

NIOSH Strategic Goals to Reduce Fall Injuries In The Workplace

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Fall-prevention research has long been recognized as one of the most critical areas of occupational safety research. Over the past 15 years, the National Institute for Occupational Safety and Health (NIOSH) has recognized fall prevention as a strategic research priority and has conducted a program of laboratory- and field-based research to identify fall risks and develop prevention strategies and technologies. Recently, NIOSH has made a concerted effort to develop and update strategic research goals to systematically address the national occupational fall burden. This paper summarizes the NIOSH priority goals for research to prevent workplace falls.

Introduction

The U.S. Bureau of Labor Statistics reported a total of 5,657 fatal work injuries for calendar year 2007 [BLS 2009]. Of the fatality cases, 847 were associated with falls. In addition, of the 1,078,140 nonfatal occupational injuries and illnesses involving days away from work in 2008, there were 260,610 cases associated with slips and falls [BLS 2010]. The National Safety Council [2002] estimated that compensation and medical costs associated with employee slip and fall incidents were approximately \$70 billion/year. The U.S. construction industry continues to suffer the highest rate of fall-related fatalities, while the health services and wholesale and retail industries experience the highest frequency of non-fatal fall injuries.

Historically, NIOSH biannual meetings with Occupational Safety and Health Administration (OSHA) to discuss research needs for safer workplaces consistently included the subject of fall prevention. NIOSH's National Occupational Research Agenda (NORA) also has identified reducing fall injuries as a primary strategic goal for the Construction Sector and the Traumatic Injuries Cross-Sector. Recently, NIOSH has undertaken a concerted effort to work with

stakeholders to develop and update strategic goals to address this national occupational burden. This paper describes the current NIOSH priority research goals for occupational fall prevention. Through this effort, we hope to increase communication among ourselves and with key stakeholders, to more effectively advance a common research agenda, and to facilitate the implementation of research findings to prevent falls in the workplace.

The Process

The strategic plan for the NIOSH effort in reducing fall injuries in the workplace was developed to (1) focus program activities in directions that are likely to have the greatest impact on preventing fall injuries and deaths, (2) ensure a systematic approach from risk factor identification to implementation of results in the workplace, (3) provide guidance to NIOSH intramural and extramural scientists in conceptualizing and planning research projects and activities, (4) assist leadership in balancing programmatic direction and resource management, and (5) facilitate coordination of research programs within the NIOSH portfolio.

The Goals

Based on the magnitude and severity of fall injury data, stakeholders' input and the above mentioned process criteria, 5 strategic goals are proposed; each with 1 to 3 intermediate goals.

Strategic Goal 1 - Reduce Fall Injuries in the Construction Industry

Intermediate Goal 1: Construction organizations, engineers, architects, and employers in the construction industry will implement effective, evidence-based fall prevention and protection designs, technologies, programs, and communications materials for their structure design and at their work sites.

Intermediate Goal 2: Safety research organizations, trade associations, insurance companies, and employers will identify, characterize, and reduce fatal and serious injuries associated with construction falls to a lower level among Hispanic construction workers.

Strategic Goal 2 - Reduce Fall Injuries in the Health Services Industry

Intermediate Goal 1: The health services industry will implement comprehensive slip, trip, and fall (STF) prevention programs.

Strategic Goal 3 - Reduce Fall Injuries in the Wholesale and Retail Trade (WRT) Industry

Intermediate Goal 1: Engineers, WRT trade associations, and employers in the WRT industry will implement effective, evidence-based fall prevention and protection designs, technologies, programs, and communication materials for the handling, storage and retrieval of merchandise.

Strategic Goal 4 - Reduce Fall Injuries in the Public Safety, Services, Manufacturing and other high risk Industries

Intermediate Goal 1: Government agencies, vehicle and equipment manufacturers, standards committees, and occupational safety professionals will work together to improve the designs of ambulances, fire trucks, and heavy trucks to reduce the risk of injuries and fatalities associated with falls from these vehicles.

Intermediate Goal 2: The food services industry and other high risk industries will implement comprehensive slip, trip, and fall (STF) prevention programs.

Strategic Goal 5 - Reduce fall injuries through research on human characteristics and on biotechnology-based fall control measures.

Intermediate Goal 1: Researchers will identify biomedical information of humans to design out fall risk or craft engineering solutions to control worker fall risk.

Intermediate Goal 2: Manufacturers will produce and market new, improved fall protection devices and

systems that effectively reduce the forces to the human body during fall arrest and fall termination.

Intermediate Goal 3: Researchers, safety professionals, and safety investigators will use comprehensive digital models of human fall dynamics to evaluate new fall prevention and protection technologies, products, and methods and conduct fall injury investigations to recommend solutions.

Summary

Fall-prevention research has long been recognized as one of the most important and needed areas of occupational injury prevention research. This paper presents current NIOSH priority strategic goals to reduce fall injuries in the workplace, including the construction, health services, wholesale and retail trade, public safety, and manufacturing industries. These priorities include research on human characteristics and biotechnology-based fall control measures. Targeted research priorities also address areas of surveillance and technology assessment, among others. Although not presented here, detailed "Activity/Output Goals" have also been developed for these strategic goals to guide project planning. Through this presentation, we hope to increase communications among ourselves and with key stakeholders, to more effectively advance a common research agenda, and to facilitate the implementation of research findings to prevent falls in the workplace. The findings and conclusions are those of the authors and do not necessarily represent the views of NIOSH or imply the policies of NIOSH.

References

- BLS (Bureau of Labor Statistics) [2009]. Fatal occupational injuries by event or exposure, 2007–2008 [www.bls.gov/news.release/cfoi.t01.htm]. Date accessed: April 1, 2010.
- BLS [2010]. Number of nonfatal occupational injuries and illnesses involving days away from work by industry and selected events or exposures leading to injur or illness, 2008 [www.bls.gov/iif/oshwc/osh/case/ostb2086.pdf]. Date accessed: April 1, 2010.
- National Safety Council [2002]. Report on injuries in America, 2002. Itasca, IL: National Safety Council.


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