

Fatal Injuries among New York City Construction Workers

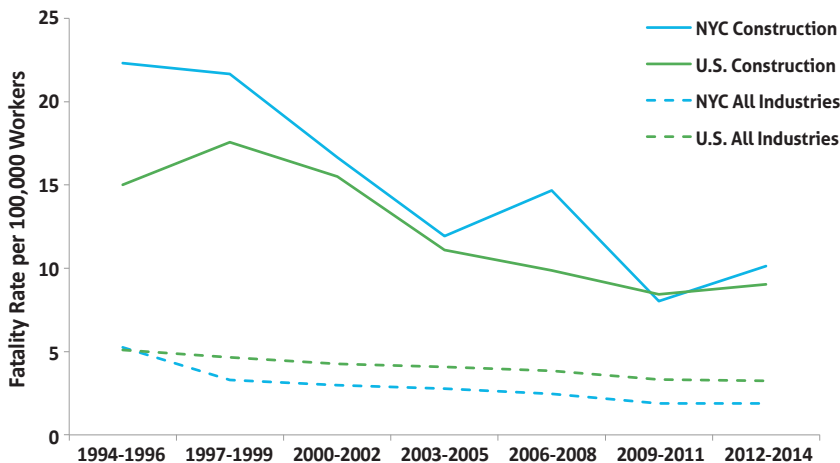
In New York City (NYC), construction workers face daily risks of severe injury and death on the job. Federal Bureau of Labor Statistics data show that construction workers make up only 5% of NYC’s total workforce, but account for 27% of work-related injury fatalities. Construction workers often work at elevated heights and with heavy equipment and materials. Many construction workers are employed on a short-term basis and may frequently change job sites and work activities, encountering unfamiliar settings, job duties and equipment. An ongoing shortage of skilled construction labor—combined with NYC’s construction boom—may further increase

injury risks. Contractors sometimes rely on untrained laborers or smaller crews to complete building projects on timelines expected of larger, more experienced crews.

A prior report summarized NYC construction fatalities from 1996 to 2009. This report examines trends in fatal construction injuries from 2007 to 2014. NYC is currently experiencing a period of high construction activity and many deaths can be prevented if appropriate actions are taken. Recommendations to further enhance safety in the construction industry are provided on page four.

New York City construction death rates have declined over the past twenty years but remain five times as high as all industry death rates

New York City and United States (U.S.) three-year average workplace fatality rates for construction compared with all industries, 1994–2014

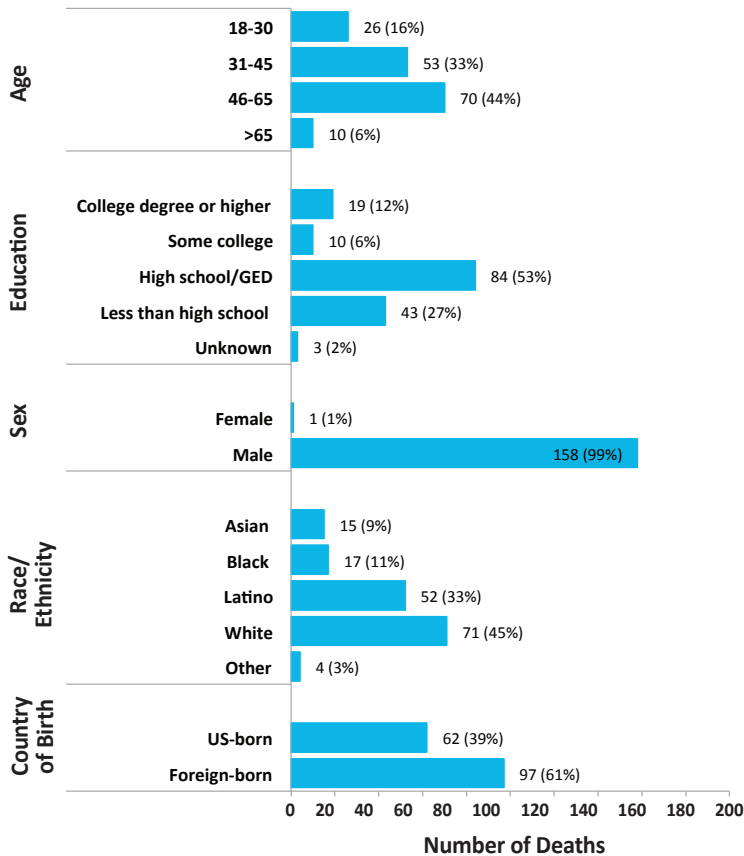


- NYC construction fatality rates have historically been higher than national construction fatality rates, even though fatality rates for all NYC industries combined are lower than the corresponding national rates.
- NYC construction fatality rates are more than five times higher than all NYC industries.
- NYC construction fatality rates have declined since the mid-1990s, but three-year average rates increased from 8.0 per 100,000 workers during 2009 to 2011 to 10.1 per 100,000 workers during 2012 to 2014.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries and Current Population Survey

From 2007 to 2014, 159 preventable deaths occurred among construction workers in New York City

Characteristics of fatally injured New York City construction workers, 2007–2014 (Total = 159)*,†



- From 2007 to 2014, an average of 20 construction workers were killed on the job each year in NYC.
- The average age of fatally injured workers was higher than the average age of the total NYC construction workforce (45 vs. 39 years).
- Approximately 80% of workers who died had a high school education or less, although this group makes up 66% of the workforce.
- Deaths among White (45%) and Latino (33%) workers reflected their representation in the workforce—41% and 38%, respectively.
- Almost 61% of construction workers who died were born outside of the U.S., corresponding to their representation in the workforce (64%).

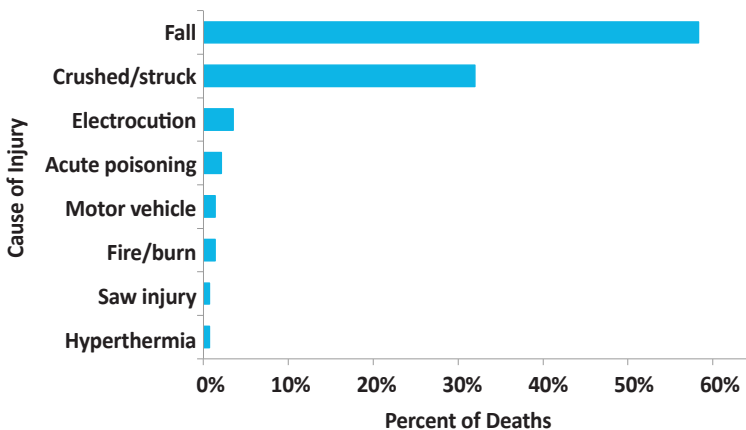
* Counts in this and following sections may not correspond to Census of Fatal Occupational Injury (CFOI) counts on page one, since death certificates and detailed data were not available for all CFOI cases.

† The Latino race/ethnicity category includes persons of Hispanic, Latino or Spanish origin of any race. Other race/ethnicity categories exclude persons of Latino ethnicity.

Sources: OSHA fatality investigation case files, New York City Health Department Bureau of Vital Statistics and NYC Office Chief Medical Examiner

Most New York City construction worker deaths are caused by falls

Cause of fatal unintentional injuries among New York City construction workers, 2007–2014 (Total = 144)



- From 2007 to 2014, 144 construction deaths occurred due to unintentional injuries, or injuries that occurred without the intent to cause harm.
- From 2007 to 2014, 15 construction fatalities resulted from intentional injuries—six homicides and nine suicides.
- Falls comprised more than half (58%) of fatal unintentional injuries among construction workers. Most fatal falls occurred from scaffolds (25%), followed by ladders (16%) and roofs (11%).
- Other common causes of fatal unintentional injuries included being struck, crushed or caught between objects or equipment (32%).

Sources: OSHA fatality investigation case files and New York City Health Department Bureau of Vital Statistics

At least one serious safety violation was cited in more than 90% of Occupational Safety and Health Administration (OSHA)* fatality investigations

Categories of violations cited among 91 OSHA fatality investigations, New York City, 2007–2014**



OSHA fatality investigations citing at least one violation in a severity classification, New York City, 2007-2014 (Total = 91)**



Source: OSHA fatality investigation case files

* OSHA sets and enforces workplace safety and health standards for most private sector employers and workers in the U.S. OSHA conducts investigations of all reported workplace fatalities with the exception of suicides and some homicides.

**A single investigation can yield multiple violations of varying severity.

- Most OSHA citations resulted from noncompliance with training requirements and fall protection standards, such as requirements for guardrails or a properly anchored harness. Violations of OSHA scaffold, stairway and ladder safety standards were also frequently cited.
- At least one serious safety violation was cited in 82 (90%) of the 91 OSHA NYC fatality investigations available for review. A serious violation is cited when the hazard could result in death or serious physical harm.
- Willful violations, which occur when an employer knowingly fails to correct a hazardous condition, were cited in 12 (13%) of 91 fatality investigations. Examples of willful violations include allowing workers to use faulty or damaged equipment or intentionally disabling safety features on hazardous equipment.

Data Sources: Estimates of construction fatalities that occurred in NYC and the U.S. between 1994 and 2014 were obtained from the U.S. Department of Labor, Bureau of Labor Statistics (BLS), Census of Fatal Occupational Injuries. The size of the NYC and U.S. construction and total labor forces between 1994 and 2014 were obtained from the BLS Current Population Survey. Fatality rates were calculated from these workforce estimates. The prior New York City Health Department construction fatalities report examined detailed demographic information on fatal construction injuries from 1996 to 2006. For this update, the Health Department Office of Vital Statistics provided death certificates for construction worker fatalities from 2007 to 2014. Matching case files and inspection reports were provided by the NYC Office of Chief Medical Examiner and OSHA. NYC construction worker demographic characteristics were obtained from a New York Building Congress analysis of the U.S. Census Bureau’s American Community Survey and the Fiscal Policy Institute’s 2006 NYC Construction Labor Market report.

Recommendations



Employers are responsible for worker safety.

- Ensure that safety programs are comprehensive and up to date. Include regular site inspections for fall hazards and proper use and maintenance of scaffolds, guardrail systems and safety equipment.
- Provide all necessary safety training in a language employees understand. Ask employees to demonstrate that they understood the training.
- Assign employees tasks appropriate to their skill level.
- Talk with union representatives and employees at non-unionized facilities about safety concerns. Address concerns as quickly as possible.
- Hold managers and workers accountable for hazard control. For example, performance evaluations should include safety indicators and disciplinary action should be taken, as necessary.
- Report any worker fatality to the federal Occupational Safety and Health Administration (OSHA) within eight hours and any amputation, loss of an eye or hospitalization of a worker within 24 hours.



Workers play an important role in keeping workplaces safe.

- Be attentive to all work safety practices and immediately report site hazards to your employer or to OSHA at 1-800-321-6742. OSHA will keep your information confidential. You can report anonymously by calling 311.
- Insist upon and attend all required health and safety trainings.
- Know your workplace health and safety rights. OSHA investigates cases of retaliation against employees who report unsafe work conditions, regardless of immigration status.
- Know the law: it is against the law for employers to require a worker to perform a task involving safety risks if the worker has not received proper training for that task.



Organizations that hire construction firms should set high standards for job safety.

- Include specifications for worker protection and fall prevention in construction contracts.
- Check construction firms' safety records on the OSHA [Establishment Search](#) and New York City (NYC) Department of Buildings [Building Information Search](#) websites before hiring them.

Federal, state and local agencies are taking action to increase construction safety.

- In August 2015, the **Manhattan District Attorney's office** convened a citywide Construction Fraud Task Force, which has successfully pursued criminal charges against contractors whose negligence compromises worker safety.
- In May 2016, NYC's **Department of Buildings** began requiring supervision by licensed construction superintendents at an expanded number of construction sites, substantially increased fines for serious safety violations and hired 100 additional inspectors.
- In August 2016, **OSHA** increased its penalties for safety violations for the first time since 1990.



Authors: Amita Toprani, Maytal Rand, Sarah Conderino, Kelly Christ, Ali Hamade

Acknowledgements: **Steven Kaplan**, Deputy Regional Administrator and **Laura Kenny**, Labor Liaison from **OSHA, Region 2**; **Tim Martin**, Chief Analytics Officer, **Joe Soldevere**, Assistant Commissioner for Communications and **Archana Jayaram**, Deputy Commissioner for Strategic Planning and Policy from **NYC Department of Buildings**

Suggested citation: Toprani A, Rand M, Conderino S, Christ K, Hamade A. Fatal Injuries among New York City Construction Workers. NYC Vital Signs 2017, 16(3); 1-4.