



Colorado Department
of Public Health
and Environment

Health Statistics Section

Alyson Shupe, Ph.D.,
Section Chief

Monica Clancy

Patricia Holguin

Becky Rosenblatt, M.A.

Research and Evaluation Unit

Jodi Drisko, M.S.P.H., Director

Janelle Mares

Debra Tuenge

Chris Wells, M.S.

Survey Research Unit

Mike Reeds, M.A., Director

Mark King

Trenton L. Thoms

Vital Statistics Unit

Mary Chase, Director

Juanita Galvan

Rose Hammond, M.S.

Jing Wang, M.S.

Colorado Census of Fatal Occupational Injuries (CFOI): Work-Related Fatalities in 2002

Debra Tuenge

Introduction

The Census of Fatal Occupational Injuries (CFOI) program is a national census conducted in partnership with states to compile work-related fatality data. CFOI data collection by the Bureau of Labor Statistics (BLS) began in select states in 1972 and spread to include all 50 states and the District of Columbia by 1992. Colorado has published data on work-related fatalities occurring since 1982 and implemented the CFOI system in 1991. CFOI program 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 also forwarded to BLS for inclusion in a national database that is used for research, statistical analysis, and planning prevention measures.

Thousands of workers in Colorado are injured at work each year, and some of these injuries result in death. Many of these accidents are preventable. It is the intent of this census to document the number and characteristics of fatal accidents occurring at work so risks can be identified and prevention measures can be instituted. 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

Data on 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 of representative CFOI cases might be: truck drivers involved in motor vehicle accidents, 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 due to illness occurring in the

workplace, this information is not published as it is not a comprehensive compilation of these deaths.

Results

The number of work-related deaths in Colorado decreased from 139 in 2001 to 123 in 2002, a decrease of nearly 12 percent. The data cite transportation fatalities, primarily highway accidents, as the major cause of work-related deaths.

The three leading causes of work-related deaths were: transportation fatalities, which include highway, rail and aircraft accidents; assaults and violent acts in the workplace; and, finally, death due to falls. In 2002 approximately five workers died in Colorado for every 100,000 in the workforce.

Work-related fatalities by event or exposure:

As shown in Table 1, transportation fatalities continued to be the leading cause of work-related deaths, accounting for 61 (or 50 percent) of the state's 123 occupational fatalities

Table 1: Work-related fatalities in Colorado by event¹, 2002

Event	Number of Fatalities
Total	123
Transportation incidents	61
Highway	37
Pedestrian, nonpassenger struck by vehicle	10
Railway	4
Aircraft	9
Assaults and violent acts	27
Homicides	13
Self-inflicted injury	14
Contact with objects and equipment	14
Struck by object	9
Caught in or compressed by equipment or objects	3
Caught in or crushed in collapsing materials	3
Falls	15
Fall to lower level	12
Fall on same level	3
Exposure to harmful substances or environments	6

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.

during 2002. Of Colorado's 61 transportation-related occupational deaths in 2002, 37 were highway fatalities, 10 resulted from pedestrian accidents, and 9 were from aircraft accidents. Highway accidents accounted for 30 percent of all occupational fatalities in 2002, compared with 23 percent in 2001.

Assaults and violent acts occurring at work were the second leading cause of worker deaths and resulted in 27 deaths—14 suicides and 13 homicides. Fifteen of the 27 deaths involved firearms. In 2001, there were 7 homicides.

The third leading cause of death was falls, which resulted in 15 deaths in 2002, compared to 20 deaths in 2001.

Work-related fatalities by worker characteristics:

Table 2 shows that men accounted for 105 (or 85 percent) of the 123 worker deaths in 2002. By race/ethnicity, 100 deaths were to White non-Hispanic workers; 16 to Hispanic workers; five were to Black or African American workers. Workers in the 45 to 54 year-old age group had the highest number of fatalities, with 32 deaths.

Work-related fatalities by industry:

As shown in Table 3, jobs in private industry accounted for 115 (or 93 percent) of all fatalities. The service industry had the highest number of deaths for a total of

Table 2: Work-related fatalities in Colorado by characteristic of workers, 2002

Worker Characteristics	Number of Fatalities
Total	123
Employee status	
Wage and salary workers ¹	104
Self-employed ²	19
Gender	
Male	105
Female	18
Age	
Under 20 years	3
20 to 24 years	12
25 to 34 years	22
35 to 44 years	17
45 to 54 years	32
55 to 64 years	20
65 years and over	17
Race/Ethnicity	
White non-Hispanic	100
Black non-Hispanic	5
Hispanic or Latino	16
American Indian or Alaska Native	*
Asian	*
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 events in that category.

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with Colorado Census of Fatal Occupational Injuries Program, 2002.

Table 3: Work-related fatalities in Colorado by industry¹, 2002*

Industry	Number of Fatalities
Total	123
Private Industry	115
Agriculture, forestry and fishing	23
Mining	5
Construction	21
Manufacturing	6
Transportation and public utilities	17
Wholesale trade	6
Retail trade	12
Services	24
Government²	8

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.

24 deaths; followed by the agriculture, forestry, and fishing industry, which had 23 deaths; and the construction industry, accounting for 21 deaths.

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 36 (Table 4). Twenty-four of these were in transportation and material-moving occupations, and 10 were handlers, equipment cleaners, helpers and laborers. The managerial and professional specialty and precision production, craft, and repair were tied for second, with 20 deaths each. The third highest by occupational group was technical, sales, administrative support with a total of 17 fatalities (See Table 4).

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

Fatal injuries in 2002 were most likely to occur on a Friday, with a total of 28 deaths. The time of day with the most fatal injuries was between 4 p.m. and 6 p.m. with a total of 26 fatalities in 2002.



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 occupation, 2002¹

Occupation	Number of Fatalities
Total	123
Managerial and professional specialty	20
Executive, administrative, and managerial	12
Professional specialty	8
Technical, sales, and administrative support	17
Technicians and related support occupations	7
Sales occupations	7
Administrative support occupations, including clerical	3
Service occupations	14
Protective service occupations	8
Service occupations, except protective and household	6
Farming, forestry, and fishing	15
Farming operators and managers	9
Other agricultural and related occupations	5
Precision production, craft, and repair	20
Mechanics and repairers	8
Construction trades	10
Operators, fabricators, and laborers	36
Transportation and material-moving occupations	24
Handlers, equipment cleaners, helpers, and laborers	10

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.