomic characteristics.

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Community Health Assessment Progress in Kansas Counties
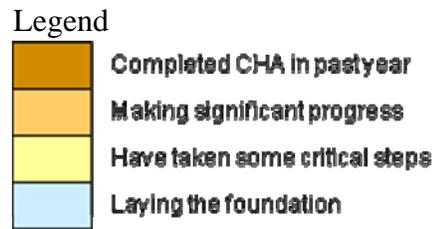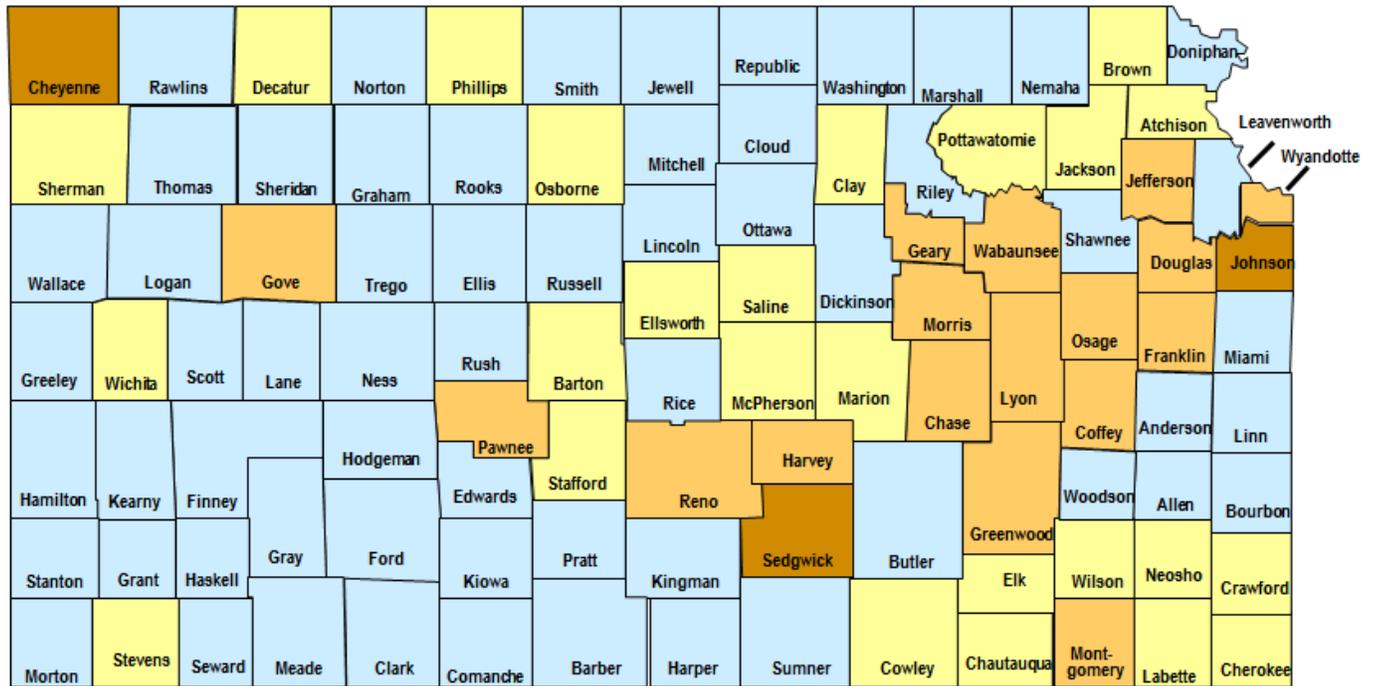
Community Health Assessment (CHA) is one of the core functions of public health agencies. In Kansas local health department and hospitals are working together on health assessments. The Kansas Department of Health and Environment is supporting health assessment efforts with statistics, technical assistance, and partnerships with public and private agencies. Some counties are conducting assessments as a regional group, others as individual counties. The map shows assessment progress. CHA information will be used as a foundation for health improvement plans for Kansas.

Data Source – March 2012 reports for SFY Formula Applications; Office of Local Public Health, Kansas Department of Health and Environment. Categories determined by responses to a pre-determined set of "Steps toward Completion of Community Health Assessment."

Announcements

Vital Records, Health, 200 Years of NEJM

In *The Burden of Disease and the Changing Task of Medicine*, published recently by the New England Journal of Medicine (http://www.nejm.org/doi/full/10.1056/NEJMp1113569), the authors reviewed how disease has changed since 1812. The article reports how disease is measured and defined, and included an interactive graphic that shows the top ten causes of death every ten years from 1900 to 2010. Discussion of the progress made in the past 200 years has not been possible without the contributions of those who work in vital records and health statistics. The vital records clerks, field representatives, nosologists, statisticians, IT specialists, and other professions represent the unacknowledged contributors to many public health and medical research publications in Kansas and the United States.

Errata

The May 2011 issue of Kansas Health Statistics Report incorrectly reported that the population density classification of Doniphan County changed from densely-settled rural to rural. This resulted from calculating population density based on the total area of the county instead of the total land area. Decennial census information and land area are used to create population density peer groups used for comparisons in many Bureau of Epidemiology and Public Health Informatics publications. This correction also resulted in errata and revised documents being published for the *2010 Annual Summary of Kansas Vital Statistics* and *Selected Special Statistics, Stillbirths and Infant Deaths, Kansas, 2010.* Population density values for the other peer groups, counties and the state remain unchanged.

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