A National Research to Practice Initiative in Construction

R. Baker, C.Y. Chang, M. Gillen

Critical research questions:

- *How to get vital information to the worker "in the trench" or "on the steel?"*
- *How to persuade contractors and workers to use effectively the interventions that are developed through research?*

- Construction Research at NIOSH: Reviews of Research Programs of the National Institute for Occupational Safety and Health, National Academies Press, 2008.

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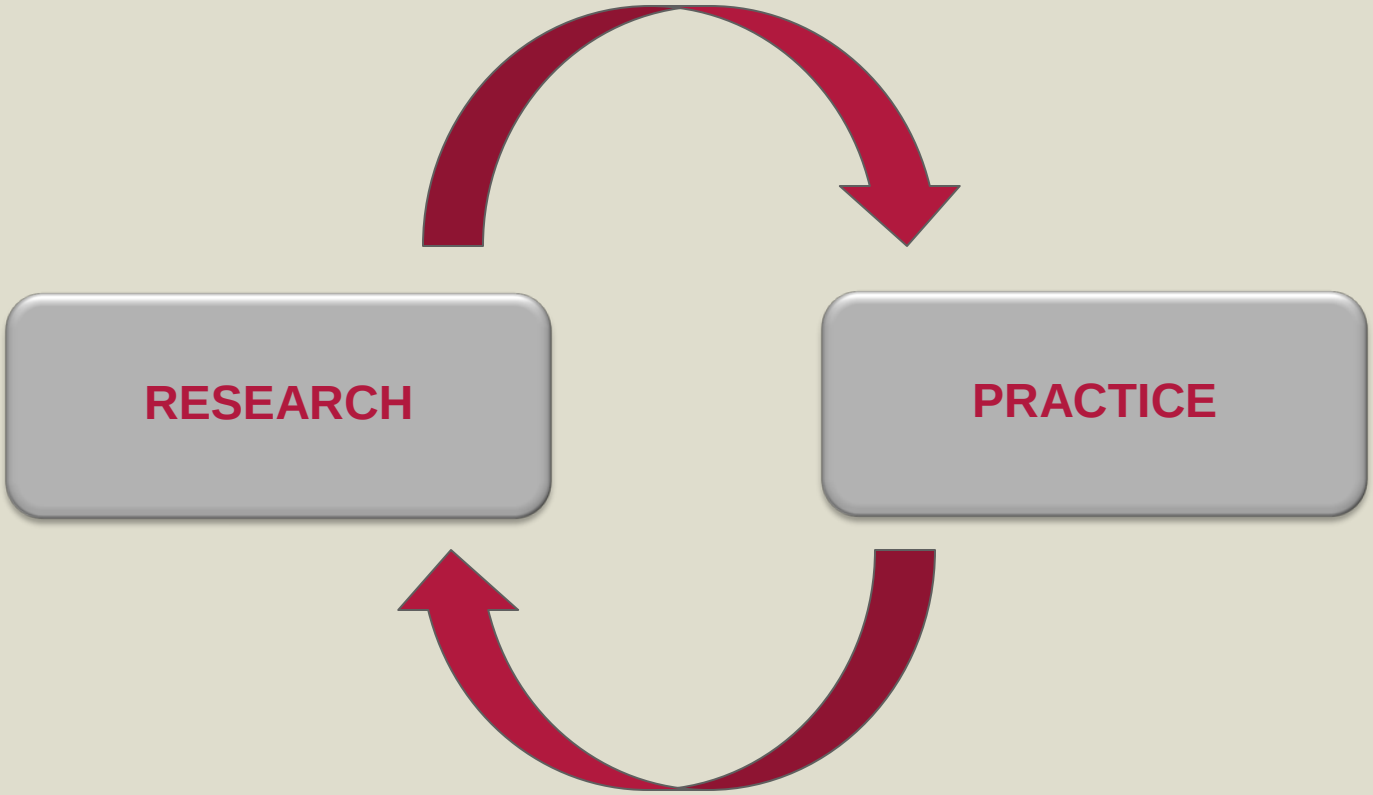
The Research to Action Pathway

r2p Cycle



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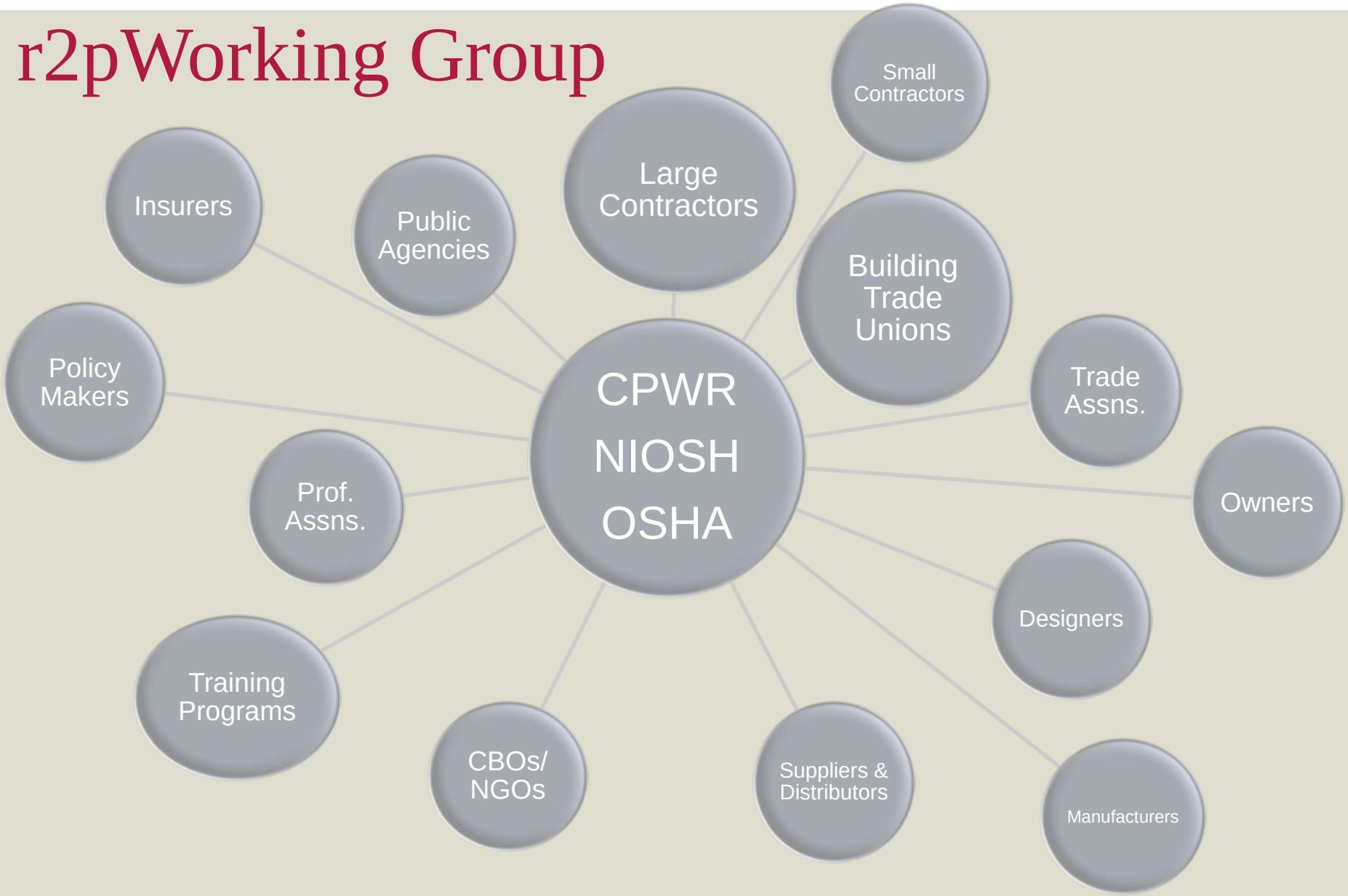
r2pWorking Group



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CPWR's r2p Initiative

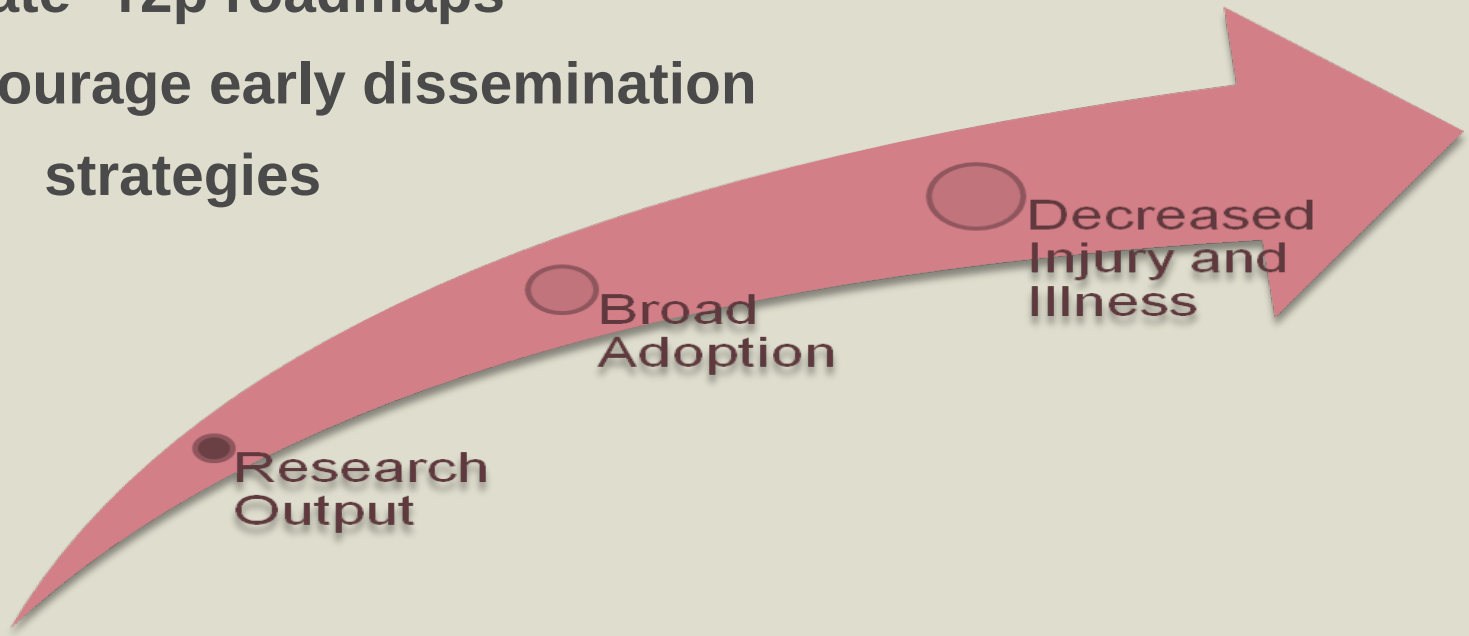
1. Research Pathways

Completed research

- **Triage to identify dissemination priorities**
- **Launch new r2p efforts**

Current research

- **Create "r2p roadmaps"**
- **Encourage early dissemination strategies**



2. Partnerships for Prevention

- **Case Studies**
  - -Asphalt Partnership
  - - Case examples of other successful partnerships
- **New Partnerships**
  - -Masonry Best Practices
  - -Latino Fall Prevention

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Masonry r2p Partnership


Members Section | Home | Position Papers | ICE Voice | Email ICE

ICE
INTERNATIONAL COUNCIL OF EMPLOYERS of Bricklayers and Allied Craftworkers

Your voice. Your advocate.

Unionized Masonry Industry to Serve as r2p Partnership Model for Construction Safety

CPWR - The Center for Construction Research and Training, BAC, ICE and IMI are taking a lead role in translating safety and
establishment of the M

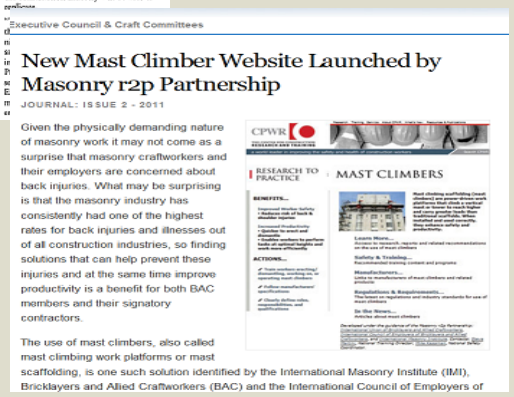

CRAFT COMMITTEES

Craft Committees Identify Safety and Health r2p Priorities

BRICK AND BLOCK COMMITTEE

BAC, ICE and IMI are taking a lead role, in coordination with CPWR-The Center for Construction Research and Training, to translate safety and health research findings into practical solutions on construction sites through the establishment of the Masonry Industry Research to Practice (r2p) Partnership. In addition to using this Partnership to advance their shared goals of safe jobsites, BAC, ICE and IMI are working with CPWR to develop a model r2p partnership structure and process that other segments of the construction industry will be able to

Committee Co-Chairs – ICE President Fred Kinateder, left, and IU President James Boland – facilitated the Committee's discussion on safety practices, existing research, and potential areas for further study. Members also heard from CalStar Products, which produces a lightweight, environmentally friendly fly ash block, and IMI, on recently issued recommendations for the safe use of mast scaffolding (by further


Executive Council & Craft Committees

New Mast Climber Website Launched by Masonry r2p Partnership

JOURNAL: ISSUE 2 - 2011

Given the physically demanding nature of masonry work it may not come as a surprise that masonry craftworkers and their employers are concerned about back injuries. What may be surprising is that the masonry industry has consistently had one of the highest rates for back injuries and illnesses out of all construction industries, so finding solutions that can help prevent these injuries and at the same time improve productivity is a benefit for both BAC members and their signatory contractors.

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RESEARCH TO PRACTICE : MAST CLIMBERS

BENEFITS...

ACTIONS...

Learn More...

Safety & Training...

Manufacturers...

Regulations & Requirements...

On the News...

The use of mast climbers, also called mast climbing work platforms or mast scaffolding, is one such solution identified by the International Masonry Institute (IMI), Bricklayers and Allied Craftworkers (BAC) and the International Council of Employers of

- Developed safety and health priorities
- Identified communication methods
- Identified intervention gap
- Baseline surveys of workers and contractors

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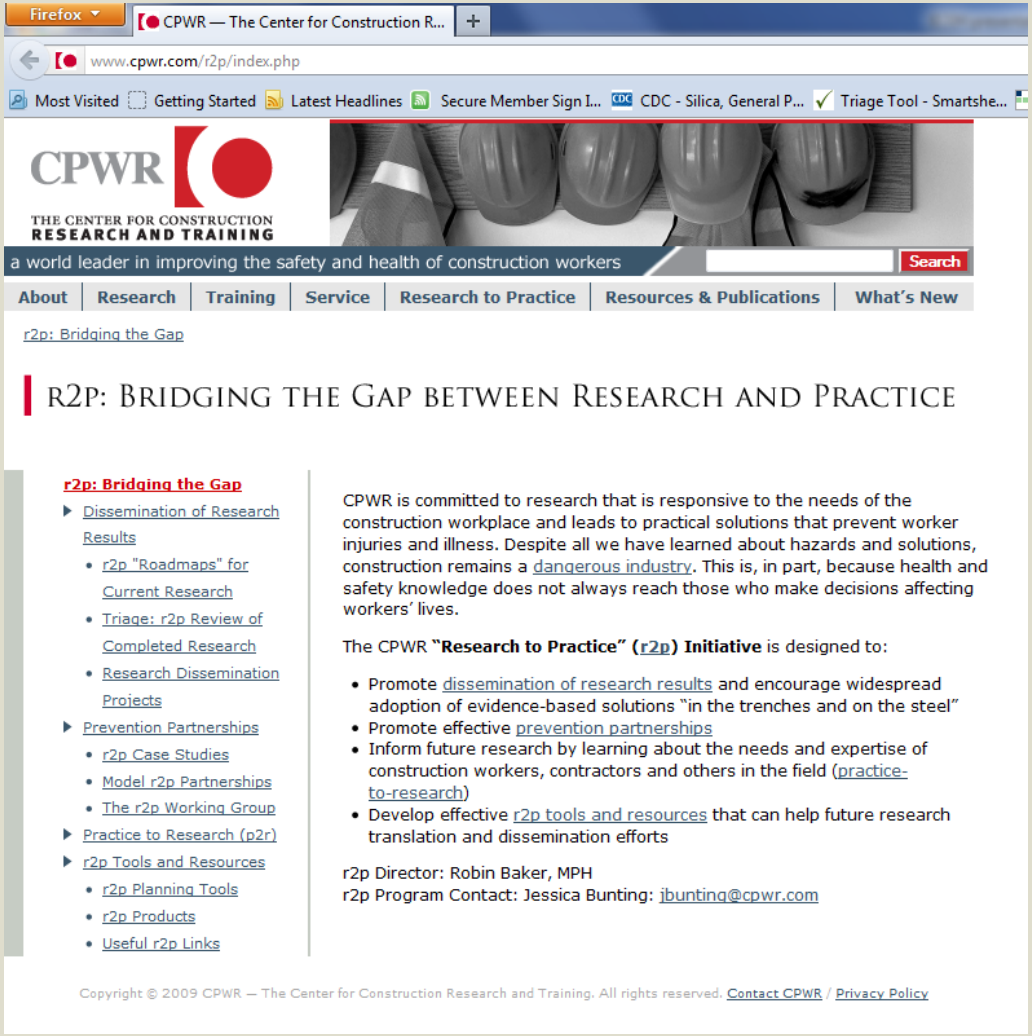
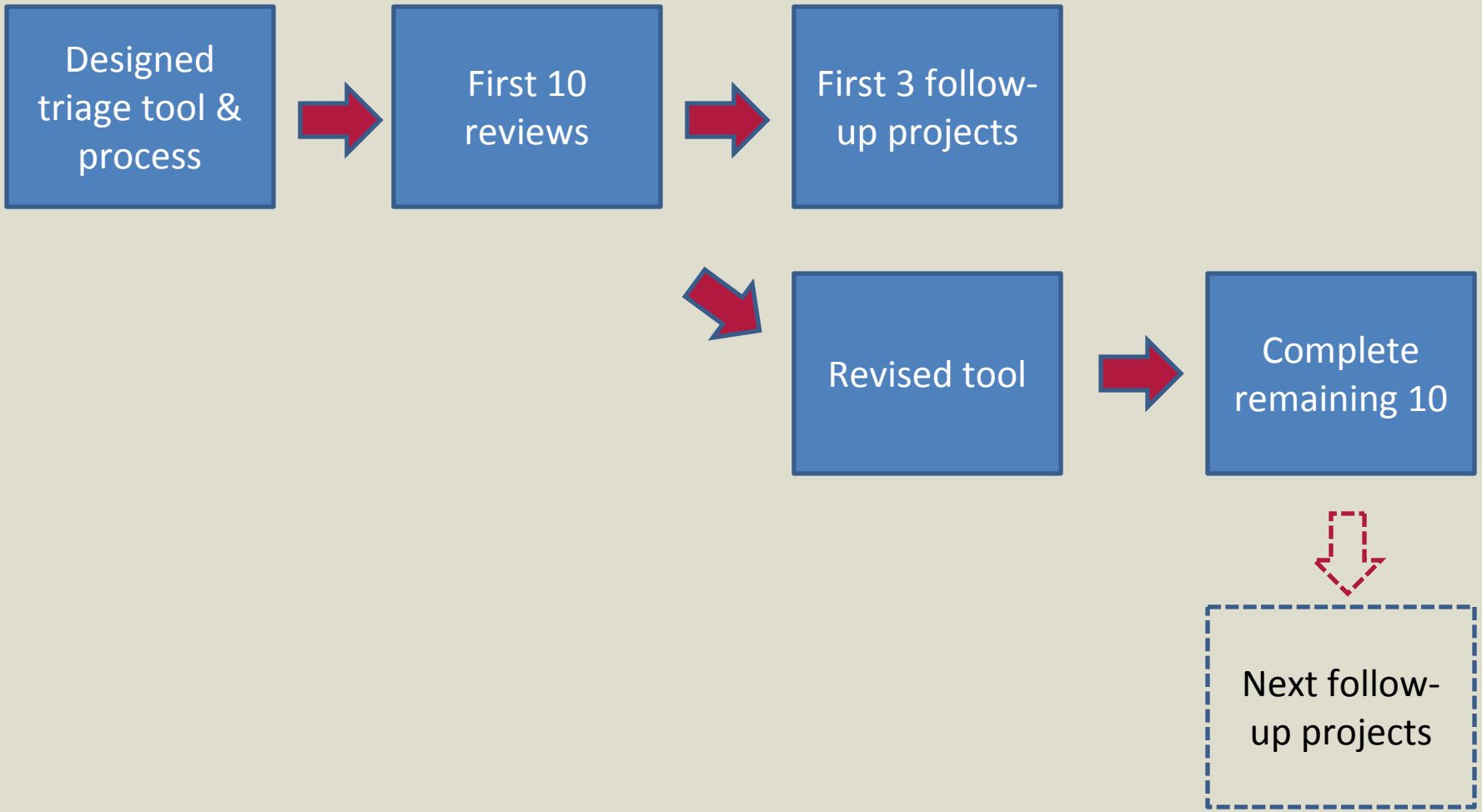
3. r2p Resources

- Impact cards
- CONDOR – contact database
- Triage and road map tools
- r2p website
- Tool kits



Triage Progress to Date



Investigator Concerns

Role of scientists

- Are we now supposed to be communication experts?

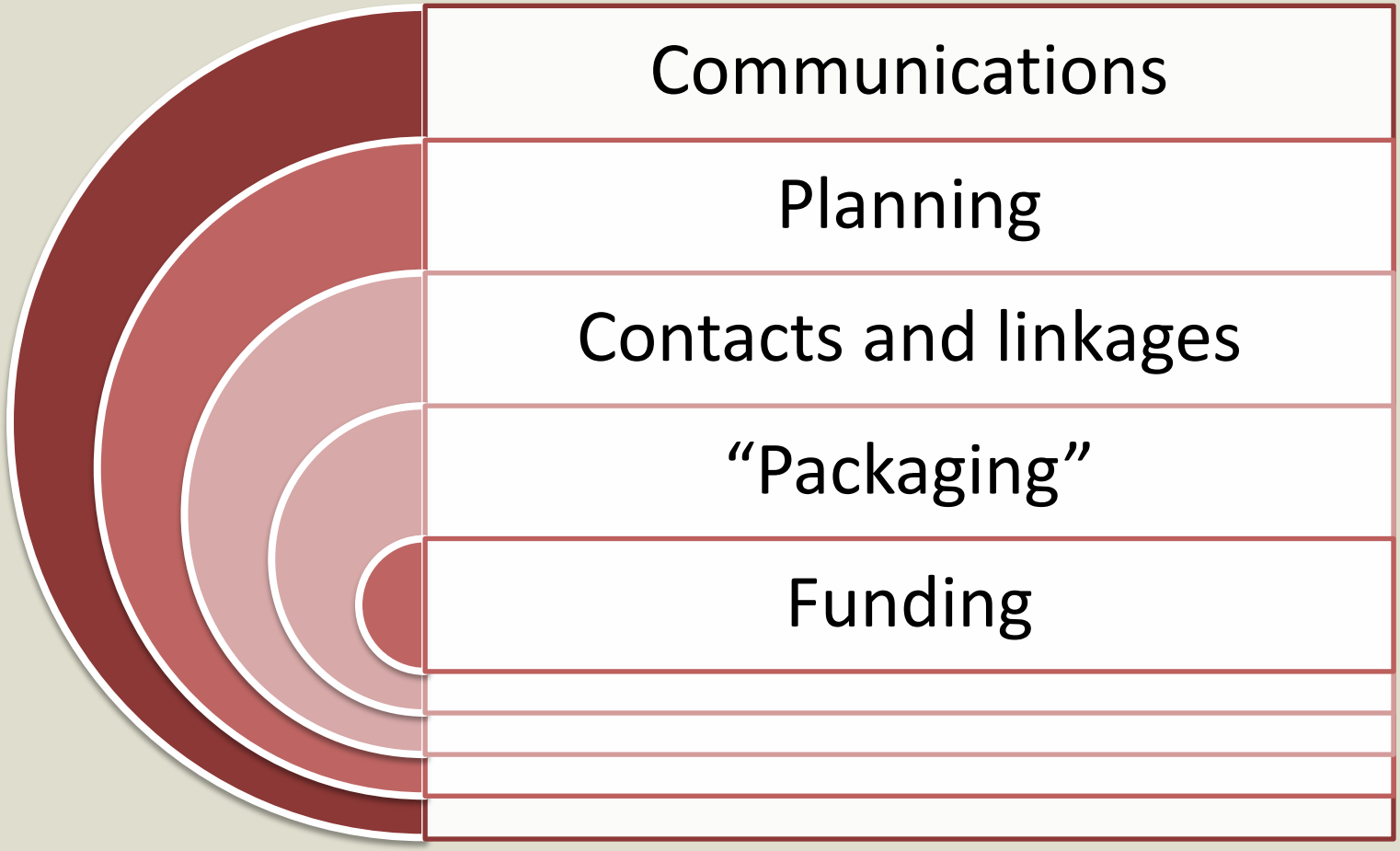
Funding for r2p

- Is this an unfunded mandate?

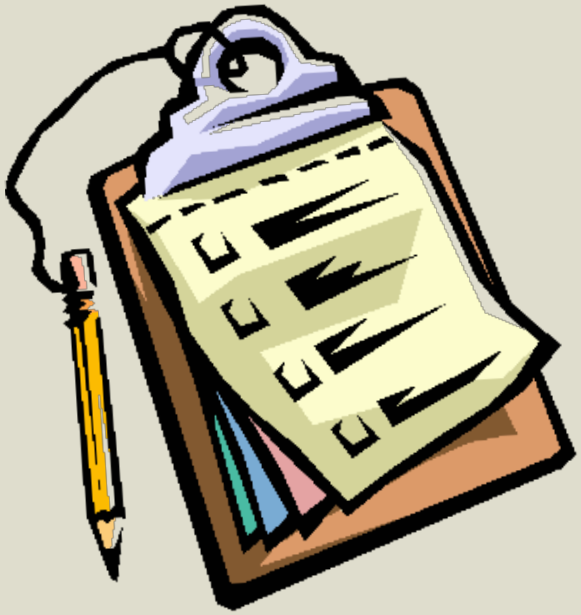
Responsibility for end outcomes

- How can I attribute injury and illness reduction to my work?

Support for Investigators



Triage Process



3 Reviewers:

- Lead Investigator
- Project Officer
- r2p Staff

Based on:

Final report + products + discussion

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Triage Tool Section A: Overview

r2p Checklist for Completed Construction Research Projects
FORM #2: INTERVENTION STAGE RESEARCH

A. OVERVIEW	Date:
1. Research project :	2. Dates of project:
3. Lead Investigator(s):	5. Reviewer:
4. Partner(s):	Type of reviewer: ☐ Project Officer ☐ Lead Investigator ☐ r2p staff ☐ Other:
6. NORA Priority:	7. Sources used (final report; other sources, as needed):
8. Major research findings:	Purpose of study: ☐ Problem definition/surveillance ☐ ID risk and protective factors/health effects/exposure assessment ☐ Develop or evaluate prevention/intervention strategies ☐ Dissemination/adoption ☐ Other

Section B: Intervention Priority Ratings

B. DETERMINE APPROPRIATE LEVEL OF TRANSFER EFFORT		
1. Intervention/Product:		#____ of ____
2. Priority Ratings:	**Priority for Transfer (1 = low, 3 = medium, 5 = high)**	**Comments**
a. How strong are the findings? (**strength of research design** & results, findings supported by other research, etc.)	○1 ○2 ○3 ○4 ○5 ○N/A	
b. How large are the potential **impact and reach** of the findings? (potential impact on injury & illness prevention, severity of the issue addressed, number of workers/trades affected, etc.)	○1 ○2 ○3 ○4 ○5 ○N/A	
c. How strong is the **potential for effective partnerships** for the transfer effort? (e.g. Are there clear partners/stakeholders? Do relationships already exist to build on? Are partners likely to bring resources to the effort?)	○1 ○2 ○3 ○4 ○5 ○N/A	
d. How **achievable** is the proposed action/intervention? (Is the proposed change an easy or hard one? Is the intervention readily available? Are there major barriers anticipated? What are the costs involved for the potential adopters? Can the intervention be "packaged" with other interventions?)	○1 ○2 ○3 ○4 ○5 ○N/A	
e. How important are the findings in terms of addressing **high priority areas** (e.g. health disparities, NORA/National Academies Report priorities, gaps in the field, making a unique contribution, impacting safety culture, making "up-stream" change at the industry/societal level, etc).	○1 ○2 ○3 ○4 ○5 ○N/A	
f. Summary: Overall, how high a priority is this for an r2p effort?	○1 ○2 ○3 ○4 ○5 ○N/A	

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Section C: Dissemination Recs

C. METHOD(S) FOR DISSEMINATION	
1. Most Promising Methods:	**Describe including type of effort and targeted audiences:**
☐ Education/training (integration into apprenticeship training, professional training, tailgate training, supervisor training, educational materials, peer training etc.)	
☐ Outreach/marketing (social marketing campaign, targeted diffusion effort, health communications program, media advocacy, educational entertainment, etc.)	
☐ Policy development (regulations, industry standards, building codes, labor-management agreements, licensing exam changes, etc.)	
☐ Technology transfer (licensing, manufacture, market approaches)	
☐ Coalition-building (multi-partner effort to promote interventions at the industry or trade level)	
☐ Communications products (press release, materials for lay audience, web posting/links, mailings, new/social media, etc.)	
☐ Other:	
4. Factors that may support or hinder an r2p effort (e.g., expertise, level of funding, partners, etc.):	
5. Recommended actions, if any: **END HERE**	

Top Priorities Addressed

NORA	Priority	# Projects
1.0	Falls	4
7.0	MSDs	3
11.0	Training & Education Issues	3
12.0	Disparities in Health & Safety in Construction	3
14.0	Improving Surveillance of Hazards & Outcomes	2

Purpose of Studies

Study Purpose	Number of Projects
Problem Def/Surveillance	8
ID risk & protective factors/ effects/exposure	4
Prevention/Intervention strategies	11
Dissemination/adoption	10

Dissemination Strategies Employed

Most	Less	Least
• Presentations & articles in construction • Professional meetings • Online postings	• Research partners • Communications products • Coalition building • Education & Training (apprenticeship, voc ed)	• Policy • Tech transfer • Mass media • Social media

Summary of Ratings

		Disparities	Training	Ergo
Strength of Findings	Average	**4**	**3**	**3.3**
	Spread	none	none	3-4
Impact & Reach	Average	**4.7**	**4.7**	**3.3**
	Spread	4-5	4-5	2-4
Partnership Potential	Average	**4.7**	**2.7**	**1.7**
	Spread	4-5	2-3	1-2
Achievability	Average	**4.7**	**2.7**	**2.7**
	Spread	4-5	2-3	1-5
High Priority Area	Average	**4.7**	**5**	**3.3**
	Spread	4-5	none	3-4
Summary Ranking	Average	**5**	**4**	**2.7**
	Spread	none	3-5	1-5

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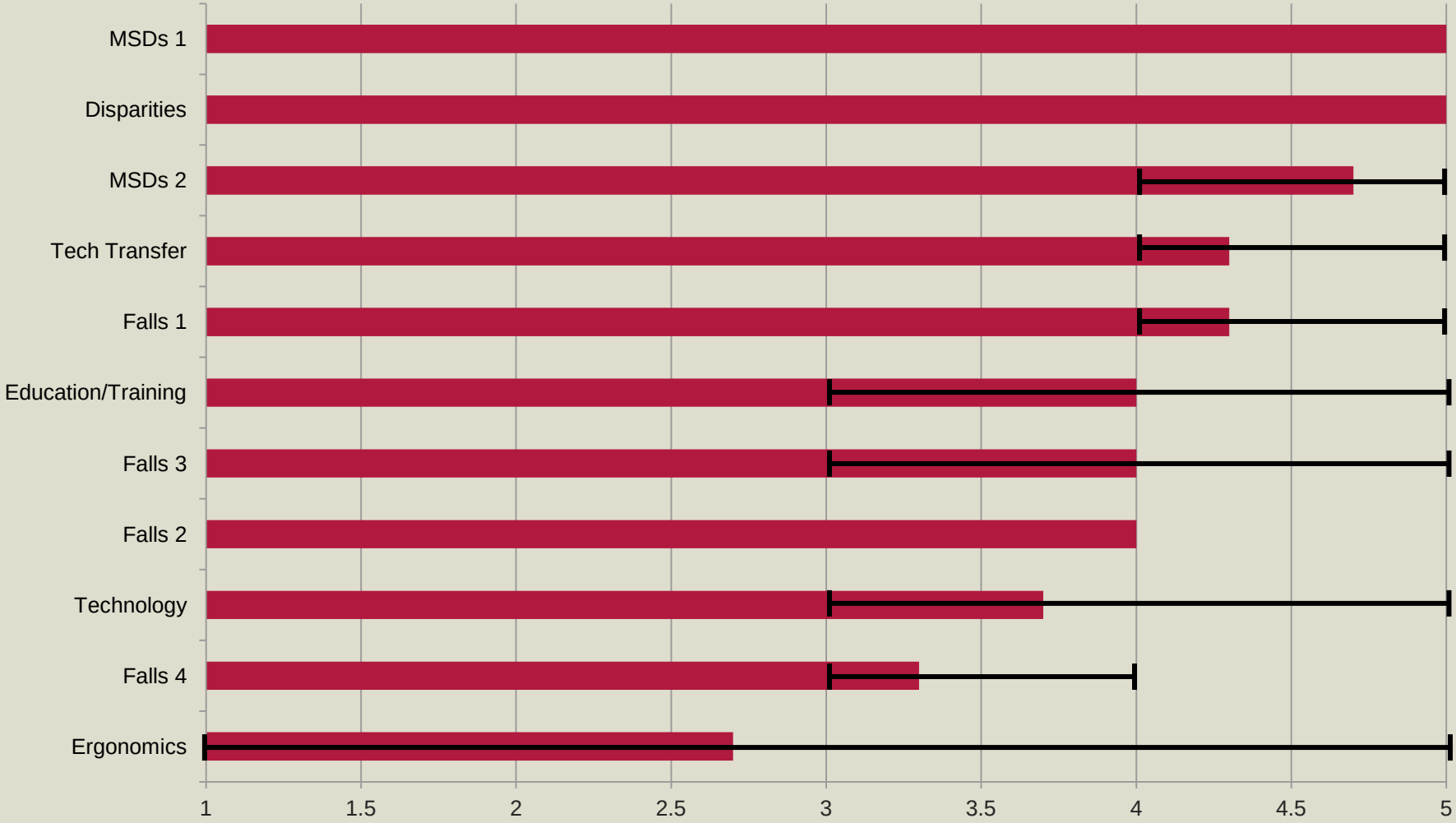
Summary Ranking



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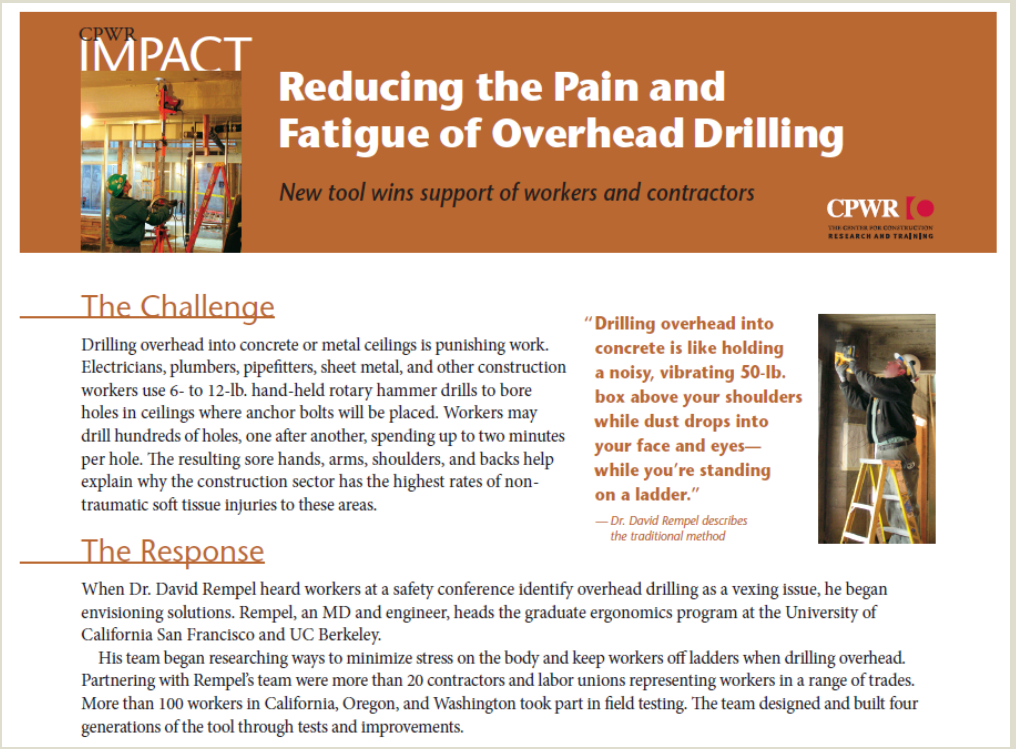
First Follow-Up r2p Projects

- Tech transfer
- Silica Solutions
- Nail guns



CPWR IMPACT

Reducing the Pain and Fatigue of Overhead Drilling

New tool wins support of workers and contractors

CPWR

The Challenge

Drilling overhead into concrete or metal ceilings is punishing work. Electricians, plumbers, pipefitters, sheet metal, and other construction workers use 6- to 12-lb. hand-held rotary hammer drills to bore holes in ceilings where anchor bolts will be placed. Workers may drill hundreds of holes, one after another, spending up to two minutes per hole. The resulting sore hands, arms, shoulders, and backs help explain why the construction sector has the highest rates of non-traumatic soft tissue injuries to these areas.

"Drilling overhead into concrete is like holding a noisy, vibrating 50-lb. box above your shoulders while dust drops into your face and eyes—while you're standing on a ladder."

— Dr. David Rempel describes the traditional method

The Response

When Dr. David Rempel heard workers at a safety conference identify overhead drilling as a vexing issue, he began envisioning solutions. Rempel, an MD and engineer, heads the graduate ergonomics program at the University of California San Francisco and UC Berkeley.

His team began researching ways to minimize stress on the body and keep workers off ladders when drilling overhead. Partnering with Rempel's team were more than 20 contractors and labor unions representing workers in a range of trades. More than 100 workers in California, Oregon, and Washington took part in field testing. The team designed and built four generations of the tool through tests and improvements.

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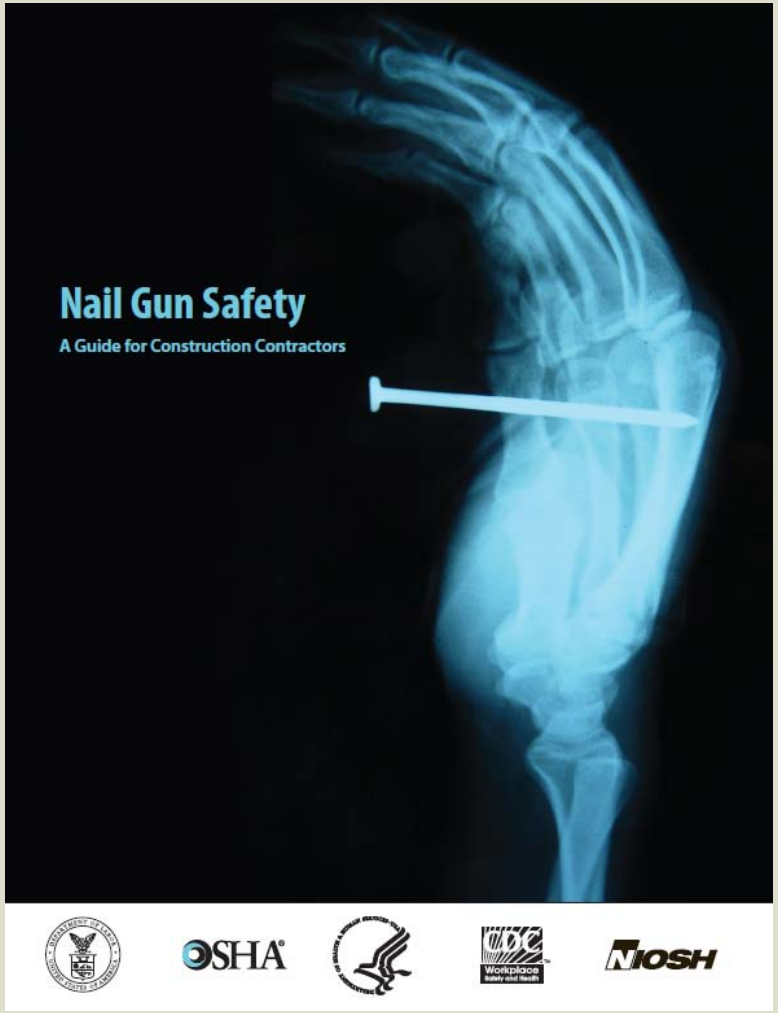
Nail Gun Research Dissemination

OSHA/NIOSH joint Guidance released on September 21, 2011

“Active Dissemination” of guidance



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Examples of Reach

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How to Prioritize?

Scores?
Opportunities?
Cross-cutting approaches?
Build r2p infrastructure?
Other???