

## A1.4

**Title: *Moving Beyond Surveillance: Lessons Learned from NIOSH Construction Safety Projects***

Author: Fosbroke D

The concept that construction is dangerous work is not novel, nor is the fact that working at heights, around electricity, in trenches, and around heavy machinery has killed thousands of construction workers. Research increasingly focuses on improving conditions in the construction industry, yet recent surveillance data suggest little headway in preventing construction worker injuries.

Why this lack of progress? One reason is that the construction industry's injury issues are complex sets of different problems-- sometimes related and sometimes not. No single at-risk-group accounts for a significant proportion of the 1000 construction workers killed annually. To reduce the toll in construction, research must target specific safety hazards among specific at-risk groups, typically representing 10 to 40 deaths per year. Another reason is that construction research tends to be descriptive and parochial in nature. If research is to impact the level of construction fatalities, researchers need to move beyond "discovering" that roofers fall off of roofs and begin conducting research that covers the spectrum of the public health model-- not just injury hazard identification.

The NIOSH Division of Safety Research began the NORA Traumatic Injury Research Program with the expressed goal of selecting research projects that advance the science of injury prevention along the public health model continuum. Program results are pending, but much has been learned about focusing injury research to bring it closer to prevention. By developing knowledge about tasks, materials, and processes; by moving research into the workplace; and by working with construction industry partners, researchers can focus research so that results are relevant to real world conditions. Simultaneously, researchers learn about channels of distribution, change agents, and spin-off applications, thus, greatly enhancing ability to move positive results out of the laboratory (and peer-review article) and into use on the construction site.

## A1.5

**Title: *Comparing U.S. and European Construction Performance: Promising Leads for Research and Policy?***

Author: Platner J

Several European Union (EU) nations have reported construction fatal injury rates which are considerably lower than US fatality rates based on the Census of Fatal Occupational Injuries (CFOI). Differences in data collection mechanisms may not allow fatality data to be directly compared across national boundaries. However, EU practices and policies provide alter-

native approaches which deserve consideration as ideas for potential leads for new types of construction interventions. For example, EU practices differ from the US with respect to allocation of responsibility for safety and health on the job-site between owners, contractors, architects and designers. EU directives and the related national enabling legislation provide incentives for safety in design and pre-construction risk assessment which are quite different from the US. Policy alternatives that encourage safety considerations in design and engineering, and which require pre-construction assessment of hazards and development of controls, provide valuable contrasts to current US practice. There are also several examples from the US of similar incentives/ requirements being built into public and private bid structures and specifications. These and other approaches will be described.

## Session: A2.0

**Title: *Cutting Edge Research: The NORA Intervention Evaluation Contest***

Moderators: James Collins, Ted Scharf

### A2.1

**Title: *Evaluation of the Effect of the Vertical Fall Arrest Standard in Washington State on Union Carpenters***

Authors: Lipscomb HJ, Li L, Dement JM

Washington State enacted and enforced a fall standard for the construction industry in 1991, preceding the Safety Standard for Fall Protection in the Construction Industry promulgated by U.S. Federal OSHA in 1994. We used administrative data to identify a cohort of 16,215 union carpenters, their hours worked by month, and workers' compensation claims for the ten year period 1989-1998. Using these data, we evaluated changes in the rate of falls among this cohort after the fall standard in Washington State in 1991, taking into account the temporal trends in their overall injury rates. Time window analyses allowed us to explore when the standard appeared to have the greatest effect. Since the standard also has regulations designed to decrease severity of falls, we compared measures of severity before and after the standard including costs and days lost from work.

There was a significant decrease in the rate of falls from height after the standard went into effect, even after adjusting for the overall decrease in work-related injuries among this cohort. The greatest decrease was seen 3-3.5 years after the standard went into effect. There was also a significant reduction in mean paid lost days per injury; and when adjusting for age and temporal trend for costs among non-fall injuries there was a significant reduction in mean costs per fall.

A significant reduction in the rate and severity of falls from elevations among a large cohort of high risk carpenters was demonstrated following promulgation of the Vertical Fall Ar-

# NOIRS 2003 ABSTRACTS

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