1977 and 2001 that were directly attributed to environmental heat. Medical Examiner records were reviewed for 161 decedents aged 10+ years to obtain information about occupation, on-the-job status, and environmental and work conditions at the time of each heat injury. Characteristics of fatal occupational injuries were compared to those of fatal non-occupational injuries. Fatality rates were calculated using employment information from the Decennial Census.

Results. During the 25-year observation period, rates of fatal heat injury declined in the general population and among workers. Twenty-five percent (n=40) of the decedents experienced heat injuries while working. Decedents who died on-the-job tended to be younger (median age: 41 years) than decedents who died in non-occupational settings (median age: 61 years). Occupational fatalities occurred most often among males employed in construction (n=14) and agriculture (n=18). Deaths in the agricultural industry were predominantly among Black, and more recently Hispanic, workers. Narrative portions of Medical Examiner records describe instances of agricultural workers, mainly field laborers harvesting row crops, dying unnoticed and without medical attention.

Conclusions. Heat-related injury continues to be an important problem for workers performing physically demanding tasks, especially during summer months. The incidence of heat-related death may seriously underestimate the public health impact of this problem; fatalities should serve as sentinel events indicating dangerous working conditions. These findings justify involving workers, employers and labor organizers in public health programs to prevent illness and injury while working in hot weather.

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Title: A Communication Intervention for Technology Transfer of NIOSH Field Portable Analytical Methods

Authors: Buzzard-Ott SD, Williams TA, Welbourne JL, Booth-Butterfield SJ, Clough-Thomas KS, Lawryk NJ

NIOSH researchers have recently developed new field portable analytical methods for measuring airborne metals. With the introduction of these new methods, NIOSH recognized the need to transfer these methods to potential end-users. To accomplish this, NIOSH implemented a communication intervention with the goal of increasing the use of the methods through communication The intervention included a three step process: 1) conduct message pretesting on a random sample of industrial hygienists prior to sending the intervention, 2) implement the intervention, and 3) evaluate the effectiveness of the intervention and make mid-course modifications. The intervention included a multi-channel, multi-exposure technique and was disseminated to all members of the American Industrial Hygiene Association (AIHA).

AIHA members completed message testing and annual evaluations. Participants were asked to review materials (advertisements and brochures) on the new NIOSH field portable methods and to complete a survey regarding their thoughts and opinions toward the materials. Industrial hygienists preferred easy to read information presented in a low graphic style. The message testing results provided the framework from which the communication intervention was developed. The intervention consisted of advertisements in the AIHA Journal, a website, and direct personal mailings. All materials focused on the benefits of using the methods. An annual evaluation assessed the effectiveness of the intervention and provided information needed to make mid-course changes. Findings showed a positive change in behavior, and identified four barriers toward using the methods, which were addressed in a second intervention. This discussion will focus on message testing procedures, findings, and the overall effectiveness of the intervention on the self-reported use of the new NIOSH field portable analytical methods.

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Title: Research Program to Develop Optimal NIOSH Alerts for Farmers

Authors: Williams TA, Buzzard-Ott SD, Welbourne JL, Clough-Thomas KS

This NIOSH research project applies psychological and communication theories to experimentally manipulate features of the NIOSH Alert and then examine the effects of these manipulations on the effectiveness of the Alert. The goals of the project are to: (1) increase the degree to which workers are motivated to elaborate upon the health and safety message presented in the Alert and (2) to create messages that contain strong arguments. To design the experimental Alerts, researchers have manipulated the NIOSH Alert Preventing Injuries and Deaths from Skid-Steer Loaders with concepts from the Elaboration Likelihood Model and Imagery.

Farmers were recruited to review an experimental version of the Alert and then complete a survey assessing their risk awareness, comprehension of the message, message elaboration, recall of the recommendations, attitudes toward the recommendations and behavioral intentions. Field research has been conducted at 3 locations: (1) the West Virginia State Fair, (2) the Mid-West Ag Expo, and (3) the Ohio-Michigan Equipment Dealers Association. Results from the first two field studies showed that farmers who received the Alert containing goal attainment imagery found the Alert easier to visualize, stronger, more convincing and more attention getting than the standard Alert. Farmers who received the Alert containing goal attainment imagery reported heightened perceptions of risk awareness and more positive attitudes toward engaging in safety recommendations. In addition, they reported that they would be more likely to pass the information on to other farmers. Analyses on

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