The Newsletter of The Center To Protect Workers' Rights

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On Center

The Research and Development Institute of the Building and Construction Trades Department, AFL-CIO

PRESIDENT'S COLUMN

New Approach to Tough Problems

CPWR has long been initiating and coordinating research and development to improve safety and health in construction. As you may know, we are on work sites trying out new ways to protect worker safety and health. We do this with workers, contractors, and researchers at government agencies and some of the nation's leading universities. Soon, we hope to work in a new way with universities and state governments.

Starting July 1, 2001, with our support, universities will begin to create as many as three regional Construction Policy Research Centers – where architects, engineers, and experts in urban planning, health policy, organizational behavior, and other disciplines can focus together on our concerns. The goal is to further improve conditions for workers and improve productivity.

President Sullivan

Proposals are currently under review and our partners will be named June 1, 2001.

This new approach is needed because, too often, analyses related to working conditions in construction are limited in scope. Thus, economists do much of the public policy analysis, although a mix of information is needed to make good decisions. For instance, working conditions – particularly safety and health – affect costs to industry and to society, through compensation and social services.

The limitations in approach persist, even though the industry employs some 8 million workers, 5 to 6 percent of the labor force. And the construction industry continues to expand in the public sector, particularly with a major program to rehabilitate the interstate highway system.

On a small scale, we have already found that a multidisciplinary approach is valuable. When, in 1992, CPWR began developing

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Site Audits Appear to Improve Safety

Regular visits to construction sites to check fall prevention practices are improving practices and lowering workers' compensation premiums, according to West Virginia University's Safety and Health Extension. The visits are part of the extension's Fall-Safe Partnership Program begun in 1994. The goal is to stop nearly 400 construction deaths yearly by improving use of known safety measures.

Fall-Safe includes advice and training about fall protection, 4 surprise visits yearly by auditors who look at safety practices, scoring, and feedback to management about what is found. The audits give points for measures used. An engineering control – like a guard rail – gets more points than use of personal equipment (PPE). Companies need to keep a minimum score to say they are "Fall-Safe."

A pilot study with 16 mid-size companies (50 to 150 employees) in West Virginia has found that safety practices improve with audits. After 15 months, audit scores improved by 19% (from .64 to .76) for 10 actively participating companies compared with 10% (to .55) for 6 companies just being watched (controls), said Paul Becker, who heads the research. Injury data are not available.

Some participating companies insured through the state say they are getting lower workers' comp premiums, Becker said, although they didn't provide dollar figures. He said St. Paul Insurance Companies and some other insurers are expected to set lower premiums for Fall-Safe companies.

Becker said a key to success is strong support by top management. Also important is worker and management training in fall protection.

A Fall-Safe auditor checks a worksite in West Virginia. The bottom of the worker's ladder should be further out from the wall.

The program is adding 60 contractors in West Virginia and the Midwest, working with West Virginia University, St. Paul Insurance, and the Construction Safety Council. The research, in cooperation with CPWR, is funded through CPWR's agreement with the National Institute for Occupational Safety and Health. For more information, call 1-800-626-4748.

Construction Safety and Health Conference and Exposition

Hosted by the Construction Safety Council and The Center to Protect Workers' Rights

Rosemont Convention Center
Rosemont, Illinois, May 20-23, 2002

Contact: Trish Quinn 301-578-8500, ext. 121
Details to come in future issues of *On Center*.

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SPECIAL FOLD-OUT POSTER INSIDE!

New Approach

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model contract specifications to help companies protect workers from lead on bridges and other steel structures, we convened a working group. It included physicians, lawyers, contractors, workers, and representatives of state and federal agencies on environment, health, and transportation, as well as experts on training and child lead protection from the nonprofit sector. The model specs are being applied at sites around the U.S.

A multi-disciplinary approach at the state or regional level can explore questions like these:

- The effects on construction costs of insurance practices, such as project-specific negotiated workers' compensation and wrap-around policies
- Whether best value bidding achieves long-term public value
- The role of architects and other design professionals in fostering safety and health, what it can/should be and how to achieve that.

Activities to help develop a research agenda might include:

- Seminars and conferences
- Research assistantships for graduate students
- Small-study grants to promote research
- A scholars-in-residence program through adjunct or visiting status within the university
- Publications.

The centers will initially be funded with $70,000 each for the first year. The funding, is part of CPWR's cooperative agreement with the National Institute for Occupational Safety and Health, which is part of the CDC.

We hope the centers, with one each eventually in the Mid-Atlantic, the Upper Midwest or New England, and the South or West, will seek partnerships with other organizations and with state governments. Such alliances and the expanded support they can produce can help expand the influence and effectiveness of these efforts.

We want to be confident that the welfare of the workers who build the nation's infrastructure is a key consideration from the beginning of designs and construction plans. We want architects, engineers, and city planners to learn construction safety and health as part of their professional training and continuing education. Just as a craft worker needs safety certification to do hazardous work, so should the professional who specifies the work. We believe Construction Policy Research Centers will help effect such a strategic approach to safety and health in construction.

Ironworker Rate Down; Other Death Rates Level

In recent years, the rates of both work-related deaths and serious injuries have declined in the U.S. for most industries. And reported serious-injury rates have declined in construction. But the trend in construction death rates is bad news: for most construction occupations, the death rate remained largely unchanged from 1992 through 1998, a new CPWR study has found.

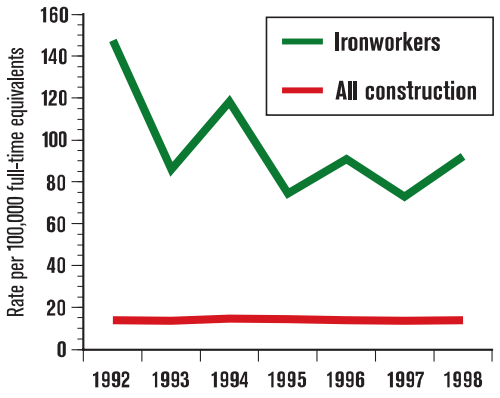
For ironworkers, though, there is some good news. Their work-related death rate has declined by 38%, from 148 per 100,000 full-time equivalents in 1992 to 92 in 1998. That is particularly good news because ironworkers have one of the highest death rates of any occupation, because of falls. Had the 1992 death rate continued, 170 more ironworkers would have been killed on the job in the following six years. (Death and injury rates are measured in full-time equivalents–FTEs–to allow comparisons between construction and other industries. An FTE is 2,000 hours worked per year.)

Rates of work-related deaths from injuries, ironworkers and all construction, U.S., 1992-98

Note: Total of 293 ironworker deaths, an average of 42 per year. A full-time equivalent is 2,000 hours worked per year. Does not include "welders."
Source: Based on U.S. Bureau of Labor Statistics data.

Earl Pollack and Risana Chowdhury looked at statistics for seven years starting in 1992, the first year the U.S. Bureau of Labor Statistics (BLS) issued both a complete national Census of Fatal Occupational Injuries and its Annual Survey of Injuries and Illnesses in its current format. To facilitate comparisons, the researchers produced rates using the BLS Current Population Survey, which estimates hours worked. The annual survey doesn't count government employees; it also leaves out self-employed workers, who are about 25% of the construction workforce. So, the injury data are not complete. But looking at the same report from year to year shows if conditions are getting better or worse.

The overall construction industry rate in 1998 was 14.1 deaths per 100,000 FTEs and 14.0 in 1992 – unchanged. The industry's serious-injury rate in 1998 was 301.1 per 10,000 FTEs, compared with 454.8 in 1992, a drop of one-third. In 1998, there were 1,195 deaths from injuries in construction and 178,341 serious injuries – lost workday injuries with or without restricted work activity.



Although ironworker death rates were lowered over the seven years studied, falls are still the main cause of deaths for most occupations that have the highest rates – ironworkers, laborers, roofers, and welders/cutters. For the other group, truck drivers, the main cause was transportation accidents.

In their report, Pollack and Chowdhury question whether the injury rates for construction really did decline as reported.

The authors have charts showing the trends in injury and death rates for 12 occupations. (For some occupations, the numbers were too low to produce reliable statistics.) The report, *Trends in Work-Related Death and Injury Rates among U.S. Construction Workers, 1992-98*, can be downloaded from **www.elcosh.org** or ordered from CPWR, 301-578-8500.

Study Documents Lung Diseases, Other Causes of Construction Deaths

A study of North Carolina records of deaths over 10 years found that construction workers have a high risk of deaths from accidental falls from elevations, transportation injuries (as drivers, passengers, and pedestrians), and electrocutions, mostly when equipment contacts a power line or other electrical source (see table).

In the death records of 43,900 men for whom construction was listed as the usual occupation, even if they had retired, the analysis found a high risk of deaths for some trades for lung illnesses (such as lung cancers, asbestosis, emphysema, or silicosis) and diseases such as cirrhosis of the liver and mouth cancer, which is tied to a combination of factors, including tobacco use, alcohol use, and exposures to some solvents or metals.

John Dement and five coworkers at the Duke University Medical Center, in North Carolina, looked at all causes of deaths, not just those listed as work-related. That approach is important because no one knows how many construction workers die each year from illnesses that may have come from their jobs. The problem is workers may not get sick for many years after they've been exposed on the job to hazards like metal fumes that can cause cancer or to silica.

The authors used PMRs (proportionate mortality ratios), statistics that show the risk of death for construction workers compared with all men in North Carolina matched by race, age, and sex. For instance, roofers had a PMR for respiratory tuberculosis of 453, more than four times the usual risk.

In addition, injury claims were compared for three groups–residential construction in North Carolina residential carpenters in St. Louis, and union carpenters in Ohio. "Struck by/against" and overexertion (sprains and strains) were the first and second most common cause of injury for each of the three groups. Falls from elevations were also a common problem for the groups.

In terms of costs, in North Carolina, of the 9,205 homebuilder claims, falls were the most costly claims for six of the trades: carpenters, drywall installers, insulators, masons, painters, and plumbers; roofers were not included in the data. In St. Louis, falls were the most expensive of 838 carpenter claims. (Costs were not calculated for the Ohio claims.)

The authors looked closely at 553 injuries by nail guns – "struck by" injuries – and found that pneumatic nail guns caused more than 4% of workers' compensation claims. The tools caused 97% of puncture wounds in residential work, two-thirds of the time after a trigger mechanism safety didn't work or was bypassed, causing an unwanted discharge or misfire.

Among the authors' recommendations:

- Careful compliance with OSHA standards to protect workers from exposures to silica and asbestos
- Research to prevent falls, transportation injuries, electrocutions (from contact with power lines), and "struck by" injuries, including those from nail guns
- Interventions to reduce sprains and strains from heavy and repetitive lifting, often in awkward postures
- Programs to prevent smoking and alcohol abuse.

Besides Dement, the researchers were Hester Lipscomb, Carol Epling, Tejas Desai, Leiming Li, and Barbara De Larco. For statistical reasons, the study focused on men, although some women who worked in construction were killed or injured. The work was done as part of CPWR's cooperative agreement with the National Institute for Occupational Safety and Health, NIOSH, which is part of the CDC.

More information from the study will be posted at **www.cpwr.com** and **www.elcosh.org** Or contact CPWR, at 301-578-8500.

Selected causes of deaths, male construction workers, North Carolina, 1988-97

Cause of death	(PMR)	# of deaths
Asbestosis	(270)	26
Electrocutions	(220)	73
Silicosis	(191)	10
Alcoholism	(142)	423
Homicide	(141)	1,379
Mouth & pharynx cancers	(132)	303
Accidental poisoning	(139)	359
Larynx cancer	(125)	151
Cirrhosis of liver	(125)	912
Accidental falls	(123)	317
Lung cancers	(113)	4,388
Pneumoconiosis	(112)	2,073
Transportation accidents	(108)	2,120

Note: Statistically significant ($p<0.05$) proportionate mortality ratios for 10 years and 43,939 deaths (compared to male population matched for age, race, and sex in North Carolina), listed as usually working construction (SIC 15, 16,17), who lived and died in North Carolina; list is not all-inclusive. PMR above 100 means a higher risk of death; 200 shows twice the risk. Accidental poisoning usually involves alcohol. Mouth cancers may be tied to a mix of tobacco use, alcohol use, and exposure to some solvents or metals. Pharynx includes nasal passages and area in back of throat. Transportation accidents include pedestrian deaths.

Mud Box May Ease Drywall Work

Researchers at the Midstate Central Labor Council in New York have found something that may help reduce sprains and strains for drywall finishers.

Drywall finishers cover the surface of drywall with "mud" to make it smooth for painting. Usually, the mud is put into 10- or 12-inch flat boxes on the end of a pole. The worker pushes the pole and the box up and down against the mounted drywall. To do that, the worker must use a lot of force from the arm and shoulder.

Help is needed. Among other problems, finishers have severe shoulder and arm injuries. "Two contracts ago, we proposed that for every five people hired, one had to be over age 50," said Jeff Kelley, a business representative and taper for Painters District Council 5, in Seattle. "The employer said, 'That's not a problem, but where are you going to find guys over 50?' By age 55, our guys are toast.

"Rotator cuffs (shoulders) are blown. Almost all of our people get carpal tunnel syndrome." The average age for the 500 union finishers in the Seattle area, Kelley said, is 29 years.

Some powered systems may help with drywall finishing, but they are harder to use. Workers must be trained and must use power cords and air lines. The new "Power Assist" mud box uses a spring to help push the mud out of the box when you put the box against a wall. Eight drywall finishers in New York who have tried the new mud box say it's a lot easier to use – needing less force, said Greg Shaw of the Midstate Central Labor Council, in Ithaca.

Shaw said he measured muscle activity for 6 of the finishers using the old and new mud boxes and found a range from no effect to a worker who needed only one-third the force with the new box.

Not everyone is convinced. Kelley, in Seattle, said Ames "makes great tools," but he's used the new mud box and is not sure it's a great improvement.

The mud box is being tried as part of research to reduce sprains and strains for drywall finishers. The work is supported by the Center to Protect Workers' Rights, with funds from the National Institute for Occupational Safety and Health.

To rent the Power Assist box, call Ames Taping Tools at 1-800-241-2771. Or, for more information, call Shaw at 607-277-5670.

Web Site: www.cpwr.com

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