

## Overview

The logging industry is hazardous, with a high fatal and non-fatal injury rate.

Increasingly, logging work is being done by machine instead of by hand. Mechanization of logging operations is thought to reduce injury risk.

The purpose of this study was to determine injury rate differences between mechanized and nonmechanized logging, and to determine if substituting logging methods would change the types of injuries occurring in logging.

Washington State workers' compensation (WC) insurance risk classification was used to differentiate mechanized and nonmechanized logging claims. Ten years of WC claims data and employer reported hours were used to characterize injuries and compare claim rates.

### Contact the author:

David.Bonauto@Lni.wa.gov

### Research for Safe Work

The SHARP Program at the Washington State Department of Labor & Industries partners with business and labor to develop sensible, effective solutions to identify and eliminate industry-wide hazards. Learn more at [www.Lni.wa.gov/Safety/Research](http://www.Lni.wa.gov/Safety/Research)

## Injury Claim Rates in Logging

Injury Rate Comparisons for Nonmechanized and Mechanized Logging Operations, Washington State, 2005-2014

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David K. Bonauto, Sara E. Wuellner, Jennifer L. Marcum & Darrin A. Adams

### Key Findings

- Accepted workers' compensation claim rates were higher for nonmechanized logging:
  - Nonmechanized logging — 46.4 claims per 100 FTE\*
  - Mechanized logging — 6.7 claims per 100 FTE\*
- Nonmechanized logging had higher claim rates for all types of injuries, suggesting that substituting mechanized logging for non-mechanized logging does not trade one injury risk for another.
- The immediate inpatient hospitalization rate for injuries from nonmechanized logging was thirteen times that of mechanized logging.
- Traumatic injuries accounted for 91% of compensable claims in non-mechanized logging and only 78% of compensable claims in mechanized logging.
- 39% of nonmechanized claims were for injuries from being struck by objects compared to 13% in mechanized logging.
- Chainsaw injuries accounted for 169, or 7% of, claims in non-mechanized logging. Of those 169 claims, 125 were cuts or lacerations.

### Impact

The results of this study strongly suggest that mechanized logging is safer than nonmechanized logging and that increased mechanization of logging operations will result in decreased injury rates.

\* Full Time Equivalent. 1 FTE = 2000 hours worked in year.

### Find the article here:

<https://www.tandfonline.com/doi/full/10.1080/1059924X.2019.1566106>

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