Occupational Health Indicators in Kansas

Kansas
Department of Health and Environment



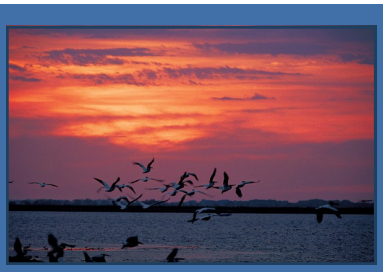


Table of Contents

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Preface

Background

More than 135 million individuals work in the United States. Every year, millions of these workers are injured on the job or become ill as a result of exposure to health hazards at work. These work-related injuries and illnesses result in substantial human and economic costs not only for workers and employers, but also for society at large. It has been estimated that the direct and indirect costs of work-related injuries and illnesses exceed $170 billion annually. Work-related injuries and illnesses can be prevented. Successful approaches to making workplaces safer and healthier begin with having the data necessary to understand the problem.

Merely monitoring the current health status of workers is not enough to protect. Careful monitoring, however, creates a baseline measurement which enables public health workers to detect anomalies when they occur. These anomalies will instigate further investigation, intervention and prevention measures.

Document Summary

This document presents 20 indicators that describe the occupational health status of the working population and provides data about these indicators across Kansas. The data are from 2009, the most recent data available. Data from subsequent years will be added as they become available. Because 2009 Occupational Safety and Health Administration (OSHA) inspection data are not available, this report provides OSHA inspection data for the years 2001 to 2008. Additionally, supplemental workers' compensation benefits data are provided for the years 2004-2008.

Occupational Health Indicators

Indicator Development

Recognizing the need for improved consistency and availability of occupational diseases and injury surveillance data, the Council of State and Territorial Epidemiologists developed a standard set of “Occupational Health Indicators.” These indicators can be used to measure the baseline health of working populations and changes that take place over time.

The council defined a set of 20 indicators along with a set of employment demographic measures. These definitions and a standardized methodology for their calculation were compiled in a document titled “Occupational Health Indicators: A Guide for Tracking Work-Related Health Conditions and Their Determinants.” The 20 occupational health indicators were selected because of their importance to public health and the availability of the data in most states.

At present, Kansas does not have an occupational health surveillance program at the state level. A state-wide program would routinely collect and analyze data and develop intervention and prevention strategies for a variety of work-related health effects. In an attempt to capture some baseline information about the health of working Kansans, the Kansas Department of Health and Environment has calculated the Occupational Health Indicators with Kansas specific data. The objective of this project is to help build capacity for occupational health surveillance in Kansas. In most cases, the data are presented for 2009, the most recent data available.

EMPLOYMENT DEMOGRAPHICS

Understanding the demographic characteristics of the working population in Kansas is essential to assess occupational health and work-related injuries. It allows for more detailed analysis of worker subgroups who may be experiencing higher than expected rates of work-related injuries or illnesses and helps in the planning and development of prevention activities.

In 2009, there were 1,425,000 people employed in Kansas. Of these, 80.2% were employed full-time, which was similar to the overall employment percentage in the United States (80.5%). In Kansas, approximately 6.8% of the population was unemployed, compared to 9.3% nationally.

In Kansas, approximately 93.1% of the employed population was between the ages of 18 and 64 in 2009. Nationally, this age group made up about 94.4% of the working population. In both Kansas and the United States, approximately 53% of the working population were male and 47% were female.

In Kansas, White workers made up 89.6% of the working population while nationally, 82.2% of workers were White. In Kansas, 5.0% of the working population was Black compared to 10.7% in the United States . In Kansas, 6.7% of workers were of Hispanic or Latino ethnicity, while nationally 14.0% of the total working population was Hispanic or Latino.

Employment demographics for Kansas, 2009

Total number employed[1]	1,425,000		
Self-employed	8.7%	Ages 16-17	2.1%
		Ages 18-64	93.1%
Employed part-time[2]	19.8%	Ages 65 and older	5.0%
Employed full-time	80.2%		
		Race: White	89.6%
Employed < 40 hours/week[3]	39.3%	Race: Black	5.0%
Employed 40 hours/week	31.7%	Race: Other	5.4%
Employed > 40 hours/week	29.1%		
		Ethnicity: Hispanic or Latino	6.7%
Men	52.7%		
Women	47.3%		
		Unemployed	6.8%

1 Total employed civilians ages 16 and older
2 Employed persons are classified as full or part-time workers on the basis of their usual weekly hours at all jobs, regardless of the number of hours they are at work during the reference week. Persons absent from work are classified according to their usual status.
3 Includes people who worked 0 hours during the week of the survey due to vacation, sick leave, or other leave.
Sources: Bureau of Labor Statistics Current Population Survey and Geographic Profile of Employment and Unemployment.

Employment demographics for United States, 2009

Total number employed[1]	139,877,000		
Self-employed	7.0%	Ages 16-17	1.2%
		Ages 18-64	94.4%
Employed part-time[2]	19.5%	Ages 65 and older	4.4%
Employed full-time	80.5%		
		Race: White	82.2%
Employed < 40 hours/week[3]	37.9%	Race: Black	10.7%
Employed 40 hours/week	39.0%	Race: Other	7.1%
Employed > 40 hours/week	23.1%		
		Ethnicity: Hispanic or Latino	14.0%
Men	52.7%		
Women	47.3%		
		Unemployed	9.3%

1 Total employed civilians ages 16 and older
2 Employed persons are classified as full or part-time workers on the basis of their usual weekly hours at all jobs, regardless of the number of hours they are at work during the reference week. Persons absent from work are classified according to their usual status.
3 Includes people who worked 0 hours during the week of the survey due to vacation, sick leave, or other leave.
Source: Bureau of Labor Statistics Current Population Survey

Limitations of Data Resources: The Geographic Profiles data are based on the Current Population Survey (CPS), which is a monthly probability sample of households across the United States. Geographic Profiles excludes workers less than 16 years of age, active-duty members of the military, and inmates in institutions. These data may underestimate the percentage of certain racial or ethnic worker populations that do not have permanent residences, or are migratory in nature. Additional Information is available at http://www.bls.gov/gps/home.htm.

INDUSTRY AND OCCUPATION DEMOGRAPHICS

Industries that employed the most civilian workers in Kansas in 2009 included Education and Health Services, which employed approximately 361,950 people or 25.4% of the total working population. Other top industries included Wholesale and Retail Trade (13.4%) and Professional and Business Services (8.9%). The occupational groups that employed the largest percentage of civilian workers included Professional and Related occupations, which employed 313,500 people (22%), followed by Services (17.0%) and Management, Business and Financial Operations (16.1%).

Nationally, the employment picture was similar. The industry that employed the most workers was also Education and Health Services (22.7%), followed by Wholesale and Retail Trade (14.1%) and Professional and Business Services (10.7%). The largest percentage of workers were employed in the Professional and Related occupations (21.9%), Services (17.6%) and Management, Business and Financial Operations (15.4%).

Industry and occupation demographics for Kansas, 2009

Total number employed[1]	1,425,000		
Industry		Occupation	
Mining	0.6%	Management, business and financial operations	16.1%
Construction	6.4%	Professional and related	22.0%
Manufacturing-durable goods	7.6%	Services	17.0%
Manufacturing-nondurable goods	4.5%	Sales and related	10.7%
Wholesale and retail trade	13.4%	Office and administrative support	12.5%
Transportation and utilities	4.4%	Farming, fishing, and forestry	0.7%
Information	2.9%	Construction and extraction	5.2%
Financial activities	6.4%	Installation, maintenance, and repair	4.4%
Professional and business services	8.9%	Production	6.1%
Education and health services	25.4%	Transportation and material moving	5.3%
Leisure and hospitality	8.2%		
Other services	4.2%		
Public administration	3.9%		
Agriculture and related	3.3%		

1 Total employed civilians ages 16 and older
Source: Bureau of Labor Statistics Geographic Profile of Employment and Unemployment.

Industry and occupation demographics for United States, 2009

Total number employed[1]	139,877,000		
Industry		**Occupation**	
Mining, quarrying, oil, gas extraction	0.5%	Management, business and financial operations	15.4%
Construction	6.9%	Professional and related	21.9%
Manufacturing-durable goods	6.4%	Services	17.6%
Manufacturing-nondurable goods	3.8%	Sales and related	11.2%
Wholesale and retail trade	14.1%	Office and administrative support	13.0%
Transportation and utilities	5.2%	Farming, fishing, and forestry	0.7%
Information	2.3%	Construction and extraction	5.3%
Financial activities	6.9%	Installation, maintenance, and repair	3.5%
Professional and business services	10.7%	Production	5.5%
Education and health services	22.7%	Transportation and material moving	5.9%
Leisure and hospitality	9.1%		
Other services	5.0%		
Public administration	4.9%		
Agriculture and related	1.5%		

1 Total employed civilians ages 16 and older
Source: Bureau of Labor Statistics Current Population Survey

Limitations of Data Resources: The Geographic Profiles data are based on the Current Population Survey (CPS), which is a monthly probability sample of households across the United States. Geographic Profiles excludes workers less than 16 years of age, active-duty members of the military, and inmates in institutions. These data may underestimate the percentage of certain racial or ethnic worker populations that do not have permanent residences, or are migratory in nature. Additional Information is available at http://www.bls.gov/gps/home.htm.

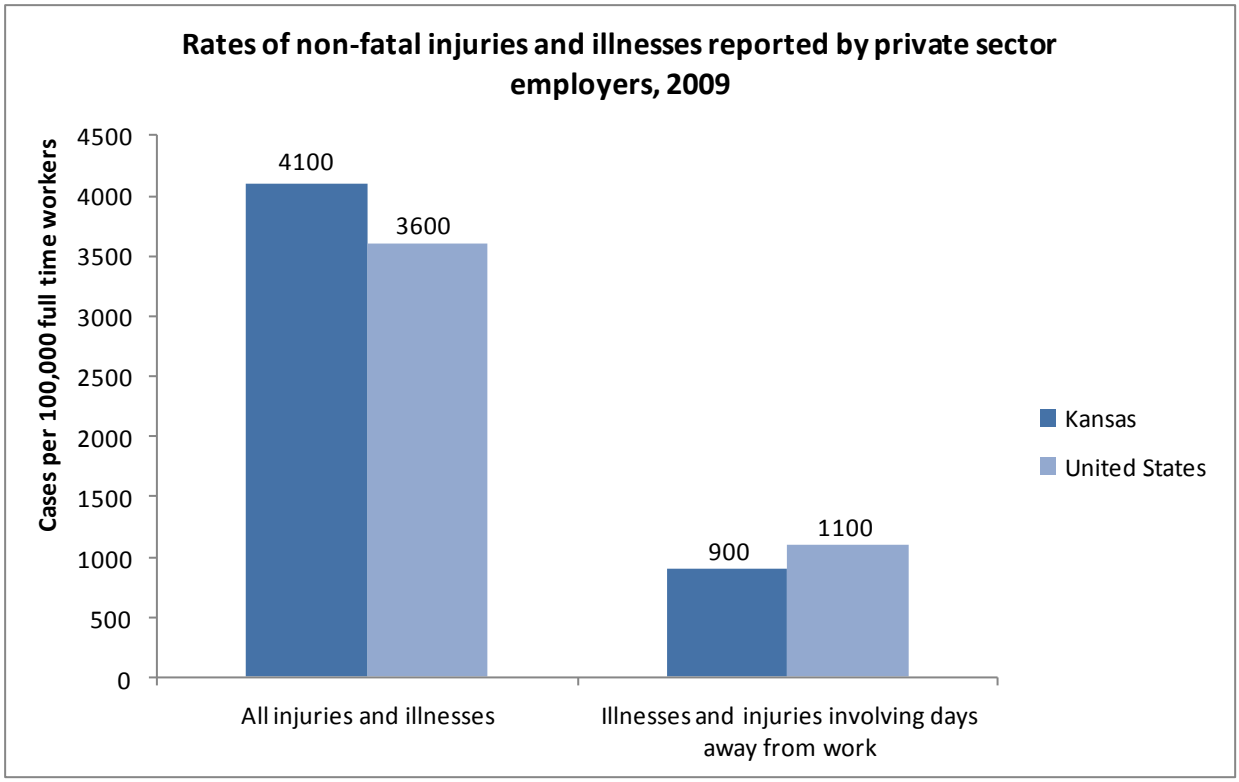
I N D I C A T O R 1

Non-fatal work-related injuries and illnesses reported by private sector employers, 2009

The identification of non-fatal work-related injuries and illnesses and the associated factors, risks and exposures is useful for intervention, education, prevention and regulatory efforts. Work-related injuries are typically one-time events and include injuries like burns, falls and electrical shocks. Work-related illnesses are usually the result of cumulative exposure to hazardous materials or repetitive motions. Examples include asbestosis and carpal tunnel syndrome.

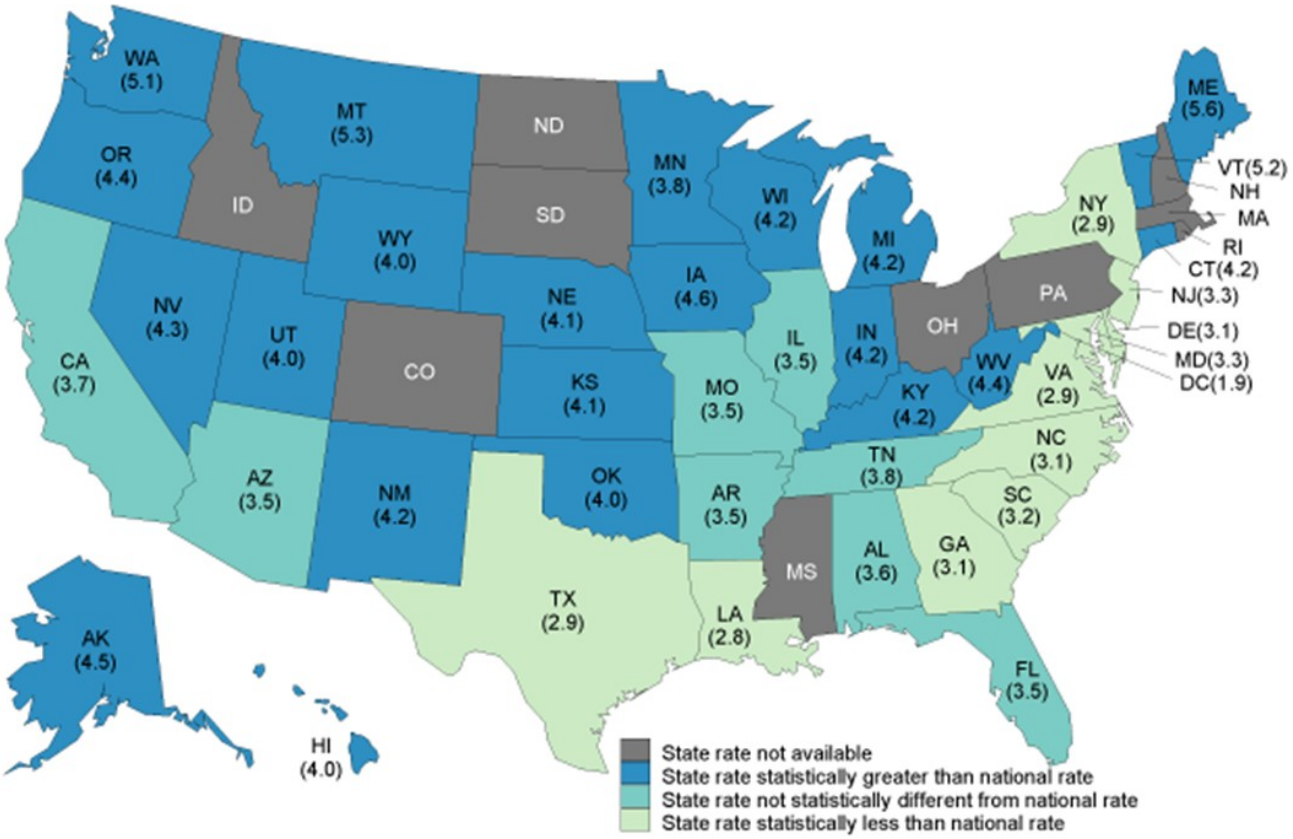
The Bureau of Labor Statistics' Annual Survey of Occupational Injuries and Illnesses (SOII) provides yearly estimates of the numbers and incidence rates of work-related injuries and illnesses at national and state levels. Information is collected from a nationwide sample of employers on all work-related injuries and illnesses that result in death, lost work-time, medical treatment other than first aid, loss of consciousness, restriction of work activity, or transfer to another job.

Private sector employers in Kansas reported an estimated 38,200 injuries and illnesses to workers in 2009. The corresponding rate of injuries and illnesses was 4,100 per 100,000 workers. Nationally, private sector employers reported 3,277,700 cases in the same year, equating to approximately 3,600 injuries and illnesses per 100,000 workers.



Source: Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

State nonfatal occupational injury and illness incidence rates* compared to the national rate, private industry, 2009



* Total recordable case (TRC) incidence rate per 100 full-time workers
Source: Bureau of Labor Statistics, U.S. Department of Labor, October 2010

Of the cases reported in Kansas, approximately 8,700 (23%) involved at least one lost day of work and 3,900 (10%) cases involved more than 10 days of work lost. Nationally, 964,900 cases resulted in at least one lost day of work and 429,820 involved more than 10 days of work lost. The rate of cases involving days away from work was 900 per 100,000 workers in Kansas and 1,100 per 100,000 workers nationally.

Kansas experienced a statistically significant higher incidence of injuries and illnesses, 4.1 cases per 100 full-time workers (or 4,100 per 100,000 workers), compared to the national rate, 3.6 cases per 100 full-time workers (or 3,600 per 100,000 workers) in 2009. Of those states that participate in SOII, 22 states experienced a higher incidence rate compared to the national rate, while eleven states experienced a lower rate.

Limitations of Data Resources: The Survey of Occupational Injuries and Illnesses (SOII) is a function of the Bureau of Labor Statistics (BLS) using a probability sample and not a census of all employers. It is based on injury and illness data maintained by employers and is subject to sampling error. There is a potential for additional sampling error if an employer has more than 30 cases with days away from work as an employer is only required to report on 30 such cases.

Excluded from the survey are the military, self-employed individuals, farms with fewer than 11 employees and Federal agencies. In some states, the survey does not cover the state and municipal employees. Therefore, this indicator is limited to the private sector workforce only. Employers vary with respect to how much they may reduce their potential reporting burden by placing affected workers on restricted work activity, thereby avoiding the reporting of lost workday cases (which requires reporting of additional details).

I N D I C A T O R 2

Work-related hospitalizations, 2009

Describing and tracking work-related hospitalizations are useful for identifying high-risk occupations and targeting prevention efforts. Individuals hospitalized for work-related injuries and illnesses can have some of the most serious and costly adverse work-related health conditions.

In 2009, there were 1,111 cases of work-related hospitalizations in Kansas. The rate of work-related hospitalizations was 78.0 cases per 100,000 workers. The rate of hospitalizations was more than twice as high for males (108.5 per 100,000 male workers) compared to females (43.9 per 100,000 female workers).

Work-related hospitalizations by sex, Kansas 2009

Sex	Number
Male	815
Female	296
Total	1,111

Source: Kansas Hospital Association and Bureau of Labor Statistics Current Population Survey

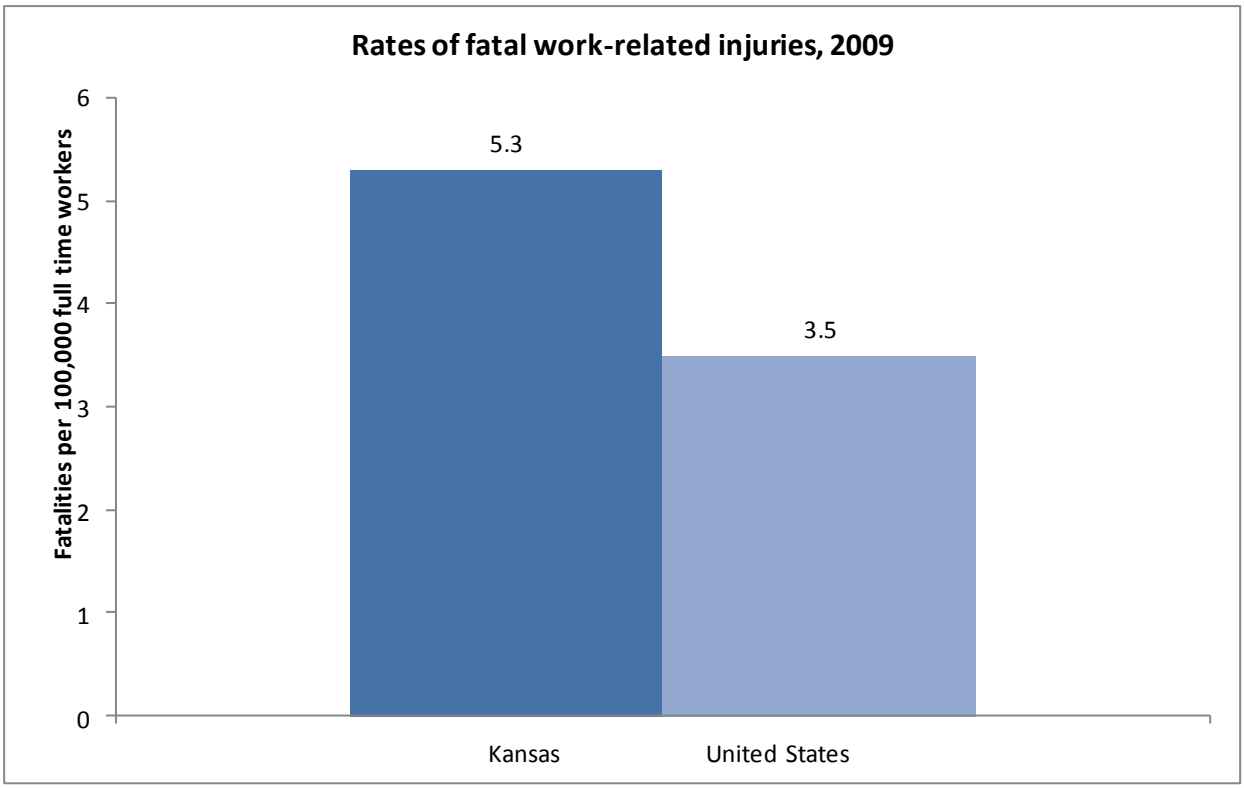
Limitations of Data Resources: Data were provided to the Kansas Department of Health and Environment by the Kansas Hospital Association. The data include all hospital discharges with a primary payer of workers compensation. The data exclude patients with age unknown, patients under the age of 16, out-of-state residents or unknown residence and out-of-state hospitalizations. All admissions are counted, including multiple admissions for a single individual.

I N D I C A T O R 3

Fatal work-related injuries, 2009

Fatal work-related injuries are defined as injuries that occur at work and result in death. Since 1982, the Bureau of Labor Statistics has conducted the Census of Fatal Occupational Injuries (CFOI) using multiple data sources. Fatal work-related injuries include unintentional injuries, such as falls, electrocutions and motor vehicle accidents, and intentional injuries, including homicides and suicides that occur at work. Utilizing surveillance data to identify risk factors and exposures related to work-related fatalities is useful for intervention, prevention and regulatory efforts.

In 2009, 76 workers were fatally injured on the job in Kansas. Nationally, 4551 workers were fatally injured. In Kansas, the rate of fatal work-related injuries was 5.3 per 100,000 workers while nationally the rate was 3.5 per 100,000 workers.



Sources: Bureau of Labor Statistics Census of Fatal Occupational Injuries and Current Population Survey

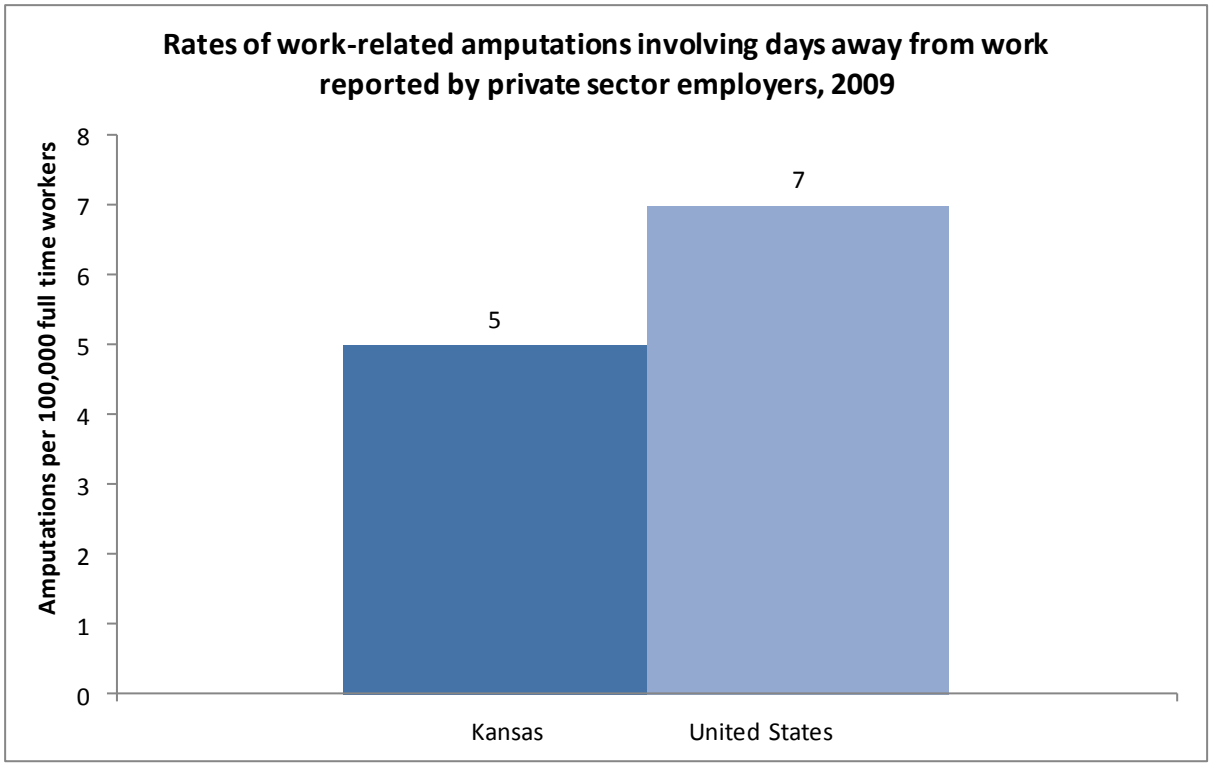
Limitations of Data Resources: States that participate in the CFOI program are not permitted to release occupation or industry specific data when data are sparse. The program publishes findings according to the Occupational Illness and Injury Classification (OICS) system rather than the International Classification of Diseases (ICD) codes; therefore, data from the program may not be comparable to causes of death documented on death certificates.

I N D I C A T O R 4

Work-related amputations involving days away from work reported by private sector employers, 2009

Most work-related amputations involve full or partial loss of fingers. Less common amputations involve the arm, leg, foot, toe, nose and ear. Work-related amputations can be prevented through the identification and control of occupational hazards and the implementation of safety procedures and regulations. The Bureau of Labor Statistics' Annual Survey of Occupational Injuries and Illnesses (SOII) provides yearly state and national estimates of the numbers and incidence rates of work-related amputations that involve at least one day away from work.

In 2009, there were an estimated 50 amputations reported among private sector employees in Kansas. Nationally, there were 5,930 amputations reported. In Kansas, the rate of amputations was approximately 5 per 100,000 workers while nationally the rate was approximately 7 per 100,000 workers.



Sources: Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

Limitations of Data Resources: The Survey of Occupational Injuries and Illnesses (SOII) is a probability sample and not a census of all employers. It is based on injury and illness data maintained by employers and is subject to sampling error. There is a potential for additional sampling error if an employer has more than 30 cases with days away from work, as an employer is only required to report on 30 such cases. Excluded from the survey are the military, self-employed individuals, farms with fewer than 11 employees, and Federal agencies. Employers vary with respect to how much they may reduce their potential reporting burden by placing affected workers on restricted work activity, thereby avoiding the reporting of lost workday cases (which requires reporting of additional details). In addition, the survey only collects data for the incident year, and does not capture lost work-time that may carry over to a new calendar year.

I N D I C A T O R 5

State workers' compensation claims for amputations with lost work-time, 2009

Most work-related amputations involve full or partial loss of fingers. Less common amputations involve the arm, leg, foot, toe, nose and ear. Work-related amputations can be prevented through the identification and control of occupational hazards and the implementation of safety procedures and regulations. In Kansas, workers compensation claims are filed with the Workers Compensation System within the Kansas Department of Labor.

There were 57 amputation cases with lost work-time claims filed with the Kansas Workers Compensation System where the date of injury was in 2009 . This resulted in an annual incidence rate of 4.4 amputations per 100,000 workers covered by workers compensation.

Limitations of Data Resources: The workers compensation statute defines a time loss claim as an injury or illness that causes the employee to lose work time more than the remainder of the day, shift or turn. The International Association of Industrial Accident Boards and Commissions (IAIABC)/ Advisory Statistical Working Group (ASWG) coding system was used for coding amputations. In 2009, the statute of limitations to file a claim for a work-related injury was 200 days from the date of injury. Time loss claims are reported within 28 days of the employer's knowledge of the injury. Some industries/ occupations are excluded from mandatory workers compensation coverage. Agricultural pursuits, some limited liability corporations (LLC) and small business or family businesses with a total payroll of $20,000 are able to opt out of coverage. It is estimated by the Kansas Department of Labor that 98% of employers in Kansas fall under coverage requirements of the workers compensation act.

I N D I C A T O R 6

Hospitalizations for work-related burns, 2009

Hospitalizations from work-related burns include injuries to tissues caused by contact with dry heat (fire), moist heat (steam), chemicals, electricity, friction or radiation. Burns are among the most expensive work-related injuries to treat and can result in significant disability. The designation of workers' compensation payment as primary payer on hospital discharge records is used as a proxy for work-relatedness of injuries that require hospitalization.

In 2009, there were 34 hospitalizations from work-related burns in Kansas. The rate of hospitalizations was 2.4 cases per 100,000 workers.

Limitations of Data Resources: Data were provided to the Kansas Department of Health and Environment by the Kansas Hospital Association. The data include all hospital discharges with a primary payer of workers compensation. The data excludes patients with age unknown, patients under the age of 16, out-of-state residents or unknown residence and out-of-state hospitalizations. All admissions are counted, including multiple admissions for a single individual.

I N D I C A T O R 7

Work-related musculoskeletal disorders involving days away from work reported by private sector employers, 2009

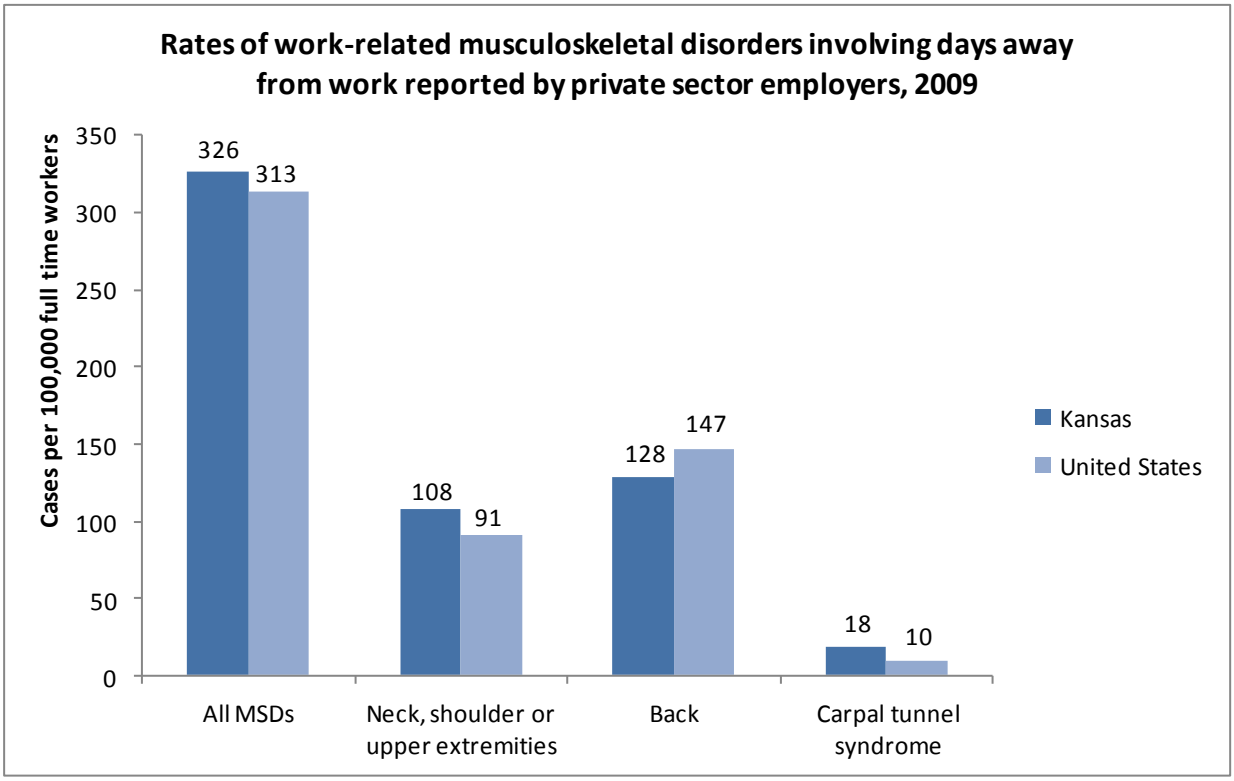
Work-related musculoskeletal disorders (MSDs) are injuries or disorders of muscles, tendons, nerves, ligaments, joints or spinal discs that are caused or aggravated by work activities. Workplace risk factors include repetitive forceful motions, awkward postures, use of vibrating tools or equipment and manual handling of heavy, awkward loads. These disorders can also be caused by single, traumatic events, such as falls. The Bureau of Labor Statistics' Annual Survey of Occupational Injuries and Illnesses (SOII) collects data on work-related musculoskeletal disorders reported as overexertion, repetitive motion or bending, reaching or twisting. The survey excludes disorders caused by single events such as slips and falls and motor vehicle accidents.

In 2009, there were an estimated 3,060 cases of MSDs reported among private sector employees in Kansas. This equates to a rate of 326 cases per 100,000 workers. Nationally, there were 283,800 cases reported, equating to 313 MSD cases per 100,000 workers.

Of the MSD cases reported in Kansas, 1,010 (33%) involved the neck, shoulder or upper extremities. Nationally, 82,640 cases (29%) involved these body parts. In Kansas, the rate of cases involving the neck, shoulder or upper extremities was 108 per 100,000 workers while the rate nationally was 91 per 100,000 workers.

In Kansas, 1,200 cases (39%) involved the back, including the spine and spinal cord. Nationally, 133,470 (47%) involved these body parts. In Kansas, the rate of cases involving the back was 128 per 10,0000 workers. Nationally, the rate was 147 per 100,000 workers.

Of the MSD cases reported to SOII in Kansas, 170 cases (6%) were due to carpal tunnel syndrome (CTS). Nationally, there were 9,140 CTS cases (3%) reported to SOII. In Kansas, the rate of carpal tunnel syndrome cases was 18 per 100,000 workers while the national rate was 10 per 100,000 workers.



Source: Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

Limitations of Data Resources: The Survey of Occupational Injuries and Illnesses (SOII) is a probability sample and not a census of all employers. It is based on injury and illness data maintained by employers and is subject to sampling error. There is a potential for additional sampling error if an employer has more than 30 cases with days away from work, as an employer is only required to report on 30 such cases. Excluded from the survey are the military, self-employed individuals, farms with fewer than 11 employees and Federal agencies. Employers vary with respect to how much they may reduce their potential reporting burden by placing affected workers on restricted work activity, thereby avoiding the reporting of lost workday cases (which requires reporting of additional details). In addition, the survey only collects data for the incident year, and does not capture lost work-time that may carry over to a new calendar year.

I N D I C A T O R 8

State workers' compensation claims for carpal tunnel syndrome with lost work-time, 2009

Carpal tunnel syndrome (CTS) occurs when the median nerve is compressed at the wrist. Symptoms range from a burning, tingling or numbness in the fingers to difficulty gripping or holding objects. Workplace factors that may cause or aggravate CTS include direct trauma, repetitive forceful motions or awkward postures of the hands, and use of vibrating tools or equipment. Claims data from the Kansas Workers Compensation System were used as the data source for this indicator and data from the National Academy of Social Insurance were used to obtain the total number of workers covered by workers compensation in Kansas.

There were 704 cases of CTS with lost work-time filed with Kansas Workers Compensation where the date of injury was in 2009. The annual incidence rate of CTS was 54.9 cases per 100,000 workers covered by workers compensation.

Limitations of Data Resources: The workers compensation statute defines a time loss claim as an injury or illness that causes the employee to lose work time more than the remainder of the day, shift or turn. The International Association of Industrial Accident Boards and Commissions (IAIABC) / Advisory Statistical Working Group (ASWG) coding system was used for coding amputations. In 2009, the statute of limitations to file a claim for a work-related injury was 200 days from the date of injury. It is mandatory to report any time loss claim within 28 days of the employer's knowledge of the injury. Some industries/occupations are excluded from mandatory workers compensation coverage. Agricultural pursuits, some limited liability corporations (LLC) and small business or family businesses with a total payroll of $20,000 are able to opt out of coverage requirements . It is estimated by the Kansas Department of Labor that 98% of employers in Kansas fall under coverage requirements of the workers compensation act.

I N D I C A T O R 9

Hospitalizations from or with Pneumoconiosis, 2009

Pneumoconiosis is a term for class of non-malignant lung diseases caused by the inhalation of mineral dust, usually in an occupational setting. Most cases of pneumoconiosis develop only after many years of cumulative exposure; thus, they are usually diagnosed in older individuals long after the onset of exposure. Data for this indicator were obtained from hospital discharge data and population statistics were obtained from the United States Census Bureau.

In 2009, there were 95 pneumoconiosis hospitalizations in Kansas for persons age 15 years and older. The annual rate was 42.6 hospitalizations per million residents.

Of the 95 hospitalizations in 2009, 75 were from asbestosis, nine from silicosis, less than six from coal workers' pneumoconiosis, and six from other and unspecified pneumoconiosis. The annual rates per million residents were 33.6 hospitalizations from asbestosis, 4.0 from silicosis, and 2.7 from other and unspecified pneumoconiosis. The rate of hospitalizations from coal workers' pneumoconiosis could not be calculated due to small numbers.

In 2009, the age-standardized pneumoconiosis hospitalization rate was 39.9 cases per million residents in Kansas. The annual age-standardized rates per million residents were 31.8 hospitalizations from asbestosis, 3.3 from silicosis, and 2.8 from other and unspecified pneumoconiosis.

Limitations of Data Resources: Data were provided to the Kansas Department of Health and Environment by the Kansas Hospital Association. The data include all hospital discharges with a primary or secondary diagnosis of pneumoconiosis. The data excludes patients with age unknown, patients under the age of 15, out-of-state residents or unknown residence and out-of-state hospitalizations. All admissions are counted, including multiple admissions for a single individual. Hospital discharge data are a useful population-based surveillance data source for obtaining the number of pneumoconiosis cases, even though only a small number of individuals with the disease are hospitalized. Therefore, hospitalization rates likely underestimate the true burden of the disease among workers. Also, pneumoconiosis may occur many years after a worker's exposure to hazardous dust. The latency from time of exposure to detection of disease averages 20 to 40 years; therefore, rates in 2009 may reflect past exposures from the 1960s to the 1980s.

I N D I C A T O R 10

Mortality from or with Pneumoconiosis, 2009

Pneumoconiosis is a term for a class of non-malignant lung diseases caused by the inhalation of mineral dust, usually in an occupational setting. Most cases of pneumoconiosis develop only after many years of cumulative exposure; thus, they are usually diagnosed in older individuals long after the onset of exposure. Data for this indicator were obtained from death certificate data collected by the Kansas Department of Health and Environment, and population statistics were obtained from the United States Census Bureau. National comparison data were obtained from the National Vital Statistics Reports.

There were less than six deaths where pneumoconiosis was the underlying cause or a contributing cause reported in Kansas in 2009. The number is too small to produce reliable estimates; therefore, a rate was not calculated. Preliminary national data indicates that there were 843 deaths from pneumoconiosis, equating to a mortality rate of three deaths per million persons.

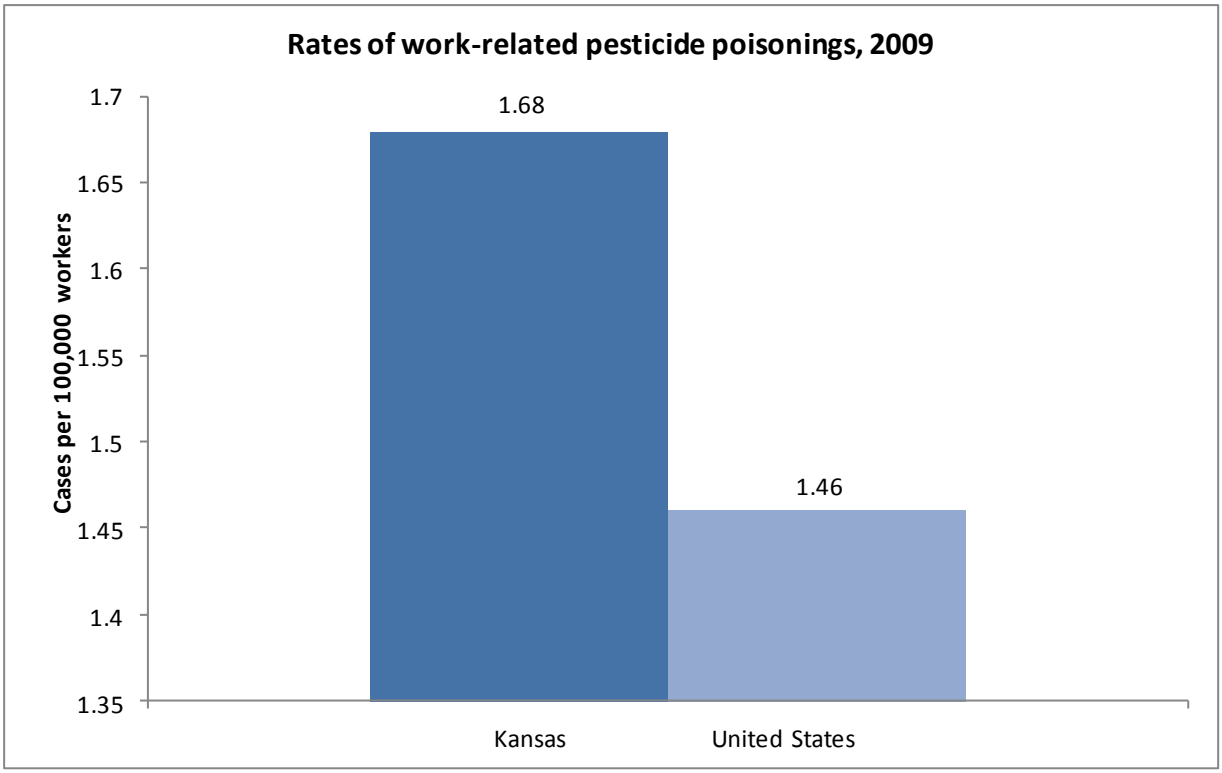
Limitations of Data Resources: Several factors may account for differences in how physicians complete the cause of death information. These factors include individual biases, unfamiliarity with the patient, or the lack of autopsy data. The number of contributing causes of death listed on the death certificate may vary by person completing the death certificate and geographic region. Death certificates identify only a small percentage of the individuals who develop pneumoconiosis. The state of residence upon death may not be the state of exposure.

I N D I C A T O R 11

Acute work-related pesticide poisonings reported to Poison Control Centers, 2009

A pesticide is a substance or mixture of substances used to prevent or control undesired insects, plants, animals or fungi. Adverse health effects from exposure to pesticides vary depending on the amount and route of exposure, and the type of chemical used. Data for this indicator were obtained from the Kansas Poison Control Center, American Association of Poison Control Centers and workforce estimates were obtained from the Bureau of Labor Statistics Current Population Survey.

In 2009, 24 cases of work-related pesticide poisonings were reported to the Kansas Poison Control Center. Nationally, 2,040 cases were reported. The rate of work-related pesticide poisonings was 1.68 per 100,000 workers in Kansas while the corresponding rate nationally was 1.46 cases per 100,000 workers.



Sources: Kansas Poison Control Center, American Association of Poison Control Centers and Bureau of Labor Statistics Current Population Survey

Limitations of Data Resources: Not all work-related pesticide exposures resulting in an illness are reported to Poison Control Centers. Calls to state and regional Poison Control Centers are estimated to capture only approximately 10% of acute occupational pesticide-related illness cases. Most reported work-related pesticide poisonings are acute exposures to pesticides; chronic long-term exposures are usually not reported to Poison Control Centers.

I N D I C A T O R 12

Incidence of malignant mesothelioma, 2009

Malignant mesothelioma is a rare, but highly fatal, cancer of the thin membranes that surround the chest cavity (pleura) or abdominal cavity (peritoneum). Much less frequently, this tumor can also affect other sites, such as the pericardium surrounding the heart. The only well-established risk factor for mesothelioma is exposure to asbestos fibers. Most persons diagnosed with malignant mesothelioma were exposed to asbestos in the work environment. Data for this indicator were obtained from the Kansas Cancer Registry and population statistics from the United States Census Bureau.

In 2009, there were 16 incident cases of mesothelioma in Kansas residents. The annual incidence rate was 7.2 cases per million residents. The age-standardized mesothelioma incidence rate was 7.0 cases per million residents.

Limitations of Data Resources: Mesothelioma is a disease with long latency, typically 20 to 40 years between exposure and onset of the disease; therefore rates in 2009 may reflect past exposures from the 1960s to the 1980s.

I N D I C A T O R 13

Elevated blood lead levels among adults, 2009

Lead poisoning among adults is primarily due to occupational exposure. Exposure to lead in adults can cause anemia, nervous system dysfunction, kidney damage, hypertension, decreased fertility and miscarriage. Workers bringing lead dust home on their clothing and shoes can expose their children to lead. The data for this indicator were obtained from the Kansas Adult Blood Lead Epidemiology and Surveillance (ABLES) program and employment estimates were obtained from the Bureau of Labor Statistics' Current Population Survey.

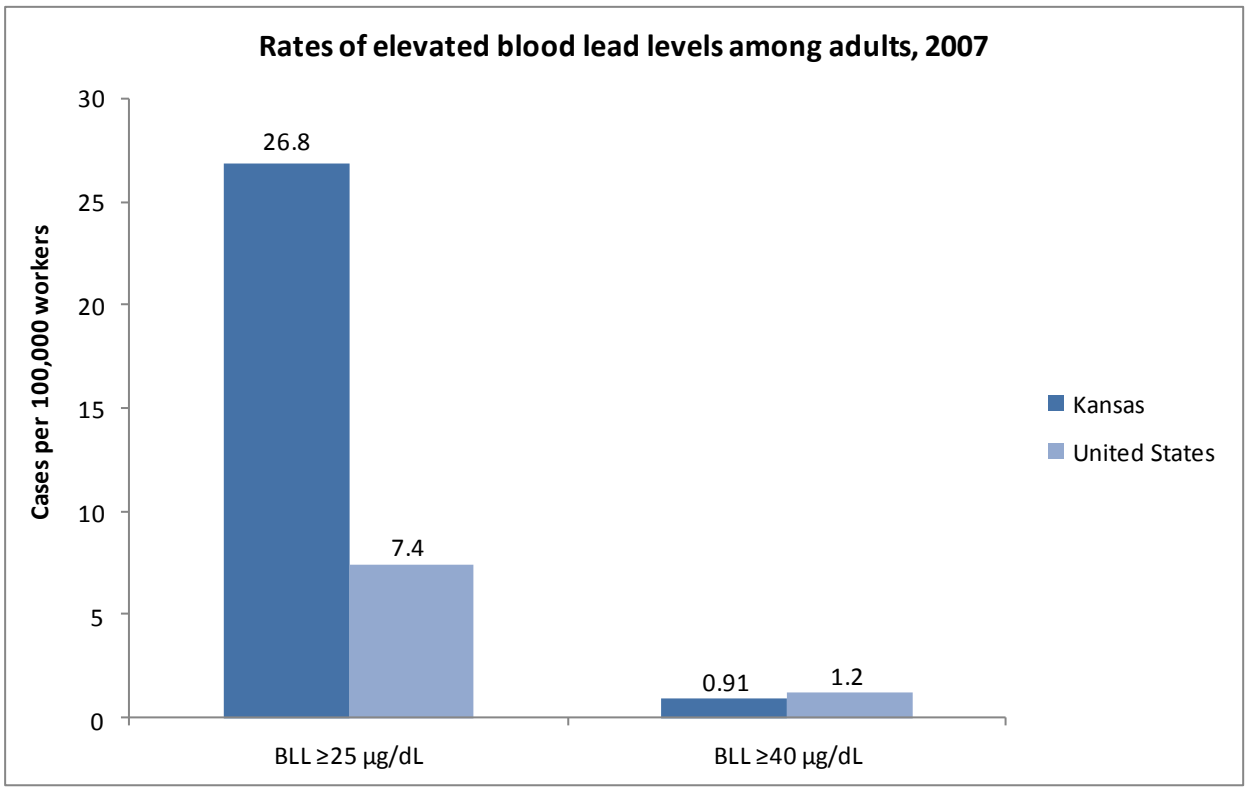
In 2009, there were 1,150 cases of blood lead levels (BLL) ≥10 micrograms per deciliter (µg/dL) among Kansas residents. The rate of BLL ≥10 µg/dL was 80.7 cases per 100,000 workers. Of these cases, 203 were new, or incident, cases in 2009. The annual incidence rate of BLL ≥10 µg/dL was 14.2 cases per 100,000 workers.

In 2009, there were 312 cases of BLL ≥25 µg/dL among Kansas residents. The rate of BLL ≥25 µg/dL was 21.9 cases per 100,000 workers. Of these cases, there were 126 incident cases. The annual incidence rate of BLL ≥25 µg/dL was 8.8 cases per 100,000 workers.

National case and rate estimates for 2009 have not been published; therefore, a comparison cannot be made for this year. However, in 2007, there were 385 cases of BLL ≥25 µg/dL among Kansas residents, while nationally, there were 8,451 cases among reporting states. In 2007, the rate of BLL ≥25 µg/dL was 26.8 cases per 100,000 workers in Kansas, while the national rate was 7.4 cases per 100,000 workers.

In 2009, among Kansas residents, there were eight cases of BLL ≥40 µg/dL. The rate of BLL ≥40 µg/dL was 0.56 cases per 100,000 workers. Of these cases, all 8 were incident cases; therefore, the annual incidence rate of BLL ≥40 µg/dL was also 0.56 cases per 100,000 workers.

Again, national estimates are not available for this year for comparison. However, in 2007, there were 13 cases of BLL ≥40 µg/dL among Kansas residents compared to 1,319 cases among states reporting nationally. The rate of BLL ≥40 µg/dL was 0.91 cases per 100,000 workers in Kansas, while the national rate was 1.2 cases per 100,000 workers.



Sources: Kansas Adult Blood Lead Epidemiology and Surveillance (ABLES) program and Bureau of Labor Statistics Current Population Survey.

Limitations of Data Resources: Laboratory results indicating elevated blood lead levels are mandatorily reported to the Adult Blood Lead Epidemiology and Surveillance (ABLES) program housed within the Kansas Department of Health and Environment. However, not all employers provide blood lead testing to all lead-exposed workers; thus underreporting may be a limitation. Also, this indicator assumes that all elevated blood lead levels were due to occupation. However, approximately 10-15% of elevated levels among adults can be due to non-occupational exposures. It is difficult to distinguish occupationally exposed individuals from non-occupationally exposed individuals due to underreporting of the exposure source.

I N D I C A T O R 14

Percentage of workers employed in industries at high risk for occupational morbidity, 2009

Workers in certain industries sustain non-fatal injuries and illnesses at much higher rates than the overall workforce. The list of high risk industries presented here are classified according to the North American Industry Classification System (NAICS) and are coded according to the NAICS industry codes. Data are obtained from the United States Census Bureau County Business Patterns, which reports the percentage of workers employed in industries at high risk for occupational morbidity. High morbidity risk industries are identified based on annual injury and illness incidence rates for private sector workers.

In 2009, 8.8% of the employed population in Kansas was employed in a high morbidity risk industry, according to the NAICS classification system. The high morbidity risk industries with the greatest number of persons employed included: Nursing and Residential Care Facilities, Animal Slaughtering Except for Poultry, Couriers and Messengers, Architectural and Structural Metals Manufacturing and Agricultural Implement Manufacturing.

In 2009, 7.1% of the employed population in the United States was employed in a high morbidity risk industry, according to the NAICS classification system. The high morbidity risk industries with the greatest number of persons employed included: Nursing and Residential Care Facilities, Special Food Services, Couriers and Messengers, Air Transportation, and Architectural and Structural Metals Manufacturing.

Average number of Kansans in the NAICS high morbidity risk industries, 2009

Industry Code	Industry Title	Number of persons
115111	Cotton Ginning	59.5
311311	Sugarcane Milling	0
311511	Fluid Milk Manufacturing	174.5
311611	Animal Slaughtering Except Poultry	13,798
311613	Rendering and Meat Byproduct Processing	174.5
311711	Seafood Canning	0
31211	Soft Drink and Ice Manufacturing	534
3161	Leather and Hide Tanning and Finishing	9.5
321214	Truss manufacturing	272
32192	Wood Container and Pallet Manufacturing	472
32199	All Other Wood Product Manufacturing	704
326212	Tire Retreading	59.5
327113	Porcelain Electrical Supply Manufacturing	0
327332	Concrete Pipe Manufacturing	174.5

Continued on next page

32739	Other Concrete Product Manufacturing	707
33122	Rolling and Drawing of Purchased Steel	35
331314	Secondary Smelting and Alloying of Aluminum	59.5
3315	Foundries	1,452
3321	Forging and Stamping	252
332214	Kitchen Utensil, Pot, and Pan Manufacturing	59.5
3323	Architectural and Structural Metals Manufacturing	5,344
332439	Other Metal Container Manufacturing	749.5
332618	Other Fabricated Wire Product Manufacturing	59.5
332721	Precision Turned Product Manufacturing	771
332997	Industrial Pattern Manufacturing	9.5
332999	All Other Miscellaneous Fabricated Metal Product Man.	853
33311	Agricultural Implement Manufacturing	4,550
33321	Sawmill and Woodworking Machinery Manufacturing	59.5
333291	Paper Industry Machinery Manufacturing	59.5
333294	Food Product Machinery Manufacturing	595
333312	Commercial Laundry, Dry Cleaning, and Pressing Machine Man.	0
333412	Industrial and Commercial Fan and Blower Manufacturing	59.5
333923	Overhead Traveling Crane, Hoist, and Monorail System Man.	174.5
336112	Light Truck and Utility Vehicle Manufacturing	9.5
33612	Heavy Duty Truck Manufacturing	0
3362	Motor Vehicle Body and Trailer Manufacturing	2,219
33636	Motor Vehicle Seating and Interior Trim Manufacturing	146
33637	Motor Vehicle Metal Stamping	59.5
3366	Ship and Boat Building	374.5
337124	Metal Household Furniture Manufacturing	0
337127	Institutional Furniture Manufacturing	243
4248	Beer, Wine, and Distilled Alcoholic Beverage Wholesalers	1,433
45391	Pet and Pet Supplies Stores	901
481	Air Transportation	374
48832	Marine Cargo Handling	59.5
4889	Other Support Activities for Transportation	80
492	Couriers and Messengers	6,562
49312	Refrigerated Warehousing and Storage	174.5
54194	Veterinary Services	4,234
6219	Other Ambulatory Health Care Services	2,467
6223	Specialty Hospitals Except Psychiatric and Substance Abuse	3,166
623	Nursing and Residential Care Facilities	40,836
7112	Spectator Sports	370
71392	Skiing Facilities	0
7223	Special Food Services	4,440
	Average number of employed persons in high morbidity risk industries	100,430.0

Source: Industry codes based on the North American Industry Classification System. Statistics are from the United States Census Bureau County Business Patterns.

Limitations of Data Resources: Estimates are based on a probability sample of private sector employers. Estimates are based on injury and illness data maintained by employers and are subject to sampling error. Estimates do not include the military, small farms and federal agencies.

I N D I C A T O R 15

Percentage of workers employed in occupations at high risk for occupational morbidity, 2009

Workers in certain occupations sustain non-fatal injuries and illnesses at much higher rates than the overall workforce. The proportion of the workforce that is employed in these high-risk occupations varies by state. This variation can help explain differences in injury and illness rates across states. This list of high-risk occupations is based on the Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses.

In 2009, 22.5% of the employed population in Kansas was employed in a high morbidity risk occupation. The high morbidity risk occupations with the greatest number of persons employed included: Construction Trades Workers, Building and Grounds Cleaning Occupations, Motor Vehicle Operators, Healthcare Support Occupations and Material Moving Workers.

In 2009, 15.6% of the employed population in the United States was employed in a high morbidity risk occupation. The high morbidity risk occupations with the greatest number of persons employed included: Motor Vehicle Operators, Building and Grounds Cleaning Occupations, Healthcare Support Occupations, Material Moving Workers and Construction Trades Workers.

Average number of Kansans in the Bureau of Census high morbidity risk occupations, 2009

Occupation Code	Occupation Title	Number of persons
2720	Athletes, coaches, umpires, and related workers	2,646
3400	Emergency medical technicians and paramedics	2,147
3600-3650	Healthcare support occupations	39,574
3850, 3860	Police officers	5,421
3900	Animal control workers	0
4120	Food servers, non-restaurant	1,535
4200-4250	Building and grounds cleaning and maintenance occupations	50,481
4340, 4350	Animal care and service workers	3,575
4530-4550	Transportation, tourism, and lodging attendants	452
5410	Reservation and transportation ticket agents and travel clerks	283
5530	Meter readers, utilities	0
6120	Forest and conservation workers	639
6210-6530	Construction trades workers	61,303
6730	Highway maintenance workers	1,965
6760	Miscellaneous construction and related workers	0
6840	Mining machine operators	0
6910	Roof bolters, mining	0
7140	Aircraft mechanics and service technicians	3,782
7150-7200	Automotive technicians and repairs	13,421
7210	Bus and truck mechanics and diesel engine specialists	1,551
7300-7620	Other installation, maintenance, and repair occupations	24,381
8140	Welding, soldering, and brazing workers	10,355
8150-8220	Miscellaneous metal workers and plastic workers	2,733
8520	Model makers and patternmakers, wood	0
8530	Saw machine setters, operators, and tenders, wood	132
8610	Stationary engineers and boiler operators	1,452
8640-8960	Other production occupations	24,449
9110-9150	Motor vehicle operators	39,667
9240	Railroad conductors and yard masters	630
9260	Subway and streetcar operators	0
9300	Sailors and marine oilers	0
9500-9750	Material moving workers	29,429
	Average number of employed persons in high morbidity risk occupations	322,003

Source: Occupation codes based on United States Bureau of the Census. Statistics are from the United States Bureau of Labor Statistics Current Population Survey.

Limitations of Data Resources: The list of high risk occupations was developed based on the Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses (SOII). The ranking of high-risk occupations may differ by state and/or industry. Estimates do not include the military, small farms and federal agencies.

I N D I C A T O R 16

Percentage of workers employed in industries and occupations at high risk for occupational mortality, 2009

Workers in certain industries and occupations sustain fatal injuries at much higher rates than the overall workforce. The proportion of the workforce that is employed in these high-risk industries and occupations varies by state. This variation can help explain the difference in injury mortality rates among the states. The list of high mortality risk industries and occupations is based on the Bureau of Labor Statistics Census of Fatal Occupational Injuries.

In 2009, 15.1% of the employed population in Kansas was employed in a high mortality risk industry. The high mortality risk industries with the most people employed included: Construction, Animal Production, Truck Transportation, Crop Production and Landscaping Services.

In 2009, 15.7% of the employed population in the United States was employed in a high mortality risk industry. The high mortality risk industries with the most people employed included: Construction, Truck Transportation, Landscaping Services, Crop Production and Animal Production.

In 2009, 12.3% of the employed population in Kansas was employed in a high mortality risk occupation. The high mortality risk occupations with the most people employed included: Driver/Sales Workers and Truck Drivers, Farmers and Ranchers, Grounds Maintenance Workers, Welding, Soldering, and Brazing Workers and Construction Laborers.

In 2009, 12.4% of the employed population in the United States was employed in a high mortality risk occupation. The high mortality risk occupations with the most people employed included: Driver/Sales Workers and Truck Drivers, Construction Laborers, Grounds Maintenance Workers, Security Guards and Gaming Surveillance Officers, and Farmers and Ranchers.

Limitations of Data Resources: The list of high-risk occupations was developed based on the Bureau of Labor Statistics Census of Fatal Occupational Injuries. The ranking of high-risk occupations may differ by states and/or industry. Suicides that take place at work are considered work-related fatalities even though these deaths may not necessarily be caused by work-related factors. Deaths reported are for the private sector only and exclude military deaths.

Average number of Kansans in the Bureau of the Census high mortality risk industries, 2009

Industry Code	Industry Title	Number of persons
0170	Crop production	13,301
0180	Animal production	28,579
0190	Forestry except logging	841
0270	Logging	0
0280	Fishing, hunting, and trapping	1,424
0290	Support activities for agriculture and forestry	3,205
0370	Oil and gas extraction	1,605
0380	Coal mining	448
0390	Metal ore mining	0
0470	Nonmetallic mineral mining and quarrying	898
0490	Support activities for mining	5,991
0770	Construction	91,889
1070	Animal food, grain and oilseed milling	5,194
1080	Sugar and confectionery products	618
2090	Miscellaneous petroleum and coal products	266
2570	Cement, concrete, lime, and gypsum product manufacturing	3,049
2670	Iron and steel mills and steel product manufacturing	2,287
2690	Nonferrous metal, except aluminum, production and processing	414
2770	Foundries	400
3680	Ship and boat building	1,138
3770	Sawmills and wood preservation	0
3780	Veneer, plywood, and engineered wood products	0
4280	Recyclable material, merchant wholesalers	636
4480	Farm product raw materials, merchant wholesalers	4,054
4570	Farm supplies, merchant wholesalers	1,756
4585	Wholesale electronic markets, agents and brokers	0
6080	Rail transportation	3,563
6090	Water transportation	0
6170	Truck transportation	16,045
6190	Taxi and limousine service	803
6270	Pipeline transportation	316
6280	Scenic and sightseeing transportation	0
6290	Services incidental to transportation	6,148
6590	Sound recording industries	0
7180	Other consumer goods rental	113
7190	Commercial, industrial, and other intangible assets rental and leasing	0
7770	Landscaping services	11,510
7790	Waste management and remediation services	4,089
8690	Drinking places, alcoholic beverages	1,930
8870	Commercial and industrial machinery and equipment repair and maintenance	3,550
	Average number of employed persons in high mortality risk industries	216,060

Source: Industry codes based on United States Bureau of the Census. Statistics are from the United States Bureau of Labor Statistics Current Population Survey.

Average number of Kansans in the Bureau of the Census high mortality risk occupations, 2009

Industry Code	Industry Title	Number of persons
0170	Crop production	13,301
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6590	Sound recording industries	0
7180	Other consumer goods rental	113
7190	Commercial, industrial, and other intangible assets rental and leasing	0
7770	Landscaping services	11,510
7790	Waste management and remediation services	4,089
8690	Drinking places, alcoholic beverages	1,930
8870	Commercial and industrial machinery and equipment repair and maintenance	3,550
	Average number of employed persons in high mortality risk industries	216,060

Source: Occupation codes based on United States Bureau of the Census. Statistics are from the United States Bureau of Labor Statistics Current Population Survey.

I N D I C A T O R 17

Occupational safety and health professionals, 2009

Occupational safety and health professionals share the common goal of identifying hazardous conditions or practices in the workplace and helping employers and workers reduce the risk imposed by such conditions. It is important to assess the availability of such personnel to implement occupational health preventive services. This occupational health indicator provides information about occupational safety and health professionals who are board-certified occupational medicine physicians, members of the American College of Occupational and Environmental Medicine, board-certified occupational health nurses, members of the American Association of Occupational Health Nurses, board-certified industrial hygienists, members of the American Industrial Hygiene Association, board-certified safety professionals and members of the American Society of Safety Engineers. Employment estimates are from the Bureau of Labor Statistics Current Population Survey.

In 2009, there was less than one occupational medicine physician, 2.7 occupational health nurses and 1.9 industrial hygienists per 100,000 employed persons age 16 and older in Kansas.

Occupational safety and health professionals in Kansas, 2009

	Number	Rate per 100,000
Board-certified occupational medicine physicians	11	0.8
Members of the ACOEM[1]	35	2.5
Board-certified occupational health nurses	39	2.7
Members of the AAOHN[2]	46	3.2
Board-certified industrial hygienists	27	1.9
Members of the AIHA[3]	45	3.2
Board-certified safety and health professionals	113	7.9
Members of the ASSE[4]	295	20.7

[1] American college of Occupational and Environmental Medicine (ACOEM)
[2] American Association of Occupational Health Nurses (AAOHN)
[3] American Industrial Hygiene Association (AIHA)
[4] American Society of Safety Engineers (ASSE)
Sources: American Board of Preventive Medicine diplomats database, annual roster of members of the ACOEM, American Board of Occupational Health Nurses directory, annual roster of members of the AAOHN member directory, American Board of Industrial Hygiene and AIHA member directory

Limitations of Data Resources: Other occupational safety and health fields are not included. Member lists include retired and part-time professionals and may overestimate the number of active occupational and safety professionals.

I N D I C A T O R 18

Occupational Safety and Health Administration enforcement activities, 2001-2008

The Occupational Safety and Health Act of 1970 was passed by Congress to assure safe and healthy working conditions for every working person in the nation. Under the Act, the United States Department of Labor's Occupational Safety and Health Administration (OSHA) is authorized to conduct worksite inspections to determine whether employers are complying with health and safety standards issued by the agency. OSHA may issue citations and impose fines to employers if violations are found.

OSHA typically inspects worksites in response to reports of fatal injuries, incidents resulting in multiple hospitalizations, worker complaints and referrals from other agencies. OSHA also conducts programmed inspections aimed at specific high-risk industries, occupations or worksites with high injury rates. Federal OSHA jurisdiction includes Federal employment, but does not extend to state and municipal government workplaces. However, under the OSHA Act, states may elect to administer their own state-based OSHA programs that are at least as effective as federal OSHA programs. In some of these "state plan" states, public and private sector worksites are subject to occupational safety and health inspections conducted by state OSHA programs. Kansas is covered under Federal OSHA jurisdiction. This occupational health indicator provides a measure of the numbers and percent of workers and worksites potentially benefitting directly from Federal/State OSHA inspections.

OSHA inspection data for 2009 are not available yet. As a result OSHA inspection data are presented for the years 2001-2008 in Kansas. Between 2001-2008 in Kansas, an average of 77,518 establishments were eligible for OSHA-inspections, of these an average of 839 (1.1%) were inspected each year. During the same time period, an average of 1,091,949 employees were employed by an OSHA covered establishment each year, of those workers, 38,058 (3.5%) had work areas that were inspected by OSHA each year.

Occupational Safety and Health Administration inspections in Kansas[1], 2001-2008

Year	Number of Inspections	Number Eligible for Inspections[2]	Percentage Inspected
2001	629	75,216	0.8%
2002	693	76,388	0.9%
2003	738	76,449	1.0%
2004	721	76,147	0.9%
2005	731	77,529	0.9%
2006	1,090	78,003	1.4%
2007	1,089	79,569	1.4%
2008	1,020	80,845	1.3%
Average 2001-2008	839	77,518	1.1%

[1] Kansas is a federal OSHA plan state.
[2] Mines and farms are not included in the number of OSHA-covered establishments eligible for inspections.

Occupational Safety and Health Administration inspections in Kansas[1], 2001-2008

Year	Employment Covered	Number Eligible for Inspections[2]	Percentage Inspected
2001	32,962	1,097,364	3.0%
2002	44,673	1,078,442	4.1%
2003	51,916	1,062,890	4.9%
2004	50,211	1,071,913	4.7%
2005	30,862	1,079,266	2.9%
2006	26,241	1,097,329	2.4%
2007	31,327	1,121,140	2.8%
2008	36,275	1,127,250	3.2%
Average 2001-2008	38,058	1,091,949.	3.5%

[1] Kansas is a federal OSHA plan state.
[2] Miners and farmers are not included in the number of OSHA-covered employees eligible for inspections.

Limitations of Data Resources: The percent of worksites inspected may be overestimated since multiple inspections can occur at the same worksite in the same year.

I N D I C A T O R 19

Workers compensation benefits, 2004-2009

Workers compensation is a state-based social insurance program that provides guaranteed compensation for workers with work-related injuries or illnesses while limiting the liability exposure of employers. Workers compensation provides benefits to partially replace lost wages and pay for medical expenses associated with work-related injury or illness. In case of a death, the worker's dependents are eligible for survivor benefits. The amount of benefits paid is an indicator of the direct financial cost of work-related injuries and illnesses. Data for this indicator were obtained from the National Academy of Social Insurance.

Between 2004 and 2009, the amount of workers compensation benefits paid ranged from $377.1 million to $418.7 million in Kansas. Nationally, the amount paid ranged from $56.1 billion in 2004 to $58.3 billion in 2009. In Kansas between 2004-2009, the amount of workers compensation benefits paid averaged $307 per covered worker per year, ranging from $299 in 2004 to $326 per covered worker in 2009. Nationally during the same time period, workers compensation benefits averaged $442 per covered per year, ranging from $446 in 2004 to $467 per covered worker in 2009.

Total amount of workers compensation benefits paid, 2004-2009

	Kansas	United States
2004	$377,116,000	$56,148,671,000
2005	$389,566,000	$57,066,950,000
2006	$390,643,000	$55,117,823,000
2007	$394,280,000	$55,997,632,000
2008	$414,579,000	$58,104,190,000
2009	$418,656,000	$58,326,816,000
Average 2004-2009	$397,473,333	$56,793,680,333

Source: National Academy of Social Insurance

Average amount of workers compensation benefits paid per covered worker, 2004-2009

	Kansas	United States
2004	$299	$446
2005	$306	$445
2006	$302	$423
2007	$298	$425
2008	$309	$445
2009	$326	$467
Average 2004-2009	$307	$442

Source: National Academy of Social Insurance

Limitations of Data Resources: The amount of benefits paid is an indicator of direct financial cost and does not reflect indirect costs. In addition, some workers who are eligible for benefits do not file. Also, several types of workers may not be covered by state workers compensation systems, including the self-employed, corporate executives, domestic and agricultural workers, federal employees and railroad, long shore and maritime workers.

I N D I C A T O R 20

Work-related low back disorder hospitalizations, 2009

Hospitalizations from work-related back disorders have serious and costly effects, including: high direct medical costs, significant functional impairment and disability, high absenteeism, reduced work performance and lost productivity. Data for this indicator were obtained from hospital discharge data, and population statistics were obtained from the United States Census Bureau.

In 2009, there were a total of 291 work-related low back disorder hospitalizations among persons age 16 and older in Kansas. Of these, there were 125 surgical and 166 non-surgical hospitalizations. The annual rate of hospitalizations for work-related low back disorder was 20.4 per 100,000 workers. The rate for surgical low back disorder hospitalizations was 8.8 and the rate for non-surgical hospitalizations was 11.6 per 100,000 workers.

The rate of hospitalizations for work-related low back disorder was higher for males, 23.4 per 100,000 male workers, compared to females, 17.1 per 100,000 female workers.

Work-related low back disorder hospitalizations in Kansas, 2009

Type of Hospitalization	Number (Rate/100,000 workers)
Surgical	125 (8.8)
Non-surgical	166 (11.6)
Total	291 (20.4)

Sources: Kansas Hospital Association and Bureau of Labor Statistics Current Population Survey

Work-related low back disorder hospitalizations in Kansas by sex, 2009

	Number (Rate/100,000 workers)
Males	176 (23.4)
Females	115 (17.1)
Total	291 (20.4)

Sources: Kansas Hospital Association and Bureau of Labor Statistics Current Population Survey

Limitations of Data Resources: Data were provided to the Kansas Department of Health and Environment by the Kansas Hospital Association. The data include all hospital discharges with a primary payer of Workers' Compensation. The data exclude patients with age unknown, patients under the age of 16, out-of-state residents or unknown residence and out-of-state hospitalizations. All admissions are counted, including multiple admissions for a single individual.

Conclusions

According to the Bureau of Labor Statistics, in the United States, the number of reported nonfatal occupational injury and illness cases that required days away from work was 1,238,490 cases in 2009 for private industry, state government and local government. The total incidence rate was 117 cases per 10,000 full-time workers. The rate of nonfatal injuries and illnesses reported by private sector employers only was 360 per 10,000 workers.

According to the results of the Census of Fatal Occupational Injuries (CFOI), there were 4,551 fatal work injuries in 2009 in the United States. The rate of fatal work injury was 3.5 per 100,000 full-time workers. The rate is the same for the preliminary 2010 data.

Of note, private sector employers in Kansas reported an estimated 38,200 nonfatal injuries and illnesses to workers in 2009. Kansas experienced a statistically significant higher incidence of nonfatal injuries and illnesses, 410 per 10,000 workers, compared to the national rate of 360 per 10,000 workers.

Also of note, in 2009, 76 workers were fatally injured on the job in Kansas. The rate of fatal work-related injuries was 5.3 per 100,000 workers while nationally the rate was 3.5 per 100,000 workers.

Part of the difference in the rates of nonfatal and fatal injuries and illnesses between Kansas and the United States could be explained by the percentage of workers in high risk jobs. In 2009, 8.8% of the employed population in Kansas was employed in a high morbidity risk industry compared to 7.1% of the employed population nationally. In Kansas, 22.5% of the employed population was employed in a high morbidity risk occupation compared to 15.6% of the employed population in the United States. The percentage of the Kansas employed population working in high mortality risk industries and occupations was similar to national percentages.

Conclusions

The prevalence rate of elevated blood lead levels (BLL) among adults was also high among Kansas adults compared to national rates. In 2007, there were 385 cases of BLL ≥25 µg/dL among Kansas residents, while nationally, there were 8,451 cases among reporting states. In 2007, the rate of BLL ≥25 µg/dL was 26.8 cases per 100,000 workers in Kansas, while the national rate was 7.4 cases per 100,000 workers.

Finally, the number of occupational safety and health professionals in Kansas is lacking. In 2009, there was less than one occupational medicine physician, 2.7 occupational health nurses and 1.9 industrial hygienists per 100,000 workers. Occupational safety and health professionals help to identify hazardous conditions or practices in the workplace and help employers and workers reduce the risk of injuries and illnesses in the workplace. The availability of these specialists is necessary to implement occupational health preventive services.

Occupational health surveillance is the systematic monitoring of health events and exposures among working populations. The purpose of this type of health surveillance is to: prevent occupational hazards and the associated diseases and injuries, collect data on cases and exposures, analyze the data and disseminate the findings, and plan intervention and prevention activities. Collecting the information that is presented in this report, in the form of the occupational health indicators, is a good first step in developing a comprehensive occupational health surveillance program in Kansas. Next steps include:

- Advocating for the need to establish occupational health surveillance in Kansas and committing to establishing minimum state-based activities in occupational safety and health as defined in the document *"Guidelines for Minimum and Comprehensive Activities in Occupational Safety and Health".*
- Further analyzing the indicators presented in this report to target future Kansas specific surveillance and intervention efforts.
- Actively seeking funding to support a state-based occupational safety and health activities.
- Continuing to calculate the occupational health indicators across several years to examine trends.

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Acknowledgments

Special thanks go to all of the data stewards who shared their data, including: the Kansas Department of Labor, the Kansas Poison Control Center, the Kansas Cancer Registry, and the Office of Vital Statistics and the Adult Blood Lead Epidemiology and Surveillance (ABLES) program within the Kansas Department of Health and Environment.

For Questions

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Suggested Citation

Ahmed, FS. Occupational Health Indicators in Kansas. Kansas Department of Health and Environment, 2011.

Kansas Department of Health and Environment

KANSAS Environmental Public Health Tracking