

Fatality Assessment and Control Evaluation Project

Public Health

KY FACE #00KY051

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FROM: Mike Pope, DVM, KY FACE Project Manager

SUBJECT: Logger Fatally Injured by Falling Tree

SUMMARY

A 73-year-old male self-employed logger (the victim) was killed when he presumably was struck on the head by a branch of a falling tree. He and his son, the only other logger on site, had finished a break and had been working approximately 30 minutes when the incident occurred. The son was operating a skidder attached to the base of a tree that had been cut, but was still standing, nearly vertical, hung in the fork of another tree. He was pulling the base away from the stump so that the tree would fall to the ground. The father was watching, waiting for the tree to come down so that he could begin trimming away the branches. After the tree hit the ground, the son got off of the skidder intending to help his father trim the branches, but he didn't see his father. Searching the site, he found his father unresponsive, slumped forward on his knees, in the branches of the fallen tree. Since there were no telephones on site, the son took a van that they had parked in a clearing nearby to call for help. As he was driving through a pasture toward the landowners house, he came upon the landowner who was loading cattle and asked him to go to the house to call 911 so that he could return to the scene. Upon returning to his father, the son had to cut away some branches in order to reach him. He moved his father out from under the branches and held him in his lap, waiting for help to arrive. Emergency medical services (EMS) were dispatched to the scene after receiving the call at 7:40 a.m., and arrived at 8:00 a.m. One of the EMS workers, also being a coroner, pronounced the victim dead at the scene, immediately upon their arrival. In order to prevent similar instances from occurring, FACE investigators recommend that:

- Loggers should attend the Master Logger Program for education regarding Occupational Safety and Health Administration (OSHA) logging standards and safety procedures.

- A clear escape path should always be planned when felling a tree and no one except for the person cutting the tree, or in this case, skidding the tree, should be in the area.
- A hazard assessment of the logging site should be completed before beginning work to identify and control potential hazards.
- Appropriate personal protective equipment (PPE) should be worn at the logging site.

INTRODUCTION

On July 25, 2000, a county coroner notified FACE investigators of a 73-year-old male logger who had been killed earlier that morning. An investigator traveled to the site on July 27 and an interview was conducted with the county coroner who responded to the scene. The scene was visited, photographs and measurements were taken, and the landowner was interviewed. The son was interviewed at a later date by telephone. A copy of the coroner's report and the death certificate were obtained.

INVESTIGATION

The victim was a self-employed logger and had been logging for about 35 years. He and his son had been logging this particular tract for about two weeks, and they had been logging for the same landowner for about a month. The hardwood logs were to be sold at a local sawmill and the income split with the landowner.

The weather was hot and dry, and had been for some time. The terrain of this particular tract was fairly mild, with a slope of less than eight degrees in the immediate area. Their usual routine involved arriving at daybreak (about 5:00-5:30 a.m.) and working for a few hours until it got too hot, usually stopping by noon. The father usually felled a tree, both the father and the son trimmed branches, and the son dragged the tree/log to a clearing with a skidder. They typically completed this process for each tree before beginning another. Neither wore any personal protective equipment.

On the day of the incident, they arrived at dawn and worked for about 2 hours before taking a break. Approximately 30 minutes after their break, the son was using the skidder to free up a 22-inch diameter (at the base) 80 feet tall tree that had been cut, but had not fallen, due to being caught in the fork of another tree. He attached a cable from the skidder to the base of the tree, and pulled the base away from the stump so that the tree would fall the rest of the way to the ground. The father was watching, waiting for the tree to come down so that he could begin trimming away the branches. The tree hit the ground after the base had moved about 60 feet from the stump. The 35 feet long 11-inch diameter fork of the second tree in which the first one was stuck broke off and came down as well. Having successfully felled the tree, the son stopped the skidder and got off to help his father trim the branches, but he didn't see his father. Searching the site, he found his father unresponsive, slumped forward on his knees, in the smaller (1-3 inch diameter) branches of the fallen tree. The son immediately went to call for help. Since there were no telephones on site, he took a van that they had parked in the clearing nearby and drove toward the landowners home to make the call. On his way, as he was driving

through a pasture, he came upon the landowner who was loading cattle, told him that his father had been struck by a tree and asked him to go call 911 so that he could return to the scene. The son then returned to his father and proceeded to extricate him from the branches of the fallen tree, having to cut some branches with his chain saw to reach him. Once he had moved his father from the tree branches, he held him in his lap waiting for help to arrive. Emergency medical services were dispatched when they received the call from the landowner at 7:40 a.m., and arrived at the scene at about 8:00 a.m. One of the EMS workers, also being a County Coroner, pronounced the victim dead at the scene, immediately upon their arrival. Death was thought to have been instant or near instant.

CAUSE OF DEATH

The cause of death on the coroner's report was depressed skull fracture/cervical spine fracture due to logging accident.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Loggers should attend the Master Logger Program for education regarding OSHA logging standards, safe logging techniques, and best management practices.

Discussion: The Kentucky Forest Conservation Act requires that as of July 15, 2000 a Kentucky Master Logger is on-site and in charge of all commercial logging operations. Master Loggers are also required to carry their Designation Card with them. Loggers should be aware of OSHA standards and proper logging techniques to ensure a safe work environment. In this case, the son was registered for the program but had not yet attended. The father had not attended nor did he have plans to attend the program, as the son would serve as the on-site Master Logger. For more information about the Kentucky Master Logger Program, contact the Kentucky Department of Natural Resources (502-564-4496).

Recommendation #2: A clear escape path should always be planned when felling a tree and no one except for the person cutting the tree, or in this case, skidding the tree (to complete its fall), should be in the area.

Discussion: Felling trees is dangerous, even with the most skilled and/or experienced loggers. A falling tree can strike objects on the way down or on the ground sending them in unpredictable directions with lethal force. There is also, of course, the obvious potential of being struck by the tree that is being felled. As inconvenient as it may sometimes seem, no one except the feller should be within two tree lengths of the tree being felled. In fact, OSHA regulations state that "no employee shall approach a feller closer than two tree lengths of trees being felled until the feller has acknowledged that it is safe to do so, unless the employer demonstrates that a team of employees is necessary to manually fell a particular tree" [29 CFR 1910.266 (h) (1) (iv)]. Another OSHA standard [29 CFR 1910.266 (h) (1) (v)] states that "no employee shall approach a mechanical felling operation closer than two tree lengths of the trees being felled until the machine operator has acknowledged that it is safe to do so." These regulations are intended to reduce or remove the risk of injury from anyone not directly involved with felling the tree.

Initially, the father was the feller, and should have been the only one within two tree lengths. However, once the tree became lodged and the decision was made to use the skidder to complete the task, the only person that should have been within the two tree length area was the

son, since he, as the machine operator, was now responsible for felling the tree. The father had no reason to be within the immediate two tree length area while the son brought the tree down with the skidder.

In this incident, it isn't clear exactly where the father was standing when the son began pulling the tree with the skidder. It is clear, however, that he placed himself in danger by not remaining a safe distance away until the tree was completely down and the area declared safe (by his son, the "machine operator") for his presence. Being self-employed, the victim wasn't governed by OSHA regulations - although following them may have saved his life.

Recommendation #3: A hazard assessment of the logging site should be completed before beginning work to identify and control potential hazards.

Discussion: The logging site should be evaluated for potential hazards such as dead, rotten or broken limbs and trees (also known as snags or "widowmakers"), as well as lodged trees and limbs. In addition, a hazard assessment should include factors such as lean of the tree to be felled, location of other trees or obstacles in the area, wind conditions, and slope of the land.

Recommendation #4: Appropriate personal protective equipment should be worn at the logging site.

Discussion: OSHA regulations for logging state that employers should provide employees with appropriate head protection and ensure that it is worn when the employee works in an area where there is potential for head injury from falling or flying objects [29 CFR 1910.266 (d) (1) (vi)]. Again, being self-employed, the victim wasn't governed by OSHA regulations. However, wearing appropriate head protection could have lessened the impact of the limbs from the falling tree and the fatal injury may have been avoided. Although it is not known for certain whether a hard hat would have prevented this fatal injury, wearing all appropriate PPE should be practiced by all loggers at the logging site, whether OSHA regulated or not.

References

Code of Federal Regulations 29 CFR 1910.266, 1999 edition. U.S. Government Printing Office, Office of the Federal Register, Washington, D.C.