

a 25 mm wide slider, the *cof* was consistently higher. The *cof* gave reasonable correlation with 60 degree gloss measurements.

While planarity deviations may affect a test result, they will not affect the friction that is available to the pedestrian. In order not to underestimate the available traction, it may be necessary to determine the degree of effective contact.

All slipmeters have potential limitations. When validating slipmeters a wide range of products should be evaluated and the results compared with subjective experiments using humans.

**Session: E2.0**

**Title: Surveillance and Intervention Programs Targeting Injuries in the Construction Industry**

Category: Special Session

Organized by T. J. Lentz, National Institute for Occupational Safety and Health

Moderator(s): T. J. Lentz

**E2.1 Survey Shows Commitment to Safety by Large Construction Firms Produces Results—Hinze JW**

In the fall of 1999, a nationwide study was conducted with the 400 largest construction firms in the United States. The survey addressed a variety of practices that are expected to produce good results in the area of safety. The survey also included questions on more novel approaches of achieving good safety performance results. The survey responses were compared with the reported injury frequency records to identify those practices that were associated with particularly good safety results. Several findings of interest were disclosed. First of all, the responding firms tended to have very good safety records, reporting an average injury frequency of about one-third of the industry average. Perhaps the most effective practices of the firms were in the area of training. Several variables on training were associated with good safety performance records. Several practices are clearly not mandated by regulations but were found to be associated with good safety records. Examples include the investigation of near misses, conducting worker safety perception surveys and considering past safety performance when making decisions on merit raises. While drug testing had been shown to significantly impact safety performance in past studies, this was no longer a finding, primarily because almost all firms have a fully implemented drug testing program in place. Interesting results were found that were related to safety incentives. Several additional findings of interest were also disclosed in the study.

**E2.2 Evaluation of the OSHA Construction Accident Reduction Emphasis (CARE) Program in Florida—Johnston S**

In Florida, in Fiscal Years 1996, 1997, and 1998, the number of construction fatalities increased from 50 to 58 to 65, respectively. The percentage of fatalities relating to construction compared to the total number of fatalities also increased. Due to this significant increase in construction fatalities, the Occupational Safety and Health Administration's (OSHA) Florida area offices developed and implemented the Construction Accident Reduction Emphasis (CARE) program. The mission of CARE is "to reduce construction accidents and fatalities in Florida by focusing resources on enforcement, partnership, and outreach." The program was officially implemented in March 1999.

To achieve the enforcement component, we are dramatically increasing the number of construction inspections by augmenting OSHA's Florida offices with compliance officers from other states. The additional personnel also allows OSHA to conduct a comprehensive inspection of all contractors on any site where a fatality occurs. OSHA is establishing partnerships with several organizations which will mentor contractors, particularly those small contractors with 25 or fewer employees, to improve their safety and health awareness and aid them in establishing effective safety and health programs.

To achieve the outreach component, OSHA is establishing alliances with the Florida Division of Labor, employers, organizations, advocacy groups and unions to provide training, information and assistance to employers and employees. OSHA is also holding informational meetings about the program, arranging construction training classes, supplying employers with computer disks containing 13 sample safety and health programs, developing and distributing safety posters and pocket cards, putting information about CARE on the Internet, developing and distributing information in Spanish, and encouraging news articles about the program by the media. Since the implementation of the CARE program, construction fatalities in Florida declined from 65 in Fiscal Year 1998 to 54 in 1999.

**E2.3 Fall Protection Emphasis Within OSHA's Region V—Medlock R**

In the construction industry, falls lead all other work-related causes of fatalities. Given this fact, coupled with two highly publicized construction accidents/fall fatalities that occurred in the Cleveland area, Mr. Medlock developed a Fall Hazard Emphasis Program designed to focus resources in addressing this major hazard. While the program began as a Cleveland initiative, it was expanded to cover all of Ohio and eventually all of OSHA's Region V. Due to the program's notoriety, similar local Fall Hazard Emphasis programs have emerged in

several locations throughout OSHA. One such emphasis program involves the construction of telecommunication towers.

The Fall Hazard Emphasis Program involved three initial phases which featured stronger enforcement and a better inspection targeting system. Along with increased enforcement, an outreach program was provided to contractors, associations, and labor, that provided education in best work practices and fall protection methods. Further, the Agency also developed internal fall protection coordinators/specialists within each Area Office. This not only enhanced OSHA's expertise, but also provided a compliance assistance resource to interested stakeholders.

The presentation will include the program's results with regards to fatality trends, inspection response times, violation/fall hazards corrected, training successes and how the program established increased respect for OSHA in the construction industry. It will advise as to how certain initiatives within the program were successful in getting companies to require fall protection at heights less than that required by the OSHA standards.

### ***E2.4 An Unconventional Surveillance Tool for Tracking Construction Projects in the State of Illinois***—Broderick T

The construction industry presents challenges for occupational safety and health professionals conducting research or designing and implementing safety programs. Construction projects are often of short duration and located in remote areas. Regulators find the industry difficult to examine for the same reasons. OSHA uses data supplied by the University of Tennessee (UT) to schedule inspections of construction sites. Supplied to UT by a private sector vendor, the data are at times outdated or erroneous and the projects may have been canceled or may have already been completed. Compliance officers waste valuable time when they drive around attempting to locate specific projects, only to find completed work or vacant land.

A project tracking system in Illinois provides superior accuracy and has the capability to capture extensive information on both publicly (48%) and privately (52%) funded projects. Currently, users of the system have access to information on over 97,000 projects in Illinois and the Northern portions of Indiana and Iowa. Additionally, users of the system can access over 65,000 company directories, for detailed information about each firm.

The contractor files contain histories of projects that have been bid or have been awarded. A resume of each contractor can be produced. The project files describe the scope of work to be performed, whether the job will be union or open shop, estimated cost of construction, anticipated start and end dates, exact location of the job, and key information about

contacts at the site. Information about subcontractors working at or proposed for the project can be found, as well.

This system was initially developed to assist union contractors and building trades unions to identify prospective projects well in advance of contractor selection. This enabled early marketing efforts to target owners with information about the virtues of "building union". Recently, OSHA's Region V office in Chicago initiated a subscription to examine the system's viability as a surveillance tool for locating construction sites. The existing targeting system at University of Tennessee is reportedly ineffective at locating small and short duration projects, such as the highly hazardous tower erection sites. Currently OSHA is field-testing the system and the presenter will provide the latest information on its viability for compliance purposes.

A system with this degree of accuracy may eventually have other uses for health and safety professionals seeking information or conducting intervention work from/with these highly mobile worksites and their similarly mobile workers.

### **Session: E3.0**

#### **Title: Young Worker Injuries: Innovative Interventions and Evaluation Challenges**

Category: Special Session

Organized by the NORA Special Populations at Risk and Intervention Effectiveness Research Teams

Moderator(s): Dawn Castillo

### ***E3.1 Injuries to Young Workers: An Overview***—Davis L

Millions of youth in the United States are employed each year. While work can have important benefits, it also imposes health and safety risks. Each year nearly 70 youth die as a result of work-related injuries and tens of thousands are injured. This presentation will provide an overview of youth employment in the United States and the descriptive epidemiology of both fatal and non-fatal occupational injuries among young workers. Patterns by age, gender, and industry will be described and the available information on comparative injury rates for young and adult workers will be discussed. Risk factors specific to young workers that need to be taken into account in developing intervention activities will be also be addressed. These include, for example, the developmental characteristics of youth and inexperience. Some of the outstanding research questions will also be highlighted.

### ***E3.2 Expanded Opportunities for Prevention of Young Worker Injuries***—Sinclair, RC

There is little disagreement that there is a need for information and education about young worker injuries. Youth, parents, employers, teachers, health departments, labor departments, and health care providers tend to be surprisingly uninformed about the hazards youth face at work and what can be done



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## ABSTRACTS

**National Occupational  
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