Update from the National Construction Center

NORA Construction Sector Council Meeting

November 16-17, 2022

Rick Rinehart and Chris Trahan Cain

CPWR – The Center for Construction Research and Training

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Research Programs

- Data Center
- **Research to Practice (r2p)**
- Safety Climate - Safety Management Information System
- **Pre-Task Planning**
- PTD Diffusion
- Residential Falls
- OSHA 10 Evaluation
- Reactive Chemicals
- Exoskeletons in Construction
- Women in the Trades
- Nanomaterials
- Communications
- BBP MMH Evaluation
- **Suicide and Opioid Overdose**

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We provide support for the NORA Construction Sector Council Workgroups

Struck-by Workgroup https://cpwr.com/struck-by-hazards

Falls Workgroup https://stopconstructionfalls.com/

COVID-19 Workgroup https://covid.elcosh.org/
https://www.covidcpwr.org/

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Struck-by Workgroup

Behavioral Economics Pilot Study

Behavioral Economics Pilot Study

- Test use of nudges and other behavioral economic techniques by incorporating them into a struck-by planning program
- Program will provide contractors of all sizes with tools and resources to effectively plan for the prevention of struck-by incidents
- Literature Review: www.cpwr.com/wp-content/uploads/Behavioral-Economics-Literature-Review.pdf

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Behavioral Economics Pilot Study

Conducted a survey on struck-by incidents in February/March (N = 208)

Key findings:

1. Primary causes of struck-by injuries:
   - Working around heavy equipment or vehicles
   - Falling/flying objects from heights or on the same level
2. Measures used most often to protect workers:
   - Training
   - Restricting access to the work area
   - Using PPE
3. Top barriers to implementing controls for struck-by hazards:
   - Lack of training on hazard identification and prevention
   - Scheduling pressure/emphasis on production
   - Lack of understanding of how to address hazards

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Behavioral Economics Pilot Study

Key findings continued:

4. Respondents indicated training/information is needed on:
   - How to identify and prevent struck-by hazards
   - Conducting a job hazard analysis
   - What is working on other job sites
5. Most effective ways to raise awareness and ensure safe practices:
   - Toolbox talks, training programs, and posters

Next steps:

- Develop planning program
- Recruit contractors of various sizes for pilot testing
- Gather feedback and update the program accordingly

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2022 Survey Results

Struck-by Hazards, Barriers, and Opportunities in the Construction Industry

AUGUST 2022

EILEEN BETIT, GRACE BARLET, JESSICA BUNTING

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CREATE A SPHERE OF SAFETY
PREVENT STRUCK-BY INCIDENTS

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Falls Workgroup

Fall Experience Survey

Fall Experience Survey

PLAN. PROVIDE. TRAIN.

Goal to improve understanding of underlying causes of falls

- Inform ASSP/ANSI voluntary standards
- Create more relevant resources and materials in support of the National Campaign to Prevent Falls in Construction and National Safety Stand-Down
- Improve CPWR outreach and education efforts
- Influence future research on fall safety
- Share data with industry to improve collective fall prevention efforts

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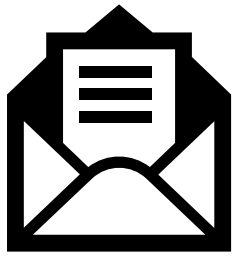
Distribution

Email



Social Media Posts

Webinars

Articles

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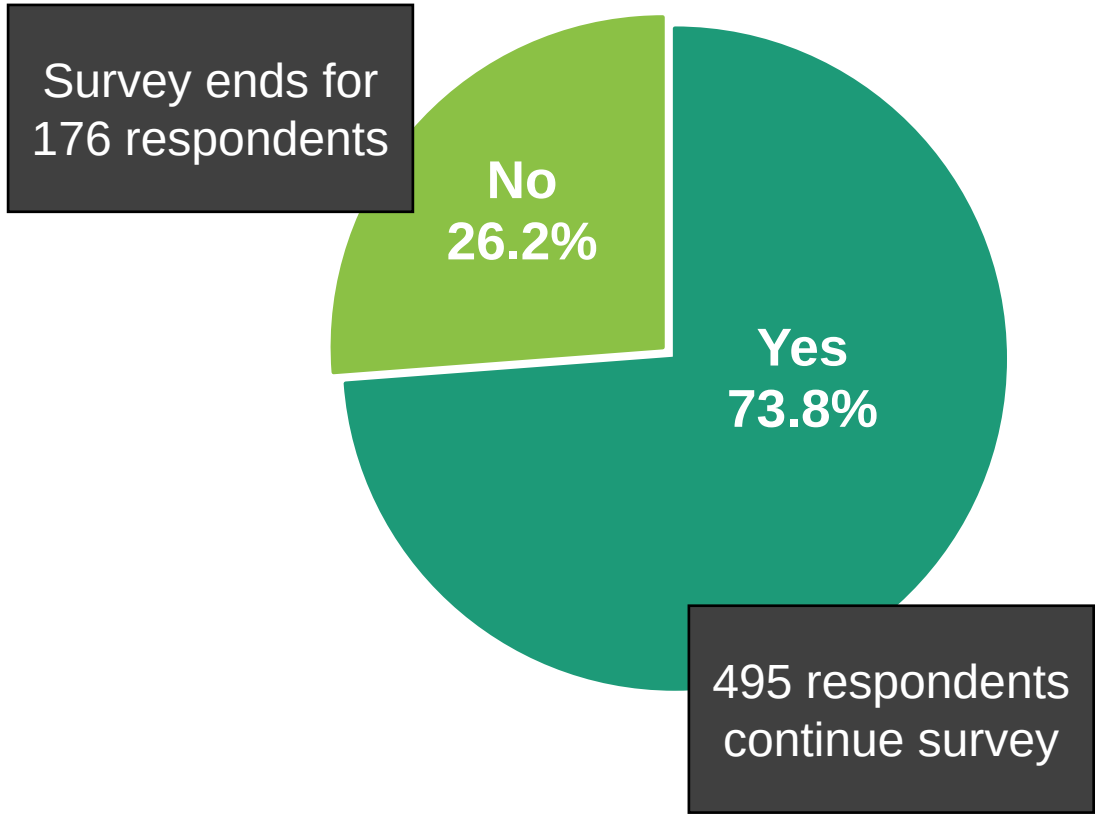
Results

671 total responses

- 658 in English
- 13 in Spanish

Have you ever been involved in, witnessed, or investigated a fall incident? (N=671)



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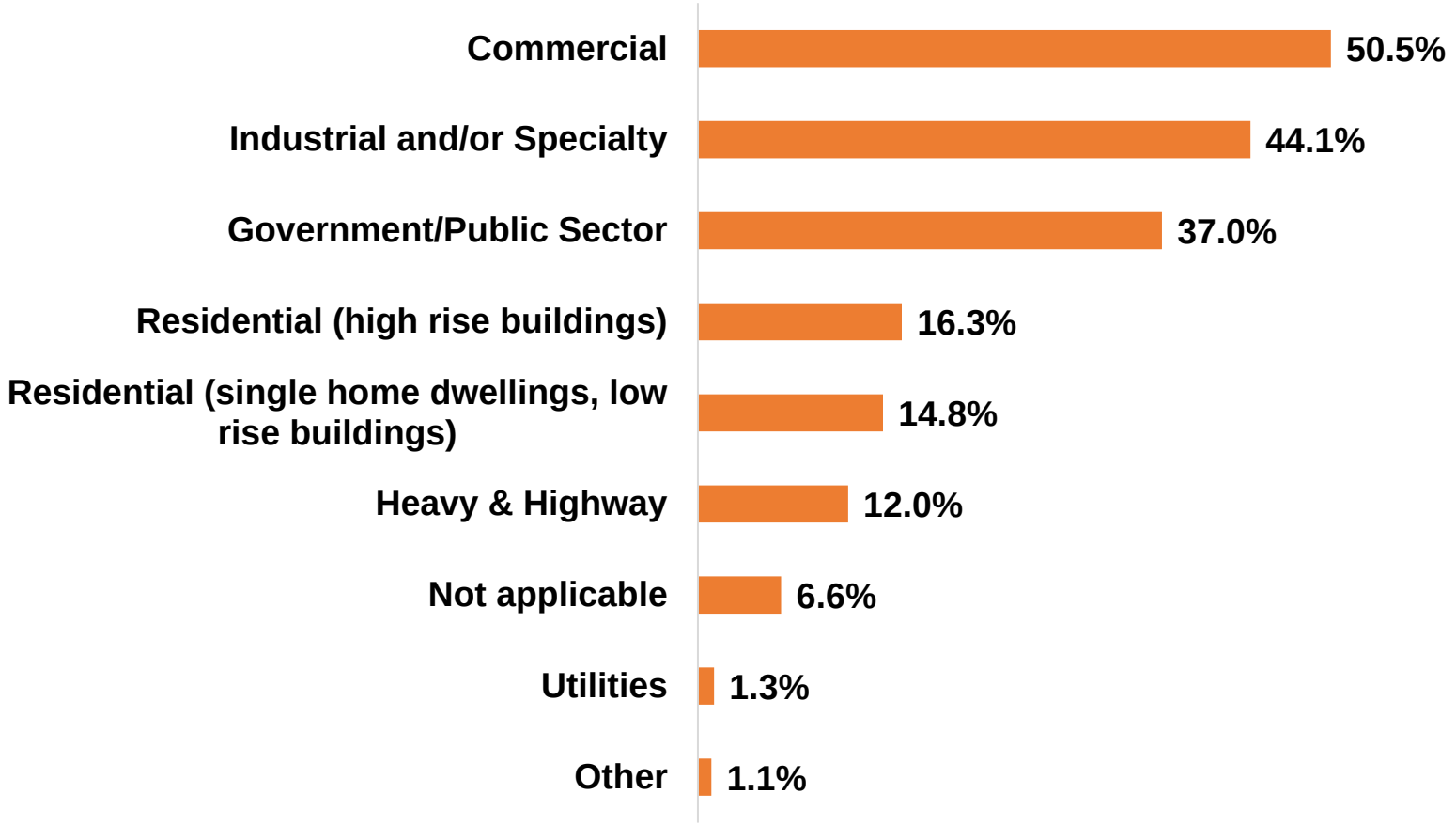
Who Did We Hear From?

What type of industry segment are you currently involved with? (Select all that apply) (N=467)



Note: Excludes insurance, equipment manufacturers, and equipment suppliers

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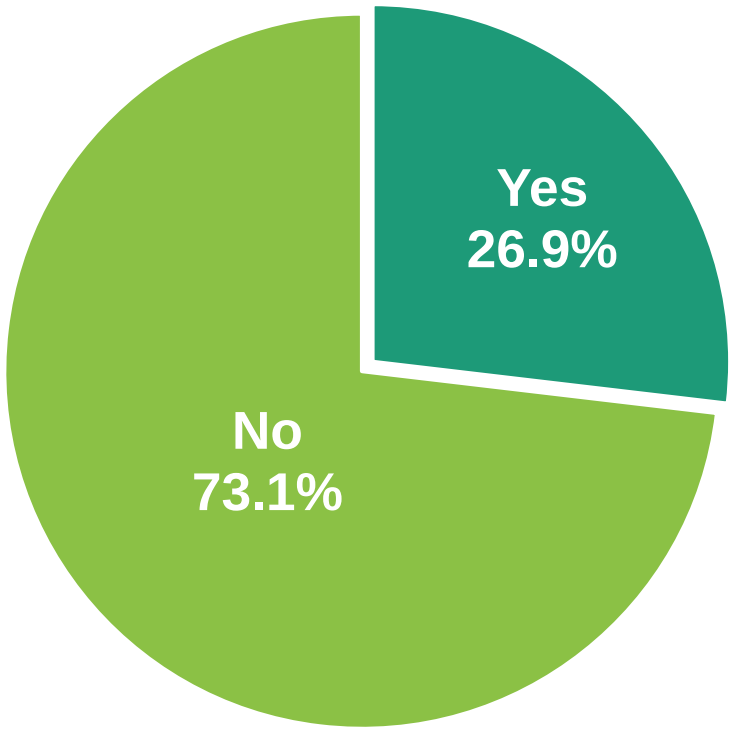
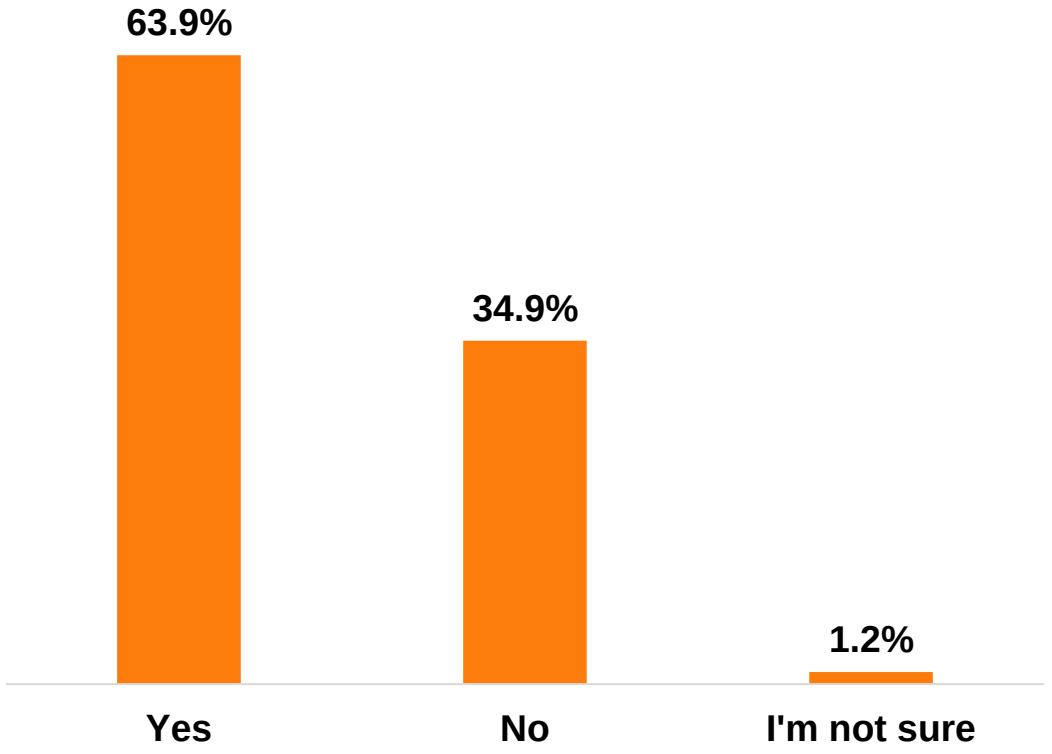
Severity of the Fall Incident

Was the fall fatal? (N=495)



Were 911/Emergency services required? (N=493)



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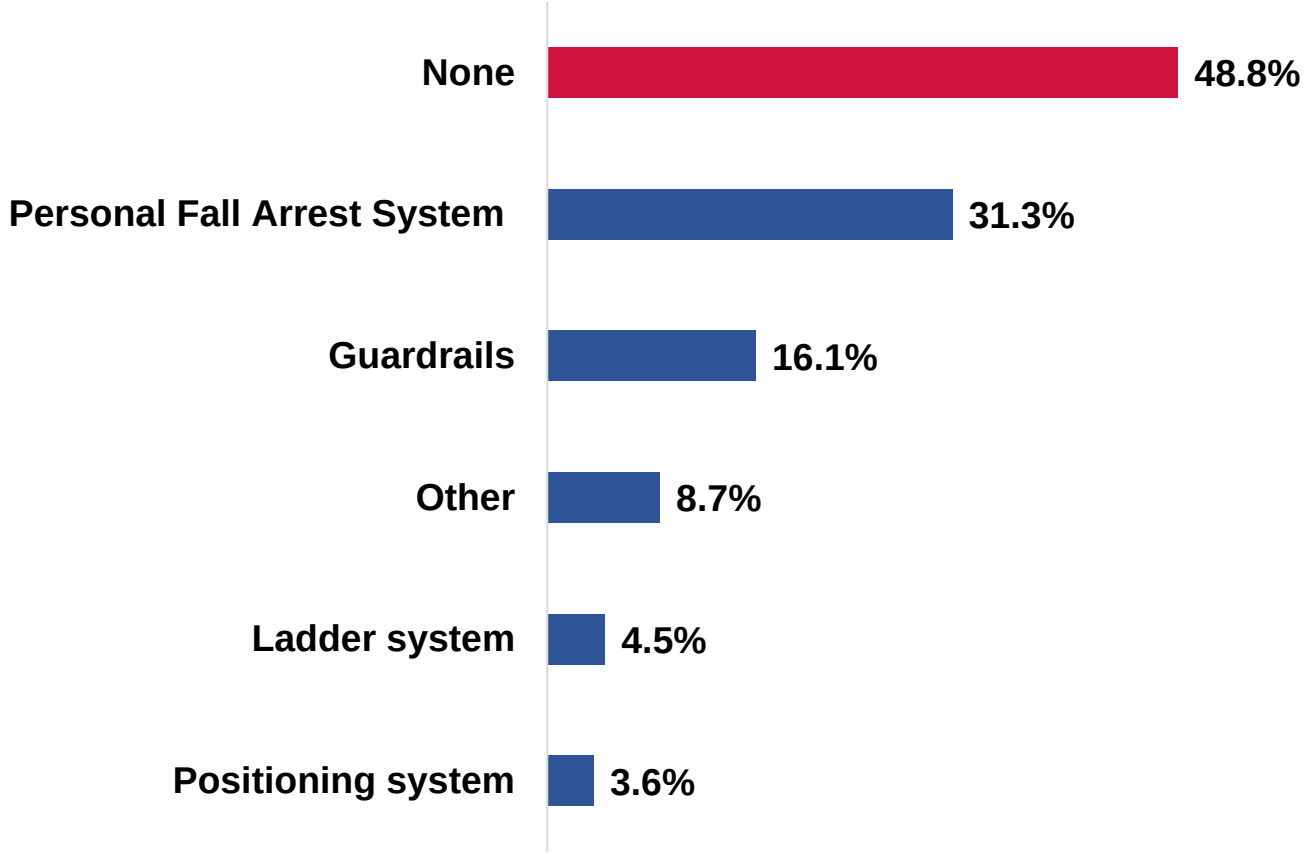
Fall Protection

What type of fall protection, if any, was being used at the time of the fall? (Select all that apply) (N=447)



Other:

- Suspension system
- Safety nets
- Travel restraint
- Hole covers
- Warning lines
- Unspecified

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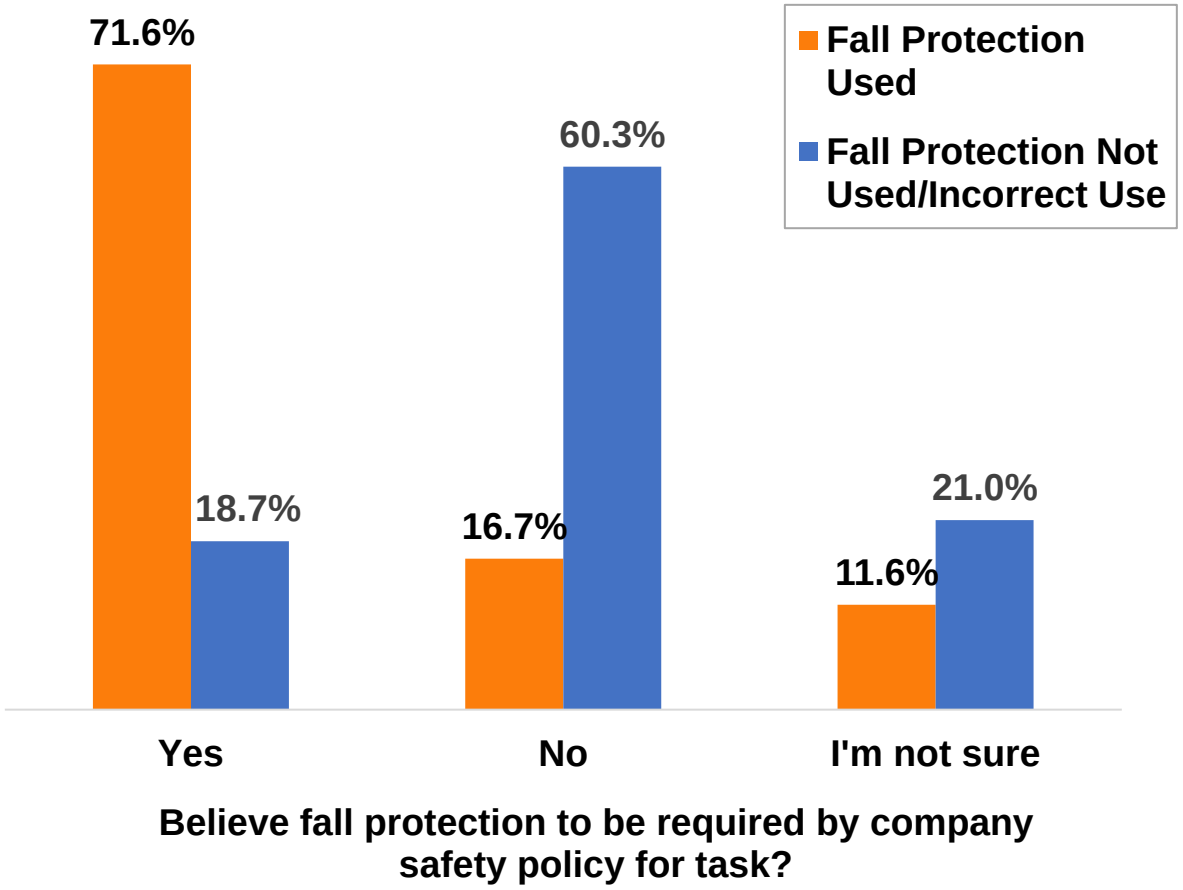
Fall Protection

Belief that fall protection was required x Fall protection use (N=429)



Individuals who believed fall protection was required by their employer were **8 times** more likely to use fall protection compared to those who did not believe fall protection was required

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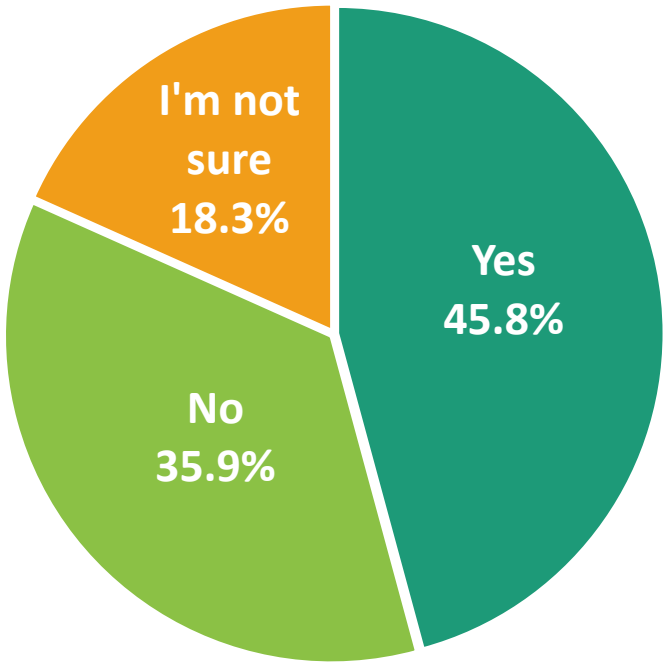
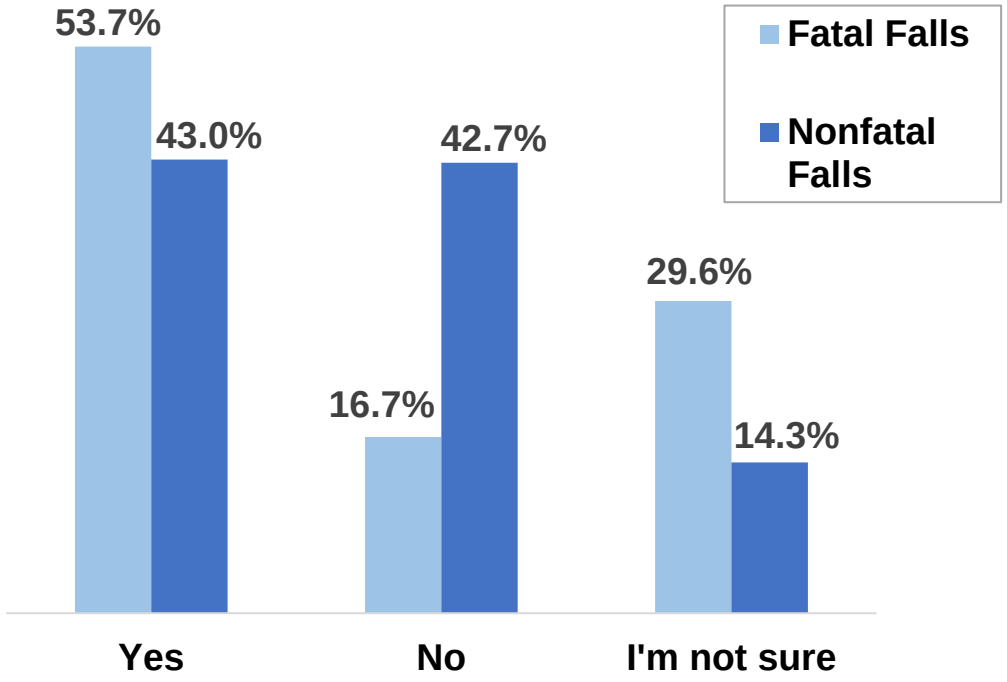
Employer-Implemented Changes

Did the employer institute any significant or sustained changes to their ways of working as a result of this event? (N=415)



Changes to ways of working x Fatal fall (N=415)



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Fall Experience Survey

PLAN. PROVIDE. TRAIN.

Key findings:

1. Respondents believe **lack of adequate planning** is a key underlying cause of falls. Lack of planning is associated with a lower likelihood of using fall protection.
2. At the time of the fall, nearly half were not wearing fall protection.
4. Employee beliefs about their company's fall protection policy were strongly associated with the use of fall protection.
5. Rescue training may help reduce fall-related deaths.

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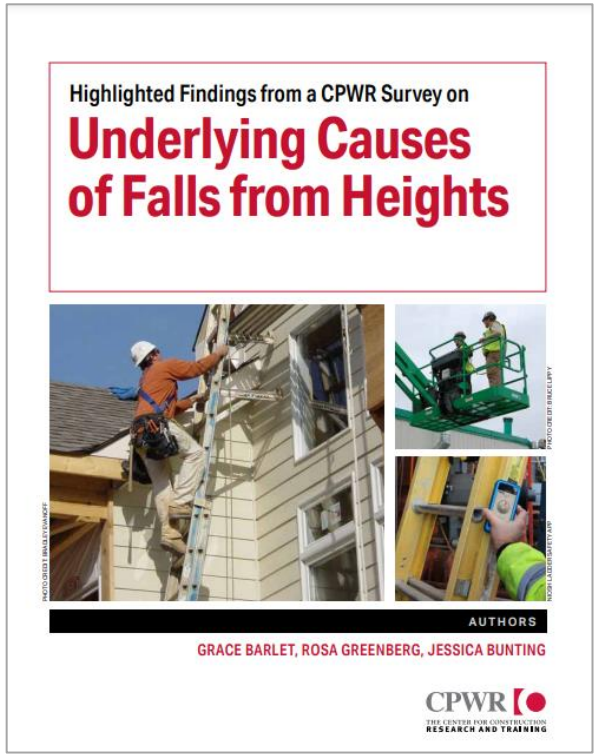
How Are We Using the Results?

- Sharing findings with industry
- Creating resources and materials in support of the Falls Campaign and Stand-Down
- ASSP/ANSI is using the findings to inform voluntary standards
- Currently putting together an expert panel on fall interventions that will use the findings to identify one or more interventions for CPWR and Falls Workgroup to promote



https://bit.ly/3A8Dkpv

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Fall Prevention Resources

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Fall Prevention Resources

FREE resources:
www.stopconstructionfalls.com

- Planning tools
- Training materials
- Posters and infographics
- And more!

Resources available in English and Spanish

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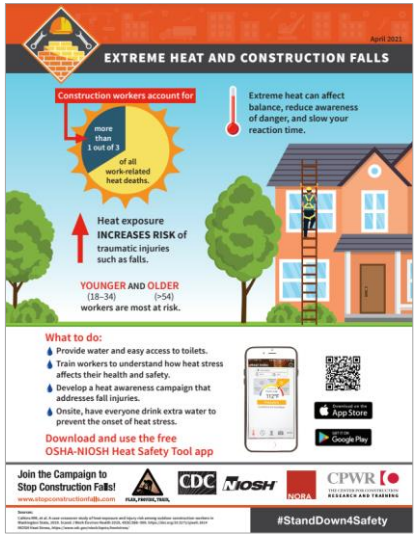
Fall Prevention Resources

Training Resources

- Toolbox Talks
- Hazard Alert Cards
- Infographics
- Videos
- On-Demand Webinars
- Podcasts
- FACE Reports & Real-life Stories
- Other Handouts for Workers
- Hardhat Stickers
- Research Findings



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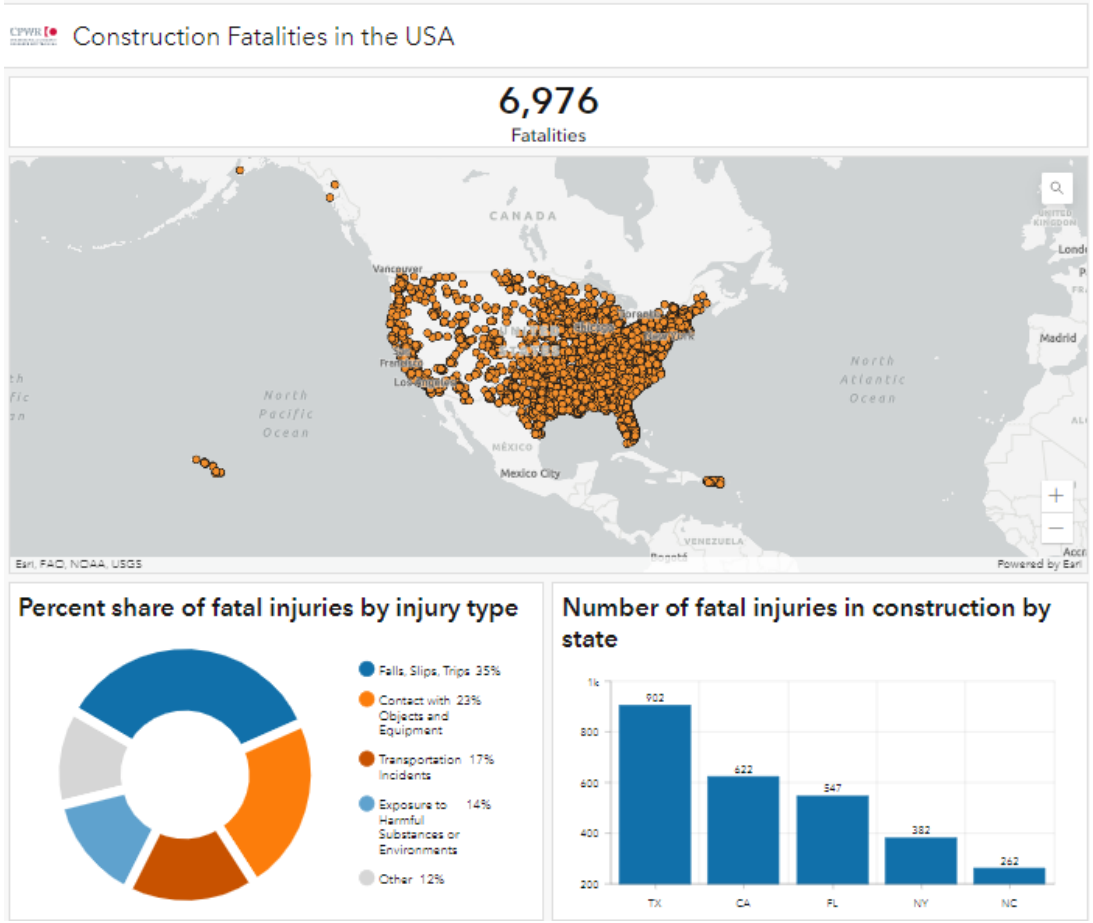
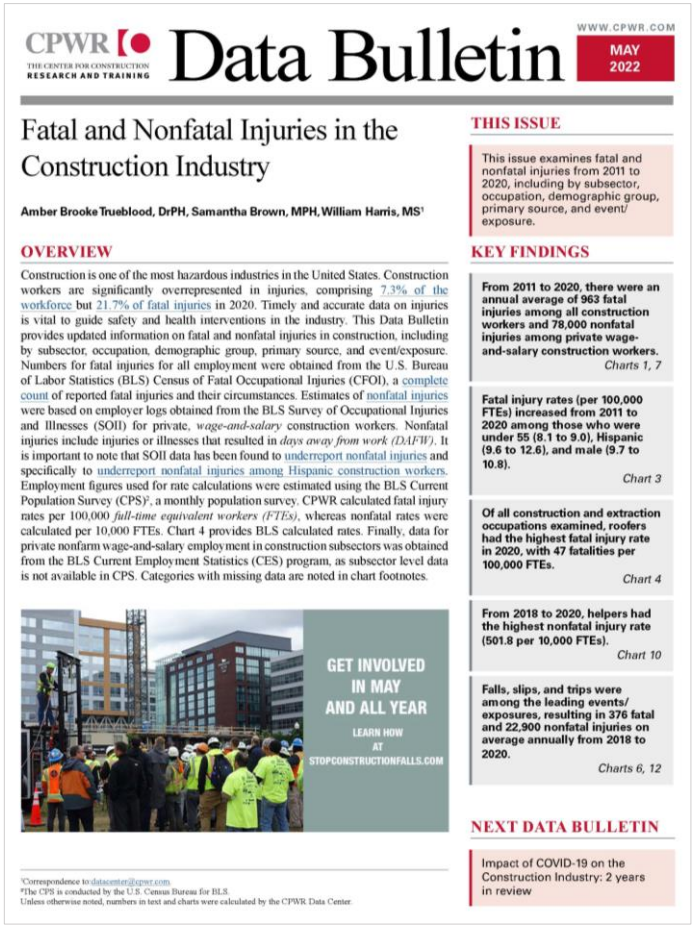
Fall Prevention Resources

Data Center Resources

- Fatality Map
- Data Dashboards
- Data Reports





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Data Bulletin

WWW.CPWR.COM

MAY 2022

Fatal and Nonfatal Injuries in the Construction Industry

Amber Brooke Trueblood, DrPH, Samantha Brown, MPH, William Harris, MS[1]

OVERVIEW

Construction is one of the most hazardous industries in the United States. Construction workers are significantly overrepresented in injuries, comprising 7.3% of the workforce but 21.7% of fatal injuries in 2020. Timely and accurate data on injuries is vital to guide safety and health interventions in the industry. This Data Bulletin provides updated information on fatal and nonfatal injuries in construction, including by subsector, occupation, demographic group, primary source, and event/exposure. Numbers for fatal injuries for all employment were obtained from the U.S. Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI), a complete count of reported fatal injuries and their circumstances. Estimates of nonfatal injuries were based on employer logs obtained from the BLS Survey of Occupational Injuries and Illnesses (SOII) for private, *wage-and-salary* construction workers. Nonfatal injuries include injuries or illnesses that resulted in *days away from work (DAFW)*. It is important to note that SOII data has been found to underreport nonfatal injuries and specifically to underreport nonfatal injuries among Hispanic construction workers. Employment figures used for rate calculations were estimated using the BLS Current Population Survey (CPS)[2], a monthly population survey. CPWR calculated fatal injury rates per 100,000 *full-time equivalent workers (FTEs)*, whereas nonfatal rates were calculated per 10,000 FTEs. Chart 4 provides BLS calculated rates. Finally, data for private nonfarm wage-and-salary employment in construction subsectors was obtained from the BLS Current Employment Statistics (CES) program, as subsector level data is not available in CPS. Categories with missing data are noted in chart footnotes.

[1]Correspondence to datacenter@cpwr.com
[2]The CPS is conducted by the U.S. Census Bureau for BLS.
Unless otherwise noted, numbers in text and charts were calculated by the CPWR Data Center.

THIS ISSUE

This issue examines fatal and nonfatal injuries from 2011 to 2020, including by subsector, occupation, demographic group, primary source, and event/exposure.

KEY FINDINGS

From 2011 to 2020, there were an annual average of 963 fatal injuries among all construction workers and 78,000 nonfatal injuries among private wage-and-salary construction workers. *Charts 1, 7*

Fatal injury rates (per 100,000 FTEs) increased from 2011 to 2020 among those who were under 55 (8.1 to 9.0), Hispanic (9.6 to 12.6), and male (9.7 to 10.8). *Chart 3*

Of all construction and extraction occupations examined, roofers had the highest fatal injury rate in 2020, with 47 fatalities per 100,000 FTEs. *Chart 4*

From 2018 to 2020, helpers had the highest nonfatal injury rate (501.8 per 10,000 FTEs). *Chart 10*

Falls, slips, and trips were among the leading events/exposures, resulting in 376 fatal and 22,900 nonfatal injuries on average annually from 2018 to 2020. *Charts 6, 12*

NEXT DATA BULLETIN

Impact of COVID-19 on the Construction Industry: 2 years in review

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Acknowledgements

Jessica Bunting, MPH
Director, r2p, CPWR
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Grace Barlet, MPH
Research Analyst, r2p, CPWR

Rosa Greenberg, MPH
Research Analyst, r2p, CPWR

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