

Peer Training, Safety Liaisons, and Safety Conditions at Construction Sites

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Outline

- Training and interventions in collaboration with New Labor
- Development of Safety Liaison Program
- Use and results of safety audits
- Current results and new projects
- Hurricane Sandy



Peer Led Health and Safety Training

- New Labor and Rutgers long term collaboration
- Developed OSHA 10 Small Group Activity Method Curriculum
- Implemented through peer trainers with supervision
- Effective in reaching adult immigrant learners in NJ and elsewhere

Why Safety Liaisons?

- High severe injury and fatality rates in residential construction and among hispanic workers.
- Laborers have little access to health and safety training.
- Immigrants have limited influence to change conditions.
- Peer training and leaders can be effective in teaching and changing behavior



Laborers in NJ Report Substantial History of Worksite Injury

- Among 43 focus group participants, 5 (12%) indicated that they had received medical attention for work-related injuries.
- In baseline survey of day laborers, 36% reported an injury in the previous 6 months requiring them to stop working.
- 18 workers (16%) had been injured this seriously more than once in the previous 6 months.

Hazardous Exposures and Actions Reported by 105 Latino Workers Attending OSHA 10 Construction Training from 2010-2012.

Exposure or Action	Often (%)	Once & A Few Times (%)	Never (%)	Frequency Missing
Self-Reported Hazardous Exposures				
Noise so loud you have to shout to be understood	31(32)	58(59)	9(9)	7
Operate power tools	55(56)	40(41)	3(3)	7
Potential for falling objects from above	7(7)	68(68)	25(25)	5
Heavy equipment operating nearby	13(13)	54(53)	34(34)	4
Heights of 2 meters (6ft.) or higher	48(48)	50(49)	3(3)	4
Trenches more than 4ft. Deep	8(8)	54(53)	40(39)	3
Work close to exposed wires/electrical hazards	21(21)	56(55)	25(24)	3
Breathe concrete, brick, or stone dust	59(57)	42(41)	2(2)	2
Work in enclosed space breathing diesel or gasoline fumes	16(16)	55(54)	30(30)	4
Exposed to debris/dust from lead paint	29(29)	51(51)	20(20)	5
Use adhesives, solvents, or cleaning chemicals	22(22)	50(49)	29(29)	4
Carry loads of 40 pounds or more	64(62)	38(37)	1(1)	2

Actions Reported by Laborers Attending Training

Exposure or Action	Often (%)	Once & A Few Times (%)	Never (%)	Frequency Missing
Actions Reported by Construction Workers				
Asked to be shown how to perform a task you did not understand	14(14)	80(77)	9(9)	2
Tried to talk to a boss about a safer way to perform a task	19(18)	75(73)	9(9)	2
Talked to co-workers about a hazardous situation at work	44(43)	55(54)	3(3)	3
Tried to find out more about job hazards on your own	35(34)	52(50)	16(16)	2
Refused to perform a task that was too dangerous	2(2)	61(59)	40(39)	2
Left a job site because the work was too dangerous	2(2)	33(32)	67(66)	3

Safety Liaisons: A New Model of Health and Safety Leadership

- **Train peer safety leaders to train, mentor and solve health and safety problems with co-workers and supervisors.**
- **Test the effectiveness of safety liaisons to improve hazardous conditions at construction worksites.**
- **Anchor this effort in community-based leadership and self-direction through New Labor.**

Setting: Residential Construction in Northern New Jersey

- Almost no union contracts
- Minority (Latino, other immigrant, African-American) laborers
- Small contractors, including immigrant owners.
- Laborers are transported to diverse sites
- Little health and safety knowledge or oversight among workers and employers

Safety Liaisons 2010-2012

- Developed training for safety liaisons, combining OSHA 10 and leadership skills.
- Successfully conducted participatory Spanish safety liaison training.
- Implemented the use of new Safety Audits to document and direct worksite assessments.
- Created policies and procedures to encourage and monitor safety liaisons in their community.
- Encouraged safety liaisons to take over leadership and direction of their roles.

Safety Liaisons Lead and Decide on Their Roles

- Help choose and train new Safety Liaisons
- Bring attention and changes at their own worksites
- Organize discussion and action around fellow workers' health and safety
- Direct bi-weekly consejo meetings
- Implement OSHA referral process for serious problems
- Enhance New Labor's role as organization





Conditions at construction sites, recorded on safety audits either from the sidewalk or at workers' job sites, by Safety Liaisons

Protection and Equipment	Side walk			At Work			Pr X2 Location
	Yes	% Yes	N/A or Unknown	Yes	% Yes	N/A or Unknown	
PPE							
Hard hats supplied	25	40.9	29	28	50.0	25	0.33
Hard hats worn	27	42.8	27	29	53.7	27	0.24
Boots worn	43	69.3	28	43	74.1	23	0.56
Hearing protection supplied	10	26.3	52	16	40.0	41	0.20
Hearing protection worn	13	31.7	49	19	50.0	43	0.10
Eye protection provided	13	26.5	41	28	47.4	22	0.03
Eye protection worn	17	34.0	40	36	60.0	21	0.01
Mask supplied	5	17.8	62	23	46.9	32	0.01
Mask training	5	19.2	64	9	20.4	37	0.90
Mask worn	8	28.5	62	26	55.3	34	0.02

Conditions at construction sites, recorded on safety audits either from the sidewalk or at workers' job sites

Protection and Equipment		Side walk			At Work		Pr X2 Location
	Yes	% Yes	N/A or Unknown	Yes	% Yes	N/A or Unknown	
LADDERS							
Correct size for the job	18	62.0	61	34	85.0	41	0.03
Fully opened and spreader bars locked	19	70.3	63	37	92.5	41	0.02
Firm foundation for ladder feet	23	76.6	60	37	90.2	40	0.12
Proper climbing procedures	15	57.6	64	33	82.5	41	0.03
Three-point contact rule followed	12	48.0	65	25	69.4	45	0.09
Free from obvious defects	17	73.9	67	31	83.7	44	0.35*
Workers stand below top 2 steps	13	52.0	65	23	62.1	44	0.43
Extend more than three feet above support	11	45.8	66	28	73.6	43	0.03

Safety Audit Results, Continued

Protection and Equipment	Side walk			At Work			Pr X2 Locati on
	Yes	% Yes	N/A or Unknown	Yes	% Yes	N/A or Unknown	
SCAFFOLDS							
Fall protection used if over 10 feet tall	11	27.5	50	17	47.2	45	0.08
Set up on level, stable footing	24	54.5	46	30	76.9	42	0.03
Platform is appropriate width for type of scaffold	20	47.6	48	26	68.4	43	0.06
FALL PROTECTION							
Fall protection provided for heights 6 feet or more	10	23.8	48	15	44.1	47	0.06
Harness is worn properly and attached to secure anchorage	8	20.0	50	16	47.0	47	0.01
Slide-guards are installed across full width and all sides	10	29.4	56	17	47.2	45	0.13
Guardrails set up for openings >6' above lower level	11	30.5	54	19	54.2	46	0.04
Guardrails are constructed sturdily with 2 x 4s	14	43.7	58	17	58.6	52	0.25

Conditions at construction sites, recorded on safety audits either from the sidewalk or at workers' job sites

Protection and Equipment	Side walk			At Work			Pr X2 Location
	Yes	% Yes	N/A or Unknown	Yes	% Yes	N/A or Unknown	
MACHINE HAZARDS							
Workers are trained on the use of power-tools	10	38.4	64	11	30.5	45	0.52
Workers have appropriate PPE and keep clothing away	7	28.0	65	17	40.4	39	0.30
Workers are trained prior to using nail guns	3	20.0	75	5	20.8	57	0.95*
Tile and concrete are cut with wet methods	9	39.1	67	15	41.6	45	0.85

Conditions at construction sites, recorded on safety audits either from the sidewalk or at workers' job sites

Protection and Equipment	Side walk			At Work			Pr X2 Location
	Yes	% Yes	N/A or Unknown	Yes	% Yes	N/A or Unknown	
HEAT STRESS							
Is heat a major problem at this site?	22	78.5	62	25	73.5	47	0.64
Have workers been trained on preventing and recognizing a heat-related illness?	3	12.0	65	5	16.1	50	0.66*
Are workers provided with enough water and appropriate rest breaks?	8	32.0	65	14	42.4	48	0.42

Actions or Changes reported on Safety Audit Forms by Safety Liaisons at 143 Work Sites

Action or Change	Yes	% Yes	No	Missi ng
Talked to co-workers about health or safety concerns	63	60	42	43
Talked to foreman or contractor about health or safety concerns	38	42	53	57
Suggested changes in equipment or procedures to co-workers	37	47	41	70
Asked foreman or contractor for changes in equipment or procedures	16	23	53	79
Asked foreman or contractor for training for self and/or co-workers	8	14	51	89



Rutgers and New Labor: Next Steps

- Expand partnerships with other worker centers
- Streamline and simplify audit process
- Add mobile application to data collection for Sandy project
- Collaborate on other reconstruction and training project
- Reach out to employers and others via new office in Newark

Safety Liaisons Attend Training with OSHA to Improve Health and Safety



Training in action





APPENDIX A1

SAFETY AUDIT CHECKLIST FOR CONSTRUCTION

Jobsite # _____ Observer # _____ Date Observed _____

Audit Completed: From Sidewalk _____ On-site _____
Not Observed

YES NO Not Observed
=N/O COMMENTS

Ladders				
1. Correct size for the job	Yes	No	N/O	
2. Fully opened and spreader bars locked	Yes	No	N/O	
3. Firm foundation for ladder feet	Yes	No	N/O	
4. Proper climbing procedures	Yes	No	N/O	
5. Three-point contact rule followed	Yes	No	N/O	
6. Free from obvious defects	Yes	No	N/O	
7. Workers stand below top 2 steps	Yes	No	N/O	
8. Extend more than three feet above support	Yes	No	N/O	
Scaffolds				
1. Fall protection used if over 10 feet tall	Yes	No	N/O	
2. Set up on level, stable footing	Yes	No	N/O	
3. Platform is appropriate width for type of scaffold	Yes	No	N/O	

Appendix A1. Continued

Fall Protection				
1. Fall protection provided for heights 6 ft. or more	Yes	No	N/O	
2. Harness is worn properly and attached to secure anchorage	Yes	No	N/O	
3. Slide guards are installed across full width and all sides				
4. Guardrails set up for openings >6' above lower level	Yes	No	N/O	
5. Guardrails are constructed sturdily with 2 x 4s	Yes	No	N/O	
Personal Protective Equipment				
Hard hats				
1. Supplied by employer	Yes	No	N/O	
2. Worn when required	Yes	No	N/O	
Boots				
1. Supplied by workers	Yes	No	N/O	
2. Worn when required	Yes	No	N/O	
Hearing Protection				
1. Supplied by employer	Yes	No	N/O	
2. Worn when required	Yes	No	N/O	
Eye Protection				
1. Supplied by employer	Yes	No	N/O	
2. Worn when required	Yes	No	N/O	

Safety Liaisons Meet with and Train Other Workers



Appendix A1. Continued

Respiratory Protection				
1. Supplied by employer	Yes	No	N/O	
2. Training provided	Yes	No	N/O	
3. Worn when required	Yes	No	N/O	
Machine Hazards				
1. Workers are trained on the use of power tools.	Yes	No	N/O	
2. Workers have appropriate PPE and keep clothing away	Yes	No	N/O	
3. Workers are trained prior to using nail guns	Yes	No	N/O	
4. Tile and concrete are cut with wet methods	Yes	No	N/O	
Heat Stress				
1. Is heat a major problem at this site?	Yes	No	N/O	
2. Have workers been trained on preventing and recognizing heat-related illness?	Yes	No	N/O	
3. Are workers provided with enough water and appropriate rest breaks?	Yes	No	N/O	

Appendix A1. Continued

Excavations				
1. Soil and conditions are inspected everyday				
2. Safe exits (ladders) for excavations greater than 4 ft. deep				
3. Shoring, shielding, and inclination assessed for excavations greater than 5 ft. deep				
Actions or Changes				
1. Talked to New Labor or consejo about health and safety concerns and possible changes/training				
2. Talked to co-workers about health or safety concerns				
3. Talked to foreman or contractor about health or safety concerns				
4. Suggested changes in equipment or procedures to co-workers				
5. Asked foreman or contractor for changes in equipment or procedures				
6. Asked foreman or contractor for training for self and/or co-workers				

Appendix A1. Continued

Lead Paint Hazards				
1. Site at risk for lead contaminated dust.	Yes	No	N/O	
2. Have workers been trained on handling lead dust?	Yes	No	N/O	
3. Is the work area properly contained?	Yes	No	N/O	
Electrical Hazards				
1. Work on electrical circuits or energized equipment is begun only after all power sources have been identified, de-energized and locked out or tagged out.	Yes	No	N/O	
2. Overhead and underground electrical power lines are located, identified, and avoided.	Yes	No	N/O	
3. Ladders, scaffolds, equipment or materials more than 10 feet from any electrical power lines	Yes	No	N/O	

