

## Fatal and Nonfatal Injuries from Falls in Construction

Falls are the number one cause of fatal injuries in construction (*see* page 43). Although overall fatalities declined (*see* page 38), in 2010, falls still caused 267 deaths in construction, accounting for about one-third of construction fatalities that year. Overall, 6,858 construction workers died from fall injuries between 1992 and 2010, about 360 deaths annually (chart 44a).

From 2008 to 2010, the largest number of fatal falls (579 deaths) in construction occurred among Specialty Trade Contractors (NAICS 238; *see* page 1 for industry classifications and codes), but falls accounted for a larger proportion (48.7%, 135 deaths) of all fatalities in Residential Building Construction (NAICS 23611).<sup>1</sup> Establishments in these two sectors are relatively small, and about 55% of all fatal falls in construction occurred in establishments with 1-10 employees from 2008-2010 (chart 44b). This was disproportionately high, given that less than 30% of construction workers were employed in establishments of this size (*see* page 2).

The risk of fatal falls varies among construction occupations. Between 2008 and 2010, the annual rate of fatal falls in construction was 3.2 per 100,000 *full-time equivalent workers* (FTEs; *see* Glossary; chart 44c), but the risk for electrical power-line installers (28.5 per 100,000 FTEs) was nearly nine times the rate in construction, followed by a rate of 23.8 per 100,000 FTEs for both roofers and ironworkers. In addition, the risk of falls dif-

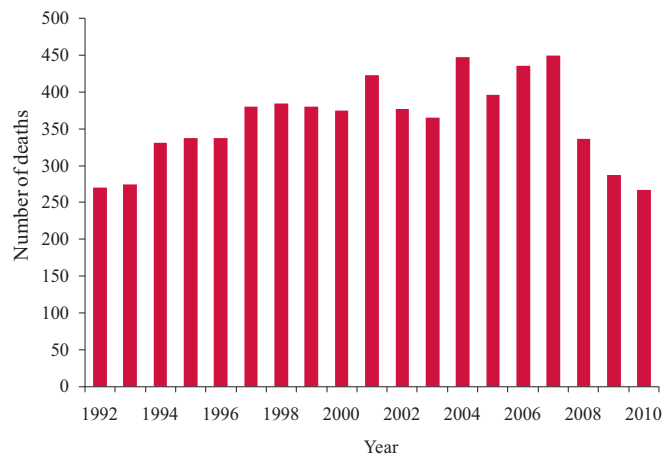
fers by demographics. Older construction workers had higher rates of fatal falls than their younger counterparts.<sup>2</sup> A higher risk of fatal falls was also found among Hispanic construction workers, particularly among those who were foreign-born.<sup>3</sup>

Falls cause severe nonfatal injuries as well. In 2010, falls led to 18,130 nonfatal injuries resulting in days away from work (DAFW), accounting for 24% of the nonfatal injuries in construction (*see* page 43). The rate of nonfatal fall injuries in construction was 50% higher than all industries combined.<sup>4</sup> Within construction, ironworkers had the highest rate of nonfatal falls resulting in DAFW at 75.1 per 10,000 FTEs, followed by sheet metal workers and roofers (chart 44d).

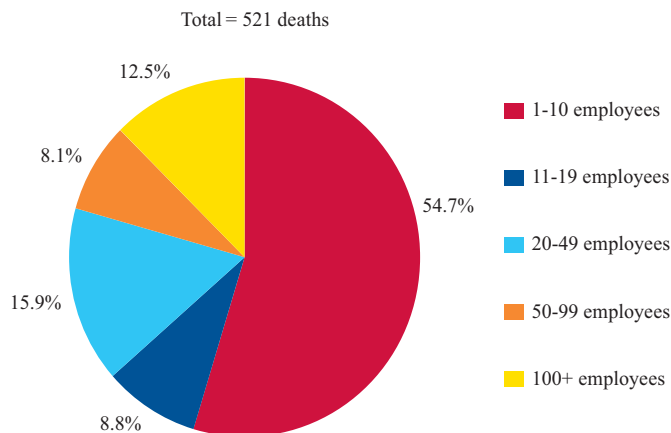
Causes of fatal and nonfatal falls are different. Between 2008 and 2010, about 97% of fatal falls in construction resulted from falls to a lower level.<sup>1</sup> The primary cause of fall fatalities in construction was falling from roofs, accounting for one-third of the fatal falls (chart 44e), whereas falls on the same level were a common cause of nonfatal injuries (39.5%; chart 44f).

To prevent construction worker falls, the National Institute for Occupational Safety and Health (NIOSH) and partners have launched a national construction falls prevention campaign, encouraging everyone in the industry (particularly residential construction contractors and workers) to work safely and use the proper equipment to reduce falls.<sup>5</sup>

**44a. Number of fatalities from falls in construction, 1992-2010 (All employment)**



**44b. Distribution of fatalities from falls in construction, by establishment size, 2008-2010 total (Wage-and-salary workers)**



1. Fatality numbers were estimated from the Census of Fatal Occupational Injuries. This research was conducted with restricted access to Bureau of Labor Statistics (BLS) data. The views expressed here do not necessarily reflect the views of the BLS. Calculations by CPWR Data Center.

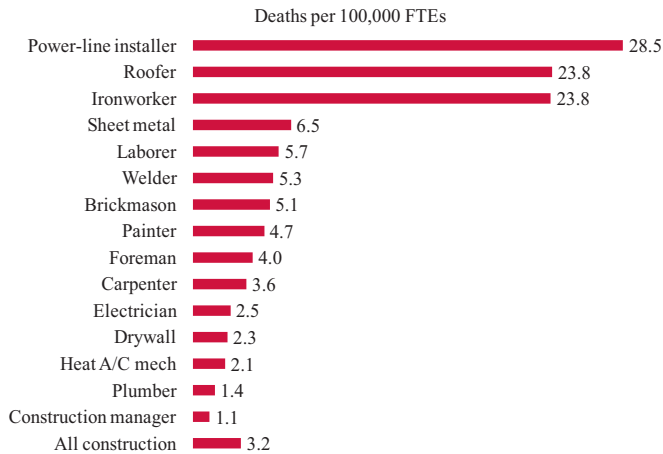
2. Dong X, Wang X, & Daw C. 2012. Fatal falls among older construction workers. *Human Factors*, 54(3):303-315.

3. Dong X, Fujimoto A, Ringen K, & Men Y. 2009. Fatal falls among Hispanic construction workers. *Accident Analysis and Prevention*, 41:1047-1052.

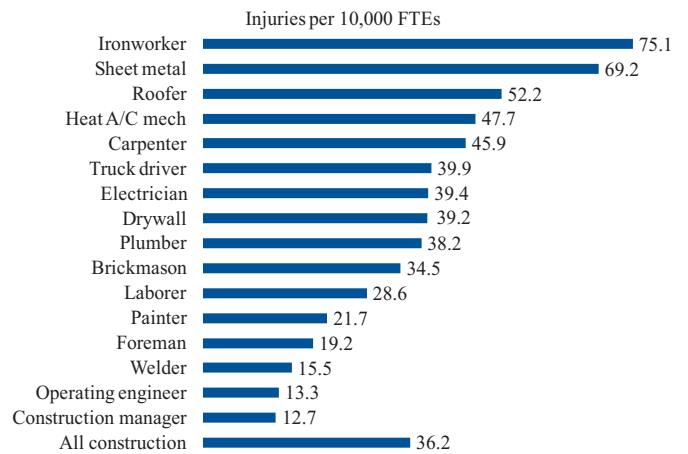
4. U.S. Bureau of Labor Statistics. 2010 Survey of Occupational Injuries and Illnesses. (Table R75). <http://www.bls.gov/iif/oshwc/osh/case/ostb2899.pdf> (Accessed August 2012).

5. National Institute for Occupational Safety and Health. 2012. *Campaign to Prevent Falls in Construction*. <http://www.cdc.gov/niosh/construction/stopfalls.html> (Accessed August 2012).

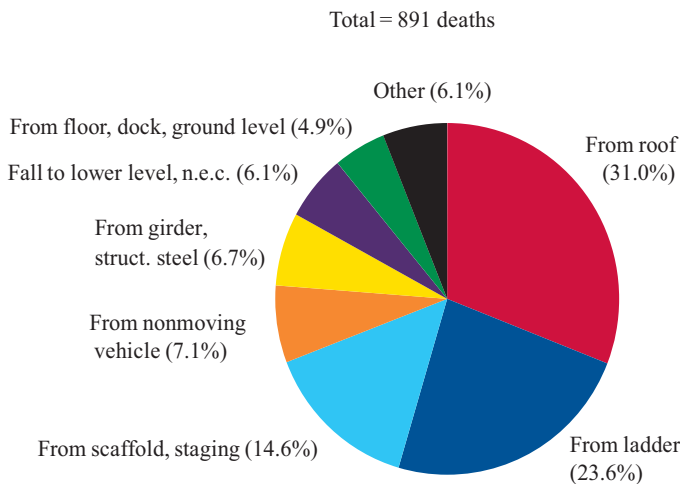
**44c. Rate of fatalities from falls, selected construction occupations, 2008-2010 average (All employment)**



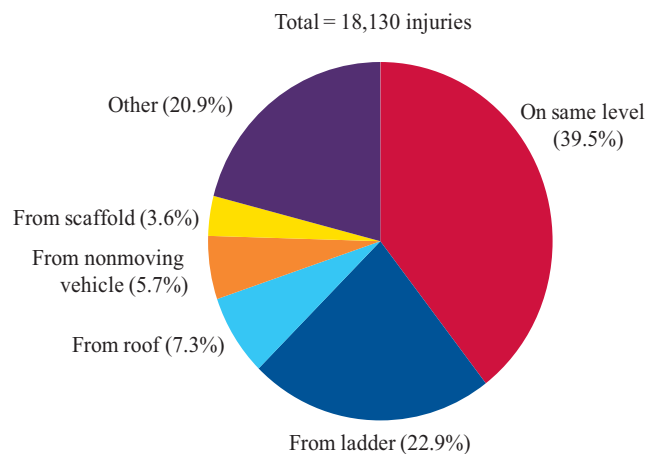
**44d. Rate of nonfatal injuries from falls resulting in days away from work, selected construction occupations, 2010 (Private wage-and-salary workers)**



**44e. Causes of fatalities from falls in construction, 2008-2010 total (All employment)**



**44f. Causes of nonfatal injuries from falls resulting in days away from work in construction, 2010 (Private wage-and-salary workers)**



**Note:** Chart 44b – Deaths of self-employed workers and those without information on establishment size were excluded.  
 Chart 44e – “Other” causes include jump to a lower level; fall on the same level; fall to a lower level unspecified; and fall down stairs or steps. Total may not add to 100% due to rounding.  
 Chart 44f – “Other” causes include jump to a lower level; fall from floor, dock, or ground level; fall from building girders or other structural steel; fall to a lower level n.e.c./unspecified; and fall down stairs or steps. Data covers the private industry only and excludes the self-employed. Total may not add to 100% due to rounding.

**Source:** Charts 44a, 44b, 44c, and 44e – Fatality numbers were estimated from the Census of Fatal Occupational Injuries. This research was conducted with restricted access to Bureau of Labor Statistics (BLS) data. The views expressed here do not necessarily reflect the views of the BLS. Numbers of full-time equivalents (FTEs) were estimated from the Current Population Survey. Calculations by CPWR Data Center.  
 Chart 44d – U.S. Bureau of Labor Statistics. Survey of Occupational Injuries and Illnesses. Numbers were obtained from the BLS through special requests (E-mail: [IIFSTAFF@BLS.GOV](mailto:IIFSTAFF@BLS.GOV)). Numbers of FTEs were estimated using the Current Population Survey. Calculations by CPWR Data Center.  
 Chart 44f – U.S. Bureau of Labor Statistics. 2010 Survey of Occupational Injuries and Illnesses. (Table R64). <http://www.bls.gov/iif/oshwc/osh/case/ostb2888.pdf> (Accessed August 2012).