



THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

Using Partnerships to Advance Safety & Health in Construction

December 18, 2019

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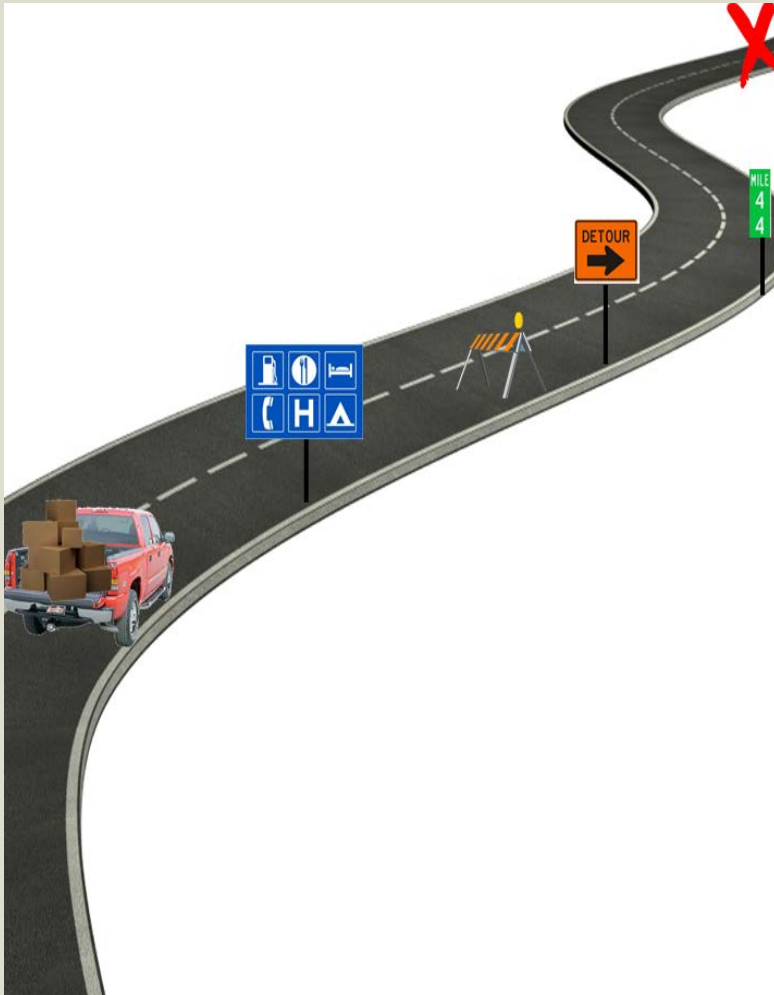
Eileen Betit
Director, Research to Practice (r2p)

About CPWR

CPWR is dedicated to reducing occupational injuries, illnesses & fatalities in the construction industry through:



Research to Practice (r2p)



2008 National Academies Finding:
Significant research on effective interventions *but* slow adoption

Questions to Address:

- How can the program get vital information to the worker?
- How does the program persuade contractors and workers to effectively use the interventions developed through the research?

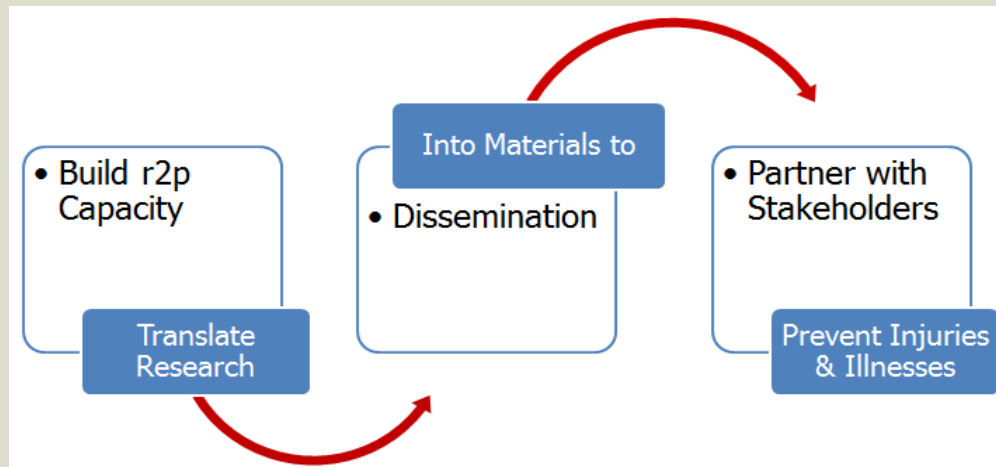
r2p Challenges

Industry

- Decentralized industry – no fixed worksites
- Small, often isolated and under-resourced contractors
- Diverse workforce

Dissemination

- Changing platforms and mechanisms for finding, receiving, sharing and **BLOCKING** information



Partnerships & Networks

Industry r2p Partnership:

National organizations that have influence over safety and health for a specific industry sector

Interagency Work Group:

Organizations who influence safety and health research and policies

Community of Practice:

Researchers and stakeholders with a shared interest in addressing a particular hazard

Network:

Group with direct access to a specific target audience

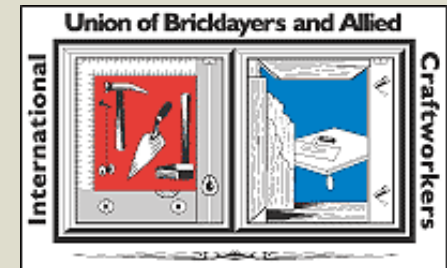
Masonry r2p Partnership

Established in 2010 by CPWR and

- The International Union of Bricklayers and Allied Craftworkers (BAC)
- The International Council of Employers (ICE)
- The International Masonry Institute (IMI)

Safety & Health Priorities:

- Reducing Ergonomic injuries
 - Back and shoulder injuries
 - Hand, wrist and arm injuries
- Hand exposure/Skin disease
- Exposure to silica dust
 - Inhalation exposures
- Work-related hearing loss
- Potential RF radiation hazards
- Design and use of 7-1/4 circular saws to cut stone
- Eye injuries



Masonry r2p Partnership

Support for Research & Dissemination

2 NIOSH Projects on Dust & Silica in Tuckpointing

Testing Completed:

1. Bosch mortar knife
2. Arbortech saw
3. Armeg raking chisel

ALL tools reduce silica exposures compared to grinders

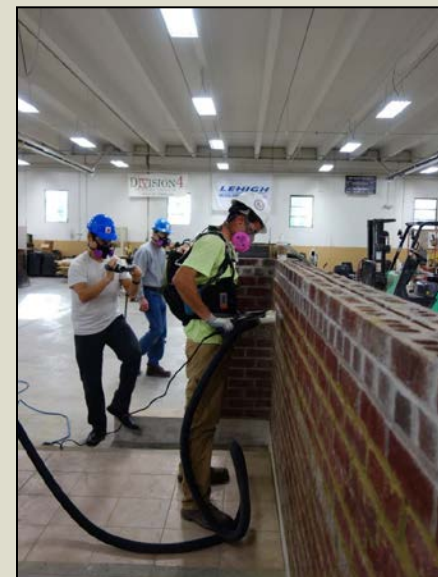
NIOSH Study on Use of Production Tables on Mast Climbing Work Platforms



Currently Used Production Table



L-shaped Production Table



Masonry r2p Partnership

Support for Research & Dissemination

SAVE: Safety Voice for Ergonomics

Click on these links to download the SAVE materials – ALL FOR FREE:

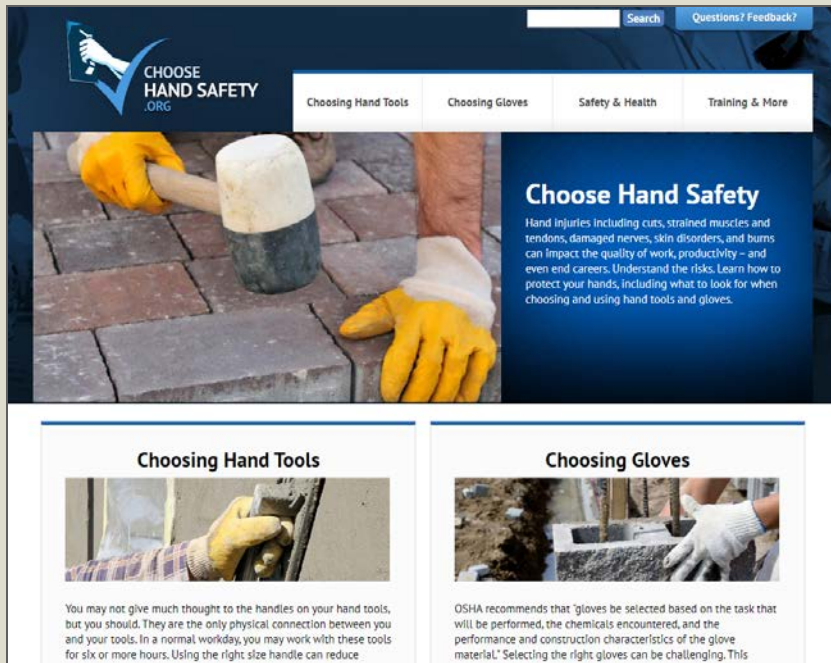
- **SAVE Materials**
 - SAVE Videos (mov)
 - Unit 1: [Introduction to Ergonomics, Anatomy & Cumulative Trauma](#)
 - Unit 2: [Awkward and Neutral Postures](#)
 - Unit 3: [Heavy Lifting, Prolonged Postures & Repetition](#)
 - Unit 4: [Safety Voice, Responsibility & Communication](#)
 - Unit 5: [Identifying Hazards & Information](#)
 - Unit 6: [Ergonomic Solutions for Masonry](#)
 - Unit 7: [Solving Safety Problems with Solutions](#)
 - [Apprentice Workbook](#) (pdf)
- **Instructor Materials and Resources**
 - [Instructor Orientation Video](#) (mp4)
 - [Instructor Manual](#) (pdf)

To learn more about SAVE, contact Dr. Dan Anton at dan.anton@ewu.edu.



Masonry r2p Partnership Support for Research & Dissemination

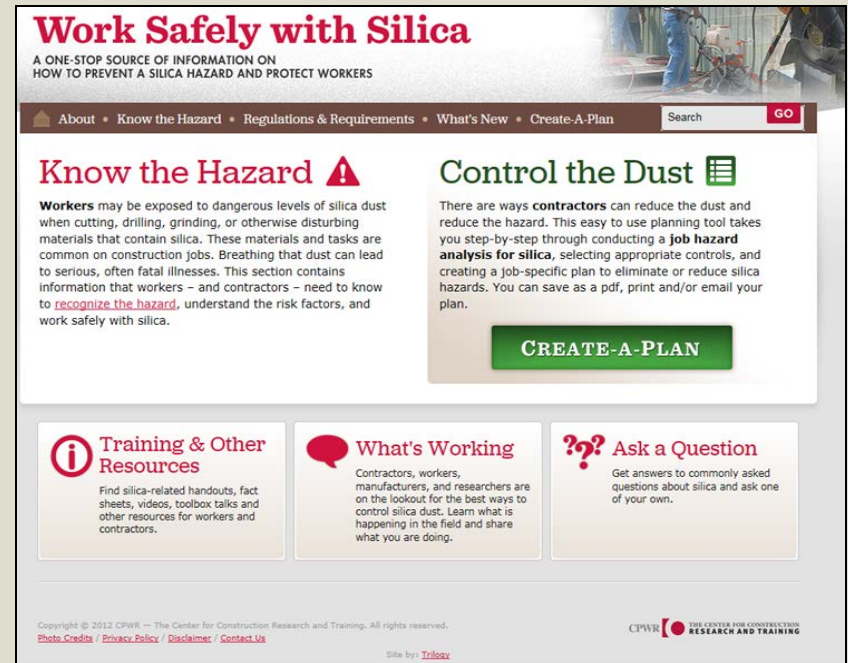
Choose Hand Safety



The screenshot shows the homepage of choosehandsafety.org. At the top left is the logo with the text "CHOOSE HAND SAFETY .ORG". A navigation menu includes "Choosing Hand Tools", "Choosing Gloves", "Safety & Health", and "Training & More". The main content area features a large image of hands in yellow gloves using a mallet on bricks, with the heading "Choose Hand Safety" and a sub-heading "Hand injuries including cuts, strained muscles and tendons, damaged nerves, skin disorders, and burns can impact the quality of work, productivity – and even end careers. Understand the risks. Learn how to protect your hands, including what to look for when choosing and using hand tools and gloves." Below this are two smaller sections: "Choosing Hand Tools" with an image of hands using a tool and text stating "You may not give much thought to the handles on your hand tools, but you should. They are the only physical connection between you and your tools. In a normal workday, you may work with these tools for six or more hours. Using the right size handle can reduce", and "Choosing Gloves" with an image of hands in white gloves and text stating "OSHA recommends that 'gloves be selected based on the task that will be performed, the chemicals encountered, and the performance and construction characteristics of the glove material.' Selecting the right gloves can be challenging. This

choosehandsafety.org

Work Safely with Silica & Control the Dust: Create-A-Plan Tool



The screenshot shows the homepage of www.silica-safe.org. The main heading is "Work Safely with Silica" with the sub-heading "A ONE-STOP SOURCE OF INFORMATION ON HOW TO PREVENT A SILICA HAZARD AND PROTECT WORKERS". A navigation menu includes "About", "Know the Hazard", "Regulations & Requirements", "What's New", and "Create-A-Plan". The main content area is split into two columns: "Know the Hazard" with a warning icon and text stating "Workers may be exposed to dangerous levels of silica dust when cutting, drilling, grinding, or otherwise disturbing materials that contain silica. These materials and tasks are common on construction jobs. Breathing that dust can lead to serious, often fatal illnesses. This section contains information that workers – and contractors – need to know to recognize the hazard, understand the risk factors, and work safely with silica.", and "Control the Dust" with a checklist icon and text stating "There are ways contractors can reduce the dust and reduce the hazard. This easy to use planning tool takes you step-by-step through conducting a job hazard analysis for silica, selecting appropriate controls, and creating a job-specific plan to eliminate or reduce silica hazards. You can save as a pdf, print and/or email your plan." Below this is a large green button labeled "CREATE-A-PLAN". At the bottom are three sections: "Training & Other Resources" with an information icon and text "Find silica-related handouts, fact sheets, videos, toolbox talks and other resources for workers and contractors.", "What's Working" with a speech bubble icon and text "Contractors, workers, manufacturers, and researchers are on the lookout for the best ways to control silica dust. Learn what is happening in the field and share what you are doing.", and "Ask a Question" with a question mark icon and text "Get answers to commonly asked questions about silica and ask one of your own." The footer contains copyright information: "Copyright © 2012 CPWR – The Center for Construction Research and Training. All rights reserved." and links for "Photo Credits / Privacy Policy / Disclaimer / Contact Us". It also credits the site to "Tilloy".

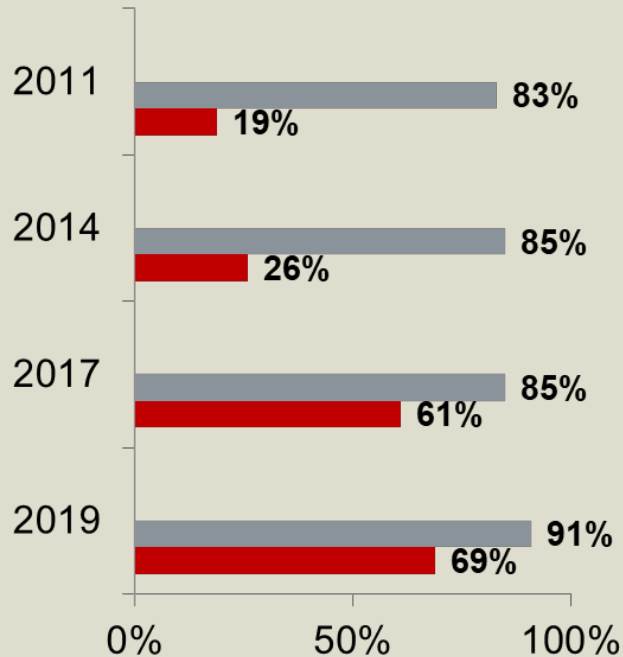
www.silica-safe.org

Masonry r2p Partnership

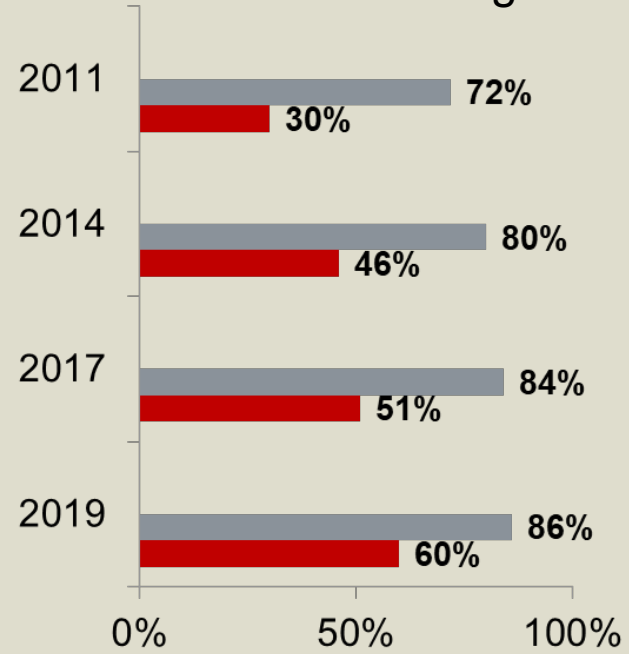
Support for Research & Dissemination

BAC Member and Contractor Safety & Health Surveys

Silica – Use of Dust Controls



Noise – Use of Hearing Protection



■ At least 1/2 the time
■ Always

Roofing Industry r2p Partnership

Established in 2014

Goals:

- Improve safety and health in the roofing industry
- Increase understanding of how to successfully engage industry partners

Plan:

- Partners establish r2p priorities, support & guide efforts, distribute materials, participate in evaluation
- CPWR provides funding & technical support



Roofing r2p Partnership Outputs

RF Radiation Awareness

Answers the questions:

1. What is Radio Frequency (RF) Radiation?
2. What is it used for?
3. What are the potential health effects?
4. Who is at risk?
5. What regulatory requirements or voluntary standards apply?
6. What does a potential hazard look like?
7. What can be done to work safely?

Program includes:

- Guide
- Presentation
- Video
- Toolbox Talk
- Hazard Alert Card



Overview

1. Radiofrequency (RF) Radiation
2. Common Uses
3. Health Effects
4. At Risk Workers
5. Regulations & Guidelines
6. Hazard Identification
7. Protective Measures



Roofing r2p Partnership Outputs

Ladder Safety



Roofing r2p Partnership Outputs

Safety Climate Assessment Tool for Small Employers

Goals:

- Help small employers (50 employees or less) assess and improve their jobsite safety climate
- Identify and develop materials and resources for these contractors

Your Results

Section 1: Demonstrates Management Commitment to Safety

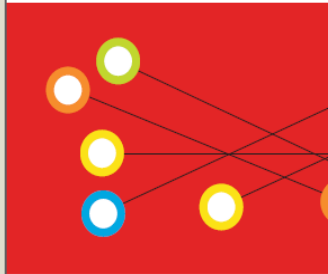
Management's commitment to keeping employees safe is demonstrated through their words and actions. Just saying "Safety is #1!" does not automatically translate into a positive safety climate.

Your responses indicate your program is **DOING WELL**.

Recommended practices for this indicator that you may already have in place are below. Click [here](https://www.cpwr.com/research/s-cat-sc-small-contractors) (or visit <https://www.cpwr.com/research/s-cat-sc-small-contractors>) for ideas and free resources to use to further strengthen your company's safety climate.

- Clearly communicate safety expectations to all employees and spell them out in company policies, procedures, and guidelines
- Make sure adequate resources are available to effectively implement safety activities
- Make safety a top agenda item at all meetings
- Require management to participate in all safety-related meetings
- Make sure management is visible to employees and follow good on-site safety practices
- Make sure employees receive sufficient safety training and have proper PPE (e.g., gloves, eye protection, etc.)
- Design rewards and incentives to encourage employees to actively follow safe work practices
- Track and analyze accidents and incidents
- Establish a formalized process for corrective action when a safety issue is discovered

Safety Climate Assessment Tool (S-CAT^{SC}) for Small Contractors



Safety Climate Assessment Tool (S-CAT) for Small Contractors

S-CAT^{SC} Worksheet for Small Contractors

For each of the following statements, please put an X in the column that best describes what your company is currently doing:

My Company...	Already does this well	Could do this better	Would need help doing this	Is not able to do this	I don't know
INDICATOR 1: DEMONSTRATES MANAGEMENT COMMITMENT TO SAFETY					
1. Has safety policies and procedures and shares them with all employees					
2. Includes money in project budgets to implement safety measures (such as purchasing or renting safer tools and equipment, and conducting training)					
3. Frequently visits jobsites and interacts with employees about safety					
4. Always obeys safety rules and wears proper personal protective equipment (PPE), such as gloves, hard hats, etc. when on the jobsite					
5. Provides appropriate PPE for all employees on every jobsite					
6. Recognizes employees for obeying safety rules and wearing proper PPE on the jobsite					
7. Identifies and takes steps to correct hazardous situations					
8. Collects information about and follows up on injuries and incidents with managers, supervisors, and employees					
9. Helps injured workers so they can return to work					
INDICATOR 2: PROMOTES AND SUPPORTS SAFETY AS A VALUE					
1. Holds regular meetings with employees to discuss safety					
2. Never compromises safety to increase productivity, meet a schedule, or save money					
3. Uses incident and near miss information to improve safety					
INDICATOR 3: ENHANCES ACCOUNTABILITY BY ALL LEVELS					
1. Discusses safety with everyone in the company and reinforces expectations daily					
2. Rewards managers, supervisors, and foremen for maintaining and improving safety					
3. Holds everyone, including managers, supervisors, foremen and employees, accountable for safety					
4. Gives supervisors and foremen the authority to make changes to correct hazards on the jobsite					

OSHA-NIOSH-CPWR r2p Working Group

Priorities Addressed:

- Silica
- Falls
- Noise
- Nail Guns
- Nanotechnology
- Ergonomics
- Trenching

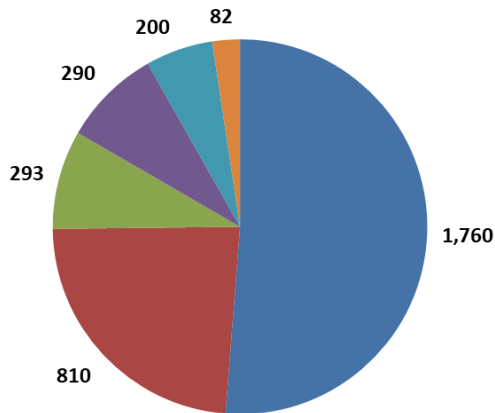
Strategies Used:

- Social network analysis
- Technology – web/app development
- Trainer engagement
- Use of new media
- Communities of practice
- Social marketing

Working Group Efforts National Fall Prevention Campaign

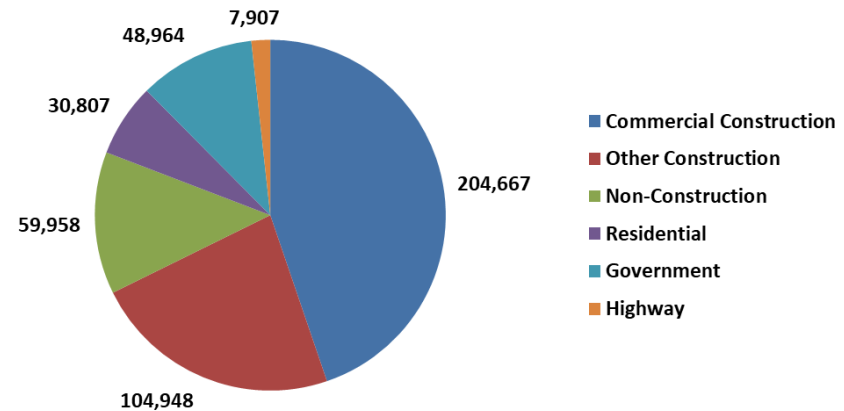
OSHA's Certificate of Participation Data

Number of Stand-downs by Construction Type



3,435 stand-downs reported
457,251 workers reached

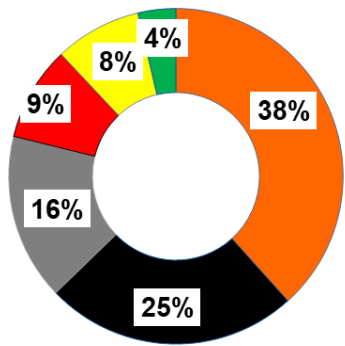
Workers Reached by Construction Type



Working Group Efforts National Fall Prevention Campaign

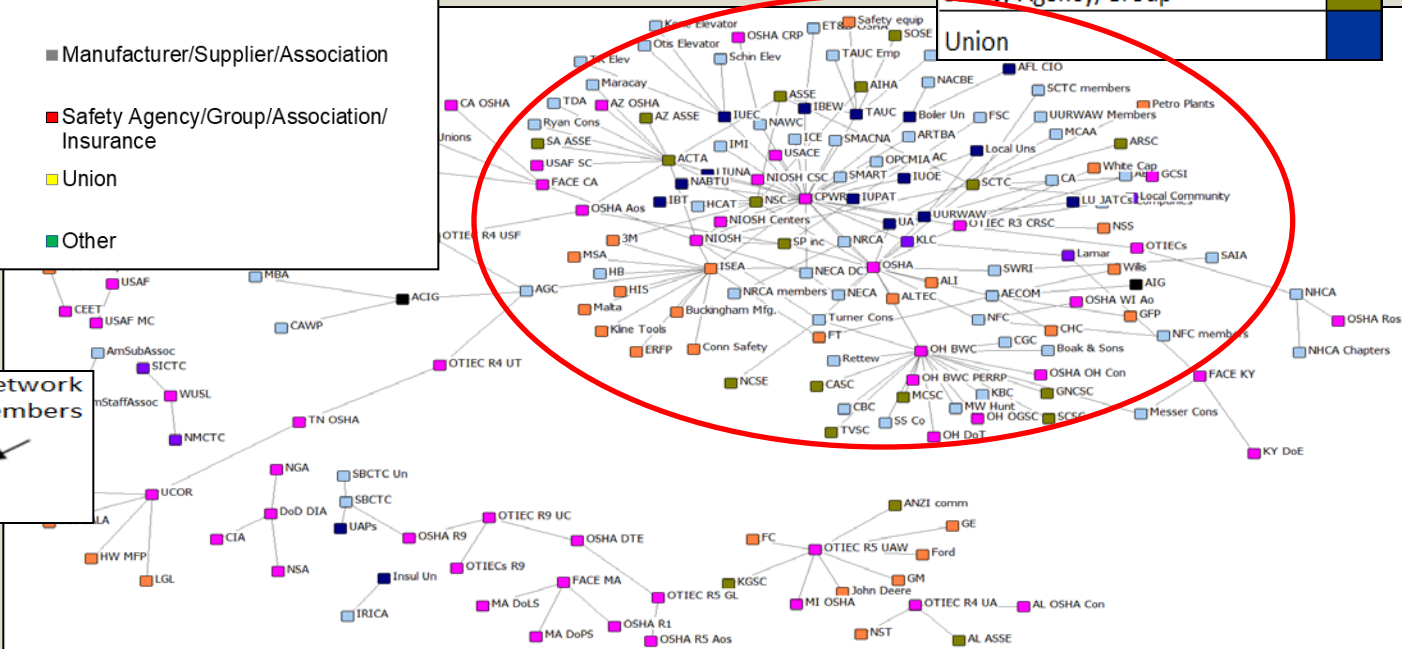
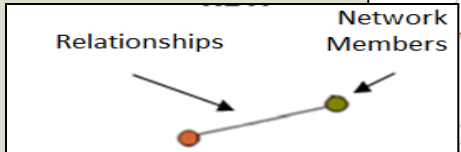
Social Network Analysis

Total Falls Campaign Partners (N=274)



- Academic/Government/Research
- Contractor/Association
- Manufacturer/Supplier/Association
- Safety Agency/Group/Association/Insurance
- Union
- Other

Academic/Government/Research	
Contractor/Association	
Insurance	
Manufacturer/Supplier/Association	
Other	
Safety Agency/Group	
Union	



Working Group Efforts

Trench Safety

Surveys on Trench Safety:

OSHA-NIOSH-CPWR r2p Working Group

- *OSHA Construction Directorate*
- *NIOSH Office of Construction Safety and Health*
- *CPWR Research to Practice (r2p) Program*

Ruth Ruttenberg & Associates

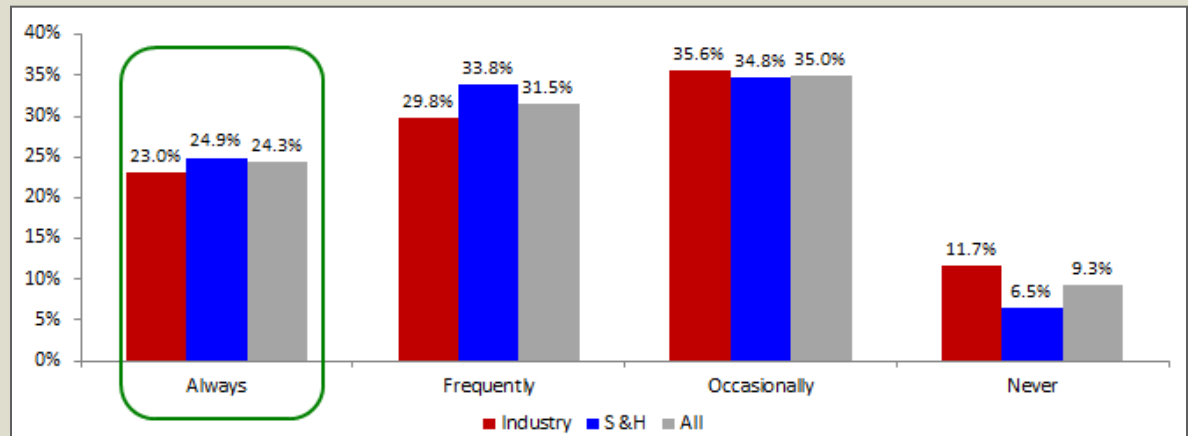
United Rentals

Speed Shore, Inc.

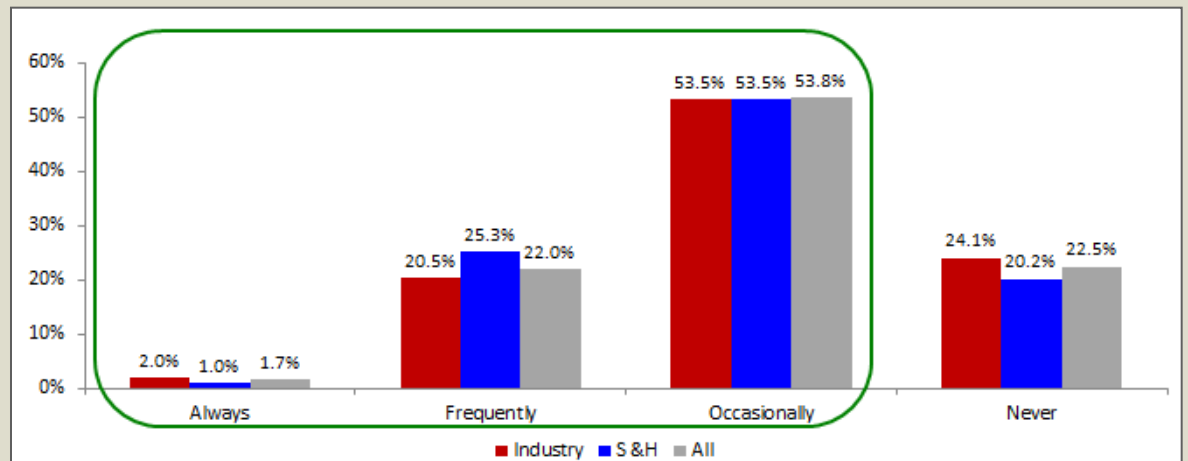
Working Group Efforts Trench Safety

Surveys on Trench Safety:

Is there sufficient pre-planning for trench work, with soil testing and trench protection needs addressed?



Do you see incidents where companies are inexperienced and new to trenching?



Working Group Efforts

Trench Safety

Which of the following do you believe are the biggest contributors to trench incidents or collapses?

	Industry	Safety & Health	Total
Lack of training on trench safety (i.e., inspections, hazards)	66.6%	67.6%	67.0%
Trying to stay on schedule/production	65.2%	67.1%	66.0%
Indifference (i.e., it won't happen on my watch)	50.6%	70.5%	58.1%
Lack of knowledge of the OSHA 1926.650 trenching and excavation standard (i.e., requirements, soil analysis, and protective system solutions)	48.3%	58.6%	52.2%
Tight budgets (i.e., didn't estimate into job costs)	29.0%	43.8%	34.5%
Language barriers	18.8%	26.2%	21.3%
Other	6.9%	10.0%	8.4%

Working Group Efforts Trench Safety

Resources to Promote Safe Work in Trenches

Injuries and fatalities associated with trenching and excavation work are preventable. The following are resources to help raise awareness of the risks and promote safe work practices.

Mark Your Calendar! 2019 Trench Safety Stand Down June 17-21, 2019 ([Click here to learn more](#))

CPWR:

- [Trenches Hazard Alert](#) (also available in [Spanish](#))
- [Trench Safety Toolbox Talk](#) (also available in [Spanish](#))
- [No New Year -- Trench Collapse Video](#) (also available in [Spanish](#))
- [Practice Trench Safety. It Saves Lives Infographic](#) (also available in [Spanish](#))
- [Strategies to Prevent Trenching-Related Injuries and Deaths Report](#)

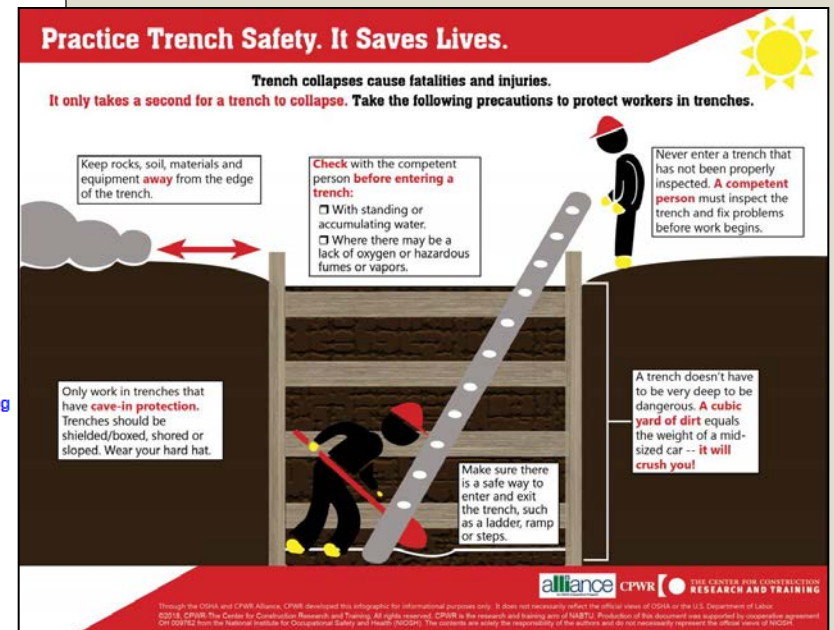
NIOSH:

- -NIOSH Science Blog - [Preventing Trenching Fatalities](#) (planning needs and solutions)
- [Trenching and Excavation](#) topic page
 - [Preventing Worker Deaths from Trench Cave-ins](#)
 - [Preventing Deaths and Injuries From Excavation Cave-Ins: NIOSH Alert](#)
 - [Trench Safety Awareness Web-based training](#)
 - [Development of Draft Construction Safety Standards for Excavations](#)
- [Trench safety-using a qualitative approach to understand barriers and develop strategies to improve trenching practices](#)

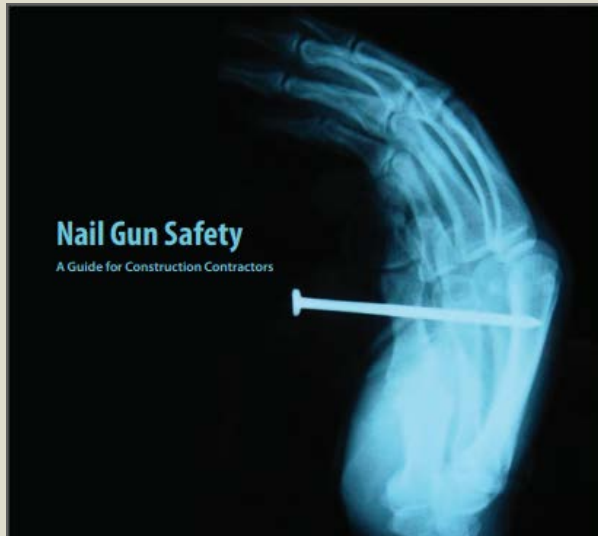
OSHA:

- [5 Things You Should Know to Stay Safe in a Trench](#) (45-second video from Secretary Acosta)
- [Trenching and Excavation](#) topic page
 - [Trenching and Excavation Public Service Announcement](#) (also available in [Spanish](#))
 - [National Emphasis Program on Trenching and Excavation](#)
 - [Protect Workers in Trenches](#) OSHA Poster (also available in [Spanish](#))
- [OSHA Standards for Excavation](#)
- [Construction eTool - Trenching and Excavation](#)
- [Working Safely in Trenches](#) OSHA QuickCard™ (also available in [Spanish](#))
- [Trenching and Excavation Safety](#) OSHA Fact Sheet

Resources to Promote Safe Work in Trenches



Working Group Efforts Nail Gun Safety



HAZARD ALERT
NAIL GUNS
Serious – even fatal – injuries are happening even when used as designed.

What's the problem?
Nail guns are popular for a reason. They get the job done in a blink of an eye. But that rapid-fire action can work against you. In a split second, a nail can enter your finger, your hand, or worse.

How most nail gun injuries happen

- Accidental or unintended firing, often associated with recoil of the tool after firing
- Ricocheting nails
- Nail going through work surface
- Airborne nails
- By-passed safety features
- Unsafe work practices
- Holding finger on contact trigger

About nail guns
Although there are many types of nail guns (framing, finishing, flooring, etc.), there are two common triggers:

Contact Trip Triggers fire anytime the trigger and the nose of the gun (contact element) are both depressed. Trigger can be held down to allow "bump" or bounce nailing.

Sequential Triggers require the nose of gun to be depressed before the trigger is pulled. That avoids accidental firing of nails.

Dual Triggers are new models that allow workers to switch back and forth between contact trip and sequential triggers.

How to prevent injury

- Ask for a nail gun with a sequential trigger mechanism.
- Do not press the trigger unless the nose of the gun (contact element) is firmly pressed against the work material.
- NEVER walk around with your finger on the trigger.
- NEVER clean or clear jams or adjust a nail gun when it is connected to the air supply.
- Avoid nailing into knots and metal; nails are more likely to ricochet. Dense materials, like laminated beams, are also difficult to nail.
- NEVER remove or bypass safety devices, triggers, or contact springs.
- NEVER use a defective tool. If a tool is malfunctioning, it needs to be tagged and taken out of service.

Why it's important:

- Workers using the contact trip or "bump nailers" have **double the rate of serious injury** of those workers using sequential trigger guns.
- Accidental firings** are most common following recoil of tools with contact trip triggers.
- Serious, even fatal, injuries are happening to workers, even if you are using a sequential trigger gun.

What's the risk?
Researchers found that 44% of apprentice carpenters in one program were injured by nail guns before they finished their training. A study measuring productivity found that most of the variability in speed had to do with the nail gun's user rather than the type of trigger used. Another study found 12% of users using a nail gun.

If you think you are in danger:
Contact your supervisor.
Contact your employer.
Call OSHA
1-800-321-OSHA

CPWR
OSHA







Know Your Nailer
Nail Gun Safety

CPWR-OSHA Alliance



Protect Yourself Against Heat Exposure.

You are at risk if you:

- Are new to the job 
- Work in hot and humid conditions 
- Do heavy physical labor 
- Don't drink enough water 

Dress Appropriately





- Colors that are: light-colored (white, etc.)
- Loose-fitting
- Long-sleeved
- Long pants
- Light weight



When you need to wear protective clothing or personal protective equipment, like impermeable clothing, you may need more frequent breaks for water, rest, and shade.

Drink Water & Take Breaks



-  Take frequent breaks out of the sun
-  Drink 1 cup (8 ounces) of water every 15-20 minutes.
-  **DO NOT** wait until you are thirsty to drink water.
-  **DO NOT** drink alcohol and **AVOID** caffeine.

Know the Warning Signs

Heat Exhaustion:



Weakness & Wet Skin



Headache, Dizziness or Fainting



Nausea or Vomiting

Heat Stroke:



Excessive sweating or red, hot, dry skin



Confusion or Fainting



Convulsions or Seizures

Seek Medical Assistance

Heat Stroke is a medical emergency

Look out for your co-workers—if you see the warning signs take action!

Call 911

Getting help can be the difference between **life** and **death**.



Learn more about heat-related illnesses and how to prevent them at <http://bit.ly/CPWRHotWeather>

Trainers and Researchers United Network (TRU-Net – *established 2014*)

Engage and Reach:

NABTU training network of
roughly 5,000 trainers 1,600
training centers

Goal:

Formalize the link between
safety and health researchers
and trainers

Priority: *noise & hearing loss*



TRU-Net / CPWR-OSHA-NIOSH r2p Work Group / Masonry r2p Partnership Construction Noise & Hearing Loss Prevention

TRU-Net Surveys on Noise & Hearing Loss Training

Trainer Survey

- Sent to Training Directors at 14 National Unions
- 9 Unions distributed to an estimated 1,200 trainers
 - Boilermakers, Bricklayers, Carpenters, Insulators, Ironworkers, Painters, Plumbers & Pipefitters, Roofers, and Sheet Metal Workers
- 248 trainers responded

Worker Survey

- 49 trainers from 7 unions agreed to administer during class
- 4,976 surveys distributed
- 4,195 trainee responses (84%)

	Yes, the training provided me with all information needed.	Yes, but I could use a refresher.	No, I need more information and training.
Do you feel that you have all the information you need to recognize when a noise is hazardous?	62.5%	29.5%	8.0%
Do you feel that you have all of the information you need on how to ask for the noise to be reduced?	56.5%	29.7%	13.9%
Do you feel that you have all the information you need on how to obtain PPE?	77.7%	17.7%	4.6%

Multi-Partnership Effort

Construction Noise & Hearing Loss Prevention

1-Hour Elective Module (provides materials to fulfill 1 hour of the 2 hour training requirement for Health Hazards in the OSHA 30)

- Instructor Manual
- Presentation

30-Minute Elective Module (designed to fulfill the 10-hour program requirement for a half-hour module on a health hazard)

- Instructor Manual
- Presentation

What causes hearing loss?

- Exposure to loud noise
- Certain drugs and chemicals
- Aging
- Heredity
- Head injury
- Headphone use
- Childhood illness




Photo courtesy of the International Brotherhood of Electrical Workers

Construction Noise & Hearing Loss Prevention

How could hearing loss impact you?








Frank Albert, Business Rep
IBEW Local 340


Exercise A-1

CPWR THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

How frequently are construction workers exposed to dangerous noise levels?

USE       

70% of the time CONSTRUCTION WORKERS are exposed over the NIOSH recommended exposure limit



CPWR THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

in Chart Book, p. 33, chart 33f, CPWR, com/sites/default/files/publications/CB%20page%2033.pdf

Multi-Partnership Effort Construction Noise & Hearing Loss Prevention

In-Class & Hands-On Refresher Exercises (short 10-15 minute reinforcement exercises)

- Instructor Manual
- Presentations for Noise Training Exercises for use in OSHA 10- & 30-hour modules
- Presentations for Noise Training Exercises for Use In-Class for Skills Training Programs
- Noise Training Exercises for Use in the Hands-On Portion of Skills Training Programs

Links to Additional Resources

"Buy Quiet" Now, Hear Later

Repeated exposures to noise above 85 decibels OR one exposure above 140 decibels can lead to irreversible hearing loss.


BUY QUIET

Buying a tool just 3 decibels lower will cut the noise energy reaching your ear in half!



A Controlled Comparison of 2 Concrete Drilling Methods: Concrete Dust, Vibration & Noise



Department of Bioengineering, University of California, Berkeley
Funding: CPWR- The Center for Construction Research and Training and NIOSH cooperative agreement OH009762


Sound Level Meter Apps

SLM for iPhones

<https://itunes.apple.com/us/app/nicsl/id1096545820?mt=8> iPhone app

Sound Meter for android

<https://play.google.com/store/apps/details?id=com.gammasis.decibel>



Construction Safety & Health Network

CONSTRUCTION SAFETY & HEALTH NETWORK CREATE PROFILE LOGIN SHARE CONTENT  

Home Content Network Directory About the Network Resources Contact Us



CONSTRUCTION SAFETY & HEALTH NETWORK
Safer Construction Begins Here

search

Find and easily share the latest research findings, new tools, solutions and programs with your members, colleagues and others who could benefit.

collaborate


Connect with other industry stakeholders, researchers, and experts on specific hazards through the Network Directory.

share

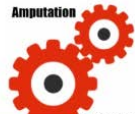
Send us construction safety and health research findings, products, materials & other resources you want to share with a broader stakeholder audience.


Share and discover the latest in construction safety & health

Featured Content



Amputation






SEARCH RESULTS

Jessica Bunting

Researcher
CPWR - The Center for Construction Research & Training





website:
www.cpw.com

area of expertise:

- Falls
- Scaffolds
- Ladders
- Aerial Lifts
- Slips & Trips
- Research to Practice (r2p)
- Evaluation

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(301) 495-8515

CONSTRUCTION SAFETY & HEALTH NETWORK CREATE PROFILE LOGIN SHARE CONTENT  

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CHOOSE FILE

* REQUIRED FIELDS

First Name*

Title

Organization*

Last Name*

Primary Role v

Area of Expertise

- All Falls
- Aerial Lifts
- Ladders
- Scaffolds
- Slips & Trips
- All Inhalation/Respiratory Exposure
- Asbestos & Fibers
- Carbon Monoxide & Gases
- Hexavalent Chromium & Metals
- Lead

- Mold & Organisms
- Nanotechnology
- Silica / Construction Dust
- Solvents, Adhesives & Paint
- Welding Fumes & Gases
- All Skin/Dermal Exposures
- Beryllium
- Carbon Monoxide & Gases
- Cement
- Epoxy
- Hexavalent Chromium & Metals

- Nanotechnology
- Solvents, Adhesives & Paint
- Radiation
- Drugs, Alcohol / Tobacco
- Crushed/Struck by
- Electricity
- Fire and Explosions
- Ergonomics (MSDs)
- Evaluation
- Green Construction/LEED

- Prevention thru Design
- Noise/Hearing Loss
- Small Businesses
- Safety Culture/Climate
- Research to Practice (r2p)
- Confined Spaces
- Trenches & Excavations
- Vulnerable Workers
- Work Zones / Motor Vehicles
- Weather

Email*

Phone

Associated Links:

Website

URL

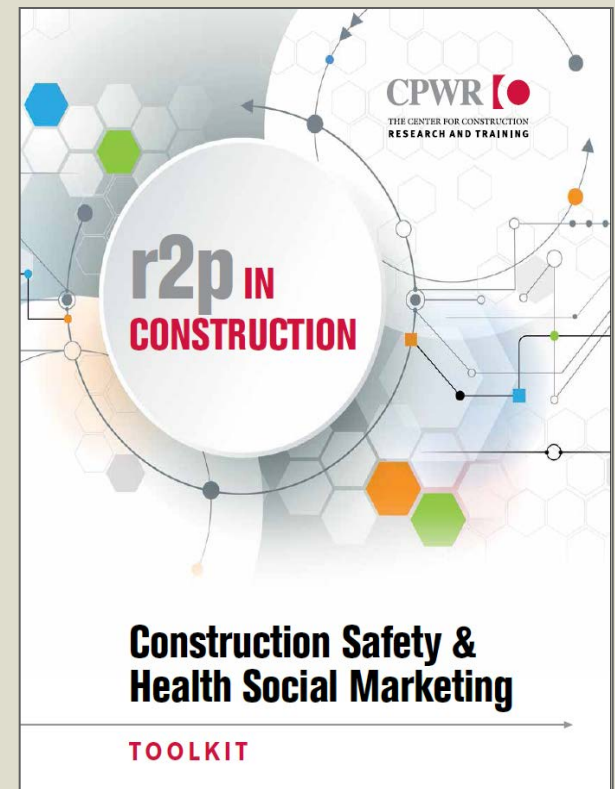
➕ ADD ADDITIONAL LINKS

Ergonomics Community of Practice

Members:

- CPWR Consortium Researchers
- Insurance Reps
- Industry Stakeholders
- Trainers


Focus: manual materials handling



Ergo Community of Practice

Best Built Plans





BEST BUILT PLANS:
Preventing Injury & Improving Productivity by Reducing Manual Materials Handling

Manually lifting and moving heavy materials on job sites can result in strain, sprain, and related soft tissue injuries. These types of injuries cost business billions of dollars and are a leading cause of disabling injuries in the construction industry. **Best Built Plans** provides contractors and workers with practical tools and information to plan for safe materials handling while staying productive and profitable. (See article ["It's Time to Stop the Pain: Preventing Overexertion Injuries."](#) CFMA Building Profits - The Magazine for Construction Financial Professionals.)

What's Available?

<p>Site Planning Tool Tailored for use at each stage of a project, from preparing a bid to project completion, includes pre-set spreadsheets, material weights, storage and lifting options, daily checklists, training materials, hazard alert cards, toolbox talks, and related microgames.</p>	<p>Training Resources Interactive exercises with narration to increase a worker's understanding of the need to plan lifts, and to introduce equipment, work practices and lifting techniques that can help reduce the risk for injury.</p>	<p>Coaching Interactive exercises that introduce warm-up activities and the fundamentals of lifting practices and allows users to test their knowledge.</p>
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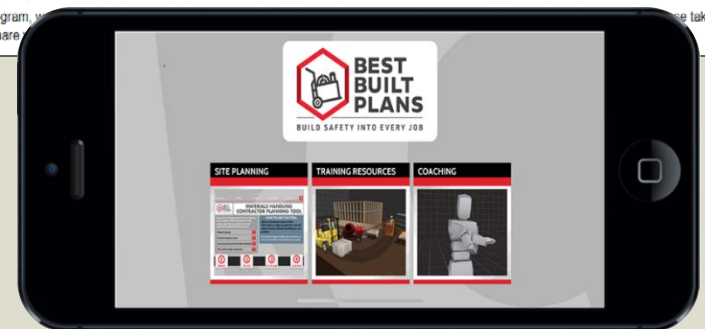
► [Click here to access the Site Planning Tool online.](#)

► **Download the PC-based Site Planning Tool and Interactive Training and Coaching Resources** by clicking [HERE](#) and following the prompts.*

► **Need it on the go?** Download our **new free app** to access the whole program on your phone or tablet! It's available for both iOS and Android users. You can download it by clicking [HERE](#).

Find infographics and posters to reinforce safer materials handling practices [HERE](#). You can post them on job sites, or use them in printed materials, presentations, on your website, or social media.

As a new program, it may take a few minutes to share.



Ergo Community of Practice

Best Built Plans

Planning Resources

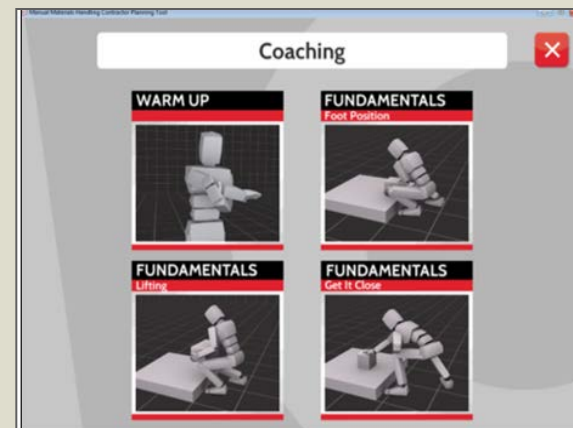
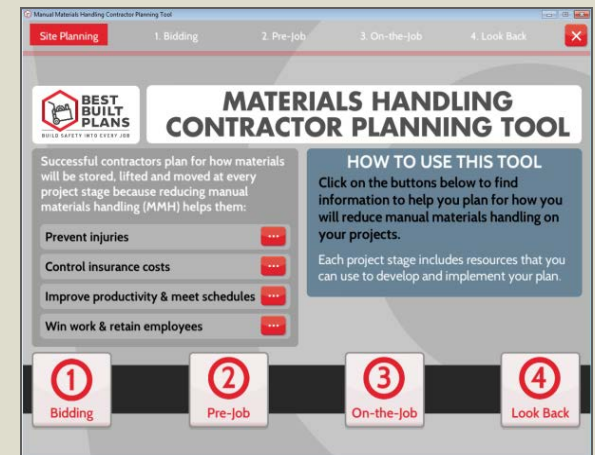
Information on the business benefits of planning

Key Questions & Resources to address barriers at each project stage:

1. Project bid
2. Before job starts
3. During construction
4. When the job ends

Training & Coaching Resources

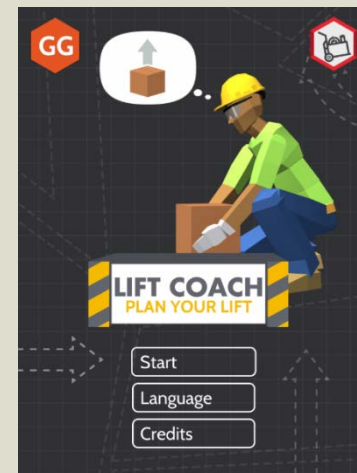
- Site planning
- Equipment
- Lifting
- Work Practices
- Coaching



Ergo Community of Practice

Best Built Plans

Games & Additional Resources



Ergo Community of Practice

Best Built Plans Updates

Now in Spanish:

- All planning resources
- Infographics/posters
- Games
- Toolbox talks
- Hazard alerts

New

- Video (*English & Spanish*)
- App version of Planning, Training & Coaching

Comprehensive Ergonomics Training Program

workers, train-the-trainer, and contractors – connect preventing pain with preventing opioid use and addiction

Herramienta de planificación para el contratista en relación con la manipulación de materiales



Herramienta De Planificación Para El Contratista En Relación Con La Manipulación De Materiales

Los contratistas exitosos planifican la forma en la que se almacenarán, cargarán y moverán los materiales para cada etapa del proyecto; lo hacen porque reducen la manipulación manual de materiales (MMH, por sus siglas en inglés) lo ayuda a:

- Reducir lesiones ([más información](#))
- Controlar los gastos de seguro ([más información](#))
- Mejorar la productividad y cumplir con los plazos ([más información](#))
- Ganar trabajo y retener empleados ([más información](#))

Los Mejores Planes Creados ayuda a los contratistas de la construcción a perseguir la seguridad y el éxito comercial. ¿Cómo? Les proporciona herramientas para reducir la manipulación manual de materiales (MMH, por sus siglas en inglés).

Haga clic en los siguientes botones para obtener más información que lo ayudará a planificar cómo reducirá la manipulación manual de materiales en sus proyectos. Todas las etapas de un proyecto incluyen recursos que puede usar para desarrollar e implementar su plan.



STRAINS & SPRAINS

High Premiums

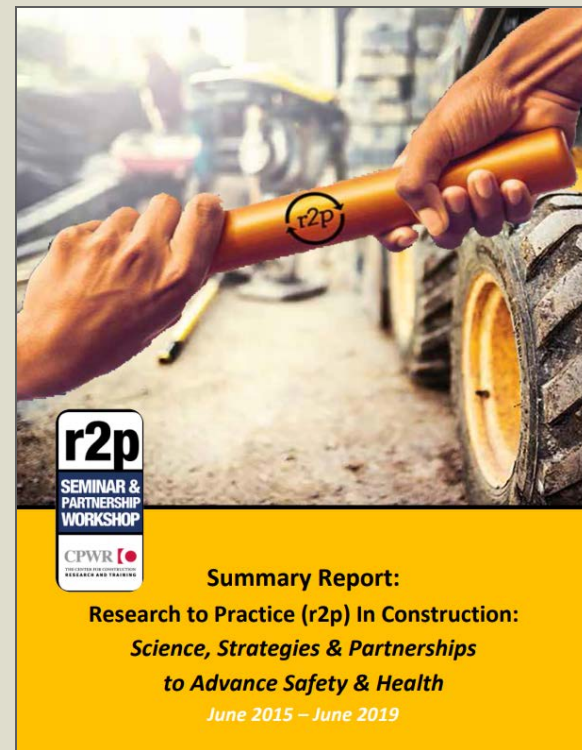
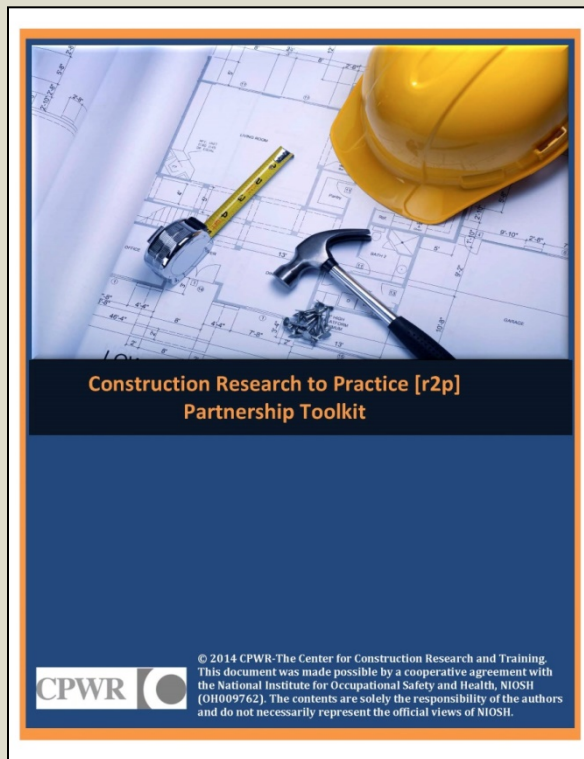
Lost Productivity

Medical Costs

Lost Wages



Using Partnerships to Advance Safety & Health in Construction Lessons Learned



Summary Report

Partnership Lessons Learned

Advantages to researchers and stakeholders of working in partnership

- Creates early buy-in and support for the research
- Buy-in from stakeholder leadership can help facilitate participation by others, such as local affiliates of their organization, other industry stakeholders, and the target audiences of the study.
- Helps the researcher understand the research and dissemination challenges they may face, and build in strategies to overcome them
- Leads to industry-specific input and support at each stage of a project
- Provides access to the population needed for the research

Challenges to working together

- Competing priorities & time constraints
- Concern about unintended consequences
- Unrealistic expectations
- Not understanding the industry or the target audience

Summary Report

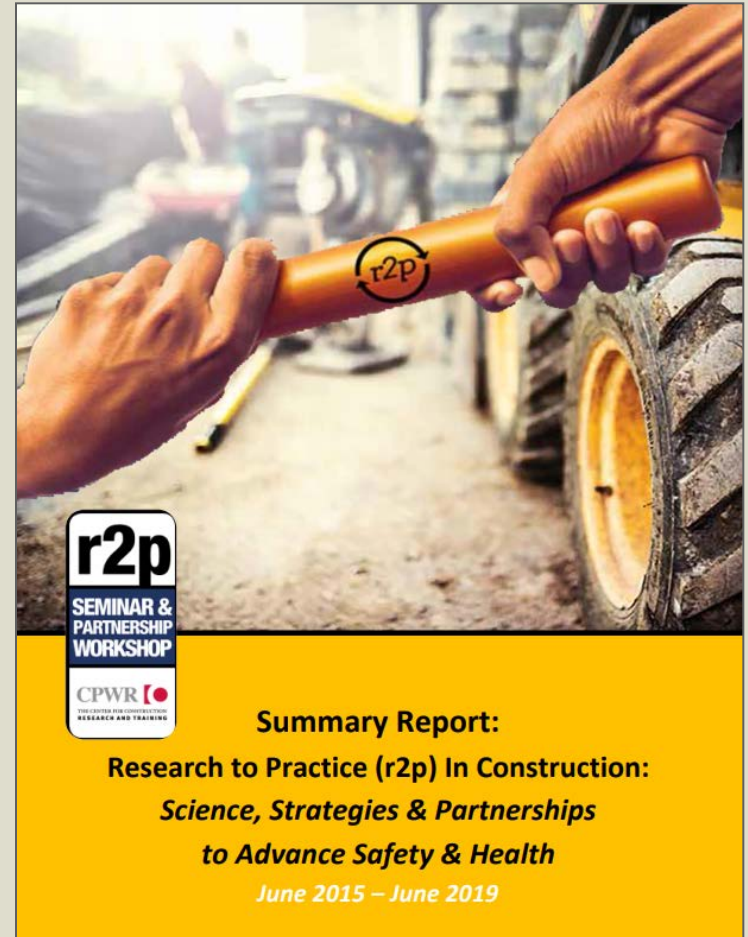
Additional Lessons Learned

Tips for Reaching Key Intermediaries, such as:

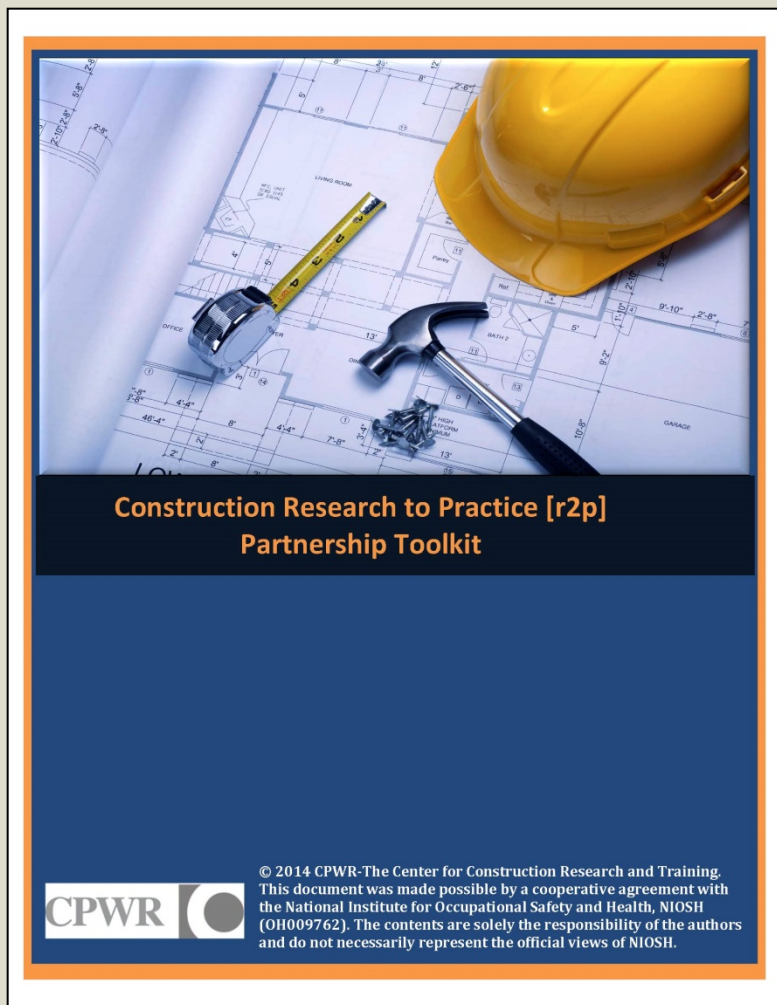
- Insurance Companies
- Contractors/Trade Associations
- Small/Hispanic Contractors & Contractor Associations
- Unions/Trainers
- Manufacturers

Challenges & Strategies for Reaching Vulnerable Workers

Improving Dissemination & Use of Research Findings



Partnership Toolkit



- **Introduction & Table of Contents**
- **Section 1:** Identify and Involve Key r2p Partners
- **Section 2:** Facilitate the Partnership Process
- **Section 3:** Develop a Shared Vision, Mission, and Goals
- **Section 4:** Actively Invest in Group Dynamics
- **Section 5:** Identify and Disseminate Solutions
- **Section 6:** Evaluate Your Work Together
- **Section 7:** Allow Your Partnership to Evolve
- **Section 8:** Appendix

Partnership Toolkit

Interviews, Observations & Case Studies

Original Toolkit:

- The Asphalt Paving Partnership
- The Masonry r2p Partnership
- The SafeBuild Alliance
- The MA Floor Finishing Safety Task Force
- The Electrical Transmission and Distribution Partnership
- Latino Falls Prevention Partnerships
- The OSHA•NIOSH•CPWR Interagency r2p Working Group

Additional Updates (*in progress*):

- The Roofing r2p Partnership
- The Ergonomics Community of Practice
- TRU-Net
- Construction Safety & Health Network
- CPWR OSHA Alliance

The SafeBuild Alliance (formerly the Greater Portland Construction Partnership) uses a regional approach to improve the industry's safety culture and achieve zero injuries. The Alliance holds quarterly meetings focusing on safety for its broad membership, which includes general contractors, subcontractors, owners, labor unions, designers, safety and health professionals, and other stakeholders. Their innovative Prequalification Assessment Certification Program helps to streamline the safety prequalification process by allowing general contractors to access information on the safety performance of participating subcontractors.

The Massachusetts Floor Finishing Safety Task Force was established as a statewide partnership in response to a specific hazard facing a vulnerable population within the state's construction industry. During 2004 and 2005, three Vietnamese immigrant workers died while using highly flammable lacquer-based sealants to finish floors. This partnership used a strategy of research, education, outreach, and advocacy to build support for the enactment of state legislation banning the sale of the types of products responsible for these deaths.

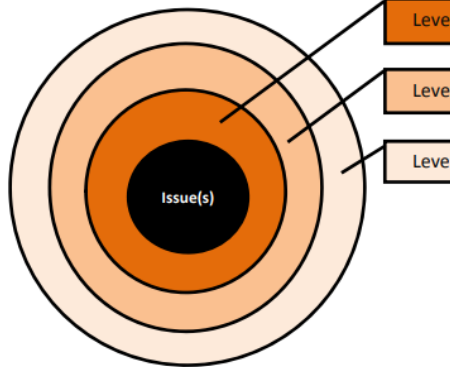
Partnership Toolkit

Tools & Activities

TOOL 1-A: ISSUE(S) BULL'S EYE

Instructions:

- Write the issue(s) and what you hope to accomplish through a partnership in the center of a piece of flip chart paper or a whiteboard; draw three rings around the issue(s); label the rings Level 1, Level 2, and Level 3 respectively. Each level refers to a type of stakeholder:
Level 1: Stakeholders who are actively engaged in or directly affected by the issue(s), are highly influential, and have critical perspectives to consider.
Level 2: Stakeholders who may be impacted by the issue(s) and are able to influence other stakeholders.
Level 3: Stakeholders who have the potential to be convinced about the importance of the issue(s) and could be helpful supporters.
- Brainstorm and write the names of the stakeholders (organizations interest in or connection to the issue(s) on sticky notes; place the s rings based on your knowledge of how close or pivotal each is to the doing this in a group, you may want to have each individual decide are on their own and place their sticky notes on the target. The group possibilities and move sticky notes around to reflect consensus.



TOOL 2-A: FACILITATOR OR A FACILITATIVE L

Instructions:

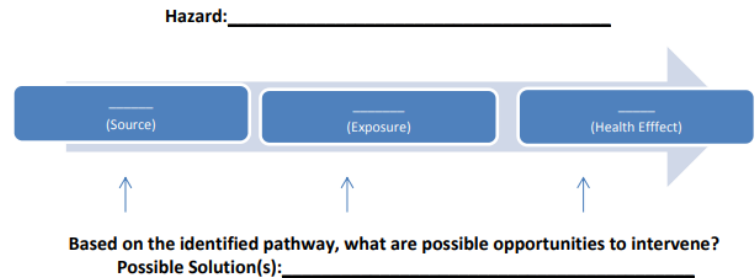
- Assess your role as the facilitator. Use which most closely reflects your role
- Assess the partnership's perceptions assessment, ask the rest of partners perception of the facilitator's role.
- Compare the results to your assessment opportunity to clarify your role as th

Characteristics		
Group Membership	Third Pa	
Involvement in Substantive Issues	Substant	
Use of Expertise	Process Expert	Content and Process Expert
Decision-Making Authority	No	Yes

TOOL 5-A: IDENTIFY OPPORTUNITIES FOR INTERVENTION USING THE SOURCE-EXPOSURE PATHWAY

Instructions:

- Draw the diagram below on a flip chart or whiteboard.
 - Write the hazard that your partnership wants to address across the top.
 - As a group, identify possible solutions by recreating the pathway for the hazard or issue you plan to address. Discuss the main source and point(s) of exposure, and identify the best point at which to intervene (shown with arrows below) given the available solutions. Write the possible solution(s) under the pathway.
- Note – Keep in mind that making a change at the source of a hazard is generally preferable to changing the exposure, and changing the exposure is preferable to having to wait to treat the health effect after it happens.*
- You can repeat this exercise for each of the hazards your partnership would like to address.



Questions?

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