Kentucky FACE Program

2016 Annual Report

About the Kentucky FACE Program

The Kentucky Fatality Assessment and Control Evaluation (KY FACE) Program is an occupational fatality surveillance program 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 preventing future injuries. 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.

Kentucky FACE would like to respectfully acknowledge the individuals who lost their lives to Kentucky workplace injury, and the pain and loss endured by their families and colleagues. It is hoped that surveillance of these tragic workplace incidents will help guide government, industry, workers and communities to direct their efforts and resources toward better targeted injury prevention.

*Organizationally, KIPRC is located in the University of Kentucky 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 5U60OH008483-12.
Kentucky Worker Fatalities at a Glance

To create effective injury prevention programs, it’s important to look at where and how fatal injuries among workers occur in Kentucky. Here is a brief snapshot of worker fatalities that occurred from January 1, 2016 through December 30, 2016.

How many workers died from injuries in 2016?

While working in Kentucky in 2016, 84 residents from Kentucky, Arkansas, Florida, Georgia, Indiana, Kansas, Missouri, Tennessee and West Virginia died on the job.

<table>
<thead>
<tr>
<th>Leading Causes</th>
<th>Leading Industries and Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Motor vehicle collision (36)</td>
<td>• Transportation and Warehousing Industry (17)</td>
</tr>
<tr>
<td>• Struck by (13)</td>
<td>• Agriculture, Forestry, Fishing, and Hunting (16)</td>
</tr>
<tr>
<td>• Fall (7)</td>
<td>• Drivers, including truck, medical, taxi, delivery (21)</td>
</tr>
<tr>
<td>• Agriculture Machine (5)</td>
<td>• Construction workers (9)</td>
</tr>
<tr>
<td>• Homicide (5)</td>
<td>• Farmers (7)</td>
</tr>
<tr>
<td></td>
<td>• Loggers (5)</td>
</tr>
</tbody>
</table>

Deaths by County

- Jefferson (14)
- Franklin, Hardin, and Pulaski (4 each)
- Daviess, Marion and Warren (3 each)
- The remainder of fatalities is spread across 76 of Kentucky’s 120 counties, with no more than two deaths per county.

Fatal Occupational Injury Rate for 2016

In 2016, the Kentucky fatal occupational injury rate decreased 10% from 4.9 deaths per 100,000 workers (2015) to 4.4 deaths per 100,000 workers (2016).
Demographics

In Kentucky, 84 workers died as a result of work-related injuries. The following lists the demographic profile of this group.

Table 1: Demographics of Kentucky Fatal Work-Related Injuries, 2016

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number</th>
<th>Percent of 84 fatalities*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>77</td>
<td>92%</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>8%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>80</td>
<td>95%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 20</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>20 - 29</td>
<td>12</td>
<td>14%</td>
</tr>
<tr>
<td>30 - 39</td>
<td>14</td>
<td>17%</td>
</tr>
<tr>
<td>40 - 49</td>
<td>15</td>
<td>18%</td>
</tr>
<tr>
<td>50 - 59</td>
<td>23</td>
<td>27%</td>
</tr>
<tr>
<td>60 - 69</td>
<td>13</td>
<td>16%</td>
</tr>
<tr>
<td>70 - 79</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>80 - 89</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>51</td>
<td>61%</td>
</tr>
<tr>
<td>Never Married</td>
<td>16</td>
<td>19%</td>
</tr>
<tr>
<td>Divorced</td>
<td>16</td>
<td>19%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than High School</td>
<td>7</td>
<td>8%</td>
</tr>
<tr>
<td>Some High School</td>
<td>14</td>
<td>17%</td>
</tr>
<tr>
<td>Finished High School</td>
<td>49</td>
<td>58%</td>
</tr>
<tr>
<td>Some College</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>College Graduate</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Country of Origin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>79</td>
<td>94%</td>
</tr>
<tr>
<td>Mexico</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Primary Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>79</td>
<td>94%</td>
</tr>
<tr>
<td>Spanish</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>State of Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kentucky</td>
<td>70</td>
<td>83%</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>16%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health, June 2017. Data source: Kentucky FACE Database.

*Percentages may not total 100 due to rounding
Occupational Fatality Trends in Kentucky

Figure 1

Number of Fatal Work Related Injuries, Kentucky, 2007-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>112</td>
</tr>
<tr>
<td>2008</td>
<td>105</td>
</tr>
<tr>
<td>2009</td>
<td>93</td>
</tr>
<tr>
<td>2010</td>
<td>64</td>
</tr>
<tr>
<td>2011</td>
<td>105</td>
</tr>
<tr>
<td>2012</td>
<td>95</td>
</tr>
<tr>
<td>2013</td>
<td>80</td>
</tr>
<tr>
<td>2014</td>
<td>80</td>
</tr>
<tr>
<td>2015</td>
<td>90</td>
</tr>
<tr>
<td>2016</td>
<td>84</td>
</tr>
<tr>
<td>Average</td>
<td>90.8</td>
</tr>
</tbody>
</table>

Types of Events Causing Worker Deaths

Figure 2

Number of Fatal Injuries at Work by Event, Kentucky, 2016

- MVC: 36
- Struck by: 13
- Fall: 7
- Agriculture machine: 5
- Homicide: 5
- Machine: 4
- Other: 3
- Electrocution: 2
- Poisoning: 2
- Suicide: 2
- Air/space transport: 1
- Animal related: 1
- Crushed by: 1
- Explosion: 1
- Suffocation: 1

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Kentucky FACE Program

Figure 3

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Motor vehicle incident on roadway</th>
<th>Motor vehicle incident on nonroadway</th>
<th>Pedestrian motor vehicle incident on roadway</th>
<th>Pedestrian motor vehicle incident on nonroadway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation &amp; Warehousing</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing and Hunting</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Information</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other Services (Except Public Administration)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Educational Services</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Administrative &amp; Support &amp; Waste…</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Arts, Entertainment, &amp; Recreation</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Health Care &amp; Social Assistance</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Professional, Scientific, &amp; Technical Services</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Public Administration</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

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**Highlights:**

- Of the 84 occupational fatalities in Kentucky in 2016, 43% (n=36) were motor vehicle collisions (MVC) (Figure 2). Motor vehicle collision deaths were up from 29 deaths in 2015, an increase of 24%. Of the 36 MVC deaths, Kentucky saw 12 pedestrian occupational fatalities in 2016. Seven of the 12 were motor vehicle traffic-related incidents occurring on roadways (Figure 3).
- Logging continues to be a dangerous occupation. Five of the 13 struck by fatalities were loggers (not shown).
- With the help of coroners and medical examiners, Kentucky FACE receives toxicology data on work-related fatalities. This data will allow for a better understanding of how drugs and alcohol impact the workplace. Of the 84 cases in 2016, 11% (n=9) had drug/narcotic involvement. Thirty one percent (n=26) are known to have no intoxication involvement. Fifty eight percent, (n=49) of cases remain undetermined. Substances detected included oxycodone, gabapentin, hydrocodone, hydromorphone, oxycodone, oxymorphone, cannabinoids, amphetamine, methamphetamine, heroin, buprenorphine, alprazolam, cocaine, and benzoylecgonine (not shown).
Fatal Injuries at Work by Industry

Figure 4

Number of Fatal Injuries at Work by Industry, Kentucky, 2016

- Transportation & Warehousing: 17
- Agriculture, Forestry, Fishing and Hunting: 16
- Construction: 8
- Manufacturing: 6
- Wholesale Trade: 5
- Public Administration: 5
- Other Services (Except Public Administration): 5
- Retail Trade: 4
- Information: 3
- Health Care & Social Assistance: 3
- Administrative & Support & Waste: 3
- Mining: 2
- Educational Services: 2
- Accommodation & Food Services: 2
- Real Estate & Rental & Leasing: 1
- Professional, Scientific, & Technical Services: 1
- Arts, Entertainment, & Recreation: 1

Highlights:

- Of the 17 transportation and warehousing fatalities (Figure 4), 12 were motor vehicle-related collisions (MVCs) and 9 of the 12 MVCs were truck drivers. Kentucky FACE recognizes trucking as a risky occupation, and provides safety training materials for truckers here: [http://www.mc.uky.edu/kiprc/face/trucking/index.html](http://www.mc.uky.edu/kiprc/face/trucking/index.html).
- The agriculture, forestry, fishing and hunting industry accounted for 19% (n=16) of Kentucky’s 2016 occupational fatalities, including 7 farmers and 5 loggers.
- The 8 construction industry fatalities in Kentucky included 4 falls. Workers who died in this industry ranged in age from 19 to 75 years of age. Kentucky FACE participates in a nationwide campaign each spring to prevent falls in construction. Free safety training resources can be downloaded from our website at: [http://www.mc.uky.edu/kiprc/face/construction/index.html](http://www.mc.uky.edu/kiprc/face/construction/index.html).
Investigation Program

The Kentucky FACE Program completed 7 investigations of selected occupational fatalities from July 1, 2016 to June 30, 2017. Each report begins with a case summary, and provides recommendations for preventing future similar incidents. Our reports do not determine fault or blame. We do not use personal identifiers in our reports, or identify the names of companies.

2016 FACE investigations are listed below. For the complete report, see the KIPRC website at: http://www.mc.uky.edu/kiprc/face/index.html.

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Title</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>15KY041</td>
<td>Seasonal Lawn Mower Operator Crushed and Dies after Lawn Mower Rolls Over on a 30 Degree Slope:</td>
<td>Landscaping Services</td>
</tr>
<tr>
<td></td>
<td>A 22-year-old lawn mower operator was mowing horizontally on a hill with a 30 degree slope when his mower slid down the hill and rolled onto him.</td>
<td></td>
</tr>
<tr>
<td>15KY063</td>
<td>Semi-Truck Owner-Operator Crushed by 7.6 Ton Steel Coil While Securing Load to Flatbed Trailer:</td>
<td>Truck Transportation</td>
</tr>
<tr>
<td></td>
<td>A 46-year-old truck driver (the victim) and a bridge crane operator were loading three 7.6 ton steel coils onto a flatbed semi-trailer, using a bridge crane. The truck driver was standing on the bed of the trailer and both he and the bridge crane operator had their backs turned to the bridge crane, while the crane operator actuated the crane’s controls. The crane’s sling became entangled in the eye of a steel coil, causing it to become unstable and topple over onto the truck driver.</td>
<td></td>
</tr>
<tr>
<td>15KY078</td>
<td>Commercial Roofer Falls 30 Feet Through a skylight while Installing Roof Insulation:</td>
<td>Construction</td>
</tr>
<tr>
<td></td>
<td>A 25-year-old male roofer (the victim) was working with a roofing crew to install insulation and corrugated metal roofing panels on a warehouse roof. The victim was stretching roofing insulation near the peak of the roof when the insulation tore, causing the roofer to lose his balance. He stepped forward onto a clear fiberglass skylight in an attempt to gain his balance, causing the skylight to break. He fell approximately 30 feet to the concrete below, fatally striking his head.</td>
<td></td>
</tr>
<tr>
<td>16KY017</td>
<td>Construction Laborer Killed in Trench Collapse while Taking Grade Measurements:</td>
<td>Construction</td>
</tr>
<tr>
<td></td>
<td>As a 22-year-old construction laborer was taking trench measurements in an unprotected trench, the excavator operator noticed the soil shifting on the vertical trench wall and yelled for the victim to get out. The victim tried to jump out of the trench to escape but was buried beneath the collapsing soil.</td>
<td></td>
</tr>
<tr>
<td>16KY052</td>
<td>Tow Truck Driver Struck and Killed by Passenger Vehicle While Securing Disabled Vehicle onto Flatbed Tow Truck:</td>
<td>Highway Incident Management</td>
</tr>
<tr>
<td></td>
<td>As a tow truck owner-operator was on the traffic-facing lane side securing a vehicle to his tow truck when the operator of an oncoming Dodge Durango traveling in the same direction failed to move over, veered over the edge line, and struck the tow truck owner and the side of the tow truck.</td>
<td></td>
</tr>
<tr>
<td>16KY055</td>
<td>Tow Truck Driver Struck and Killed by Van While Entering his Tow Truck:</td>
<td>Highway Incident Management</td>
</tr>
<tr>
<td></td>
<td>As a tow truck driver was entering the rollback tow truck cab on the traffic-facing side of the truck, an oncoming van swerved into the emergency lane and struck him, causing fatal injuries.</td>
<td></td>
</tr>
</tbody>
</table>
Kentucky FACE Program

Kentucky Hazard Alerts

The Kentucky FACE Program completed 3 Hazard Alerts on selected occupational fatalities from July 1, 2016 to June 30, 2017:

- **Convenience Store Robbery Safety** looks at three convenience store robberies that occurred in Kentucky between 2009 and 2015, and offers occupational safety tips for protecting workers during a robbery, as well as prevention tips for deterring robberies.

- **Fatal Falls in Construction** looks at the construction industry in Kentucky from 2008 – 2015, and highlights the types of incidents that occurred. Falls accounted for 32% of construction fatalities during that time period, and the Hazard Alert features three Kentucky fall cases, offering requirements and recommendations for preventing similar incidents. Links to additional free training resources are also provided.

- **Pedestrian Tow Drivers Struck and Killed** looks at three tow truck operators who were struck and killed by passing motor vehicle traffic while responding to calls for roadside auto assistance from 2015-2016. The unique challenges faced by tow truck operators are highlighted, and safety recommendations are made, including the wearing of reflective safety gear and requesting the assistance of law enforcement for lane closure.

For the complete Hazard Alert, see the KIPRC website: [http://www.mc.uky.edu/kiprc/face/hazard-alerts.html](http://www.mc.uky.edu/kiprc/face/hazard-alerts.html).

Kentucky FACE Social Media

Kentucky FACE maintains a presence on Social Media, enabling us to share references and links to occupational injury prevention materials and sources. Please visit us:

[@KYFACEProgram](http://www.mc.uky.edu/kiprc/face/hazard-alerts.html)

Kentucky FACE Data Source

All data in this report was produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. June 2017. Data source: Kentucky FACE Database.