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Colorado Census of Fatal Occupational Injuries (CFOI): Work-Related Fatalities in 2001

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Introduction

The Census of Fatal Occupational Injuries (CFOI) is a national census conducted in partnership with states to compile work-related fatality data. In 1972 the Bureau of Labor Statistics (BLS) began collecting CFOI data in select states. By 1992 this activity was conducted in all 50 states and the District of Columbia. Colorado has published data on work-related fatalities occurring since 1982 and implemented the CFOI system in 1991. CFOI data are collected in cooperation with BLS to ensure that data are comparable among states. The data are compiled and published yearly by each state and are forwarded to BLS for inclusion in a national database that is used for research, statistical analysis, and planning of prevention measures.

Thousands of people in Colorado are injured each year at work, and some of these injuries result in death. Many of these injuries are preventable. It is the intent of CFOI to document the number and characteristics of these fatal injuries so that risks can be identified and prevention measures can be addressed. Numerous organizations, including the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH), are using CFOI data to prevent injuries through the development of safety standards, educational programs, and safety equipment.

Methodology

All fatal injuries meeting program criteria are collected, analyzed, and published. Specifically, the injury must have occurred while the employee was at work receiving pay or other compensation; was conducting work activity; or was present at the site of the incident as a condition of employment. Volunteer workers who are exposed to the

same work hazards and perform the same duties as paid employees are also included. Examples representative of CFOI cases include: truck drivers involved in motor vehicle crashes; ranchers and farmers injured while working in a field; persons injured while traveling to conduct business by aircraft or automobile; and construction workers killed in accidents. However, a fatal accident occurring during a person's regular commute to or from work is not considered to be a CFOI case.

To ensure that fatalities are work-related, CFOI cases are substantiated with two or more independent source documents. Source documents include: death certificates, workers' compensation reports, coroner reports, motor vehicle accident reports, autopsy reports, newspaper articles, OSHA reports, and others.

The statistics published in this report do not include deaths due to illness or natural causes. Although CFOI collects data on deaths in the workplace due to illness, this information is not published as it is not a comprehensive compilation of these deaths.

Results

The number of work-related deaths in Colorado rose from 117 in 2000 to 139 in 2001, an increase of 19 percent. The data cite a rise in transportation fatalities, mainly airplane accidents, which account for the majority of the increase in work-related deaths.

The three leading causes of work-related deaths were: transportation-related events, which include highway, rail and aircraft accidents; assaults and violent acts in the workplace; and workers' contact with objects and equipment. In 2001 approximately six workers died in Colorado for every 100,000 in the workforce.

Work-related fatalities by event or exposure:

As shown in Table 1, transportation incidents continued to be the leading cause of work-related deaths, accounting for 56 (40%) of the state's 139 occupational fatalities during 2001. Of Colorado's 56 transportation-related occupational deaths in 2001, 33 were highway fatalities and 19 resulted from aircraft accidents, up from 6 fatalities in 2000. Aircraft accidents include events in aircraft which are in use (flying) for business travel or transport of passengers or

Table 1: Work-related fatalities in Colorado by event¹, 2001

Event	Number of Fatalities
Total	139
Transportation incidents	56
Highway	33
Aircraft	19
Assaults and violent acts	26
Homicides	7
Self-inflicted injury	18
Contact with objects and equipment	26
Struck by object	16
Caught in or compressed by equipment or objects	7
Caught in or crushed in collapsing materials	3
Falls	20
Fall to lower level	15
Fall on same level	3
Exposure to harmful substances or environments	8
Contact with electric current	5
Exposure to casutic, noxious, or allergenic substances	3
Fire and explosions	3

¹ Based on the 1992 BLS Occupational Injury and Illness Classification Manual.

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries.

supplies. Highway accidents accounted for 23 percent of all occupational fatalities in 2001, compared with 29 percent in 2000.

Assaults and violent acts occurring at work were the second leading cause of worker deaths resulting in 26 deaths, including 18 suicides and seven homicides. Nineteen of the twenty-six deaths involved firearms. Total work-related homicide deaths dropped in 2001 for Colorado and the nation.

Tied as the second leading cause of death was workers' contact with objects and equipment, which resulted in 26 deaths in 2001, compared to 15 deaths in 2000. *Contact with objects and equipment* includes being struck by flying or falling objects, being caught in running equipment or machinery, and being caught in or crushed by collapsing materials.

Work-related fatalities by worker characteristics:

Table 2 shows that men accounted for 128 of the 139 worker deaths in 2001. By race/ethnicity, 104 deaths were of White non-Hispanic workers, 25 of Hispanic workers, five of Black workers, and four were of Asian descent. Workers in the 35- to 44-year-old age group had the highest number of fatalities with 38 deaths.

Work-related fatalities by industry:

As shown in Table 3, deaths occurring in a private industry setting accounted for 116 of 139 fatalities, or 83 percent. The construction industry had the highest number of deaths (27), followed by the transportation/public utilities industry, which had 25 deaths, and the service industry, which had 23 deaths.

Table 2: Work-related fatalities in Colorado by characteristic of workers, 2001

Worker Characteristics	Number of Fatalities
Total	139
Employee status	
Wage and salary workers ¹	110
Self-employed ²	29
Gender	
Male	128
Female	11
Age	
Under 20 years	6
20 to 24 years	11
25 to 34 years	36
35 to 44 years	38
45 to 54 years	24
55 to 64 years	14
65 years and over	10
Race/Ethnicity	
White non-Hispanic	104
Black non-Hispanic	5
Hispanic or Latino	25
American Indian or Alaska Native	*
Asian	4
Native Hawaiian or Pacific Islander	*

1 May include volunteers and other workers receiving compensation.

2 Includes paid and unpaid family workers and may include owners of incorporated businesses or members of partnerships.

Note: Totals for major categories may include subcategories not shown separately.

* indicates fewer than three in that category.

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries.

Table 3: Work-related fatalities in Colorado by industry¹, 2001*

Industry	Number of Fatalities
Total	139
Private Industry	116
Agriculture, forestry and fishing	10
Mining	5
Construction	27
Manufacturing	10
Transportation and public utilities	25
Wholesale trade	3
Retail trade	9
Finance, insurance, and real estate	4
Services	23
Government²	23

1 Classified according to the *Standard Industrial Classification Manual, 1987*.

2 Includes fatalities to workers employed by governmental organizations regardless of industry.

* There were fewer than 5 fatalities for which there was insufficient information to determine a specific industry or classification, though a distinction between private and government was made for each.

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries.

Work-related fatalities by occupation:

By occupation, operators, such as machine operators, truck drivers, and construction laborers had the highest number of deaths for a total of 35 (Table 4). Sixteen of these were in transportation or material-moving occupations and fifteen were handlers, equipment cleaners, helpers or laborers. Thirty-three fatal injuries occurred in managerial and professional specialty careers. Twenty-two deaths were in technical, sales, or administrative support positions. Twenty-one were in precision production, craft, or repair positions.

Additional Information

Additional information about work-related injury deaths in Colorado and the nation can be obtained by visiting the Colorado Census of Fatal Occupational Injuries Web site at www.cdphe.state.co.us/hs/cfoi.html or by contacting Debra Tuenge at (303) 692-2173.

Table 4: Work-related fatalities in Colorado by occupation¹

Occupation	Number of Fatalities
Total	139
Managerial and professional specialty	33
Executive, administrative, and managerial	19
Professional specialty	14
Technical, sales, and administrative support	22
Technicians and related support occupations	12
Sales occupations	6
Administrative support occupations, including clerical	4
Service occupations	14
Protective service occupations	8
Service occupations, except protective and household	6
Farming, forestry, and fishing	12
Farming operators and managers	4
Other agricultural and related occupations	8
Precision production, craft, and repair	21
Mechanics and repairers	7
Construction trades	12
Operators, fabricators, and laborers	35
Machine operators, assemblers, and inspectors	4
Transportation and material-moving occupations	16

¹ Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

Note: Totals for major categories may include subcategories not shown separately.

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries.

Work-related fatalities by day of week and time of day

Fatal injuries in 2001 were most likely to occur on a Wednesday or Thursday, with a total of 26 deaths each day. The time of day with the most fatal injuries was between 5 p.m. and 6 p.m. with a total of 16 fatalities occurring during this time period in 2001.

