

Kentucky FACE Program

2011 Annual Report

About the Kentucky FACE Program

The Kentucky Fatality Assessment and Control Evaluation (KY FACE) Program is an occupational fatality surveillance project of the Kentucky Injury Prevention and Research Center (KIPRC)*. The goal of KY FACE is to prevent fatal work injuries by studying the worker, the work environment, the energy exchange resulting in fatal injury, and the role of management, engineering, and behavioral changes in controlling the interaction of these factors. KY FACE investigators evaluate information from multiple sources including 1) interviews of employers, coworkers, witnesses and other investigators; 2) examination of the work site and equipment; 3) review of Occupational Safety and Health Administration (OSHA) reports, police reports, and medical examiner reports; and 4) employer safety procedures. The FACE program does not seek to determine fault or place blame on companies or individual workers. Findings are summarized in narrative reports that include recommendations for preventing similar events in the future.

*Organizationally, KIPRC is located in the University of Kentucky College of Public Health and is a bona fide agent of the Kentucky Department for Public Health (KDPH). Funding for the KY FACE Program is provided by the National Institute for Occupational Safety and Health (NIOSH) Cooperative Agreement Number 5U60OH008483-08.

For more
detailed
information
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Kentucky Work Fatalities at a Glance

To create effective injury prevention programs, it's important to look at where and how injuries occur in Kentucky. Here is a brief snapshot of work fatalities that occurred from January 1, 2011 through December 30, 2011.

How many workers died from injuries in 2011?

One hundred five Residents from Kentucky, Indiana, Tennessee, Ohio, Pennsylvania and West Virginia died while working in Kentucky this year.

What were the leading causes?

- Motor vehicle collisions (29)
- Struck by (17)
- Agricultural machinery (9)
- Homicides (7)
- Falls (5)
- Machines (5)
- Explosions (5)
- Suicide (5)

Who was at the highest risk?

- Construction workers (15)
- Farmers (14)
- Truck drivers (13)
- Installation/maintenance workers (11)
- Building and grounds/cleaning (10)

Deaths by County

- Jefferson (13)
- Fayette (5)
- Adair (4)
- Boone (3)
- Boyd (3)
- Christian (3)
- Franklin (3)
- Harlan (3)
- Kenton (3)

Fatal Occupational Injury rate for 2011

In 2011, the Kentucky rate of fatal occupational injury was 5.6 deaths per 100,000 workers, 37.5% above the 2011 U.S. rate of 3.5 deaths per 100,000 workers. In 2010, the Kentucky rate was 3.9 deaths per 100,000 workers.



Demographics

In Kentucky, 105 workers died as a result of work related injuries. The following lists the demographic profile of this group.

Table 1: Demographics of Kentucky work-related injuries, 2011

Characteristics		Number	Percent of 105 fatalities
Sex	Male	97	92.4%
	Female	8	7.6%
Race	White	96	91.4%
	Other	4	3.8%
	Unknown	5	4.8%
Age	1 - 19	2	1.9%
	20 - 29	13	12.4%
	30 - 39	16	15.2%
	40 - 49	23	21.9%
	50 - 59	33	31.4%
	60 - 69	10	9.5%
	70 - 79	5	4.8%
	80 - 89	3	2.9%
Marital Status	Married	58	55.2%
	Never Married	19	18.1%
	Widowed	2	1.9%
	Divorced	19	18.1%
	Unknown	7	6.7%
Education	Less than High School	10	9.5%
	Some High School	7	6.7%
	Finished High School	52	49.5%
	Some College	20	19.1%
	College Graduate	8	7.6%
	Unknown	8	7.6%
Country of Origin	United States	99	94.3%
	Mexico	2	1.9%
	Other	4	3.8%
Primary Language	English	100	95.2%
	Spanish	2	1.9%
	Other	1	1.0%
	Unknown	2	1.9%
State of Residence	Kentucky	87	82.9%
	Other	16	15.2%
	Unknown	2	1.9%



Investigation Program

The Kentucky FACE Program completed several investigations of selected occupational fatalities from July 2011 to June 2012. For more detailed descriptions of each case, see the KIPRC website at: <http://www.mc.uky.edu/kiprc/projects/KOSHS/index.html>

Roadside Responder is Struck by a Box Truck and Dies (11KY006)

On a winter day, a 53-year-old retired fire chief was working for an environmental company to clean up a tractor-trailer crash along an interstate. The environmental company had been deployed to assist in the cleanup and facilitate a lane closure. The cleanup was almost complete and there were five workers left at the incident site. They were working in the right lane loading a tag-along trailer with items from the crash, when a box truck crashed into the work zone striking the worker and killing him.

To prevent similar injuries, the Kentucky FACE program recommends:

- Companies should provide new and refresher commercial driver safety training for company drivers that addresses driver distraction and includes defensive driving techniques.
- Companies should institute errant traffic alert procedures for roadside work zones.
- Semi tractor-trailer drivers should be trained to recognize signs of fatigue and when to seek appropriate rest areas.

Semi-Truck Driver Falls Asleep While Driving, Crashes and Dies (11KY009)

A 56-year-old male long-haul semi-truck driver fell asleep while driving. It was approximately 4:15 A.M. and the driver was hauling a load of canned tomatoes. He was driving in the right hand lane on a four lane interstate traveling south, when the unit travelled to the right, across the rumble strip and the emergency lane, behind a guardrail, down an embankment and crashed into a grove of trees. A man driving a car behind the semi-truck saw dust rise from the crash, stopped, called emergency medical services and spoke with the driver, who stated that he had fallen asleep. EMS arrived six minutes later and spoke with the trapped driver, who restated that he had fallen asleep while driving. The driver died 20 minutes later while emergency services tried to extricate him from the semi.

To prevent similar injuries, the Kentucky FACE program recommends:

- Semi tractor-trailer drivers should be trained to recognize signs of fatigue and drowsiness and when to seek appropriate rest areas.
- Employers should establish worker safety programs that include recommendations for addressing sleepiness and fatigue.
- Commercial transportation companies should explore the types of drowsy-type driver alert systems that are available on the market and consider providing their drivers with this type of technology.
- Manufacturers of semi trucks should explore the possibility of incorporating driver alert systems technology (e.g. face recognition, vibrating steering wheels and seats, audible and visual alarms) to assist drivers during driving operations.
- Policy makers should consider using Fatality Assessment Control and Evaluation reports to inform federal and state transportation regulatory policy making activities.



Two Tree Trimmers Die when Struck by Errant Semi Tractor-Trailer (10KY009)

One spring morning in 2010, three tree trimmers set up a work site at a highway intersection at the base of a mountain. As one tree trimmer removed equipment from the truck, two other tree trimmers, 21- and 32-years old, stood on the shoulder of the highway to post signage in the intersection. A semi tractor-trailer was driving down the mountain toward the intersection, when its brakes failed. To avoid hitting vehicles in front of the semi, the driver steered to the left, crossed the intersection, striking both tree trimmers with the semi tractor-trailer. Both tree trimmers died at the scene.

To prevent similar injuries, the Kentucky FACE program recommends:

- Roadside inspectors should prevent commercial drivers from continuing to operate a semi tractor-trailer when taken out of service due to inspection.
- Commercial drivers should inform employers of roadside inspection results.
- Commercial carriers should perform random verification checks of driver motor vehicle records.
- A certified annual commercial vehicle inspection program should be established.
- Employers should require proof that operators have performed daily safety checks on the semi tractor-trailer prior to operation.
- The toll-free number to report illegal and/or dangerous commercial driver activity to the Federal Motor Carrier Administration should be advertised in rest areas and truck stops.

Semi Tractor-Trailer Driver Dies in Median Crossover Crash; 10 Others Die (10KY008)

At approximately 5:00 A.M. on a spring morning, a 45-year-old male semi tractor-trailer driver headed south on an interstate highway with a back-haul of brake drums. He crossed a 60 foot grass depressed median, drove over a cable barrier, was struck by a northbound 15-passenger van with 12 occupants, hit a cut rock wall and caught fire. The semi-truck driver and 10 occupants within the van died.

To prevent similar injuries, the Kentucky FACE program recommends:

- Commercial vehicle carriers should establish and implement an appropriate comprehensive safety and driver training program that includes recognition of driver distraction and driver fatigue.
- Median barriers along rural interstate roadways with high volumes of large truck traffic should be built with test level 5 barriers.
- Commercial vehicles should be equipped with the latest communication technology available.
- Transportation companies should consider banning cell phone use by drivers while operating a commercial vehicle.
- Transportation companies should require drivers to have adequate rest before operating a commercial vehicle.
- Research should be performed on the design and location of semi-truck fuel tanks to reduce their exposure on commercial vehicles.

Steel Worker Falls from Highway Bridge and Dies (10KY043)

On a fall day in 2010, a 49-year-old steel worker fell from a highway bridge and died. The steel worker was in the process of leveling jacks for concrete forms. He had donned a fall protection harness with an attached lanyard then stepped outside the lifeline onto a 10' x 2' wooden board to verify the jacks were level. As the steel worker stepped over the lifeline, he did not attach the lanyard and fell approximately 28 feet onto the railroad tracks below. He was taken to a nearby hospital where he died in surgery approximately two hours later.

To prevent similar injuries, the Kentucky FACE program recommends:

- A safety analysis should be performed by a competent person at each job site before work commences.
- Employers should ensure all employees use personal fall arrest systems correctly.
- Employers should implement and enforce a written safety policy which states the consequences of not following personal fall arrest policy.
- General contractors should ensure, through contract language, that all subcontractors implement and enforce appropriate safety and health programs and training specific to the work to be performed.
- Small business owners should institute and enforce drug testing policies.



Kentucky Hazard Alerts

The Kentucky FACE Program completed three HazAlerts of selected occupational fatalities from July 2011 to June 2012. For the complete HazAlerts, see the KIPRC website:

<http://www.mc.uky.edu/kiprc/projects/KOSHS/index.html>

Workers Die from Heat Stroke

In 2011, there were two cases where workers died as a direct result of heat stroke. The first was a 32-year-old male tire-company employee who changed a tire in a tire bay, then drove 30 minutes to a farm to change a tractor tire. The temperature was 95 degrees. In the second case, an 18-year-old male landscape company worker died of heat exposure on a 96 degree day.

To prevent heatstroke, the Kentucky FACE program recommends that employers:

- Train supervisors and employees to recognize the symptoms of heat stroke.
- Give frequent breaks and provide drinking water.
- Adjust work hours to accommodate work conditions such as high heat index and/or high humidity.
- Monitor workers who are at risk of heat stroke.

To prevent heatstroke, the Kentucky FACE program recommends that employees:

- Report unusual behavior.
- Know how to treat co-workers for heat stroke.
- Monitor their own physical condition and that of their co-workers.

Workers Killed after being Electrocuted

In 2011, a master electrician was fatally injured while working in a confined attic space to install a drop pole for an office cubicle. An electrical engineer was operating a copper aluminum jointer at a manufacturing company, and suffered an electrical shock. A construction company worker was repositioning an aluminum ladder, which came near the overhead power lines resulting in an arc, killing the worker.

To prevent electrocution, the Kentucky FACE program recommends that employers:

- Provide non-conductive ladders.
- Conduct a jobsite survey to identify potential hazards.
- Provide electricity awareness training.
- Provide onsite automated external defibrillators (AEDs).

To prevent electrocution, the Kentucky FACE program recommends that employees:

- Use non-conductive ladders.
- De-energize lines before beginning work.
- Make sure all equipment is properly grounded.
- Know how to use automated external defibrillators (AEDs).

Workers Die from Carbon Monoxide Poisoning

A rental house owner died of CO poisoning while running a generator inside his house, after an ice storm. A heating and cooling company employee died of carbon monoxide poisoning while monitoring a gas-fired air conditioning unit.

To prevent carbon monoxide poisoning, the Kentucky FACE program recommends that employers:

- Train supervisors and employees to recognize symptoms of CO poisoning.
- Provide first aid training, including what to do if exposed to carbon monoxide.
- Review carbon monoxide prevention tips with their employees.

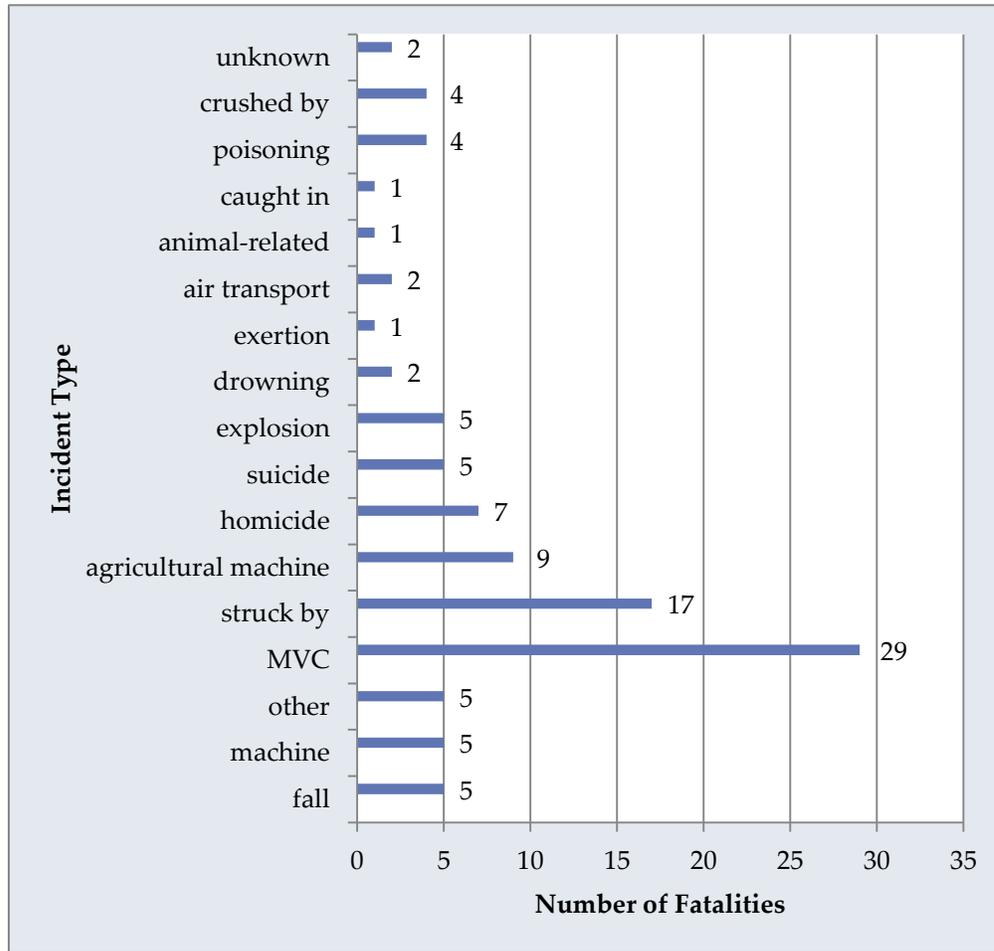
To prevent carbon monoxide poisoning, the Kentucky FACE program recommends that employees:

- Report unusual behavior.
- Know how to treat co-workers for carbon monoxide poisoning.
- Carry a carbon monoxide detector to mobile sites.
- Recognize the signs of carbon monoxide poisoning.



Types of Events Causing Worker Deaths

Figure 1: Number of fatal injuries at work by event, Kentucky, 2011*



*Type of injury could not be determined for one Kentucky FACE record, so only 104 injuries are reported in this figure.

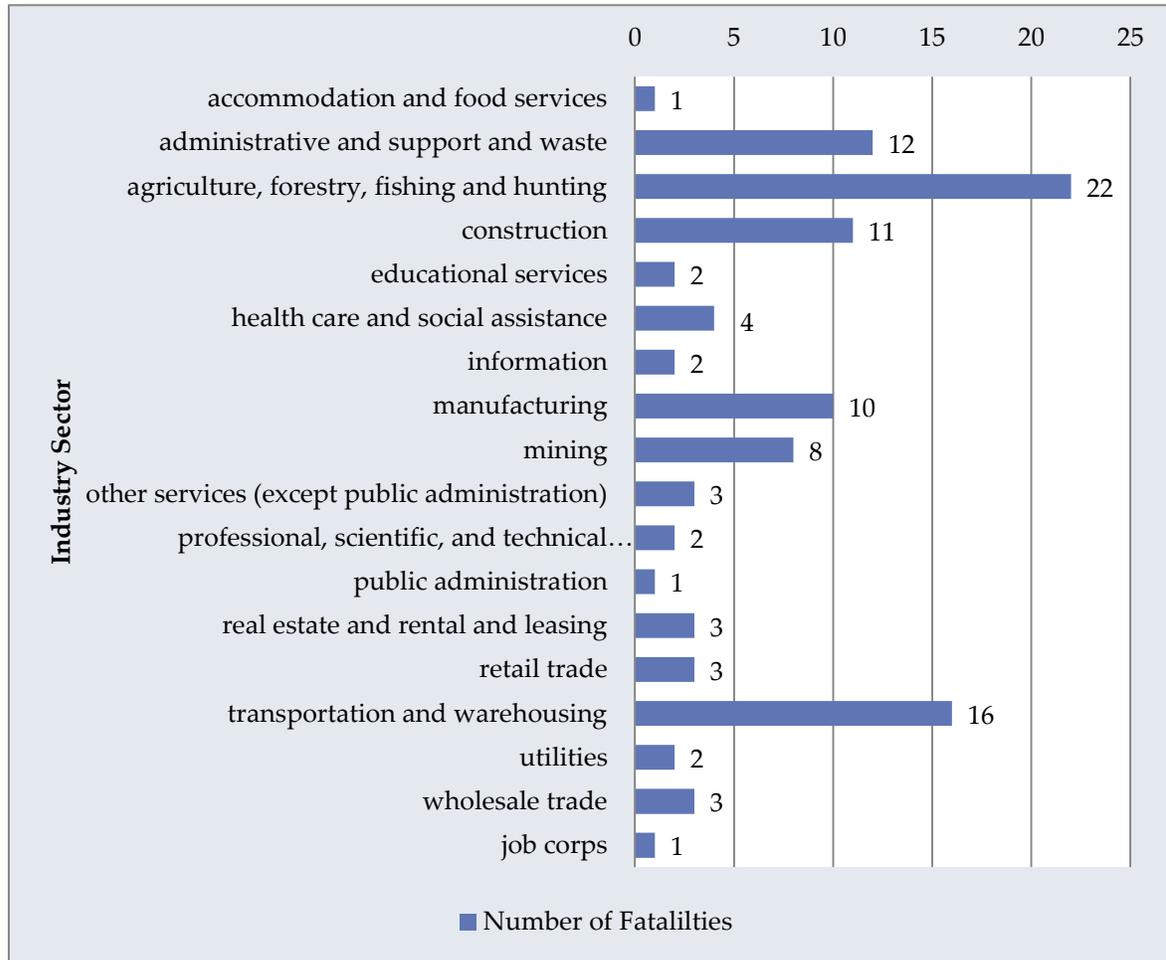
Highlights:

- Of the 105 fatal occupational injuries in Kentucky in 2011, 29 were motor vehicle collisions. Thirteen of the motor vehicle collisions involved white male truck drivers between the ages 39 and 56.
- Five of the seventeen struck-by deaths involved logging or tree trimming occupations, where the worker was struck by either a tree or tree limb.
- Self-employed farmers accounted for 7 of the 9 work fatality cases involving agricultural machinery.
- Seven workers were victims of workplace homicide, and six of the seven died of gunshot wounds. Two of the victims worked in the health care profession, and the others included a lawyer, landlord, cab driver, plant supervisor and security guard.



Fatal Injuries at Work by Industry

Figure 2: Number of fatal injuries at work by industry, Kentucky, 2011



Highlights:

- The agriculture, forest, fishing and hunting industry had the highest number of deaths in 2011. Twenty seven percent of the 22 fatalities were killed after being struck by an object. Of the six struck-by deaths occurring in this industry, four were a result of a falling tree or limb, one was caused by a log rolling off a burning pile of tree debris, and one was a result of a logging vehicle slipping off a jack.
- Thirty six percent (n=8) of the agriculture, forestry, fishing and hunting industry deaths were related to agricultural machinery.
- Self-employed workers accounted for 81%(n=17)¹ of the fatalities in the agriculture, fishing and hunting industry.
- Of the 16 cases reported under the transportation and warehousing industry, 11 were motor vehicle collisions involving truck drivers.

¹ Percentage calculated on the number of known self-employed workers.

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- Four tree trimmers and two landscape workers were among the 12 reported administrative and support services industry deaths.
- The construction industry continues to be dangerous in Kentucky, with 11 deaths reported in 2011. Four of the construction industry deaths occurred as a result of motor vehicle collisions, and two occurred as a result of explosions.
- Two manufacturing workers were killed in a chemistry plant explosion, and one in a plastics factory explosion. Three manufacturing workers were killed as a result of motor vehicle collisions.
- In 2011, the Kentucky mining industry saw the deaths of 7 Kentuckians, and one worker from Tennessee.



Conclusions

The Kentucky Injury Prevention and Research Center would like to take a moment to respectfully acknowledge the individuals that the numbers in this report represent, and the pain and loss their families must endure. It is hoped that surveillance of these tragic workplace situations will help to guide government, industry, workers and community to direct their efforts toward future injury prevention.