

Poster: 0066

Is the Occupational Fatal Injury Experience in the United States Really Improving?

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Problem Background: Each year more than 4 million injuries occur that are associated with workplace events—a rate of nearly five per 100 full-time workers. Individuals affected often become unable to work, their ability to work is limited by physical impairment, or more tragically they die. On a typical day, more than 15 U.S. workers die from an injury on the job. In recent years, the number and rate of work-related fatal injuries has been declining. However, frequency and rate are not the only measures of human loss nor are they the only means to direct efforts to reduce the number of occupational incidents. Economic loss is another perspective that provides an alternative outcome measure that can assist in directing scarce research resources.

Objectives: The objective of this study was to determine if different impact or outcome measures produce a different picture of the U.S. occupational safety experience over time.

Methods: This study uses occupational fatality surveillance data from the Bureau of Labor Statistics Census of Fatal Occupational Injuries (CFOI) for the period 1992 through 2001. This system compiles data from 50 States (excluding New York City) and the District of Columbia using multiple sources. The cost of a workplace fatality to society was estimated using the cost-of-illness approach, which combines direct and indirect costs to yield an overall impact of an occupational fatal injury on the Gross Domestic Product (GDP). Unlike most estimates of the cost of occupational incidents, this approach calculates the cost of each fatal injury based on the characteristics of each decedent. Those individual costs are aggregated to derive societal cost—total, mean, and median costs.

Results: Over the ten-year period of 1992 through 2001, the number of fatal occupational injuries declined from 5,833 to 5,664 after having reached the peak of 6,303 in 1994. The estimates of the total cost of fatal occupational injuries derived in this study rose by 4%; from a \$4.8 billion in 1992 to a high of just under \$5.0 billion in 2001. The mean cost also increased over this time period from \$819,735 to \$880,805 per fatality—an increase of 7%. More importantly, the impact of these fatalities does not effect subpopulations equally. During this same period the total cost of fatal occupational injuries occurring in the mining industry increased by 6%, the mean cost increased by 12%, but the number of fatal injuries decreased by 5%. The total cost of occupational fatalities in the construction industry increased by 34%

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while the cost within the retail trade industry declined by 24%. The mean cost of a fatal occupational fall increased only slightly, 3%, while the number increased by 38%. The mean cost of an occupational fatal assault or violent act increased by 13%, while the number decreased by 25%. The number and mean cost of all fatal injuries in a work-related transportation incident increased by 3% and 8% respectively. The largest increase in mean cost in that category occurred in nonhighway incidents, 16%, yet the number of fatalities declined by 12%.

Conclusion: To fully understand the impact of occupational fatal injuries and the successes of safety promotion and prevention activities, more than one measure should be examined.

For the first time, this research provides societal costs of occupational fatal injury over time, allowing for trend analysis of not only magnitude and rate, but the impact on national income and the GDP. Considering the cost or economic impact of an occupational fatality in conjunction with other outcome measures will help focus efforts to improve worker conditions in all industry sectors.

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