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Reaching and Influencing Small Residential Contractors' Safety and Health Practices

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13

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This survey was conducted through CPWR – The Center for Construction Research and Training, as part of its work with the research to practice (r2p) Working Group, a partnership between OSHA-NIOSH-CPWR.

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Reaching and Influencing Small Residential Contractors' Safety and Health Practices

INTRODUCTION

The U.S. residential construction workforce makes up a significant share of the overall construction workforce. However, the majority of residential construction workers are self-employed or work for construction establishments with fewer than 10 employees and the number of injuries affecting the residential sector each year is disproportionately high compared to the construction industry as a whole. In 2012, nonfatal injury and illness rates involving days away from work in residential construction were 177.1 injuries per 10,000 employees versus 147.1 injuries per 10,000 employees for the construction industry as a whole (U.S. Bureau of Labor Statistics, 2012).

Efforts to improve safety and health in the residential construction industry have been challenging, due to the decentralized and largely isolated nature of contractors and workers in this sector. While efforts have been conducted nationally to reach small residential contractors, most have not been published and lessons learned have not been collected and compared to identify promising strategies. CPWR, as part of its work with the r2p Working Group[*], sought to learn more about the approaches that have been used to influence residential workers, contractors, "intermediaries," and others involved in this sector, as well as to gather ideas for new approaches.

In order to better understand promising strategies and influential entities for reaching small residential contractors, CPWR conducted a qualitative survey of such efforts from across the United States.

[*] The r2p Working Group, established as part of CPWR - The Center for Construction Research and Training's Research to Practice (r2p) Initiative, is a collective effort with the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) that aims to better move evidence-based safety and health solutions into practice in the construction industry.

METHODS

An online qualitative survey was developed and emailed to 46 individuals identified by 1) the r2p Working Group, 2) a literature review of efforts to reach and influence small residential contractors' safety and health practices, and 3) recommendations from other stakeholders. Survey recipients were asked to complete the online survey and to voluntarily participate in a follow-up phone interview. Twenty-one (21) of those contacted completed the survey, and a convenience sample of nine respondents participated in follow-up interviews. Respondents included: university and governmental researchers, contractor association representatives, trainers, general contractors, community-based organizations, union representatives, builders, and product manufacturers. All of the respondents had participated in different research and dissemination efforts to reach and influence small residential contractors' safety and health practices.

Respondents were classified into three categories:

Respondent Classification	Number of Respondents in Classification
Community-Based Organization (CBO)	3
Industry-affiliated	6
Researcher	12

The primary focus of the study was to identify potentially promising dissemination strategies. General question areas included:

1) Experience with outreach to small residential contractors
    a. Number of safety and health dissemination efforts undertaken
    b. Descriptions of dissemination efforts
    c. Effectiveness of the dissemination efforts

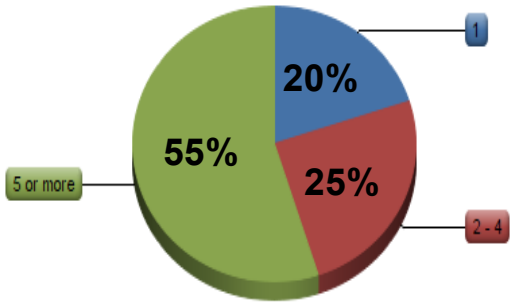
2) Suggestions for future dissemination efforts
    a. Promising dissemination strategies
    b. Influential organizations or players in dissemination efforts

RESULTS

Dissemination Efforts

Respondents had engaged in a variety of dissemination efforts to reach and influence small residential contractors. All respondents were involved in at least one effort, with over half of respondents involved in five or more efforts.

Graph 1. Percent of respondents who have been involved in [1], [2-4], [5 or more] safety and health dissemination efforts specific to residential construction



Respondents were asked to briefly describe one or two of their efforts including whether they considered the approach effective. (See Appendix A for details on specific efforts.) Descriptions included:

Communication Efforts
Materials or tools were used to reach and influence small residential contractors. Efforts included campaigns, social marketing strategies, safety stand-downs (events for companies to take a break and conduct a toolbox talk or other safety activity involving contractors, workers, and safety professionals), presentations, distribution of educational materials, and academic publications.

Intermediary Outreach Efforts
Intermediaries were used to reach and influence the target audience. Intermediaries included Community Development Corporations, big box stores, the residential remodeling community, and trade associations.

Policy/Regulatory Efforts
Raising awareness of existing policies or regulations was part of the strategy to reach and influence small residential contractors. These efforts involved local health departments and local hardware stores as intermediaries.

Training Program Efforts
A manufacturer provided training for small residential contractors, a state agency collaborated with other organizations to provide classroom and hands-on training to small residential contractors, and a university trained small builders on safer practices.

Effectiveness of Dissemination Efforts

Respondents used a variety of measures in their anecdotal descriptions of effective and ineffective dissemination efforts. The following markers of effectiveness were developed to analyze their responses:

A. Quality of the product produced
B. Amount of information or number of resources distributed
C. Amount of information received by the target audience
D. Number from target audience who sought more information
E. Number from target audience who changed practices

Overall, respondents were most likely to rely on (C) the amount of information received by the target audience as an indicator of having an effective reach or influence. Half of researchers used multiple markers to define effectiveness. Few industry-affiliated respondents, and zero CBO respondents, used multiple markers to define effectiveness.

Table 1. Number and percent of respondents who used the following markers to define effectiveness

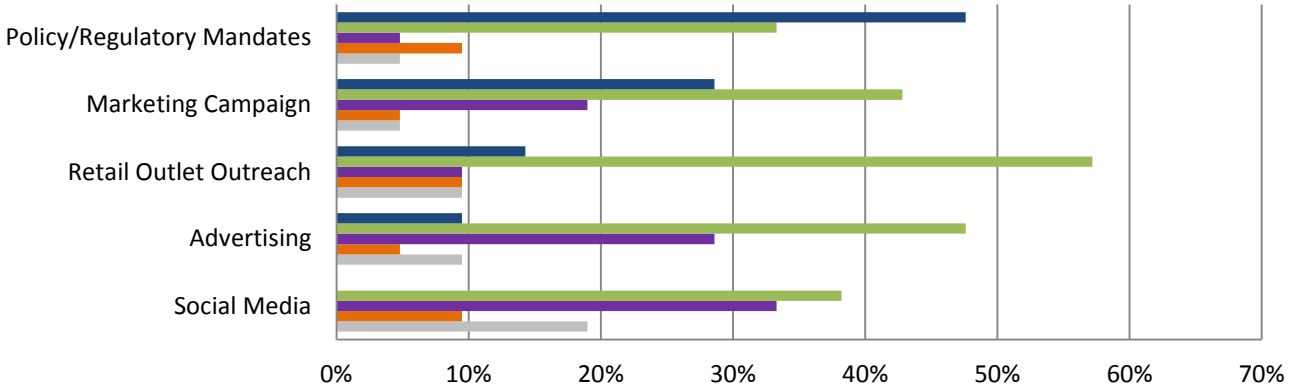
	Researcher	Industry	CBO	TOTAL
A. Quality of the product produced	2	0	1	3 *(14%)*
B. Amount of information or number of resources distributed	3	2	0	5 *(24%)*
C. Amount of information received by the target audience	8	4	1	13 *(62%)*
D. Number from target audience who sought more information	3	0	1	4 *(19%)*
E. Number from target audience who changed practices	6	2	0	8 *(38%)*

Promising Dissemination Strategies

Respondents were asked to rate five dissemination strategies on their potential to effectively reach and influence small residential contractors' safety and health practices. The strategies considered include: retail outlet outreach, marketing campaigns, policy initiatives/regulatory mandates, advertising, and social media (e.g., Facebook, Twitter). (See Appendix C for detailed table on respondent category and dissemination strategy ratings).

As shown in the following chart and the discussion that follows, policy/regulatory mandates was the most promising strategy and social media was considered the least promising strategy.

Graph 2. Percent of respondents rating dissemination strategies on their potential to reach and influence small residential contractors' safety and health practices



	Social Media	Advertising	Retail Outlet Outreach	Marketing Campaign	Policy/Regulatory Mandates
Very Likely	0%	9.5%	14.3%	28.6%	47.6%
Somewhat Likely	38.2%	47.6%	57.2%	42.8%	33.3%
Somewhat Unlikely	33.3%	28.6%	9.5%	19%	4.8%
Very Unlikely	9.5%	4.8%	9.5%	4.8%	9.5%
Not Sure	19%	9.5%	9.5%	4.8%	4.8%

<u>Policy Initiatives/Regulatory Mandates</u>
Overall, policy initiatives/regulatory mandates emerged as the most promising dissemination strategy with 81% of respondents saying this strategy was ***very likely*** (48%) or ***somewhat likely*** (33%) to reach and influence small residential contractors' safety and health practices.

All CBOs, half of the researchers, and 17% of the industry-affiliated respondents suggested it was ***very likely*** to be influential, while 50% of industry-affiliated respondents said ***somewhat likely*** *(50%). Policy initiatives/regulatory mandates was also the approach that respondents were least likely to say was* ***somewhat*** *(5%)* or ***very unlikely*** (10%) to reach and influencing small residential contractors.

<u>Marketing Campaigns</u>
Respondents found marketing campaigns to be the second most promising strategy with 71% saying that they are ***very likely*** (28%) or ***somewhat likely*** (43%) to influence small residential

contractors' safety and health practices. This included all CBO respondents, and 75% of researchers. Industry-affiliated respondents were split on how likely this approach would be to reach and influence small residential contractors: 50% said ***very*** or ***somewhat likely*** and the remaining half selected ***very unlikely*** or ***somewhat unlikely.***

Retail Outlet Outreach

Retail outlet outreach was another strategy viewed as promising with 71% of all respondents saying retail outlet outreach was ***very likely*** or ***somewhat likely*** to influence small residential contractors' safety and health practices, including 84% of researchers and two-thirds of industry-affiliated respondents (66%). In contrast to the Marketing Campaigns strategy, which seemed to reflect a more enthusiastic response, respondents were more likely to select retail outlet outreach as a ***somewhat likely*** to be effective strategy.

Advertising

A majority of all respondents (57%) said that advertising was ***very likely*** or ***somewhat likely*** to influence small residential contractors' safety and health practices, but none of the industry-affiliated respondents or CBOs, and only 17% of the researchers indicated it was ***very likely*** to be effective. A third of respondents said this approach was ***somewhat*** or ***very unlikely*** to be effective. Researchers were more likely to say this approach was ***somewhat unlikely*** (41%) to be effective.

Social Media

Social media was viewed as the least promising approach with none of the respondents (0%) believing it to be ***very likely*** and only 38% believing it to be ***somewhat likely*** to influence small residential contractors. More than half (57%) of respondents, including two-thirds of the industry-affiliated respondents, felt that social media was ***somewhat*** or ***very unlikely*** to influence small residential contractors. Only 5% of respondents said they were ***not sure*** about social media's potential to reach and influence small residential contractors, and this group was made up exclusively of researchers.

Some respondents suggested other dissemination strategies and intermediaries, which they rated as ***very likely*** or ***somewhat likely*** to be effective including:

- Face-to-face meetings (3)
- Small contractor associations (2)
- On-site demonstrations (2)
- Local meetings (1)
- Building permit offices (1)
- Religious groups (1)

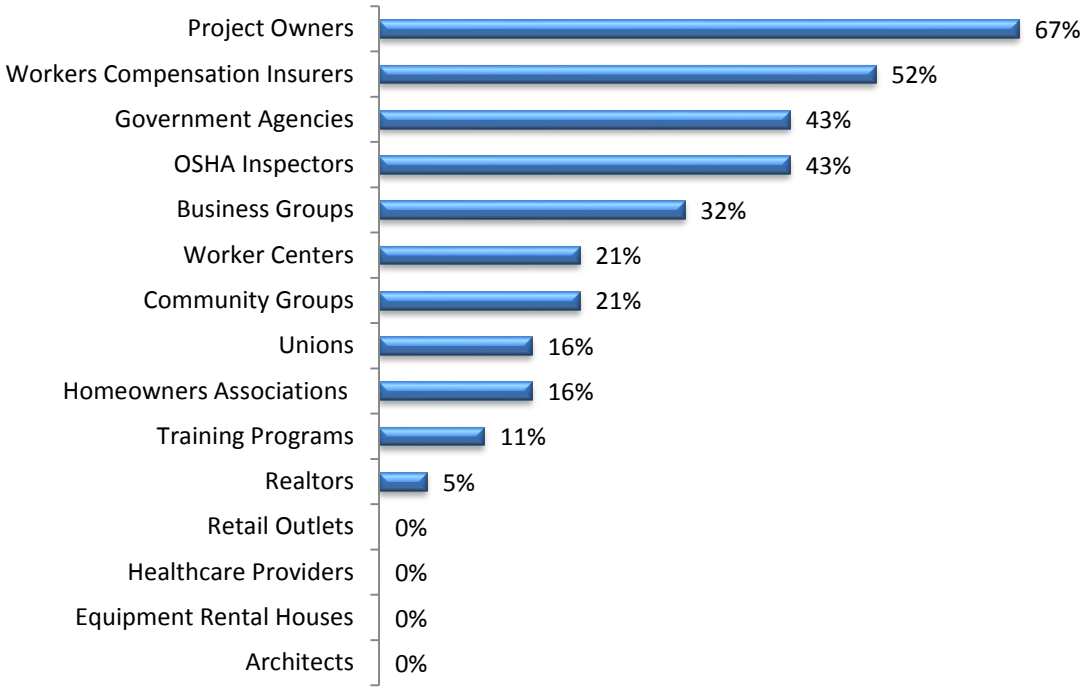
Top Influential Entities

Respondents were asked to indicate which three entities, from those listed in the graph below, they felt would have the most influence on the safety and health practices of small residential contractors.

Overall the top most influential entities identified by respondents were project owners, workers compensation insurers, followed by government agencies and OSHA Inspectors, which tied for third place, though responses varied substantially by type of respondent.

- Researchers were more likely to view project owners as a top influential entity.
- Industry-affiliated respondents were more likely to view business groups and project owners as top influential entities.
- CBO respondents were more likely to view worker centers as a top influential entity.

Graph 3. Percent of respondents who selected the following as the top influential entities



Project Owners

Sixty-seven percent (67%) of all respondents selected project owners as one of the top three entities that have the most influence on small residential contractors' health and safety practices, including:

- 75% of researcher respondents
- 66% of industry-affiliated respondents
- 33% of CBO respondents

Workers Compensation Insurers

Fifty-two percent (52%) of all respondents indicated workers compensation insurers were top influential entities with regard to small residential contractors' health and safety practices, including:

- 66% of researcher respondents
- 50% of industry-affiliated respondents
- 0% of CBO respondents

Government Agencies and OSHA Inspectors

Forty-three percent (43%) of all respondents indicated government agencies (EPA, HUD, local permit offices, etc.) were top influential entities with regard to small residential contractors' health and safety practices, including:

- 58% of researcher respondents
- 33% of CBO respondents
- 16% of industry-affiliated respondents

Forty-three percent (43%) of all respondents indicated OSHA inspectors were top influential entities with regard to small residential contractors' health and safety practices, including:

- 66% of researcher respondents
- 33% of CBO respondents
- 0% of industry-affiliated respondents

Business Groups

Twenty-eight percent (28%) of all respondents indicated business groups were top influential entities with regard to small residential contractors' health and safety practices, including:

- 66% of industry-affiliated respondents
- 16% of researcher respondents
- 0% of CBO respondents

Worker Centers

Nineteen percent (19%) of all respondents indicated worker centers were top influential entities with regard to small residential contractors' health and safety practices, including:

- 100% of CBO respondents
- 8% of researcher respondents
- 0% of industry-affiliated respondents

Homeowners' Associations

Fourteen percent (14%) of all respondents indicated homeowners' associations were top influential entities with regard to small residential contractors' health and safety practices, including:

- 50% of industry-affiliated respondents
- 0% of researcher respondents
- 0% of CBO respondents

Training Programs

Fourteen percent (14%) of all respondents indicated training programs were top influential entities with regard to small residential contractors' health and safety practices, including:

- 25% of researcher respondents
- 0% of industry-affiliated respondents
- 0% of CBO respondents

Not Indicated as Top Influential Entities

No respondents indicated retail outlets, healthcare providers, equipment rental houses, or architects among the **top** entities having an influence over the safety and health practices of small residential contractors. It is important to note that even though retail outlets were not considered by respondents to be influential (Graph 3), they did identify retail outlets as a promising strategy or vehicle to reach small residential contractors (Graph 2).

RESPONDENT REFLECTIONS

Through the survey and follow-up interviews, respondents suggested a variety of potential opportunities and challenges associated with reaching and influencing small residential contractors.

Opportunities

Access through Policy:

- Explore public policy initiatives, particularly those with associated fines or incentives, which can increase access and open the door for conversations with small residential contractors about a health and safety issue.
- Examine general contractors' or owners' safety and health policies which can be effective leverage points if sub-contractors are required to comply with all on-site safety rules.

Reach through Communications Materials:

- Develop safety and health communications designed for small residential contractors.
- Assess the effectiveness of communications materials by whether or not they've been posted or made available on jobsites, requested by contractors, or prompted requests for additional materials. Involve small residential contractors in the development, design, and testing of new communications materials.

Influence through Training:

- Provide direct, face-to-face, on-site safety and health training programs for workers, sub-contractors, and contractors.

Windows of Opportunity:

- Take advantage of "windows of opportunity," such as an incident on a job site, to launch a discussion or introduce safety and health materials and solutions.

Challenges

Lack of Buy-in and Interest:

- Generating buy-in for a safety and health hazard can be difficult unless the hazard is already an industry concern.
- Intermediary groups may lack interest in participating in a safety and health dissemination effort.
- In the absence of specific and on-going guidance from the owner, contractor, or other influential entities there's no incentive to do anything beyond the status quo.
- Lack of enforcement can influence lack of buy-in.
- Small residential contractors may lack interest in reading traditional print media products.

Lack of Partnership Support and Resources:

- Lack of support from organizational leaders can reduce the strength of a partnership formed to influence small residential contractors' safety and health practices.
- Lack of incentives or a dedicated champion.
- Existing political, financial, or other issues among potential partners.
- Concerns that a collaboration involving a government agency could lead to inspections and fines may inhibit participation from certain groups.

Contractor Perceptions:

- Perception that it will take too much time, money, and/or staff resources.
- Concern that sharing information about incidents or near-misses could result in fines or legal issues if an accident or injury occurs in the future.

CONCLUSION & NEXT STEPS

This survey offered insights into the top entities with influence over small residential contractors, (**project owners, workers compensation insurers**, and **government agencies,** including **OSHA**), and promising dissemination strategies (**policy approaches and regulatory mandates, marketing,** and **retail outlet outreach**). It also raised several questions and areas where further research exploration and research may be needed, such as:

1. **Influential entities and small residential contractors**. The survey suggested that overall, project owners and workers compensation insurers are considered top influential entities.
    - Are there potential models for engaging workers compensation insurers in prevention efforts?
    - Are there potential models for engaging project owners in prevention efforts?
    - Who do small residential contractors perceive them as top influential entities over their safety and health practices? How can we best identify these entities?

2. **Small residential contractors' use of retail outlets.** We learned that respondents, particularly industry-affiliated respondents, indicated marketing campaigns and retail outlets are potentially effective dissemination strategies. Yet no respondents indicated retail outlets as top influential entities.

- Where do small residential contractors actually go for materials? (Big box stores vs. specialty supply houses)
- Are retail outlets perceived as knowledgeable resources among small residential contractors and workers?
- How might the perception of retail outlets as a resource impact their use in a dissemination strategy?
- Is there the potential to do marketing campaigns through retail outlets to small residential contractors and workers?

3. **Small residential contractors' use of social media.** Respondents were less enthusiastic and less sure about the potential utility of social media as a dissemination channel with small residential contractors. Given the growth and interest in these tools in occupational health and safety, the nature of respondent concerns may warrant further exploration.

4. **How do small residential contractors perceive various dissemination strategies?** We have gathered input from respondents who have conducted efforts to reach and influence small residential contractors. A potential next step is to assess how small residential contractors themselves perceive these promising dissemination strategies and influential entities.

Inherent in all of these possible areas for future research is a need to invest in more in-depth evaluation of r2p efforts that gauge audience reach, adoption, and implementation in addition to safety and health impact.

Appendices

This appendix includes selected examples of dissemination efforts to reach and influence small residential contractors' safety and health practices, the survey tool used in the study, and an additional table on dissemination strategy ratings by respondent type.

Appendix A

Examples of Dissemination Efforts to Reach and Influence Small Residential Contractors Safety & Health Practices

Communication
Massachusetts Brochures The Massachusetts Department of Public Health developed ladder, scaffold, personal fall arrest system, and general safety brochures for residential contractors. The effort began with anonymous needs assessment surveys, via both mail and internet, on fall prevention safety with small contractors in Massachusetts. Small contractors were also surveyed to assess the final design of the brochures which led to the incorporation of both content and visual changes. An email database was developed, using the internet and other public sources, for brochure dissemination. Emails of brochures were sent to more than 30,000 small residential contractors and by mail to all building inspection service departments. This effort was considered to be effective due to the inclusion of contractor input in materials development that resulted in materials more suited to the needs of the target audience. Small contractors requested over 20,000 hard copies of the brochures and there were hundreds of web hits. Hits continued even during periods without active dissemination. One challenge indicated was maintaining an up-to-date email database – a large number of emails from the developed database bounced back. ➢ Massachusetts Campaign Success Story http://stopconstructionfalls.com/wp-content/uploads/2013/10/Massachusetts-SS-2013.pdf
National Falls Campaign Fall Prevention "Stand-Downs" OSHA conducted a nationwide outreach campaign to raise awareness among workers and employers about the hazards of falls in the construction industry. The campaign included voluntary safety stand-down events for companies to take a break and conduct a toolbox talk or other safety activities involving contractors, workers, and safety professionals. This nationally coordinated effort aimed to motivate key construction stakeholders, though one challenge presented was the need for more time to advertise the stand down. ➢ Stop Construction Falls Website http://stopconstructionfalls.com/

- National Safety Stand-Down Webpage
  http://stopconstructionfalls.com/?page_id=1884
- OSHA National Safety Stand-Down Webpage
  https://www.osha.gov/StopFallsStandDown/

Massachusetts Bus Ads
Leading up to the re-launch of the national campaign to prevent falls in construction, a workgroup of construction safety professionals partnered with local transit authorities across Massachusetts to secure donated (free) advertisement space on seven metro buses in the region, subway cars in Boston, and roadside digital billboards across Massachusetts. These advertisements, designed by the National Falls Campaign, ran from April to June, providing local call-in numbers in place of the general OSHA number, with the goal of increasing general awareness of the national campaign and fall prevention for small contractors. Evaluation surveys completed with two separate audiences of contractors suggested small contractors or workers did not see the advertisements.

Intermediary Outreach

Community Development Corporation Zoning Policies
The Philadelphia Area Project on Occupational Safety and Health reached out to the board of a Community Development Corporation (CDC) in a community with a large volume of new residential construction. The board voted to endorse sponsoring a fall protection training class for neighborhood residents that were being hired by local small contractors. The CDC furthered the effort by hosting monthly meetings with the contractors and developers working in the community. There was hope the effort could be expanded using safety trainings as a requirement for contractors needing CDC zoning approval. The effort was less than successful, however, because of the complex relationship between the CDC and the contractor community, which led to resistance to imposing requirements on contractors.

- Safer Times Article
  http://www.philaposh.org/pdf/Safer_Times_Issue_137-WEB.pdf

Policy/Regulatory

New EPA Rule Awareness through Direct Mail and Email
The National Association of the Remodeling Industry (NARI) conducted outreach to raise awareness of the EPA's Lead Renovation, Repair, and Painting Rule (RRP Rule), via email and direct-mailing efforts. NARI worked with chapter leadership to bring local experts to discuss the RRP rule and the associated large fine for noncompliance, which incentivized member engagement and interest in more information.

- Lead Renovation, Repair and Painting Program Rules
  http://www2.epa.gov/lead/lead-renovation-repair-and-painting-program-rules

- Renovation, Repair and Painting Program
  http://www2.epa.gov/lead/renovation-repair-and-painting-program

Bill Passed to Require Lead Safe Information at Illinois Hardware Stores
The University of Illinois School of Public Health led an initiative called Lead Safe Illinois. Local health departments and local hardware stores were recruited as intermediaries to post signs and distribute informational materials to small contractors on lead safe work practices. One hundred fifty neighborhood hardware stores were identified in the City of Chicago, and the university's industrial hygiene and safety students visited the hardware stores and conducted observations of available supplies for working safely with lead. After the first year, Lead Safe Illinois successfully passed a bill which included requiring local hardware stores to display a poster about lead safe work practices (developed collaboratively with hardware store owners) as well as provide printed information on lead safe work practices. After the bill was passed, the poster and written materials were distributed to hardware stores, and online versions of the materials were made available through the state health department.

In the third year of the project the hardware stores were visited to see if the poster and materials were available and to ask the hardware store staff questions about lead safe work practices. At the end of the project, a "how to" booklet targeted at county health departments was created and piloted in three Illinois counties. The state law requiring the posting of information about lead in retail establishments is believed to have provided access for intermediary outreach staff to begin conversations with hardware store owners.

- Lead Safe Illinois Website
  http://www.leadsafeillinois.org/
- Lead Safe Work Practices Workbook
  http://www.uic.edu/sph/erc/downloads/Lead Safe Work Practices.pdf

Training Programs

James Hardie Preferred Remodeler & Associate Contractor Programs
James Hardie, a manufacturer, developed trainings for remodelers and contractors through their Preferred Remodeler & Associate Contractor programs. These programs focus on compliance with installation requirements and the proper installation of their materials. Incentivizing participation is an approach in which the manufacturer works to obtain "buy-in from the top" (the building owner), often through informal building audits on jobsites using their products.

Buildings are scored on installation and site safety observations, the reliability of financial reporting, and compliance with laws and regulations. The efficiency of operations and fraud risk factors are assessed with the intention of encouraging builder warranty claims personnel to look at the cost incurred from improper installation of materials, remediation, and customer dissatisfaction and the benefits of addressing the issues with a cost-lens. This data-driven approach incentivizes company buy-in among higher-level company stakeholders and encourages building owners to then influence contractors' practices.

Virginia Tech "DUSTI" Intervention
Dust-control Usage: Strategic Technology Intervention, or "DUSTI," is an intervention developed with the goal of improving the adoption of engineering controls that reduce exposure to silica. The project tested the efficacy of different approaches to diffusion of the technology and barriers to its effective use. One focus of the effort looked at influencing small builders through the creation of "technology champions" within the firms and providing training on productivity and customer satisfaction, health information, and regulatory drivers.

- Project Description
  http://www.oshrc.centers.vt.edu/projects/descriptions/DustControlUsage.html

Trenching Safety Training in Kentucky
NIOSH coordinated a half-day trenching safety training in collaboration with the Kentucky Labor Cabinet, Associated General Contractors (AGC) of Kentucky, a rigging consultant, a trench box leasing company, and a community college. The training targeted small construction businesses in Kentucky and included both classroom and hands-on demonstration components with the goal of raising awareness of safe trenching practices among small contractors. Survey results indicated participants found the training useful and planned on applying it to their business.

The partnership initially came together to coordinate the half-day training. Partners chose to continue to collaborate and offer the same type of training again with NIOSH assistance. The equipment supplier's relationship with the client was considered a key factor in making the project more successful. Most participants found out about the training through the equipment supplier, though other partners spread the word via emails as well (OSHA sent ~40,000 emails; the trade association sent ~3,000-4,000; the equipment supplier sent ~600 emails).

- CDC Kentucky OSHA Trenching Classes Webpage
  http://www.cdc.gov/niosh/events/kyosha2010/

Appendix B

Reaching Small Residential Contractors and Influencing their Safety and Health Practices Survey

Q1 Name:

Q2 Organization/Position:

Q3 Approximately how many safety and health dissemination efforts, specific to residential construction, have you been involved in?

- ❍ None
- ❍ 1
- ❍ 2 - 4
- ❍ 5 or more

Q4 Briefly describe one of your dissemination efforts which stood out to you as being particularly effective in reaching the residential construction industry. (*Include when the effort was conducted, the audience, what was disseminated, and the goal.)*

Q5 Why do you believe this dissemination effort was particularly effective?

Q6 Briefly describe one outreach or dissemination effort which you believe was not as "successful," but might offer important lessons. (*Include when the effort was conducted, the audience, what was disseminated, and the goal.)*

Q7 Why do you believe this dissemination effort was not as successful?

Q8 Were there any materials developed (e.g. promotional, recruitment etc.) for any or all of your effort(s) that you would be willing to share?

- ❍ Yes
- ❍ No

Q9 Do you have evaluation findings from any of your outreach or dissemination efforts with residential contractors that you would be willing to share?

- ❍ Yes
- ❍ No

Q10 Do you know of others who have conducted safety outreach or dissemination efforts targeting residential contractors that we might be able to contact to learn of their experiences?

- ❍ Yes [Please provide any contact information available]
- ❍ No

Q11 Please rate each of the dissemination strategies listed below on their potential for effectively reaching and influencing residential contractors' health and safety practices:

	Very unlikely to be effective (1)	Somewhat unlikely to be effective (2)	Somewhat likely to be effective (3)	Very likely to be effective (4)	I'm not sure x
Retail Outlet Outreach (e.g. big box stores, local hardware stores, rental companies etc.)	❍	❍	❍	❍	❍
Marketing Campaign Campaign(e.g. national falls campaign)	❍	❍	❍	❍	❍
Policy Approaches (e.g. EPA lead requirements, OSHA fall protection standard, skylight installation guidelines, etc.)	❍	❍	❍	❍	❍
Advertising (e.g. articles in trade journals)	❍	❍	❍	❍	❍
Social Media (e.g. Facebook, Twitter, etc.)	❍	❍	❍	❍	❍
Other:	❍	❍	❍	❍	❍

Q12 From the list below, please select the top 3 people or entities that you believe have the most influence on residential contractor's safety and health related decisions. *(Select up to 3)*

- ❑ Architects
- ❑ Business groups (e.g. chamber of commerce; trade associations)
- ❑ Community groups (e.g. civic, religious)
- ❑ Equipment rental houses
- ❑ Health-care providers
- ❑ Homeowners Associations (HOAs)
- ❑ OSHA inspectors
- ❑ Government agencies (EPA, HUD, local permit, offices, etc.)
- ❑ Project owners (e.g. individual homeowners, homeowner associations, small residential new construction developers)
- ❑ Realtors
- ❑ Retail outlets
- ❑ Training programs (e.g. construction skill classes at local colleges)
- ❑ Unions
- ❑ Worker centers/ worker advocacy organizations
- ❑ Workers compensation insurers
- ❑ Other: _____

Q13 Would you be willing to participate in a brief 15-20 minute phone interview to follow-up to discuss in more detail the information you've provided in this survey?

- ❍ Yes
- ❍ No

If "Yes" is selected in Q13 (Would you be willing to provide follow-up information in a brief 15-20 minute phone interview?):

Q13a Please provide contact information below.

- ❍ Email Address _____
- ❍ Phone Number _____

Appendix C

Table 2. Number of respondents who rated a dissemination strategy Very Likely (VL), Somewhat Likely (SL), Somewhat Unlikely (SU), and Very Unlikely (VU) to reach residential contractors and influence their safety and health practices

	CBO				Industry				Researcher			
	VL	SL	SU	VU	VL	SL	SU	VU	VL	SL	SU	VU
Retail Outlet Outreach	-	1	-	1	1	3	1	1	2	8	1	-
Marketing Campaigns	2	1	-	-	2	1	2	1	2	7	2	-
Policy Initiatives/ Regulatory Mandates	3	-	-	-	1	3	-	2	6	4	1	-
Advertising	-	2	-	-	-	4	1	1	2	4	5	
Social Media	-	2	1	-	-	2	3	1	-	4	3	1

*Note: some respondents chose not to rate dissemination strategies within this section

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