

OCCUPATIONAL HEALTH IN KENTUCKY, 2014

An Annual Report by the Kentucky Injury Prevention and Research Center

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EXECUTIVE SUMMARY

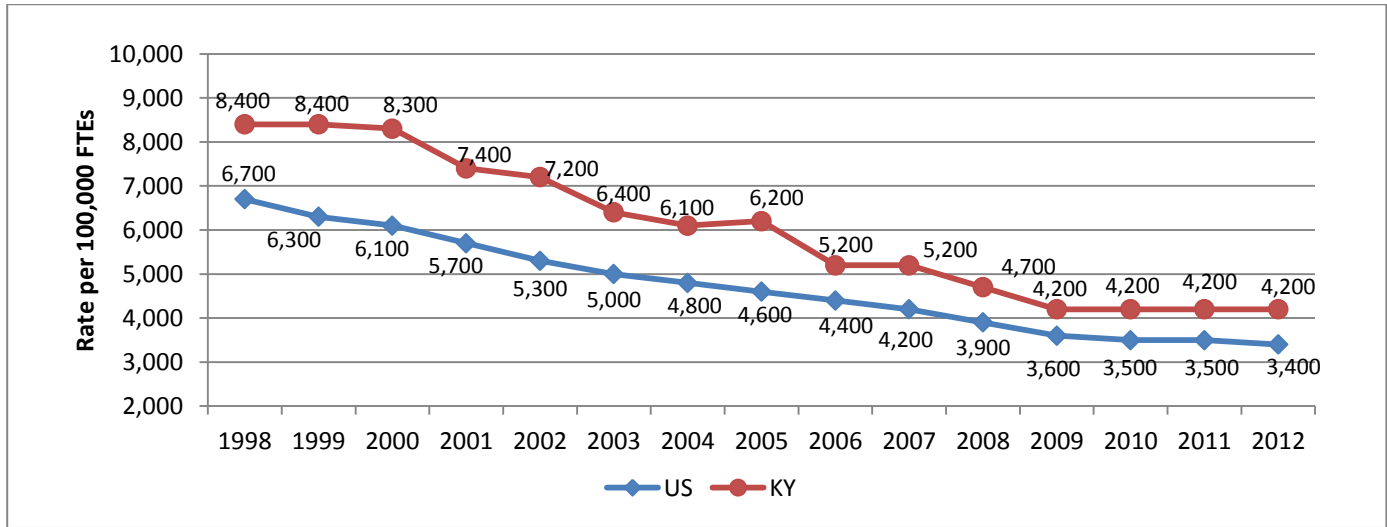
Key findings:

- ❑ Kentucky's 2012 *nonfatal* work-related injury and illness rate was still 20% above the national rate.
- ❑ The 2012 work-related *fatality* rate was 4.9 deaths/100,000 workers, 44% above the U.S. rate of 3.4/100,000.
- ❑ Kentucky's amputation work-related rate was 7 claims/100,000 workers in 2012, 17% above the 2012 U.S. rate.
- ❑ The 2011 age-adjusted pneumoconiosis mortality rate was 32 deaths/million residents, 357% above the U.S. rate.
- ❑ The 2011 annual incidence rate of reported work-related pesticide poisonings in Kentucky was 3.6/100,000 FTEs, 80% above the national rate.
- ❑ In 2011, Kentucky had 9.3% of its workers employed in high risk industries for occupational morbidity. The corresponding U.S. percentage was 7.2%.
- ❑ The 2012 Kentucky occupational motor vehicle injury rate remains the same as the 2011 rate of 62/100,000 workers.
- ❑ The occupation at highest risk for work-related injuries and illnesses in Kentucky was the drivers/sales workers and truck drivers' occupation in 2011.
- ❑ The occupational fall injury incidence rate slightly increased by 2% from 2012 to 2013.
- ❑ The average amount of workers' compensation benefits per covered worker in Kentucky was \$389 in 2011, almost the same as \$391 in 2010.
- ❑ There were 71 school bus collisions in 2013.
- ❑ The number of buses involved in motor vehicle collisions increased from 143 in 2012 to 156 in the year 2013.

Indicator #1: Non-Fatal Work-Related Injuries and Illnesses Reported By Employers

In 2012, there were 49,200 non-fatal work-related injuries and illnesses in Kentucky, with an incidence rate of 4,200/100,000 employees, down 50% from 1998 (Figure 1). Kentucky is still 20% above the national incidence rate of 3,400 /100,000 FTEs.

Figure 1. Non-Fatal Work-Related Injury and Illness Incidence Rates, 1998-2012

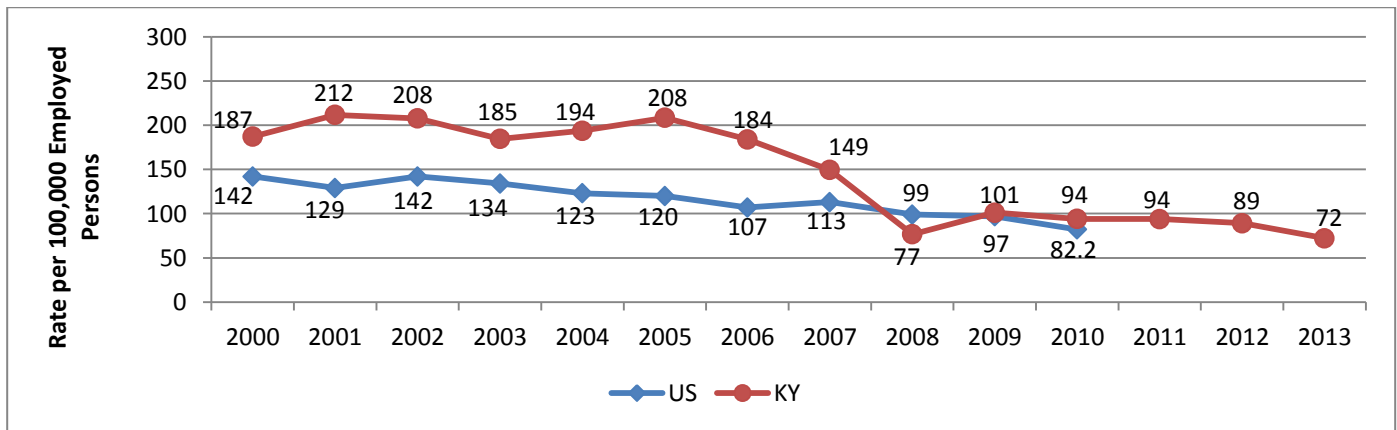


Data Source: Annual Bureau of Labor Statistics (BLS) Survey of Occupational Injuries and Illnesses (SOII).

Indicator #2: Work-Related Hospitalizations

In 2013, there were 1,369 work-related hospitalizations with an annual crude rate of 72/100,000 employed persons age 16 years and older, down 61% from the year 2000 (Figure 2).

Figure 2. Work-Related Hospitalization Rates, 2000-2013

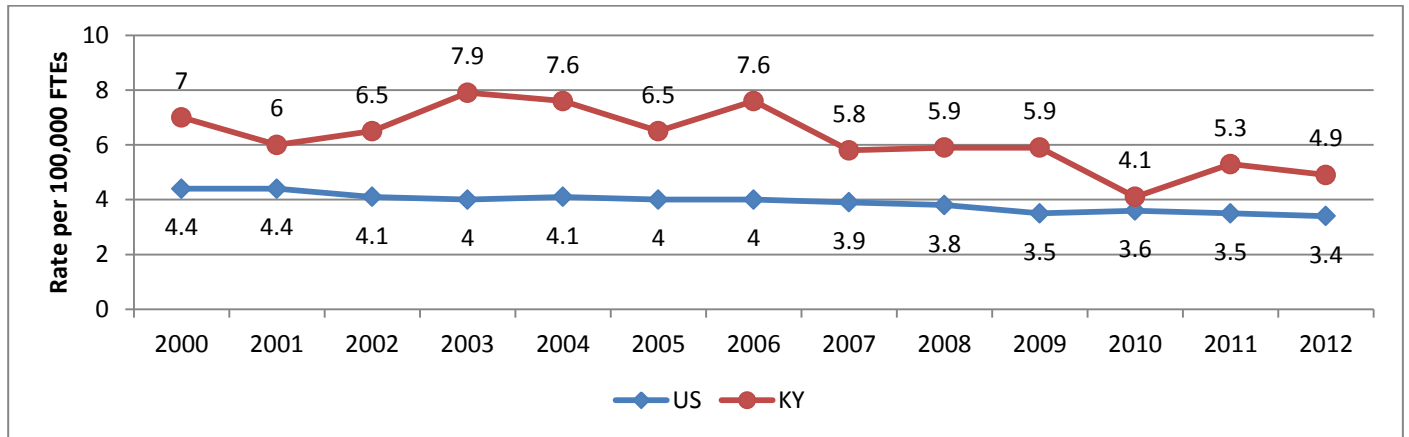


Data Source: Numerator KY data: KY Department for Public Health, Office of Health Policy. Numerator US data: National Hospital Discharge Survey. Denominator data: BLS Current Population Survey data. Rates may differ from rates reported in previous reports as the KY hospital discharge files for the last 4 years were updated.

Indicator #3: Fatal Work-Related Injuries

In 2012 there were 91 fatal occupational injuries in Kentucky, a 2% decrease from the reported 93 fatal work-related injuries for 2011. The 2012 Kentucky rate was 4.9/100,000, or 44% above the preliminary 2012 national rate of 3.4/100,000.

Figure 3. Fatal Work-Related Injury Rates, 2000-2012

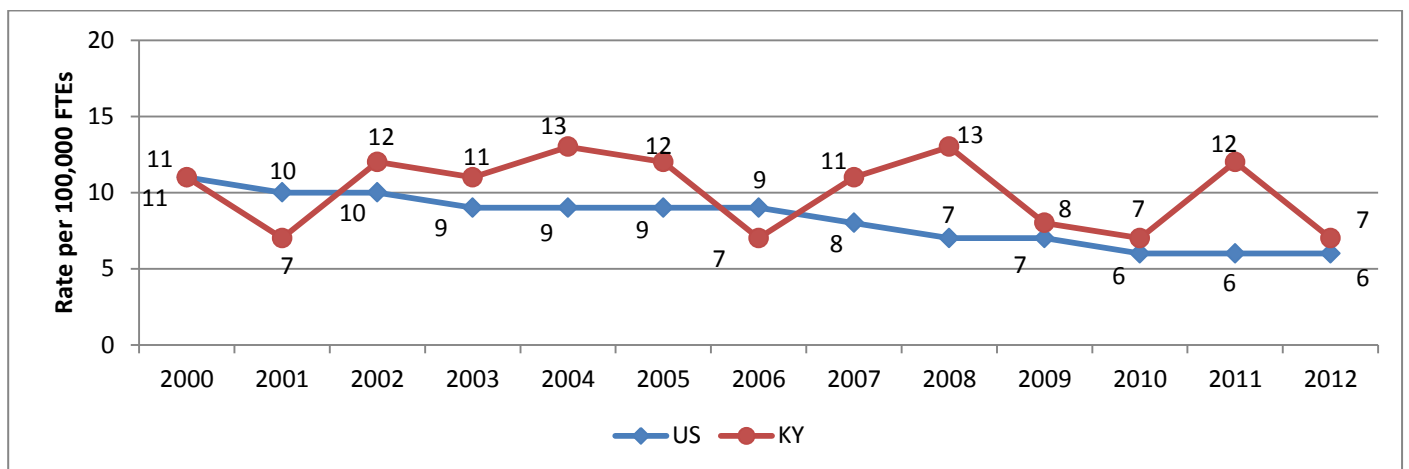


Data Source: Census of Fatal Occupational Injuries (CFOI).

Indicator #4: Work-Related Amputations with Days Away from Work

There were 80 amputation cases with days away from work in 2012, down 60 cases from the year 2011. The annual incidence rate of 7 cases per 100,000 FTEs was 17% higher than the national amputation incidence rate of 6/100,000 (BLS SOII) in 2012 (Figure 4).

Figure 4. Work-Related Amputation Rates, 2000-2012

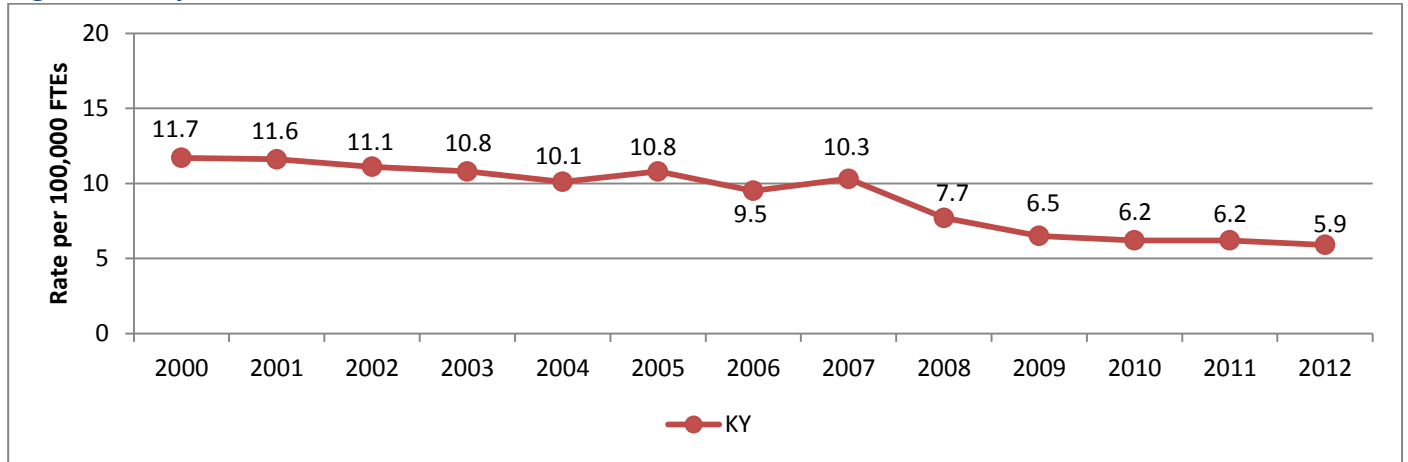


Data Source: Annual BLS Survey of Occupational Injuries and Illnesses (SOII).

Indicator #5: Amputations Filed with the State Workers' Compensation System by Injury Year

There were 101 amputations reported to the Kentucky Department of Workers' Compensation that occurred in year 2012, similar to the number of amputation injuries during 2011 (n=104). However, due to the larger number of workers covered by WC in 2012 (1,718,000 workers), the 2012 incidence rate of 5.9 amputations per 100,000 covered workers was lower than the 2011 rate of 6.2/100,000 (Figure 5).

Figure 5. Amputation Work-related Rates, 2000-2012

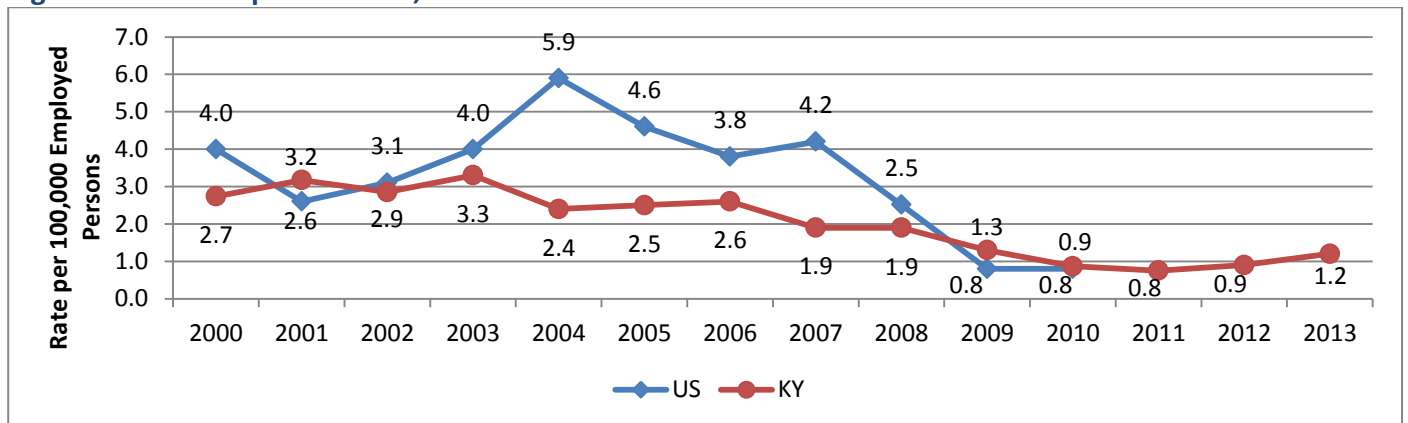


Data Source: Kentucky Department of Workers' Claims.

Indicator #6: Work-Related Burn Hospitalizations

There were 22 work-related burn hospitalizations in 2013 with an annual crude rate for work-related burn hospitalizations of 1.2/100,000 employed persons age 16 years or older. After years of stable decrease, the Kentucky work-related burn hospitalization rate is showing signs of increase (Figure 6).

Figure 6. Burn Hospitalizations, 2000-2013

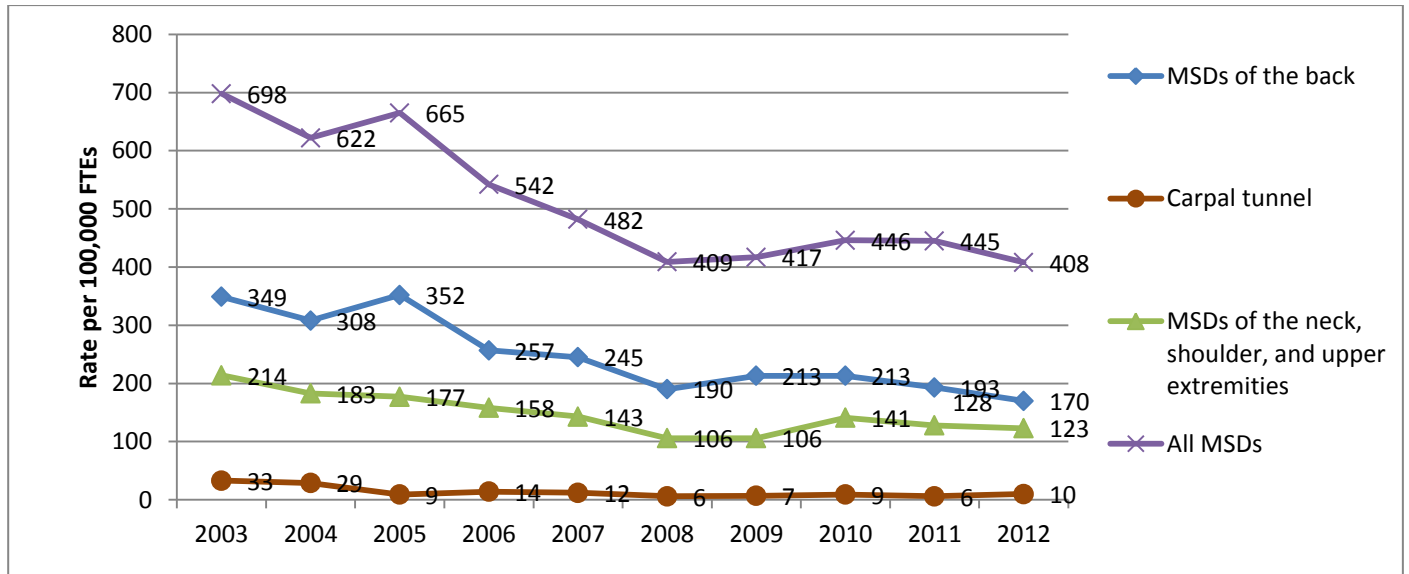


Data Source: Kentucky Department for Public Health, Office of Health Policy.

Indicator #7: Work-Related Musculoskeletal Disorders (MSDs) with Days Away from Work

Kentucky had a total annual MSD incidence rate of 408 cases/100,000 FTEs in 2012 (Figure 7), due primarily to MSDs of the back (170/100,000).

Figure 7. Musculoskeletal Disorders Incidence Rates Involving Days Away from Work, 2003-2012

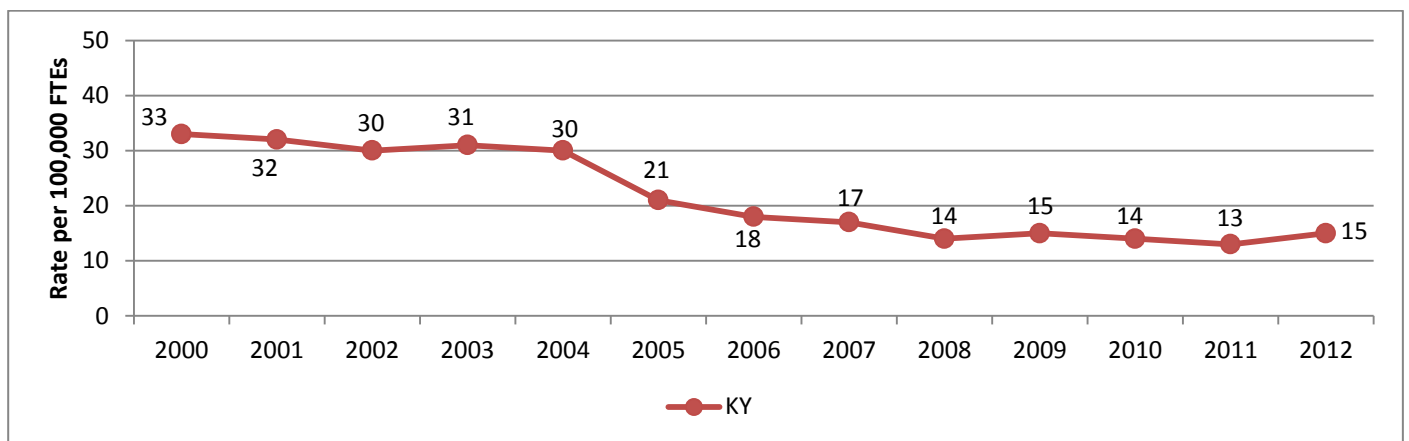


Data Source: Annual Bureau of Labor Statistics (BLS) Survey of Occupational Injuries and Illnesses (SOII).

Indicator #8: Carpal Tunnel Syndrome First Report of Injury Filed with the State Workers' Compensation System by Injury Year

There were 253 Carpal Tunnel Syndrome (CTS) cases reported in 2012, an incidence rate of 15/100,000.

Figure 8. Lost Work-Time Claim Rates for Carpal Tunnel Syndrome Cases Identified in State Workers' Compensation Systems, 2000-2012

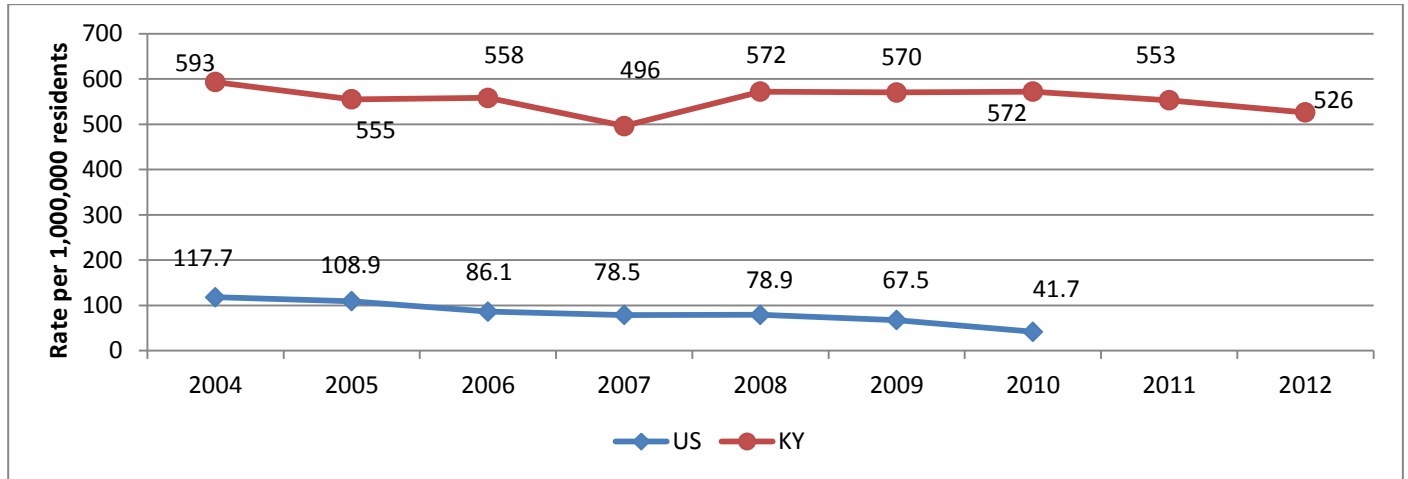


Data Source: Kentucky Department of Workers' Claims.

Indicator #9: Hospitalization from or with Pneumoconiosis

The annual age-standardized rate of pneumoconiosis hospitalizations per million residents in Kentucky decreased 5% from 2011 to 2012. U.S. rates for the last two reported years are not available yet, but the Kentucky rate likely remained more than 10 times above the U.S. rate (Figure 9).

Figure 9. Age-Standardized Hospitalization Rates from or with Total Pneumoconiosis, 2004-2012



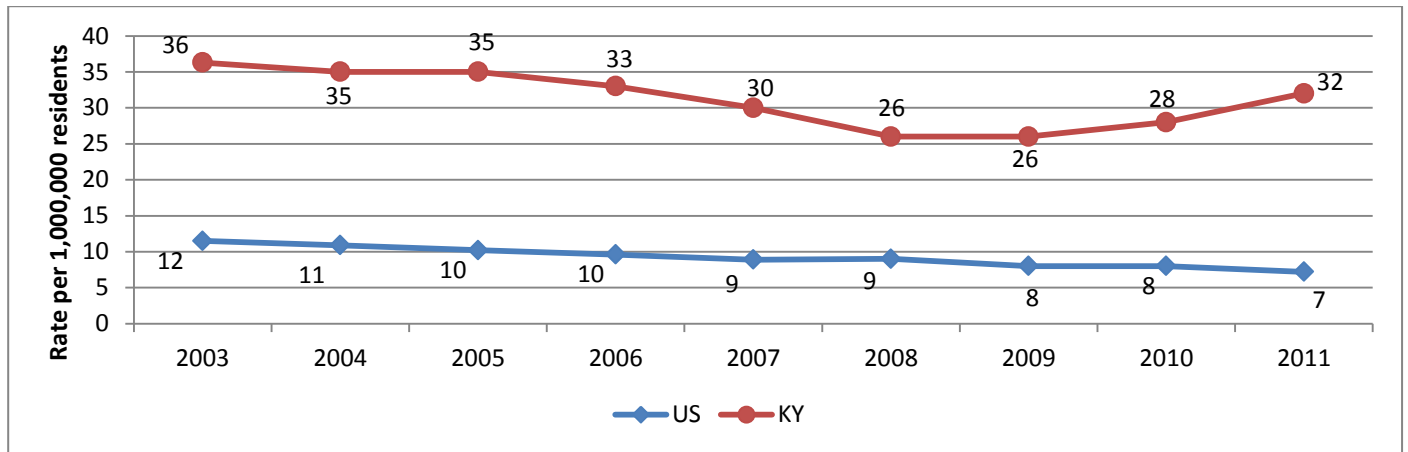
Note: U.S. rates are not available yet for years 2011 - 2012.

Data Source: Kentucky Department for Public Health, Office of Health Policy.

Indicator #10: Mortality from or with Pneumoconiosis

There were 114 deaths for Kentucky residents ages 16 years or older, who died from or with pneumoconiosis in 2011. The 2011 Kentucky age-adjusted death rate from or with pneumoconiosis for residents 16 years of age or older was 32 per one million, 357% above the U.S. rate (Figure 10).

Figure 10. Age-Standardized Mortality Rate from or with Pneumoconiosis, 2002-2011

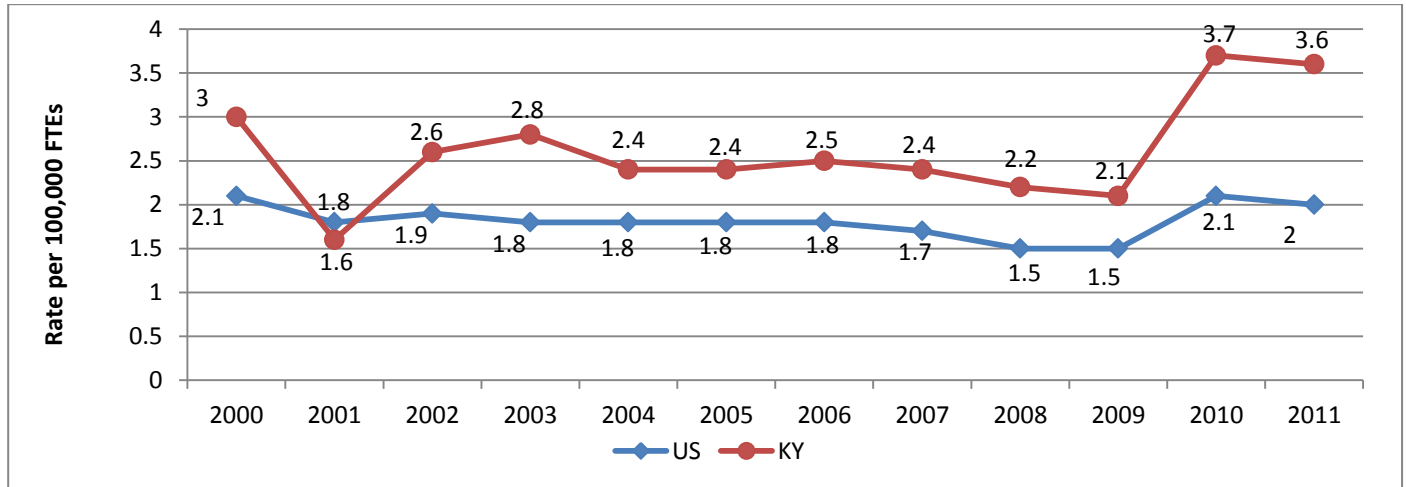


Data Source: Kentucky Department for Public Health, Office of Vital Statistics and CDC WONDER query system.

Indicator #11: Acute Work-Related Pesticide-Associated Illness and Injury Reported to Poison Control Centers

The 2011 annual incidence rate of reported work-related pesticide poisonings in Kentucky was 3.6/100,000 FTEs, 80% above the national rate (Figure 11).

Figure 11. Work-Related Pesticide-Associated Poisoning Rates, 2000-2011

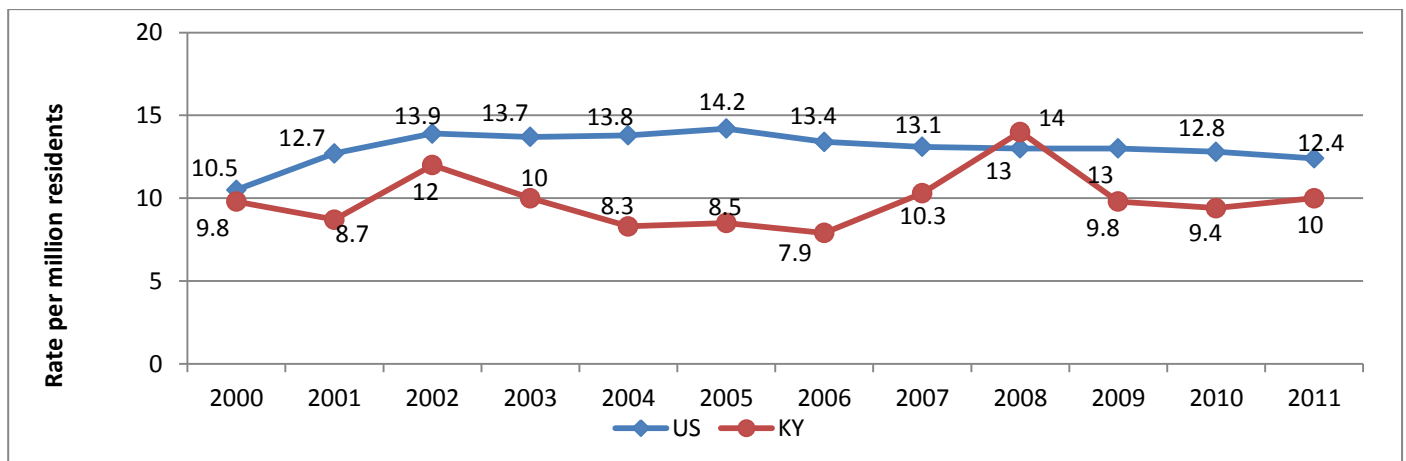


Data Source: American Association of Poison Control Centers.

Indicator #12: Incidence of Malignant Mesothelioma

The age-adjusted rate of malignant mesothelioma was 10.0 cases per million residents (36 cases) in 2011. The 2011 U.S. rate was 12.4 per million residents (Figure 12).

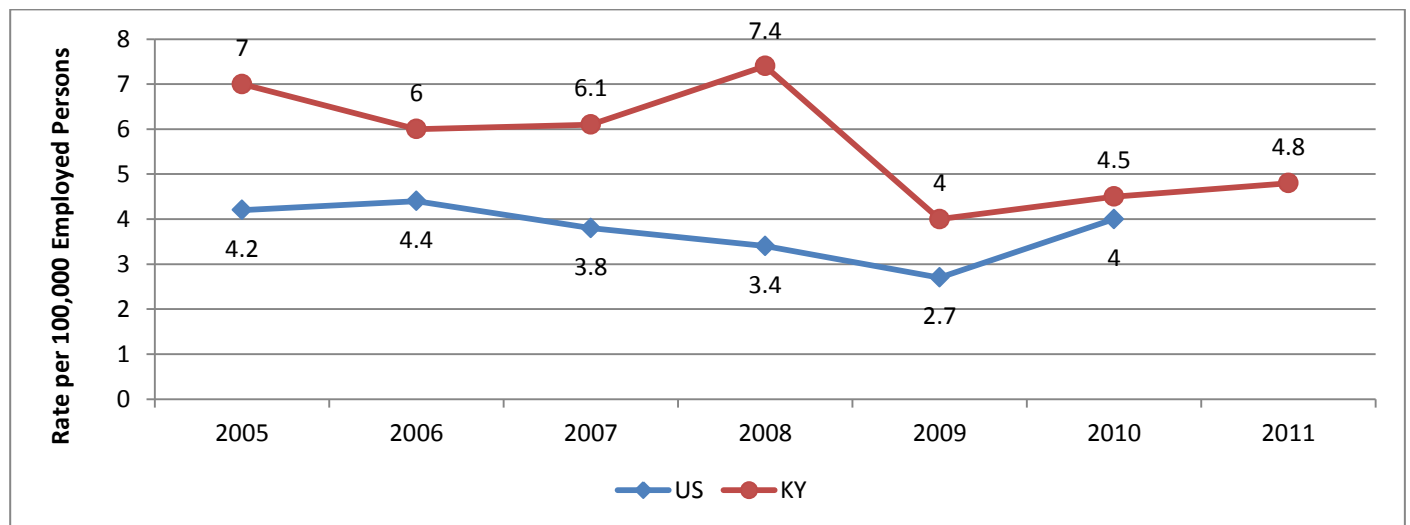
Figure 12. Age-Standardized Incidence Rate of Malignant Mesothelioma, 2000-2011



Data Source: Kentucky Cancer Registry. U.S. rate for 2011 was not available at the time of the publication.

Indicator #13: Elevated Blood Lead Levels (BLL) among Adults

The current surveillance case definition for an elevated BLL used by the Centers for Disease Control and Prevention (CDC) and National Institute for Occupational Safety and Health (NIOSH) includes workers aged 16 and older, with blood lead concentrations of 10 µg/dL or higher. The Kentucky rate of incidence cases of persons age 16 years or older with elevated BLL \geq 10µg/dL in 2011 was 13.6/100,000, the same as in 2010. The 2010 U.S rate was 14.3/100,000. The Kentucky annual incidence rate of persons aged 16 years or older with elevated BLL \geq 25µg/dL was 4.8/100,000 in 2011, a slight increase compared to the 2010 rate of 4.5/100,000.

Figure 13. Annual Incidence Rates of Elevated BLL \geq 25 µg/dL Among Persons Age 16 Years and Older*

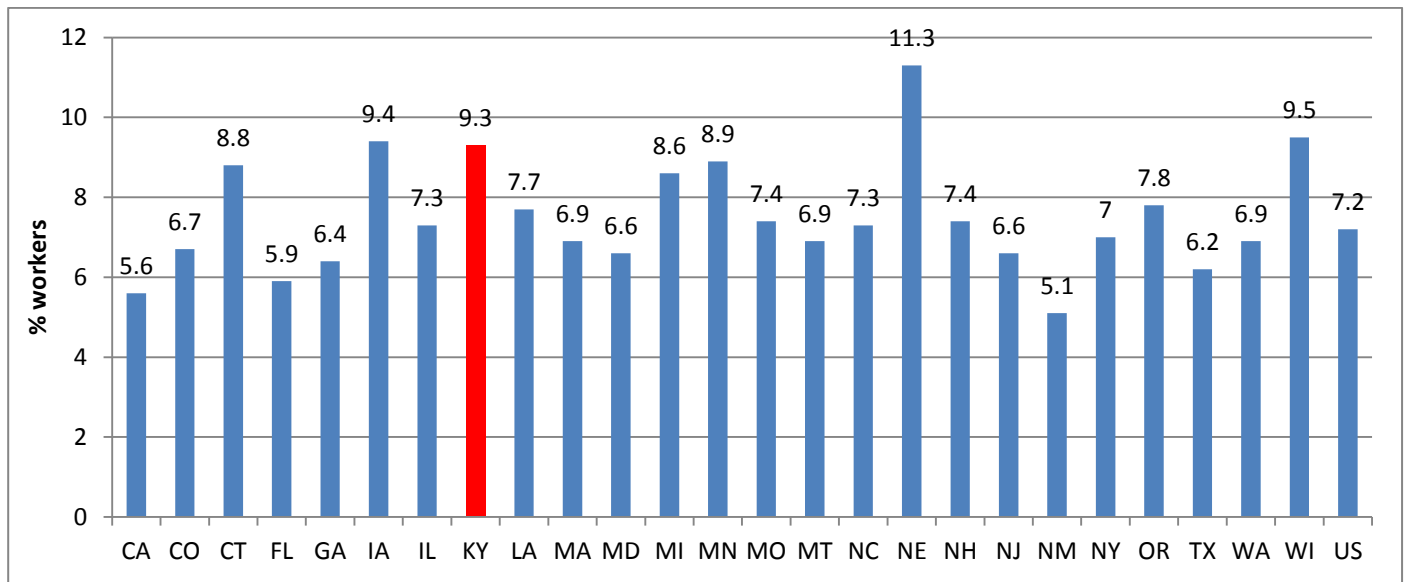
Data Source: Kentucky Lead Poisoning Prevention Program, Division of Adult and Child Health. U.S. rates were obtained from the NIOSH ABLES program. U.S. rate for 2011 was not available at the time of the publication.

*The 2011 U.S. incidence rate as well as the U.S. incidence rates before 2010 were not available at the time of this publication.

Indicator #14: Workers Employed in Industries with High Risk for Occupational Morbidity

The percentage of Kentucky workers employed in high-risk morbidity industries in year 2011 was 9.3% (Figure 14), a slight decrease from 9.6% in 2010. Nationwide, the percentage of workers employed in industries at high risk for occupational morbidity in 2011 was 7.2%. Kentucky ranked 4th among states submitting data to the Council of State and Territorial Epidemiologists for 2011 (Figure 14).

Figure 14. Percentage of Workers in High Risk Industries for Occupational Morbidity, 2011

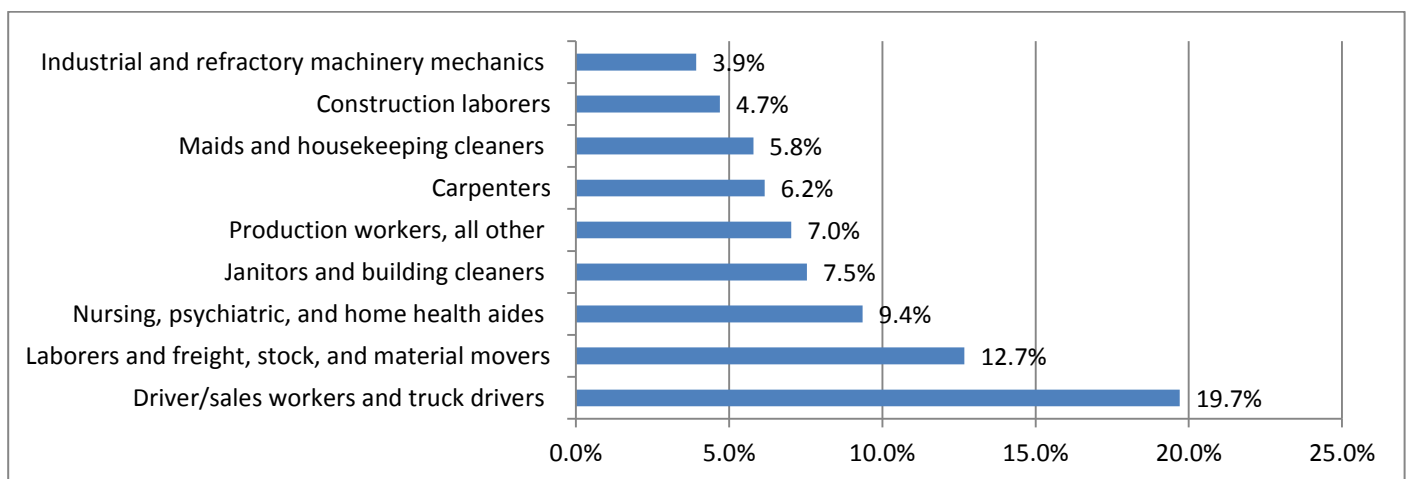


Data Source: Census Bureau County Business Patterns.

Indicator #15: Percentage of Workers Employed in Occupations at High Risk for Occupational Morbidity

In 2011 there were 262,673 (18.8%) of Kentucky workers employed in occupations at high risk of occupational morbidity. The percentage of U.S. workers employed in occupations at high risk for occupational morbidity in 2011 was 15.4%.

Figure 15. Percentage of Kentucky Workers in Occupations with High Risk for Occupational Morbidity, 2011*



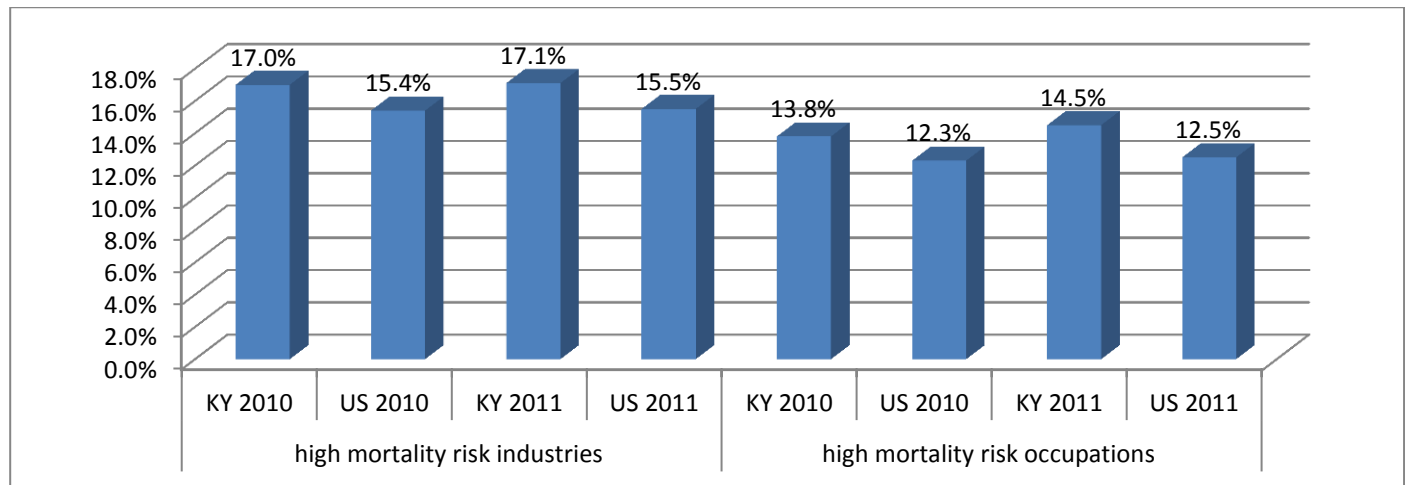
Data Source: Bureau of Labor Statistics (BLS) Current Population Survey (CPS).

*The largest groups of occupations at highest risk for occupational injuries and illnesses in 2011 in Kentucky are presented in Figure 15 as the percentage of employed Kentucky population in occupations for high risk of occupational morbidity.

Indicator #16: Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality

The percentage of Kentucky workers employed in industries at high risk for occupational mortality was 17.1% in 2011, 10% above the U.S. percentage. The percentage of Kentucky workers employed in occupations at high risk for occupational mortality was 14.5% in 2011, 16% above the overall U.S. percentage.

Figure 16. Percentage of Workers Employed in High Mortality Risk Industries/Occupations, 2010-2011



Data Source: Bureau of Labor Statistics (BLS) Current Population Survey (CPS).

Indicator #17: Occupational Safety and Health Professionals

Table 1. Rates of Occupational Safety and Health Professionals in Kentucky, 2009-2010.*

Rate per 100,000 employees	KY 2010	US 2010	KY 2009	US 2009
Rate of board-certified occupational physicians	1.5	2.1	1.2	2.2
Rate of American College of Occupational and Environmental Medicine members	3.3	2.9	3.8	3.0
Rate of board-certified occupational health registered nurses	4.0	3.9	4.6	4.1
Rate of members of the American Association of Occupational Health Nurses	NA	NA	4.2	4.6
Rate of board-certified industrial hygienists	3.6	5.2	3.5	5.1
Rate of American Industrial Hygiene Association	4.4	5.6	4.9	5.9
Rate of board certified safety health professionals	8.6	8.8	8.1	8.6
Rate of American Society of Safety Engineers membership	27.5	22.5	27.1	21.5

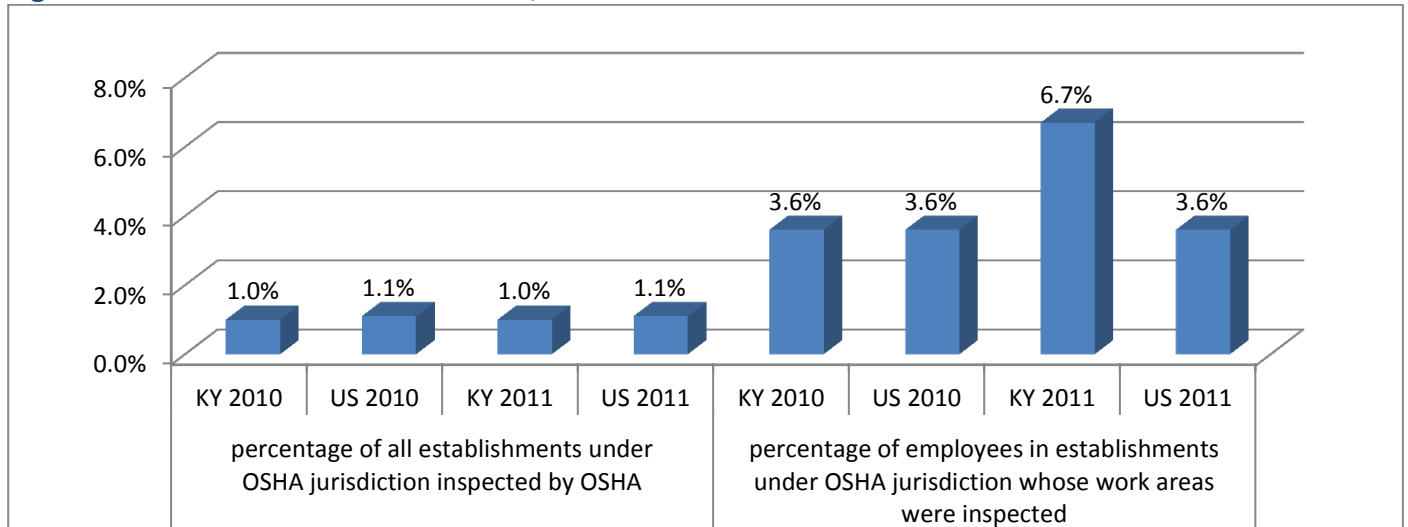
Data Sources: American Board of Preventive Medicine, ACOEM, American Board of Occupational Health Nurses Directory, AAOHN, American Board of Industrial Hygiene, AIHA, BCSP, ASSE, BLS Current Population Survey.

*The 2011 Kentucky and U.S. data for this indicator were not available before the release of this report. Table 1 shows historical data for 2009-2010.

Indicator #18: OSHA Enforcement Activities

In 2011, there were 1,063 establishments inspected by KY OSHA, a decrease from 1,139 in 2010. The percentage of establishments under OSHA jurisdiction inspected by KY OSHA in 2011 was 1.0% (Figure 17). The percentage of OSHA-covered employees whose work areas were inspected by OSHA in 2011 was 6.7%, an 86% increase compared with year 2010.

Figure 17. OSHA Enforcement Activities, 2010-2011

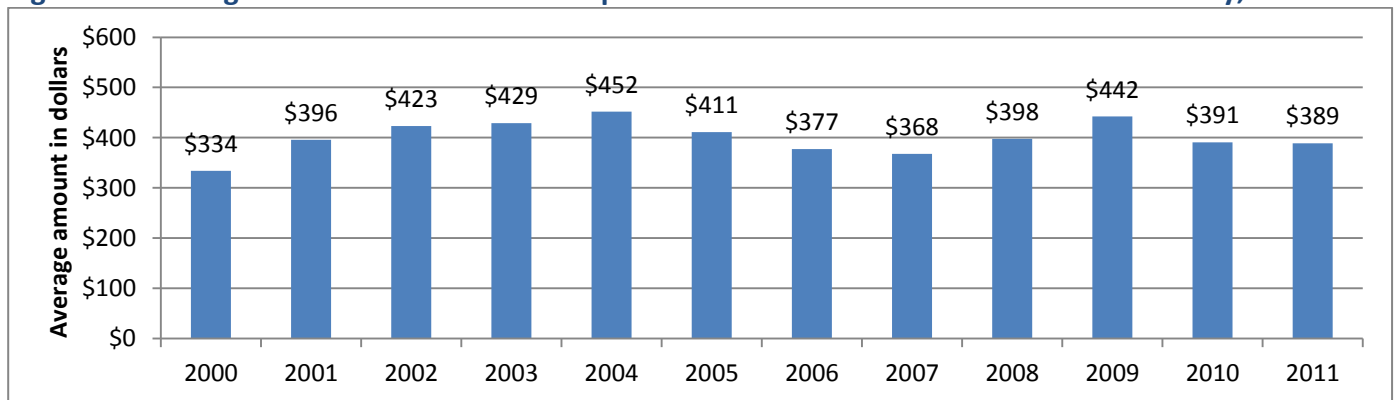


Data Sources: OSHA annual reports, BLS statistics on Covered Employers and Wages.

Indicator #19: Workers' Compensation Awards

The total amount of workers' compensation benefits paid in Kentucky in 2011 was \$656,441,000. The average amount of workers' compensation benefits paid per covered worker in Kentucky remained almost the same from 2010 (\$391) to 2011 (\$389) (Figure 18).

Figure 18. Average Amount of Workers' Compensation Benefits Paid Per Worker in Kentucky, 2000-2011

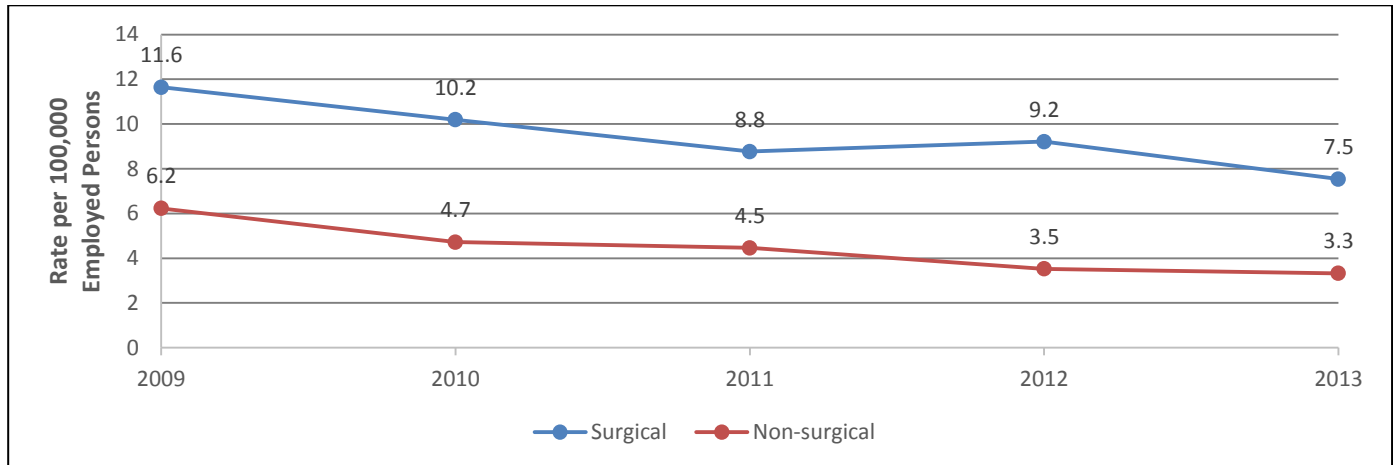


Data Source: National Academy of Social Insurance.

Indicator #20: Low Back Disorders

In 2013, the number of work-related surgical low back disorder hospitalizations for persons 16 years or older in Kentucky was 143, at an annual rate of 7.5/100,000 employees, down 18% from 2012 (Figure 19). The annual number of non-surgical work-related low back disorder hospitalizations for persons 16 years old and above was 3.3 hospitalizations/100,000 employees in 2013, down 6% from 2012.

Figure 19. Kentucky Work-Related Surgical and Nonsurgical Low Back Disorder Hospitalization Rates Among Persons 16 Years and Older, 2009-2013



Data Source: Kentucky Department for Public Health, Office of Health Policy.

Indicator #21: Asthma Among Adults Caused or Made Worse by Work

Using data from the 2011 Asthma Call Back Survey conducted on Behavioral Risk Factor Surveillance System (BRFSS) respondents, it was estimated that 228,298 (63.5%) of ever-employed Kentucky adults with current asthma considered that their asthma was caused or made worse by exposures at work.

Indicator #22: (Kentucky-Specific): Fatal and Non-Fatal Occupational Motor Vehicle Collision Injuries

In 2013, there were 11,332 occupational motor vehicle collisions (MVCs) in Kentucky, a 4% increase from 10,936 in 2012; 83 drivers or occupants in the vehicles involved in these collisions were killed and 2,629 people were injured. Table 2 compares some characteristics of the commercial vehicles involved in collisions in Kentucky 2009-2013. In about two-thirds of the cases, the commercial vehicle driver was reported as at fault according to the police officer. There were 25 commercial vehicle fires in 2013 compared to 31 reported in 2012. The number of buses involved in motor vehicle collisions increased from 143 in 2012 to 156 in the year 2013.

Table 2. Kentucky Commercial Vehicle Collisions, 2009-2013

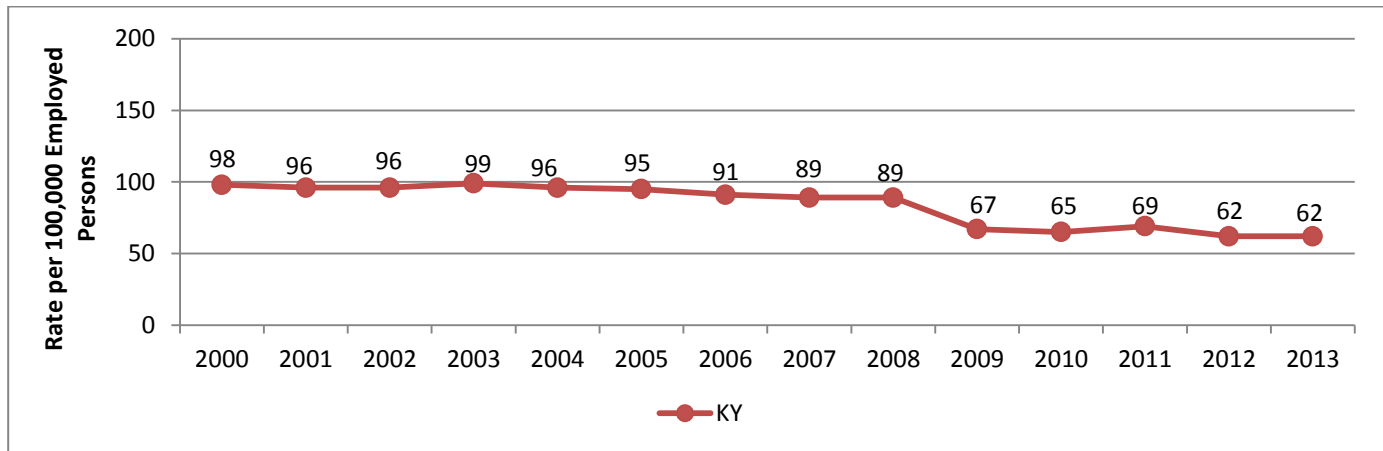
	Year				
	2009	2010	2011	2012	2013
Commercial vehicles involved in collisions in Kentucky	5,683	5,984	6,395	6,122	6,296
Unit number 01 (unit at fault according to the police)	3,674	3,840	4,166	3,951	4,097
Driver's injury					
Fatal	19	9	13	10	9
Incapacitating	38	31	48	37	37
Non-incapacitating	138	145	116	110	125
Possible injury	138	139	143	150	139
Vehicle fire	25	33	20	31	25
KY license	3,252	3,466	3,080	2,848	2,909
Total number of fatalities in collisions involving a commercial vehicle	107	99	83	81	72
Total number of injuries in collisions involving a commercial vehicle	1,392	1,438	1,438	1,392	1,399
Single vehicle collision	1,319	1,316	1,475	1,407	1,440
Unit type					
Bus	116	148	136	143	156
School bus	55	59	75	69	71
Truck and trailer	1,013	1,018	1,125	1,083	1,094
Truck – single unit	1,473	1,498	1,385	1,419	1,484
Truck tractor & semi-trailer	2,894	3,111	3,491	3,279	3,358
Truck – other combination	94	122	138	109	106
Other	34	28	44	20	26
Hazard cargo present	156	171	151	133	136

Data Source: Kentucky State Police Collision Report Analysis for Safer Highways (CRASH) database.

Indicator #23: (Kentucky- Specific): Occupational Motor Vehicle Collisions- First Reports of Injury and Claims Filed with Workers’ Claims by Injury Year

There were 1,182 occupational motor vehicle collision claims or first reports of injury filed with Kentucky workers’ compensation for injuries during 2013, with 62 injuries /100,000 workers (Figure 20).

Figure 20. Occupational Motor Vehicle Collision Injury Rates, 2000-2013

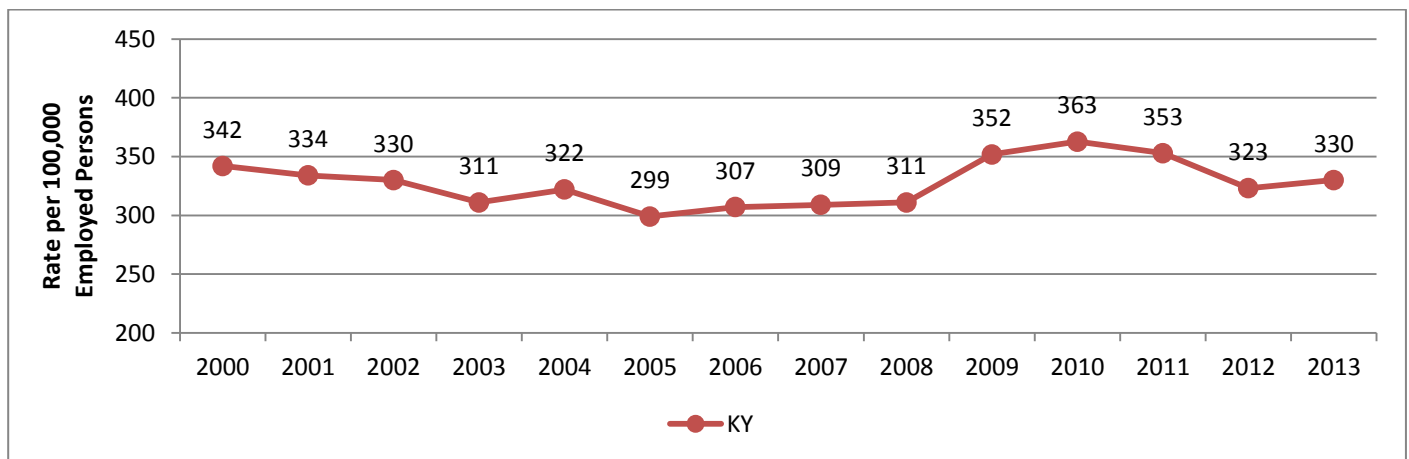


Data Source: Kentucky Department of Workers’ Claims.

Indicator #24 (Kentucky- Specific): Occupational Falls- First Reports of Injury and Claims Filed with Workers’ Claims by Injury Year

In 2013, there were 6,258 occupational fall claims and first reports filed with an associated injury incidence rate of 330/100,000 employed workers, a slight 2% increase from 2012 (Figure 21).

Figure 21. Occupational Fall Injury Incidence Rates, 2000-2013



Data Source: Kentucky Department of Workers’ Claims.



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The Kentucky Injury Prevention and Research Center (KIPRC) is a partnership between the Kentucky Department for Public Health and the University of Kentucky's College of Public Health that combines academic investigation with practical public health initiatives.

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