P07

Title: Crane-Related Fatalities in Construction, 1992-2006

Author: **McCann M**

Introduction: Recent tower crane collapses with multiple deaths in New York City and Miami have generated concern about crane safety and the risk to the public in general. The purpose of this study is to analyze the causes of crane-related deaths in construction.

Methods: Crane-related deaths were identified by selecting all construction records from 1992-2006 with source or secondary codes of "crane" (343*) from the Census of Fatal Occupational Injuries Research File of the Bureau of Labor Statistics. The records were analyzed for causes of death and occupation.

Results: A total of 315 crane-related worker deaths were identified, about 21 deaths per year. Major causes of death were contact with overhead power lines (32%), falling/collapsing cranes (19%), struck by crane parts or loads (except falling booms) (23%), struck by falling crane booms (14%), and caught in/between (7%). Less than 10% of the crane deaths involved tower cranes. The main occupations of workers killed were construction laborers (30%), crane and tower operators (16%), supervisors/ managers/administrators (13%), other heavy equipment operators (7%), and mechanics (5%). In the overhead power line contact deaths, 29% of contact involved the crane boom, and 19% involved crane cables. Only about one-third of the CFOI narratives for falling/collapsing cranes indicated the cause of the collapse. Reasons listed included insufficient ground support, excessive loading, mechanical problems, and high wind. About 60% of the falling crane boom deaths occurred while assembling or dismantling the boom or part of the boom.

Discussion: Recommendations include: (1) a permit system for working near overhead power lines; (2) required state certification of crane operators; (3) following recommended procedures for assembly, disassembly and rigging of cranes; (4) following manufacturer's limits for loads; and (5) not working under (or allowing pedestrian or vehicle traffic under) suspended crane loads.

P08

Title: Nail-Gun Injuries Treated in Emergency Departments—United States, 2001-2005

Authors: **Jackson L**, Lipscomb H

Introduction: Speed, ease of use, and ready availability have made pneumatic nail guns a common tool used in work settings such as residential construction and wood-product fabrication. In addition, the tools are now readily available to consumers, extending to the public what had been primarily a potential work-related hazard.

Methods: To characterize nail-gun injuries in work and nonwork settings, injuries treated in U.S. hospital emergency departments (EDs) were studied by using the U.S. Consumer Product Safety Commission's (CPSC's) National Electronic Injury Surveillance System (NEISS) and the NEISS occupational injury supplement (NEISS-Work) maintained by the National Institute for Occupational Safety and Health (NIOSH).

Results: During 2001-2005, an average of approximately 37,000 patients with injuries related to nail-gun use were treated annually in EDs, with 40% of injuries (14,800) occurring among consumers. In addition, in 2005, nail-gun injuries among consumers were about three times higher than in 1991 (4,200)—approximately a 200% increase. In 2005, most injured consumers and workers were men. The median age for injured workers was 27 years, and 35 years for consumers. The diagnosis associated with 87% of the nail-gun injuries was either wound with a foreign body or puncture wound.

Discussion: ED injury estimates provide a national perspective on the injuries received from nail guns and indicate how injuries from tools used in work and nonwork settings can overlap. Although training regarding safe work practices might reduce nail-gun injuries, use of sequential-trip triggers is likely to be more effective. The current voluntary ANSI standard only addresses availability of the sequential-trip triggers. Distribution of new nail guns with sequential-trip triggers without the optional contract-trip triggers might help reduce nail-gun injuries.

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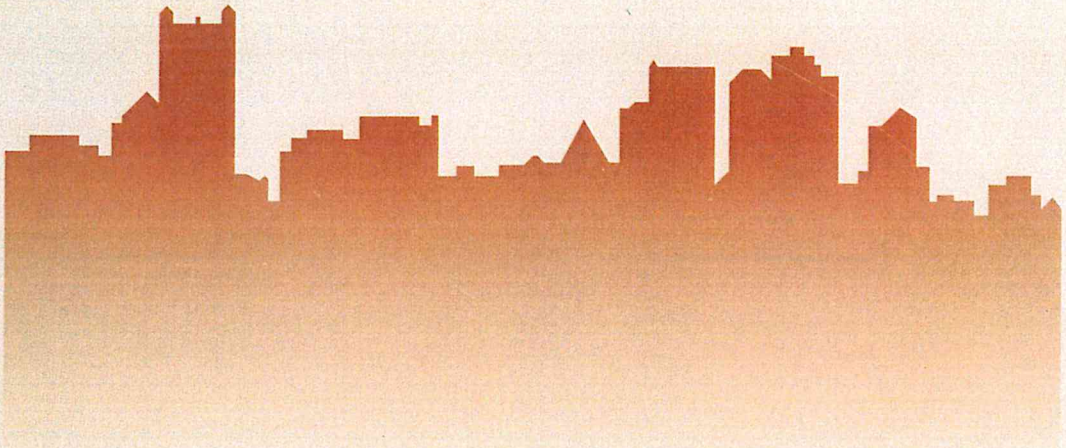

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