NIOSH Construction Program Update

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NIOSH Office of Construction Safety & Health

April 2022
NIOSH Construction Program

• Background on NIOSH, NORA, and Construction Program

• Quick Summary of Construction Safety and Health Issues
  - “Focus Four” --- Struck-By and Falls Stand-Downs
  - COVID-19
  - Emerging Issues
Occupational Safety and Health (OSH) Act of 1970

- Established NIOSH
- “to assure safe and healthful working conditions for working men and women”
- “…to preserve our human resources”
Occupational Safety and Health in Federal Government

Regulation/Enforcement

Department of Labor

Mine Safety and Health Administration MSHA
Occupational Safety and Health Administration OSHA

Research, Training, and Prevention Recommendations

Department of Health and Human Services

Centers for Disease Control and Prevention CDC
National Institute for Occupational Safety and Health NIOSH
NIOSH

The National Institute for Occupational Safety and Health (NIOSH) creates new knowledge in the field of occupational safety and health and transfers it into practice globally.
Not all workers have the same risk of experiencing a work-related health problem, even when they have the same job.

Avoidable differences in work-related disease incidence, mental illness, or morbidity and mortality that are closely linked with social, economic, and/or environmental disadvantage such as:

- work arrangements (e.g. contingent work),
- socio-demographic characteristics (e.g. age, sex, race, and class),
- organizational factors (e.g. business size)
NIOSH Locations and “DLOs”

- Approximately 2,000 staff members
- Across the U.S.
  - Western States Division
  - Division of Science Integration
  - Div. of Compensation Analysis & Support
  - Division of Field Studies & Engineering
  - Pittsburgh Mining Research Division
  - Natl Personal Protective Technology Lab
  - Health Effects Laboratory Division
  - Respiratory Health Division
  - Division of Safety Research
National Occupational Research Agenda (NORA)

• Begun by NIOSH in 1996 as a public-private partnership to engage diverse interests and perspectives to chart a research course

• Recognized no one organization has the resources necessary to fully address the research needs of workers in the United States

• Provided a framework to guide occupational safety and health research for the nation

“Delivering on the Nation’s promise: safety and health at work for all people through research and prevention”
NIOSH / NORA Programs

- **10 Sector Programs**
  - Agriculture, Forestry & Fishing
  - **Construction**
  - Healthcare & Social Assistance
  - Manufacturing
  - Mining
  - Oil & Gas Extraction
  - Public Safety
  - Services
  - Transportation, Warehousing & Utilities
  - Wholesale and Retail Trade

- **7 Cross-Sector Programs**
  - Cancer, Reproductive, Cardiovascular, and Other Chronic Disease Prevention
  - Hearing Loss Prevention
  - Immune, Infectious, and Dermal Disease Prevention
  - Musculoskeletal Health
  - Respiratory Health
  - Traumatic Injury Prevention
  - Healthy Work Design and Well-Being
NIOSH Divisions/Labs/Offices

- Western States Division
- Division of Science Integration
- Division of Field Studies & Engineering
- Pittsburgh Mining Research Division
- Natl Personal Protective Technology Lab
- Health Effects Laboratory Division
- Respiratory Health Division
- Division of Safety Research

Construction Safety and Health Program

- coordinates and integrates construction work across all NIOSH DLOs
NIOSH Construction Program Mission

To eliminate construction fatalities, injuries, and illnesses through a focused program of research and prevention

Fulfill mission through high quality research, practical solutions, partnerships, and research to practice (r2p).
Construction Program Structure and Focus

NIOSH Construction Safety and Health Program

Intramural Research
- Basic Research
- Surveillance
- Methods Research
- Exposure Assessment
- Controls Development
- Applied Research
- Research to Practice

National Construction Center
- Industry Characterization
- Applied Research
- Industry Liaison
- Intervention
- Research to Practice

Extramural Investigator-initiated Grants
- Innovative Ideas
- Opportunities
- State Initiatives

CPWR
The Center for Construction Research and Training
Program Addresses All Types of Construction

- Commercial-Skyscrapers
- Residential-Homes
- Specialty Trades
- Heavy and Civil
Interactions with many Construction partners

- NIOSH FACE program
- NIOSH occupational Health Equity Workgroup
- NIOSH Substance Use and Work Coordination Team
- Pandemic Response
- NIOSH r2p Workgroup
- Hearing Loss Cross-sector
- NIOSH Climate Workgroup
- CPWR Technical Advisory Board
- CPWR r2p Workgroup
- OSHA Construction Alliance Roundtable
- IPAs with 3+ universities
- NIOSH Substance Use and Work Coordination Team
- NIOSH Occupational Health Equity Workgroup
- OSHA Advisory Cmte for Construction Safety and Health

Organizations and Partners:
- NIOSH
- OSHA
- CPWR
- AGC
- NRCA
- NAPA
- NECA
- IBEW
- ASU
- NAHB
- LWSC
- TAUC
- SMACNA
- MCAA
- NAPA
- NIOSH Climate Workgroup
- NIOSH Occupational Health Equity Workgroup
- NIOSH Substance Use and Work Coordination Team
- NIOSH Pandemic Response
- CPWR Technical Advisory Board
- CPWR r2p Workgroup
- Hearing Loss Cross-sector
- IPAs with 3+ universities
Purpose of NIOSH Construction Sector Council

- Exchanging Information
- Forming Partnerships
- Enhancing dissemination and implementation
NORA Agendas

• Broad strategic objectives

• OSH research priorities for the nation
NORA Construction Research Agenda

Objectives

1: Falls from heights – Eliminate falls in construction
2: Falls from same level – Significantly reduce or eliminate slips, trips, and falls
3: Struck by – Reduce fatal and serious injuries associated with struck-by incidents
4: Electrical – Conduct research to address electrical safety issues on construction sites
5: Respiratory and dermal – Reduce the frequency of occupational disease from respiratory & dermal hazards
6: Hearing loss – Reduce occupational hearing loss in construction
7: Musculoskeletal disorders – Reduce the risk and burden of MSDs in construction
8: Workers at disproportionate risk – Conduct research to eliminate disproportionate risks
9: Small business – Reduce the number of illnesses, injuries, and fatalities occurring in small construction firms
10: Emerging issues
11: Extreme temperatures – Reduce the likelihood of temperature extreme incidents
12: Prevention through Design (PtD) – Increase the use of PtD approaches in construction
13: Research to Practice (r2p) – Build capacity for effective translation research and r2p strategies
14: Work organization – Improve conditions in construction by studying safety culture & safety climate
15: Surveillance – Reduce occupational safety and health hazards through proactive surveillance
16: Training – Research to increase the reach, scope, and effectiveness of training in construction
NIOSH Construction Program

- Background on NIOSH and Construction Program

- Quick Summary of Safety and Health Issues
  - “Focus Four” --- Struck-By and Falls Stand-Downs
  - COVID-19
  - Emerging Issues
• Construction is one of the most dangerous industries in the United States

• Every year about two-thirds of fatal injuries in construction are caused by four leading hazards: falls, struck-by, electrocutions, and caught-in/between, defined as the **Construction Focus Four** by the Occupational Safety and Health Administration (OSHA).
Headlines from last week

• Construction worker dies after being hit by truck during pavement project in Mandarin
  • JACKSONVILLE, Fla. — A construction worker was killed Friday after being run over by another construction worker during a pavement project in Mandarin, according to the Jacksonville Sheriff’s Office.

• Construction worker dies when concrete stairwell fell, police say
  • ATLANTA, GA - An Atlanta construction worker died after a concrete stairwell reportedly fell and damaged a gas meter in northwest Atlanta.

• Man dies after fall at construction site in Shooting Star
  • Jackson Hole, WY -- A construction worker died March 8 after falling off an icy roof while working on a job site in Teton Village.
NORA Construction Sector Council Work Groups

Preventing COVID-19
Co-Chairs:
Travis Parsons
Ann Marie Dale

Preventing Falls
Chair:
Tom Shanahan

Preventing Struck-by
Co-Chairs:
Brad Sant
Alanna Klein
Construction Focus Four Fatalities, 2011-2019

Injury type

- Caught-in/between
- Electrocution
- Struck-by
- Fall to lower level
- Non-Focus Four Injury

% of total fatalities

Number of fatalities by injury type and year

National Stand-Down to Prevent Struck-By Incidents Set for April

02/07/22 / National Safety Council

Washington, DC — The third annual National Stand-Down to Prevent Struck-By Incidents is expanding to a full week from a one-day event.

Set to take place April 11-15, the stand-down is a collaborative effort led by NIOSH’s National Occupational Research Agenda Construction Sector Council. The event, scheduled in conjunction with National Work Zone Awareness Week, is aimed at raising awareness of struck-by hazards and ways to prevent them. According to OSHA, the four most common struck-by hazards are being struck by a flying, falling, swinging or rolling object.

CPWR – The Center for Construction Research and Training and the NORA Construction Sector Council’s struck-by work group have scheduled a series of webinars throughout the week. Topics will include work zone safety, lift zone safety, heavy equipment and dropped objects.

CPWR also is offering various online resources, including infographics, toolbox talks, research and two on-demand webinars from last year’s stand-down: Cranes & Lifting – Avoiding Struck-By Incidents Under the Hook and Preventing Struck-By Incidents: Learning by Experience.

Source: National Safety Council
Planned Webinars
Register and share these webinars with your networks!

- April 11, 2022, 1 PM ET – Preventing Struck-by Incidents in Roadway Work Zones
- 11 de abril de 2022 a las 3 PM ET – Prevención de Incidentes por Atropellos: Zonas de Trabajo, Equipos Pesados e Impacto de Objetos
- April 13, 2022, 2 PM ET – What’s the risk? Best Practices to reduce the likelihood of struck-by injuries from heavy equipment and crane activities
- April 14, 2022, 2 PM ET – Preventing Struck-by Incidents from Dropped Tools & Other Objects
The California FACE Program

Occupational Health Branch
California Department of Public Health

Hank Cierpich
Robert Harrison
Laura Styles
Quick Coupler Description

• Quick couplers are after-market devices, made by various manufacturers, that are installed at the outer end of booms on various types of construction and earth-moving machines
  • Facilitate the rapid exchange of working tools or buckets
  • Usually mounted on the machine by means of the pins that would otherwise be the mountings for the bucket or attachment
  • Many variations in the design of quick couplers
Case # 1

• A construction heavy equipment operator (trainee) died after being struck by an excavation bucket that came loose from the quick coupling device attached to the end of the boom.

• After removing dirt from a trench, the decedent swung the boom of the excavator over to the side and exited the cab, leaving the boom elevated. As he was walking toward the boom, the bucket detached from the quick coupler and fell to the ground striking him.
Case #2

- A construction laborer, working in a trench, died after being struck by an excavation bucket that came loose from its quick coupler.

- The operator of the excavator was curling the bucket into the boom when the bucket came loose, hitting the ground and then bouncing into the trench where the victim was working.
California FACE Reports

• CA/FACE (July 2, 2021)
  https://www.cdc.gov/niosh/face/pdfs/20ca001.pdf

• CA/FACE (Aug. 4, 2021)
  https://www.cdc.gov/niosh/face/pdfs/20ca002.pdf
NORA Struck-by Work Group

Best Practices for Safe Crane Lifts

1. **Prepare Ahead of Time**
   - Conduct risk assessments and develop lift plans.
   - Ensure all crane operators, riggers, and other lift personnel are trained.

2. **Use Appropriate Equipment**
   - Select cranes and rigging equipment suitable for the job.
   - Check equipment for proper condition and maintenance.

3. **Plan Lift Sequence**
   - Coordinate with all stakeholders involved in the lift.
   - Establish clear communication channels.

4. **Monitor and Control**
   - Use alarms and visual signals for lift control.
   - Monitor equipment and personnel for safety.

5. **Ensure Proper Rigging**
   - Use appropriate rigging devices and methods.
   - Inspect rigging for proper condition.

6. **Secure the Load**
   - Ensure all load attachments are secure.
   - Use adequate safety chains and clamps.

7. **Keep Clear of the Lift Area**
   - Keep non-essential personnel and equipment away from the lift area.
   - Use proper signage and barriers.

8. **Post-Lift Inspection**
   - Perform a thorough post-lift inspection of the crane and rigging.
   - Document any issues and address them.

For more information on preventing strick incidents, visit: www.cpwrg.org/toolbox
Preventing Falls

OSHA, NIOSH, & CPWR are collaborating on a Falls Campaign and Safety Stand-down.

https://stopconstructionfalls.com/
http://www.osha.gov/StopFallsStandDown
http://www.cdc.gov/niosh/construction/stopfalls.html
6. Number of fatal injuries caused by Construction Focus Four, 2011-2019

2022 Construction Falls Prevention Campaign and Stand-Down: May 2-6
2022

- 10-Year Anniversary of National Campaign to Prevent Falls in Construction
- 9th National Stand-Down to Prevent Falls
- Focus on outreach to most at-risk
  - Small residential contractors, immigrant (Hispanic), roofer
  - Other Languages | Stop Construction Falls

2021

- 5 NIOSH NORA Falls videos published in 2021
- CDC Construction Safety & Health YouTube Playlist
- CPWR Fall Hazards & Prevention YouTube Playlist
FALLS continued

SNAPSHOT OF FATAL FALLS IN CONSTRUCTION, 2019

1,102 CONSTRUCTION DEATHS
Most deaths in a year since 2011

1 in 3 DEATHS WERE FROM FATAL FALLS
- 81 on OSHA’s Fatal Four
- 93 fatal falls related to ladders
- 52 fatal falls related to scaffolding

401 FATAL FALLS TO A LOWER LEVEL
- 25% increase from 2018
- Hispanics have a higher rate of falls

146 FATAL FALL DEATHS FROM ROOFS
- 28% increase from 2018
- 63% increase from 2011

374 HISPANIC CONSTRUCTION DEATHS
- 27% increase from 2018
- 90% increase since 2011

1 in 3 CONSTRUCTION WORKERS ARE HISPANIC
- Provide training in the language workers use and images that reflect their culture.

2X RATE OF DEATH FOR CONSTRUCTION
- Workers age 65+ compared to workers age 55 or less

PLAN ahead to get the job done safely:
- PROVIDE the right equipment
- TRAIN workers to use the equipment safely

2021 True Fall Video Series

The Impact on Lives

Saving Lives

Changing Old Behaviors

https://www.cdc.gov/niosh/construction/infographics.html

https://stopconstructionfalls.com/infographics/
Contractor Electrocutions

Electrocutions and Prevention in the Construction Industry

Electrocutions are a leading cause of fatalities in the construction industry, and have been addressed through the National Electrical Safety Code, the Occupational Safety and Health Administration (OSHA), and various other initiatives. Contractors must take necessary precautions to prevent electrocutions, including proper protective gear, training, and adherence to safety guidelines.

Key Findings:
- Contractors are required to follow the National Electrical Safety Code (NFPA) and OSHA standards.
- Proper protective gear, including insulated gloves and hard hats, is essential.
- Training on electrical hazards and safety protocols is mandatory.

2. Number and rate of electrocutions in construction, 2003-2015

NIOSH Science Blog

Preventing Electrocution of Construction Contract Workers

Construction and the Focus Four Hazards

In another analysis, researchers have conducted an review of the literature on electrocution hazards in the construction industry. This review suggests that electrocution hazards are a significant issue, and that effective strategies are needed to prevent these incidents.

Figure 1. The Focus Four Hazards in Construction.
Drafting Toolbox Talk: struck-by or caught in between machinery

https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/toolbox-talks/

- Be familiar with the locations of emergency stop buttons.
- Do not use unguarded equipment and machinery.
- Only qualified personnel should perform maintenance and repair work on equipment.
- Use proper lockout/tagout procedures when completing repairs.
NIOSH Construction Program

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    - COVID-19
    - Emerging Issues
NORA COVID-19 Workgroup

- Webinars
- Clearinghouse

- Planning tool
- Resources
COVID-19 Response: Webinars
Series of 22 Webinars Began April 2020

CPWR-NIOSH COVID-19 Series

Click here for the full COVID-19 Series Playlist on YouTube

  Moderator: Chris Cain, CIH, Executive Director, CPWR
  Presenter: Doug Trout, MD, MHS, Medical Officer, Office of Construction Safety and Health, National Institute for Occupational Safety and Health (NIOSH)
  January 13, 2022
  Play Recording  Download Presentation

- CPWR-NIOSH COVID-19 Webinar: Update on OSHA Guidance for Workers Not Covered by the COVID 19 ETS
  Moderators: Rick Rinehart, ScD, Deputy Director, CPWR G.
  Scott Earnest, PhD, PE, CSP, Associate Director for Construction, Office of Construction Safety and Health, NIOSH
  Panelists: Christina Dragon, Health Scientist, OSHA DTSEM
  Larry McGowan, Supervisory Industrial Hygienist, Directorate of Enforcement Programs, OSHA
  July 9, 2021
  Play Recording  Download Presentation  Additional Resources

- CPWR-NIOSH COVID-19 Webinar: COVID 19 Science and Policy Update with Dr. John Howard
  Welcome: Chris Cain, CIH, Executive Director, CPWR
  Presenter: Dr. John Howard, Director, NIOSH, and Administrator of the World Trade Center Health Program, U.S. Department of Health and Human Services.
  Moderator: G. Scott Earnest, PhD, PE, CSP, Associate Director for Construction, Office of Construction Safety and Health, NIOSH
  May 13, 2021
COVID-19 Poses Big Challenges for Small Construction Firms

March 9, 2021 by Claudia Parvanta, PhD; Tessa Bonney, MPH, PhD; Lee Newman, MD, MA; Eileen Bett; and CDR Elizabeth Garza, MPH, CPH

Occupational safety and health (OSH) professionals can help small construction firms build safety into their worksites, even during the COVID-19 pandemic.

https://blogs.cdc.gov/niosh-science-blog/2021/03/09/construction_covid/

https://www.cpwr.com/covid-19-resources/covid-19-vaccine-resources/

https://www.constructforstl.org/vax-facts-stl/

Información N.º 3 sobre la vacuna contra la COVID-19
Se debe vacunar incluso si ha tenido COVID-19.

Debido a los graves riesgos para la salud asociados a la COVID-19 y al hecho de que la reinfección es posible, se recomienda la vacuna independientemente de si ya se contagió con el virus.

En este momento, los expertos no saben cuánto tiempo está protegida una persona de volver a enfermarse después de recuperarse de la COVID-19. La inmunidad que se obtiene al tener una infección, llamada inmunidad natural, varía de persona a persona. Algunas pruebas preliminares sugieren que la inmunidad natural puede no durar más de 90 días.

COVID-19 continued

**Workplaces and Businesses**

**Plan, Prepare, and Respond**

Updated Oct. 18, 2021  Languages  •  Print

CDC has archived several workplace-related guidance documents, factsheets, and toolkits. The Occupational Safety and Health Administration (OSHA) provides resources to assist employers and workers in identifying COVID-19 exposure risks and help take appropriate steps to prevent exposure and infection. See the OSHA Coronavirus Disease (COVID-19) topic page for the most current requirements, guidance, and tools.

**Workplace Prevention Strategies**

To prevent and reduce transmission and maintain healthy business operations and work environments

**Workplace Vaccination Program**

For the 2020-2021 season, construction occupations experienced an 2.42% absenteeism rate compared to 2.32% for all other occupations.

Motivating workers to receive their vaccination is one of the most important steps toward ending the pandemic, getting back to life as we knew it, and for maintaining business activities.

Your employees are your most valuable asset. When one worker is down, the whole crew feels it. This impacts every aspect of the business, causing indirect costs such as:

- Training replacement employees
- Increased mandatory overtime
- Increased stress
- Lower morale
- Reduced productivity
- Increased number of safety issues
- Increased employee health problems
- Higher turnover rates

What can you do to prevent these added costs to your bottom line?

- Provide accurate information about COVID-19 vaccination.
- Establish supportive policies and practices to allow your workers to take the time to get the vaccine.

Waiting to get the COVID-19 vaccine is like leaving your tools out overnight. You're taking your chances and throwing away good money.

For more information about the COVID-19 vaccines, visit:


For more information about the construction worker COVID-19 safety checklist, visit:

https://www.cpwr.com/covid-19-resources/covid-19-vaccine-resources/

Find community transmission levels and masking guidance by county.


NIOSH Construction Program

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High and Rising Mortality Rates Among Working-Age Adults

Committee on Rising Midlife Mortality Rates and Socioeconomic Disparities

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Printed in the United States of America

The Problem: U.S. Life Expectancy Fell Between 2014 and 2017

Years of Age
Summary

- All-cause working-age mortality has been increasing since 2010, cause-specific death rates increasing since 1990s
- Not happening in peer countries
- Working-age mortality increased across all racial/ethnic groups and in rural and urban areas (but more in rural).
  - Proximal causes: drug overdoses, alcohol-related disease, suicides, and cardiometabolic diseases
  - Multiple drivers at multiple levels (no single factor)
  - Numerous policy, data, and research priorities
  - COVID likely to exacerbate existing trends and disparites
Addressing the Opioid Overdose Epidemic in Construction: Minimize Work Factors that Cause Injury and Pain

September 14, 2021 by Ann Marie Dale, PhD; Brad Evanoff, MD; Brian Gage, MD; Douglas Trout, MD, MHS; Jette Novakovich, PhD, MS, MA; Scott Earnest, PhD, PE, CSP; CDR Elizabeth Garza, MPH, CPH; and L. Casey Chosewood, MD, MPH


Addressing the Opioid Overdose Epidemic in Construction:
Minimize Work Factors that Cause Injury and Pain

Selected Findings

• Construction workers prescribed opioids for musculoskeletal pain had a higher risk for long-term opioid use and for developing opioid use disorder

• Construction workers who received opioids for diagnoses other than MSDs (such as kidney stones or dental visits) were not found to have an increased risk of long-term use and opioid dependency

Addressing the Opioid Overdose Epidemic in Construction:
Minimize Work Factors that Cause Injury and Pain

What Construction Employers Can Do

• Identify work factors that pose a risk of injury - eliminate or minimize them
• Improved access to health benefits and sick/injury leave
• Provide paid time off when a worker gets injured on the job
• Education of employees, employers, and workplaces
  – appropriate to education and culture
  – Minimize and eliminate repercussions, stigma
• Unique opportunities identified for larger and smaller companies

Partnering to Prevent Suicide in the Construction Industry – Building Hope and a Road to Recovery

September 9, 2020 by Trudi McCleery, MPH; Scott Earnest, PhD, PE, CSP; Christina Socías-Morales, DrPH; and CDR Elizabeth Garza, MPH, CPH


https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6903-H.pdf
The construction industry has one of the highest suicide rates compared to other industries. In 2016, the suicide rate for men in construction and extraction occupations was:
- almost twice the total suicide rate for civilian working men (16-64 years old) in 32 states
- 5 times greater than the rate for all fatal work-related injuries in the construction industry in 2018

There are important steps that workers and employers should take to recognize the warning signs and help prevent suicides. The goal of suicide prevention is to reduce factors that increase risk and enhance factors that promote resilience.
Disparities in the Deaths of Despair by Occupation, Massachusetts, 2000 to 2015

Devan Hawkins, ScD, Letitia Davis, ScD, Laura Punnett, ScD, and David Kriebel, ScD

- JOEM Volume 62, Number 7, July 2020
- DOI: 10.1097/JOM.00000000000001870

- Deaths from drug and alcohol poisonings, suicides, and alcoholic liver disease or cirrhosis have been referred to as ‘deaths of despair’
Disparities in the Deaths of Despair by Occupation, Massachusetts, 2000 - 2015

doi: 10.1097/JOM.00000000000001870

Devan Hawkins¹,*,e, Laura Punnett²,e, Letitia Davis³ and David Kriebel⁴
Brief Summary – Follow-up Study
Hawkins et al. [2021]

• Further exploratory analysis to evaluate mortality due to these deaths and differences by:
  – occupational injury and illness rate
  – prevalence of perceived job insecurity
  – Prevalence of non-standard work arrangements

• Workers with more occupational injuries, job insecurity, and non-standard work arrangements are at an elevated risk for the deaths of despair. The potential interactions between these factors deserve further attention.

doi: 10.1093/annweh/wxab017
Identifying Occupation Groups for Suicide Prevention: A Statewide Data Linkage Study

Morissa Henn, Catherine Barber, Wilson Zhang, Michael Staley, Deborah Azrael, and Matthew Miller
Brief Summary - Identifying Occupation Groups for Suicide Prevention
Henn et al. [2022]

• Objective
  – To identify and describe suicide rates by occupation category in Utah and identify the occupation category that had the state’s highest rate and highest number of suicides
    • Construction and Extraction

• FINDINGS
  – Construction and Extraction:
    • Stands out as an occupation group with a very high number and rate of suicides
    • Is an important occupation group to target finite prevention resources and comprehensive strategies
  – Two-thirds of male decedents in Construction and Extraction had a substance abuse problem

Henn et al [2022]. Archives of Suicide Research
https://doi.org/10.1080/13811118.2021.2020699
NIOSH Construction Program

• Emerging Issues - Integrating Complementary Efforts

➢ Multi-pronged strategies needed:
  • Upstream work safety policies
  • Control ergonomic and safety hazards
  • Support workers’ timely treatment for general mental or physical health concerns
Public Health Model Adopted - SUD

Ultimate goal: **Prevention**

<table>
<thead>
<tr>
<th>Primary Prevention</th>
<th>Secondary Prevention</th>
<th>Tertiary Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent workplace injuries that cause pain</td>
<td>Education on effective treatment of workplace injuries and associated pain</td>
<td>Substance use disorder treatment</td>
</tr>
<tr>
<td>Basic awareness and destigmatization training and communication</td>
<td></td>
<td>Ongoing recovery support</td>
</tr>
</tbody>
</table>
What we know from research

• Upstream factors, such as workplace safety policies, may have downstream effects on opioid-related overdose and suicide.
Safety Climate Tool - CPWR

• “Organizational safety climate” -- defined as shared perceptions among employees regarding what is rewarded, expected, valued, and reinforced in the workplace with respect to safety

• Strong safety climate and safety culture helps reduce the potential for injuries, illnesses, and fatalities. CPWR has worked closely with the industry to develop free tools and resources to help companies achieve a strong positive job site safety climate/culture.

• Safety Climate – Safety Management Information System (SC-SMIS)
  • Use Safety Climate Assessment Tool (S-CAT) to measure company’s safety climate
  • http://www.scsmis.org/

• Feb 2022 webinar https://www.youtube.com/watch?v=fr1kAwSuEt0
  • “CPWR’s New Safety Climate – Safety Management Information System (SC-SMIS)"
    Presented by: Linda M. Goldenhar, Ph.D., Director, Evaluation and Research, CPWR

https://doi.org/10.1016/j.jsr.2019.02.004
Workplace Supported Recovery Webpage:
https://www.cdc.gov/niosh/topics/opioids/wsrp/default.html
What is a recovery-supportive workplace?

A recovery-supportive workplace aims to prevent exposure to workplace factors that could cause or perpetuate a substance use disorder while lowering barriers to seeking care, receiving care, and maintaining recovery.

A recovery-supportive workplace educates its management team and workers on issues surrounding substance use disorders to reduce the all too common stigma around this challenge.

https://www.cdc.gov/niosh/topics/opioids/wsrp/default.html
Federal and State Initiatives – ‘Recovery Friendly Workplaces’

• Office of National Drug Control Policy
  “Priority 6: Advancing recovery-ready workplaces and expanding the addiction workforce”

• Many States have initiatives with similar goals
Suicides in Construction
Learn more by visiting our NIOSH National Construction Center Suicide Prevention Resources.

Opioids in Construction
Learn more by visiting our NIOSH National Construction Center Preventing Opioids Deaths Resources. Watch our new videos series: Opioids in the Construction Industry.

1. The Evolution of a Crisis
2. Impacting Lives
3. Pathways to Recovery
Opioids in Construction – Series of NORA videos

- **Video 1**: What the problem is
- **Video 2**: Experiences that led workers into addiction & impact addiction had on worker, families, co-workers
- **Video 3**: Recommendations for how employers can help

https://www.cdc.gov/niosh/construction/default.html
Mental Health & Addiction Resources

- Workplace Stress
- Suicide Prevention Resources
- Resources to Prevent Opioid Deaths in Construction
  - Opioid Awareness Training Program

https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/mental-health-addiction/
NIOSH Construction Program

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- **Wrap-up and Upcoming Events**
NORA Construction Research Agenda

Objectives

1: Falls from heights – Eliminate falls in construction
2: Falls from same level – Significantly reduce or eliminate slips, trips, and falls
3: Struck by – Reduce fatal and serious injuries associated with struck-by incidents
4: Electrical – Conduct research to address electrical safety issues on construction sites
5: Respiratory and dermal – Reduce the frequency of occupational disease from respiratory & dermal hazards
6: Hearing loss – Reduce occupational hearing loss in construction
7: Musculoskeletal disorders – Reduce the risk and burden of MSDs in construction
8: Workers at disproportionate risk – Conduct research to eliminate disproportionate risks
9: Small business – Reduce the number of illnesses, injuries, and fatalities occurring in small construction firms
10: Emerging issues
11: Extreme temperatures – Reduce the likelihood of temperature extreme incidents
12: Prevention through Design (PtD) – Increase the use of PtD approaches in construction
13: Research to Practice (r2p) – Build capacity for effective translation research and r2p strategies
14: Work organization – Improve conditions in construction by studying safety culture & safety climate
15: Surveillance – Reduce occupational safety and health hazards through proactive surveillance
16: Training – Research to increase the reach, scope, and effectiveness of training in construction
Silica Partnership Field Studies

- 15 NIOSH technical reports of Partnership field studies over 11 years in 7 states
  - 50 different water-spray and ventilation control designs were evaluated
  - Most studies showed reductions in dust exposures
  - All 15 NIOSH technical reports available online at: [http://www.cdc.gov/niosh/surveyreports/](http://www.cdc.gov/niosh/surveyreports/)
Best Practices Document and Field Guide

Describes 10-years of collaborative research by labor, industry and government partnership

Highlights the most successful engineering controls to reduce silica exposures on asphalt pavement milling machines

Published March 2015
Struck-by Fatalities Related to Excavator Quick Couplers (March 2022)

Partnering to Design Safe and Healthy Workplaces for Construction (PtD) (February 2022)

Exoskeletons: Potential for Preventing Work-related MSDs in Construction (February 2022)

Addressing the Opioid Overdose Epidemic (Sep 2021)

50 Years of NIOSH Construction Safety & Health Research (Aug 21)

Heat Stress in Construction (May 2021)

Preventing Struck-by Injuries: Lift Zone Safety (April 2021)
May 10–12, 2022 – Virtual Conference

Conference registration is open (No fee to attend NOIRS)
Theme is ‘Preventing Workplace Injuries in a Changing World’

Many presentations will be directly or indirectly related to Focus Four topics – stay up to date with the Agenda (and register) at https://www.cdc.gov/niosh/noirs/default.html
Prevention Through Design (PtD)

Series of workshops funded by NIOSH in collaboration with Arizona State University

- **3rd Workshop – May 25-26, 2022**
  - Drive implementation of PtD organizations
  - Advance knowledge in PtD
  - Promote instruction of PtD in construction management and engineering programs
  - [https://ptd.engineering.asu.edu/basic-page-layout/](https://ptd.engineering.asu.edu/basic-page-layout/)

See recent [NIOSH Science Blog](https://blogs.cdc.gov/niosh-science-blog/2022/02/23/ptd-construction/) ‘Partnering to Design Safe and Healthy Workplaces for Construction Workforce’
Infrastructure Bill and related work

**INFRASTRUCTURE BILL BREAKDOWN**

- Roads & Bridges: $125 B
- Power Grid: $100 B
- Freight Rail: $75 B
- Broadband: $50 B
- Water: $25 B
- Resilience: $0 B
- Airports: $0 B

$1.2T

In total spending over eight years.

The $1 trillion infrastructure package recently signed into law by President Joe Biden is largely expected to be a boost for the construction industry. But where firms will find workers to complete these projects is a big question the industry is contending with.

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QUESTIONS?

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https://www.cdc.gov/niosh/construction/

For more information, contact CDC
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.