enforced uniformly across the industry on large and small sites? Researchers should engage contractors and workers as partners in practical assessments that consider economic impacts, organizational barriers to change, skills needed, and how a change in one process may impact other work processes. Just interesting research results are of little value to either contractors or workers. We want to see real change in the industry that lead to significant reductions in injuries and fatalities, and gives contractors with the best safety performance a competitive advantage.

B1.4

Title: Extramural Research Perspectives on Construction Research Priorities
Author: Gittleman J

Over the past decade overall injury rates in construction have fallen from 6.9/100 workers to 3.2/100 workers, a decline of more than 50%. However, within the construction sector there are still many high risk activities posing safety hazards and causing injury to workers. Research projects by CPWR and its consortium members have spanned a wide array of topics which have characterized traumatic injury, work-related musculoskeletal disorders, and on a more limited basis health effects such as lead, noise and exposure to silica. Safety projects have demonstrated the value of interventions focused on fall protection, lock-out tag-out procedures, scaffold safety practices and materials substitution (e.g. light weight block).

In the early 1990s, many of these projects started out as surveillance efforts to identify the magnitude of the problem. In the mid-nineties efforts shifted to interventions to identify solutions and in some cases best practices. From 2000 to the present implementation of risk reduction strategies via use of engineering controls, work practices, personal protective equipment, and training are being explored. Moving the research agenda forward will require continued intervention and evaluation along with greater emphasis on impact assessment and diffusion of information and technology throughout the industry to employers and employees.

Session: B2.0
Title: Quantifying Injury Exposure: A Tool for Evaluating Interventions on Road Construction Sites
Moderator: Stephanie Pratt

B2.1

Title: Defining Hazard Areas Around Construction Equipment
Author: Hause MG

Construction workers are at risk of fatal and serious nonfatal injuries when working on foot near construction vehicles (e.g., dump trucks) and equipment (e.g., graders, wheeled loaders, and excavators). Between 1992 and 1998, excluding collisions between vehicles and single-vehicle crashes, 818 construction workers were killed in incidents involving construction vehicles and equipment. Of these, 703 deaths were due to a worker on foot being struck by a vehicle (437 deaths), or being caught between, in or pinned by a vehicle (266 deaths). Evaluation of worker exposure to the hazard of being struck by construction vehicles and equipment requires an understanding of the blind areas surrounding the construction vehicles and equipment. A blind area is the area around a vehicle or piece of construction equipment that is not visible to the operators, either by direct line-of-sight or indirectly by use of internal and external mirrors. Forty-three blind area diagrams for construction equipment have been developed; 19 by our in house research staff, and 24 via an external vendor through a contract. The diagrams will be combined with information on operating speeds of the equipment and human reaction times to define hazardous areas around equipment on asphalt paving operations. Zones of varying probability of being struck by operating equipment will define these hazard areas. The blind area diagrams presented are an integral component of defining worker exposure to being struck by operating equipment learned from pre-intervention and post-intervention studies that are currently being conducted.

B2.2

Title: Development of Internal Traffic Control Plans
Authors: Graham JL, Williams CL, Burch R

A temporary traffic control plan (TCP) describes how a specific work zone is to be set up to ensure the safety of the motoring public traveling through the work zone; however, construction equipment and vehicles within the work space are not addressed by TCPs. In contrast to a TCP, an internal traffic control plan (ITCP) is a tool that project managers can use to coordinate the flow of construction vehicles, equipment, and workers operating in close proximity within the activity area, so that the safety of workers can be ensured. NIOSH is sponsoring research on

NOIRS 2003 ABSTRACTS

Although the abstracts in this publication were proofread to eliminate obvious errors in spelling, punctuation, and grammar, they were neither edited nor officially cleared by the National Institute for Occupational Safety and Health (NIOSH). Therefore, NIOSH is not responsible for the content, internal consistency, or editorial quality of the abstracts. That responsibility lies solely with the individual authors. Any use of company names and products throughout this publication does not imply endorsement by NIOSH, the Centers for Disease Control and Prevention, the Public Health Service, or the Department of Health and Human Services.