

Fatal Occupational Injuries to Volunteer Workers, 2003–07

by Matthew M. Gunter
Bureau of Labor Statistics

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Every year, millions of Americans choose to volunteer their services to a wide variety of different organizations. As reported by the [Current Population Survey \(CPS\)](#), between September 2007 and September 2008 more than 60 million Americans volunteered through or for an organization.¹ Similar numbers have been reported since the survey was first conducted in 2002.

From 2003 to 2007, a total of 287 volunteer workers were killed on the job, or 1 percent of all fatal occupational injuries reported over that 5-year span.² The [Census of Fatal Occupational Injuries \(CFOI\)](#) considers volunteer workers to be in scope if they are exposed to similar work hazards and perform similar job duties to those of paid workers and meet the CFOI work-relationship criteria.³ A volunteer fire fighter who dies of smoke inhalation while fighting a fire or a volunteer carpenter who dies in a fall from the roof of his church while making repairs are two illustrative examples of the types of incidents that can befall volunteer workers and that would be counted in the CFOI.

As table 1 indicates, fatal injuries to volunteer workers trended upward between 2003 and 2007. The 68 fatal injuries to volunteer workers in 2007 were the highest total recorded by CFOI since 2000, and the second highest since CFOI was first conducted in 1992.

Table 1. Number of fatal occupational injuries to volunteer workers, 2003-07

Year	Number of fatal occupational injuries
2003	40
2004	52
2005	66
2006	61
2007	68

Where And When Volunteer Fatal Injuries Occurred

Ohio, Indiana, and Pennsylvania were the States with the most fatal injuries to volunteer workers during the 2003–07 period. Together, the 11 States listed in table 2 accounted for just over half (51 percent) of all volunteer worker fatal injuries in the United States from 2003 to 2007.

Table 2. States with the most fatal occupational injuries to volunteer workers, 2003-07

State	Number of fatal injuries
Ohio	19
Indiana	16
Pennsylvania	16
New York	15
California	13
North Carolina	12
Alabama	11
Illinois	11

State	Number of fatal injuries
Michigan	11
Mississippi	11
Texas	11

One-third (94) of fatal occupational injuries to volunteer workers from 2003–07 occurred on a Saturday or Sunday, compared with only 16 percent for all paid workers. Volunteers may be more likely to be engaged in volunteer work during nontraditional hours, which might explain part of this difference. Fatal injuries to volunteer and paid workers by time of day and month of the year occurred in similar proportions. Most workers were fatally injured during the middle of the day (table 3) with a yearly peak in fatal injuries occurring in July and August (table 4).

Table 3. Percent of fatal occupational injuries to volunteer and paid workers by time of day, 2003-07

Time of day	Volunteers	Paid workers
12:00 a.m. - 7:59 a.m.	16	18
8:00 a.m. - 3:59 p.m.	54	58
4:00 p.m. - 11:59 p.m.	29	24

Note: The time of incident was not known in the case of 8 volunteer worker fatal injuries and 1,771 paid worker fatal injuries. The percentages above were calculated using only known time of incident data. Percentages may not add to 100 because of rounding.

Table 4. Percent of fatal occupational injuries to volunteer and paid workers by month, 2003-07

Month	Volunteers	Paid workers
January	8	8
February	5	7
March	8	8
April	10	8
May	9	8
June	5	9
July	11	10
August	11	10
September	8	8
October	10	9
November	8	8
December	6	7

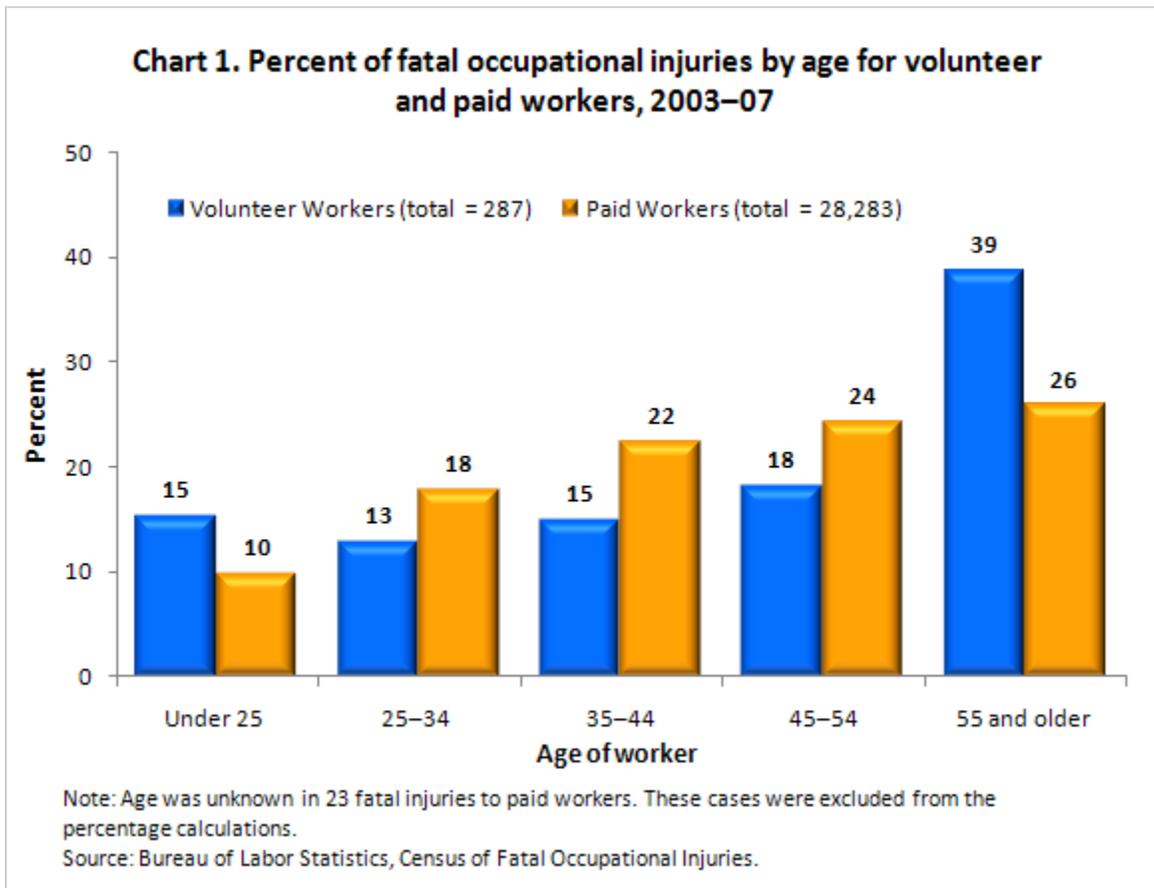
Note: Percentages may not add to 100 because of rounding.

Demographic Characteristics

A disproportionate number of fatal injuries to volunteers were incurred by women and non-Hispanic Whites relative to their proportions among paid workers.⁴ Thirteen percent (36) of the volunteer workers who died on the job from 2003 to 2007 were women, whereas only 7 percent of all paid workers who died during that time period were women.

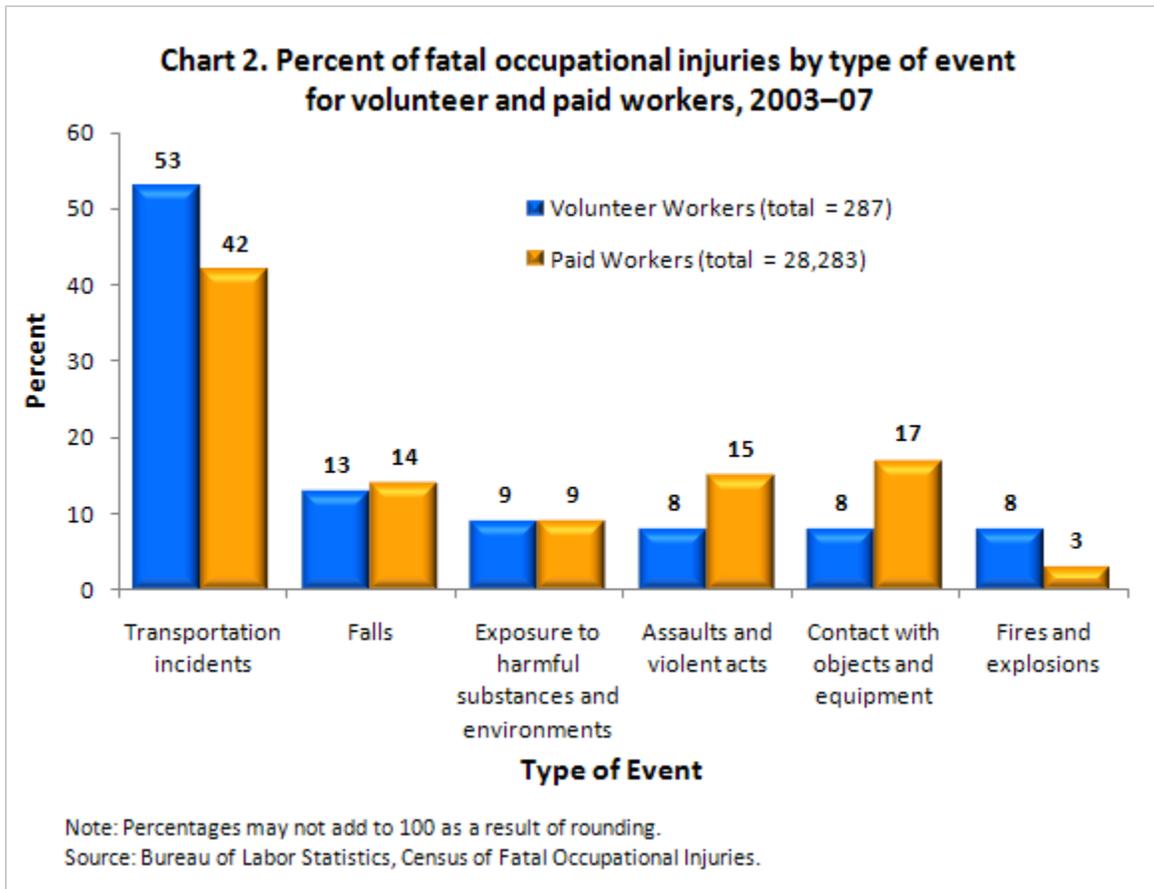
White, non-Hispanic volunteer workers constituted 89 percent (255) of all volunteer fatal injuries from 2003 to 2007, but only 70 percent of all (nonvolunteer) workplace fatal injuries during the same period. The results were different for Hispanic and Latino and non-Hispanic Black or African-American volunteers. Hispanics and Latinos made up 5 percent (13 fatalities) of fatally injured volunteer workers compared with 16 percent of paid worker fatalities from 2003 to 2007. Non-Hispanic Blacks and African Americans constituted 4 percent (11 fatalities) of fatally injured volunteer workers compared with 10 percent of paid worker fatalities over this period.

As chart 1 indicates, fatally-injured volunteer workers were more likely to be younger (under 25) or older (over 55) than fatally-injured paid workers as a whole. Almost two-fifths (111) of volunteer workers who died at work were 55 years of age or older; whereas about one-quarter of paid workers killed on the job were 55 or older. These numbers may be explained by older workers propensity to volunteer for more hours per year. CPS data indicate that individuals 55 years and older compose about 25-30 percent of all volunteers (compared with 15 to 20 percent of all paid workers) and spend more time performing volunteer activities than volunteers as a whole. While all volunteers spent a median of 52 hours annually on volunteer activities, volunteers age 55-64 and 65 years and older spent 58 and 96 hours, respectively, on volunteer activities.⁵



Event Or Exposure⁶

One-hundred fifty-three volunteer workers were killed in transportation incidents from 2003-07, accounting for 53 percent of all fatal injuries to volunteers during this period. (See chart 2.) Over half (81) were killed in highway incidents. Of the 81 workers fatally injured in highway incidents, 29 were killed in collisions between vehicles or mobile equipment and 26 were killed when a vehicle struck a stationary object. Other transportation incidents with a significant number of volunteer worker fatalities included workers who were struck by vehicles or mobile equipment, which accounted for 29 fatal injuries; and workers who perished in aircraft accidents, which accounted for 27 fatal injuries.



Thirty-seven volunteer workers were killed in fatal workplace falls, and another 26 were exposed to harmful substances or environments (including 15 volunteers who were electrocuted and 5 who drowned). Contact with objects and equipment accounted for 24 fatal injuries, including 13 volunteers who were struck by an object or equipment. Assaults and violent acts also accounted for 24 fatal injuries, 15 of which were homicides. Twenty-three volunteers were fatally injured in fires or explosions. On a percentage basis, volunteer workers were about half as likely to be fatally injured by an assault or violent act or contact with an object or equipment as paid workers, but almost 3 times more likely to have died in a fire or explosion. (See chart 2.)

Fifty-one of the 287 volunteer workers (18 percent) died in multiple-fatality incidents from 2003 to 2007. A multiple-fatality incident is a single incident that results in the death of at least two workers.⁷ Aircraft accidents accounted for 15 of these fatal injuries, followed by highway incidents (11) and fires (11).

Industry⁸

A majority of the 287 fatal injuries to volunteer workers during the 2003–07 period were incurred by those working in the government sector (157). Almost 90 percent (140) were volunteers at the local government level. The vast majority of fatal injuries in local government were in the public administration sector, with fire protection accounting for 109 fatal injuries and police protection accounting for another 10 fatalities.

Only 130 (45 percent) of the fatal occupation injuries to volunteer workers were in the private sector. For all paid workers over this same period, 91 percent were in the private sector. The private sector industries with the most volunteer worker fatalities were all service-providing, including 33 fatal injuries in other services, except public administration (which included 22 fatal injuries to workers in religious organizations and 6 fatal injuries to workers in civic and social organizations); 26 fatal injuries to workers in the arts, entertainment, and recreation industry; and 18 fatal injuries to workers in health care and social assistance. Table 5 provides a breakdown of fatal injuries to volunteers by private industry and government.

Table 5. Fatal occupational injuries to volunteer workers by industry, 2003-07

Industry	Number of fatal occupational injuries
Total	287
Private industry	130
Goods producing	24
Agriculture, forestry, fishing, and hunting	8
Construction	12
Manufacturing	3
Service providing	106
Wholesale trade	4
Transportation and warehousing	5
Information	7
Educational services	3
Health care and social assistance	18
Hospitals	5
Social assistance	8
Arts, entertainment, and recreation	26
Spectator sports	5
Promoters of performing arts, sports, and similar events	7
Museums, historical sites, and similar institutions	6
Amusement, gambling, and recreation	5
Accommodation and food service	5
Other services, except public administration	33
Religions organizations	22
Civic and social organizations	6
Government	157
Federal government	7
State government	10
Local government	140
Educational services	4
Health care and social assistance	6
Public administration	125
Police protection	10
Fire protection	109

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

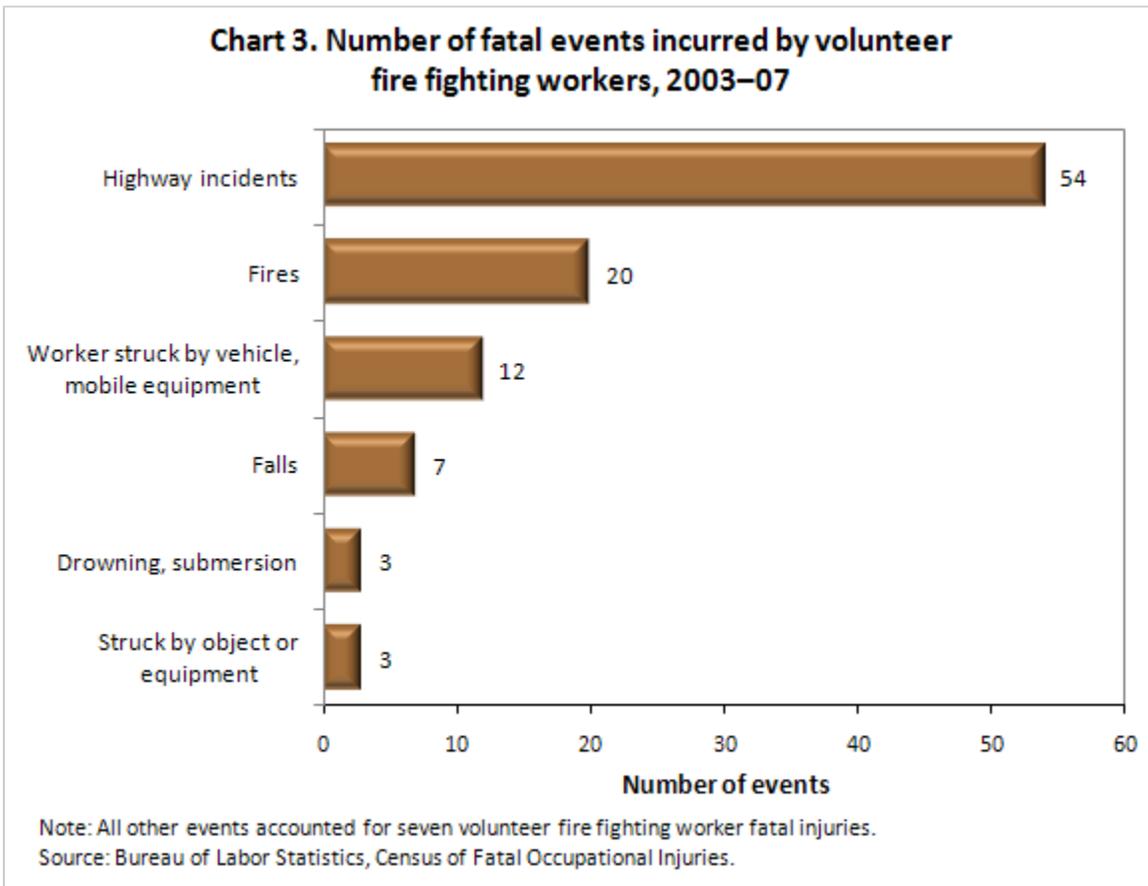
Occupation⁹

Volunteers in protective service occupations experienced 120 fatal injuries from 2003 to 2007, the most of any occupational group. The majority of these fatalities were to volunteer fire fighters and related workers. Other detailed occupations with significant numbers of fatally-injured volunteer workers included aircraft pilots and flight engineers (17 fatalities), construction laborers (12 fatalities), emergency medical technicians and paramedics (9 fatalities), and police officers (9 fatalities).

Volunteer fire fighters had the highest number of fatally injured volunteer workers of any occupation from 2003 to 2007. Almost one-third (91) of all volunteers killed at work over this period were volunteer fire fighters. If we expand the definition of fire fighters to also include first-line supervisors/managers of fire fighting and prevention workers, fire inspectors and

investigators, and forest fire inspectors and prevention specialists, the total number of fatalities to volunteer fire fighting workers increases to 106 (37 percent of all fatally-injured volunteers).

Ninety-two percent (97) of fatally injured volunteer fire fighting workers were White, non-Hispanic men. Highway incidents were the most frequent type of fatal event incurred by volunteer firefighting workers by a wide margin. Almost 3 times as many volunteer firefighting workers were killed in highway incidents (54) than in unintended or uncontrolled fires (20), as chart 3 shows. Among the 54 fatal injuries that were due to highway incidents, 18 were the result of a vehicle striking a stationary object on the side of the road, another 18 were noncollision incidents (including 13 jack-knives or overturns), and 14 involved a collision between vehicles or mobile equipment.



Thirteen of the 106 fatalities to volunteer fire fighting workers occurred in seven different multiple fatality incidents.¹⁰ All were due to a fire, explosion, or highway incident.

Conclusion

Although volunteers account for only about 1 percent of all fatal occupational injuries, the number of fatal injuries to volunteer workers has trended upward since 2003. Fatal injuries befall volunteer workers of all races, ethnicities, genders, and ages; but women, non-Hispanic White, and older workers all incurred a disproportionate number of these fatal injuries relative to their proportions among paid workers. Over half the fatal injuries to volunteer workers occurred in the government sector, while fewer than 10 percent of fatal injuries to paid workers were in government. This disparity was largely due to volunteer fire fighting workers, who incurred over one-third of all volunteer worker fatalities from 2003 to 2007.

Matthew M. Gunter
 Economist, Division of Safety and Health Program Analysis and Control, Office of Safety, Health and Working Conditions, Bureau of Labor Statistics.
 Telephone: (202) 691-6211; E-mail: Gunter.Matt@bls.gov.

Notes

1 See [Volunteering in the United States, 2008](http://www.bls.gov/news.release/archives/volun_01232009.htm), USDL 09–0078 (U.S. Department of Labor), Jan. 23, 2009, on the Internet at http://www.bls.gov/news.release/archives/volun_01232009.htm.

2 Data for all years are revised and final.

3 A CFOI work relationship exists if an event or exposure results in the fatal injury or illness of a person (1) ON the *employer's premises* and the person was there to *work*; or (2) OFF the *employer's premises* and the person was there to *work*, or the event or exposure was related to the person's *work* or status as an employee. The *employer's premises* include buildings, grounds, parking lots, and other facilities and property used in the conduct of business. *Work* is defined as duties, activities, or tasks that produce a product or result; that are done in exchange for money, goods, services, profit, or benefit; and, that are legal activities in the United States. Individuals counted as volunteers in the CPS may not be counted as in scope for CFOI based on the above definition.

4 Non-Hispanic Whites and women both tend to volunteer at higher rates than other ethnic groups and men, which could explain their relatively higher shares of fatal injuries amongst volunteer workers relative to paid workers. See [Volunteering in the United States, 2008](http://www.bls.gov/news.release/archives/volun_01232009.htm), on the Internet at http://www.bls.gov/news.release/archives/volun_01232009.htm.

5 Median hour figures are from the September 2007 through September 2008 survey period. See table 2, [Volunteering in the United States, 2008](http://www.bls.gov/news.release/archives/volun_01232009.htm), on the Internet at http://www.bls.gov/news.release/archives/volun_01232009.htm.

6 Based on the [Occupational Injury and Illness Classification System \(OIICS\)](http://www.bls.gov/iif/oshhoiics.htm), on the Internet at <http://www.bls.gov/iif/oshhoiics.htm>.

7 For more information on multiple fatality incidents, see Dino Drudi and Mark Zak, "Work-related multiple-fatality incidents," [Monthly Labor Review](http://www.bls.gov/opub/mlr/2004/10/art2full.pdf), October 2004, p. 35, on the Internet at <http://www.bls.gov/opub/mlr/2004/10/art2full.pdf>.

8 Based on the [2002 North American Industry Classification System \(NAICS\)](http://www.census.gov/eos/www/naics/). For more information on 2002 NAICS, see the U.S. Census Bureau NAICS page at <http://www.census.gov/eos/www/naics/>.

9 Based on the [2000 Standard Occupational Classification \(SOC\) system](http://www.bls.gov/soc/2000/soc_majo.htm), on the Internet at http://www.bls.gov/soc/2000/soc_majo.htm.

10 Note that not all workers killed in these seven incidents were volunteers or volunteer fire fighting workers.

Data for Chart 1. Percent of fatal occupational injuries by age for volunteer and paid workers, 2003-07

Age	Volunteer Workers (total = 287)	Paid Workers (total = 28,283)
Under 25	15	10
25-34	13	18
35-44	15	22
45-54	18	24
55 and older	39	26

Data for Chart 2. Percent of fatal occupational injuries by type of event for volunteer and paid workers, 2003-07

Type of event	Volunteer Workers (total = 287)	Paid Workers (total = 28,283)
Transportation incidents	53	42
Falls	13	14
Exposure to harmful substances and environments	9	9
Assaults and violent acts	8	15
Contact with objects and equipment	8	17
Fires and explosions	8	3

Chart 3. Number of fatal events incurred by volunteer fire fighting workers, 2003-07

Type of event or exposure	Number of events
Highway incidents	54
Fires	20
Worker struck by vehicle, mobile equipment	12
Falls	7
Drowning, submersion	3
Struck by object or equipment	3

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