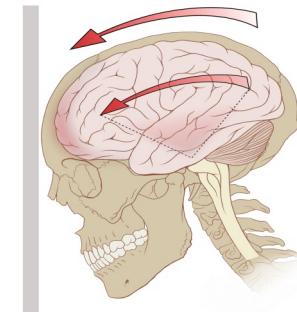


## Traumatic Brain Injuries in the Workplace

Kentucky Occupational Safety and Health Surveillance, November 2018

### What is the hazard?

In 2016, there were 405 visits to Kentucky emergency departments for a work-related traumatic brain injury (TBI). An additional 63 visits resulted in admission to the hospital for a work-related TBI, averaging a stay of 6.1 days, and costing Kentucky companies over \$5.2 million. The leading causes of work-related TBIs are falls, struck by/against, and motor vehicle crashes<sup>[1]</sup>.



### The following traumatic brain injury deaths occurred in Kentucky:

Case 1: At 2:00 pm, an electric company worker was travelling in the middle lane of an interstate when he approached a slowed semi-truck. The victim signaled and attempted to pass the semi in the left lane. As the victim changed lanes, he struck a box truck in the rear that had stalled in the passing lane. The cause of death was listed as multiple blunt force trauma including to the head. The victim was not wearing a seat belt. (2017)

Case 2: At 1:30 pm, a drywall installer was on the top buck of a mobile scaffold in the process of positioning the guardrails. For unknown reasons, the victim stepped onto an unsecured walking plank without fall protection in order to hang a piece of drywall. The plank flipped onto its side, throwing the victim face first 11 feet to the ground below. The cause of death was listed as blunt force trauma to the head and neck. (2017)

Case 3: At 11:45 am, a logging employee was felling a large tree. As the tree was falling, vines near the top of the tree became entangled in an adjacent tree's limbs located behind the victim. The vines pulled several limbs free, one of which struck the victim in the back of the head, killing him instantly. The limb struck with enough force to split the hardhat the victim was wearing in half. (2017)

### Recommendations:

- Employers who have employees who drive for work purposes should enforce a strict seatbelt policy, prohibit cell phone use while driving, and carefully inspect/perform repairs on company vehicles through a preventive maintenance program.
- 29 CFR 1926.501(b)(1) requires each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- Employers should ensure that each affected employee wears a protective helmet approved under ANSI standard Z89.1-2014 when working in areas where there is a potential for injury to the head from falling objects. Hardhats that are frequently used in direct sunlight should be replaced at a higher rate than those that are not.

[1] <http://www.mc.uky.edu/kiprc/programs/tbi-surveillance/reports/TBI2016Report.pdf>



## Further Resources

Name of Resource	Resource Description	Resource Link
<b>The Brain Injury Alliance of Kentucky (BIAK)</b>	BIAK's mission is "to serve those affected by brain injury through advocacy, education, prevention, service and support."	<a href="https://biak.us/">https://biak.us/</a>
<b>Centers for Disease Control and Prevention (CDC) Fact Page</b>	The United States' leading national public health institute webpage that defines TBI and provides statistics on the leading causes of TBI and the most common risk factors.	<a href="https://www.cdc.gov/traumaticbraininjury/get_the_facts.html">https://www.cdc.gov/traumaticbraininjury/get_the_facts.html</a>
<b>The Mayo Clinic Webpage on TBI</b>	The Mayo Clinic, the number one ranked hospital in the United States by U.S. News, provides a webpage on TBI symptoms and causes as well as diagnosis and treatment.	<a href="https://www.mayoclinic.org/diseases-conditions/traumatic-brain-injury/symptoms-causes/syc-20378557">https://www.mayoclinic.org/diseases-conditions/traumatic-brain-injury/symptoms-causes/syc-20378557</a>
<b>Traumatic Brain Injuries in Construction</b>	TBI remains one of the main causes of work-related fatalities in the construction industry. This resource provides statistics and ideas for prevention of TBIs.	<a href="https://blogs.cdc.gov/niosh-science-blog/2016/03/21/constructiontbi/">https://blogs.cdc.gov/niosh-science-blog/2016/03/21/constructiontbi/</a>

For additional training materials and information regarding the KOSHS program, please visit the program website at:  
<http://www.mc.uky.edu/kiprc/koshs/index.html>

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### Acknowledgements:

Produced by the Kentucky Occupational Safety and Health Surveillance (KOSHS) Program, Kentucky Injury Prevention and Research Center (KIPRC) as bona fide agent for the Kentucky Department for Public Health.  
The KOSHS Program is funded by grant 5U60OH008483-14 from the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention.