Dangerous Jobs

The Census of Fatal Occupational Injuries program

The Bureau of Labor Statistics collects nationwide information on work-related fatalities in its Census of Fatal Occupational Injuries (CFOI) which was conducted for the first time in 1992. Each work-related fatality is identified, verified, and profiled using multiple source documents; these diverse data sources include death certificates, workers' compensation records, and reports to Federal and State agencies. Cross-referencing these documents provides detailed information about each work related fatality including worker characteristics, equipment involved, circumstances of the event, and details of the injury. The detailed data are then aggregated and used to promote safety efforts by employers, employees, and others.

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Dangerous occupations are identified by analyzing fatality rates. Fatality rates depict the risk of incurring a fatal work injury for workers in a given employment group (usually occupation), expressed as the proportion of fatalities per standard measure (usually per 100,000 workers). This allows risks to be compared among different employment groups. To produce a fatality rate, the number of fatal work injuries in a given occupation is divided by the number of employed persons in that occupation, and multiplied by 100,000.

The Current Population Survey (CPS) is the source for the employment measures. The advantages of using the CPS for employment data are that it is timely, the occupational classifications are the same as those used by CFOI, and the sampling universe covers the same population measured by CFOI. However, the CPS is based on a sample that, of necessity, has sampling errors; small occupational groups will have large sampling errors, or may go unreported.

Occupations with very few fatalities or low employment are removed from annual fatality rate analyses because annual fluctuations in their fatality rates are too large for meaningful analysis. Instead, rates for these occupations can be averaged over a five or seven-year period to smooth annual fluctuations and provide better comparability to rates for other occupations. An average fatality rate is computed by dividing the sum of the fatalities across the years by the sum of the annual employment figures for the given occupation over the given time period, and multiplying by 100,000.

Is elephant trainer a "dangerous job"?

The article "Dangerous Jobs," published in the Summer 1997 *Compensation and Working Conditions* illustrates the difficulty and impracticality of measuring fatality rates for occupations with few workers. The article explains why numbers of deaths, fatality rates, and other factors should be considered together when analyzing the danger of particular jobs and uses the occupation "elephant trainer" to illustrate the point.

From worst to first? Because few workers are employed as elephant trainers, a small number of fatalities to elephant trainers would make their fatality rate extremely high for a single year, despite their low number of deaths. On the other hand, in most years, this occupation incurs no deaths, rendering their fatality rate 0 and ranking them among the safest occupations.

"Elephant trainer" is a hypothetical occupational classification. The classification BLS uses groups these workers with either "artists and performers" or "animal caretakers", both of which include many more people than just elephant handlers.