D4.2 The Relation Between Age & Duty-Related Injuries in Urban Fire Fighters I—Beaton R, Johnson C, Salazar M, Murphy S

Urban firefighters perform a variety of labor-intensive duties and tasks including fire suppression, rendering emergency medical services, and extrication/rescue. In 1997, the annual incidence of duty-related injuries in U.S. firefighters (40%) was nearly six times the average reported by other private sector U.S. worker groups.

The purpose of this investigation was to identify risks associated with firefighter age as well as protective factors for duty-related injuries employing a cross-sectional analysis of survey data obtained from two U.S. metropolitan fire departments. In a NIOSH surveillance study firefighter participants were asked to report if they had "been physically injured in the line of duty within the past year," and whether they were "still experiencing the after effects of this injury." Participants also reported the type of line-of-duty injury experienced.

Sample(s): Participants who completed surveys between 1995-1997 from their respective departments (n=382 and n=158) comprised the total firefighter sample (N=540). Approximately 90% of the potential respondents from each department participated. The average age of the total participant sample was 38 y.o., with an average of 11.25 years of service.

Analyses, Results, & Conclusions: Respondent data were analyzed by decade-age cohorts consisting of firefighters in their 20's (n=95), 30's (n=207), 40's (n=188), and 50's (n=47). In the older cohorts, there was significant increase in both the percentage of firefighters reporting duty-related injury (2=12.37; df=3; P<.01) and in the percentage reporting the "after-effects" of their duty-related injury (2=36.14; df=3; P<.001). The most commonly reported injuries were musculoskeletal.

In a series of logistical regression equations, firefighter age and department were shown to correctly categorize "on-the-job" injuries in 67.7% of cases. However, neither rank, gender, nor any reported health habit improved predictions of duty-related injury status. Explanations of these findings and implications for firefighter training and policy formulation are considered.

D4.3 A Prospective Longitudinal Study of Duty Related Injuries in Urban Fire Fighters—Johnson CL , Beaton R, Lewis E, Ollis T

Urban firefighters, by virtue of the often dangerous and labor-intensive emergency duties they perform, have an annual incidence of on the job injuries that is nearly six times the average reported by other private sector U.S. worker groups (IAFF, 1997). Exploring longitudinal data obtained from two U.S. metropolitan fire departments, the purpose of this investigation was to identify variables (both risk and protective factors) which might predict future duty related injury status (Injured: Yes/No).

Methods and Sample: In a NIOSH surveillance study firefighter participants from two urban fire departments were asked to report if they had "been physically injured in the line of duty within the past year." Survey data were then collected from the firefighter participants every six months for the next 18 months. Subjects who were uninjured at baseline were selected for analysis (n= 185) and classified with regard to a subsequent job-related injury in the 18 month follow up period (Subsequent Injury: Yes/No). Baseline measures of demographics as well as symptoms and sources of stress were examined as potential variables predictive of future on the job injury.

Findings and Conclusions: Results identified self reported symptoms of stress (SOS Total score) (r=0.22 p<0.01), reported concerns about potential "reductions in force, wages and benefits" (r=0.22 p<0.01), and "conveying news of tragedy" (r=0.21 p<0.01) as the most powerful predictors of future duty related injury in this sample. However, neither participant age, rank, nor any other demographic variable were significant predictors of future injury. Explanations and limitations of these findings as well as of implications for firefighter policy and training are considered.

D4.4 Fire Fighter Fatality Reports and Their Importance to the Volunteer Fire Service—Schafer HS

The National Volunteer Fire Council (NVFC) participated in a workshop to determine the level of detail, content and distribution of the National Institute of Occupational Safety and Health's (NIOSH) Fire Firefighter Fatality Investigation and Prevention Program.

The purpose of the program is to determine factors that cause or contribute to firefighter deaths suffered in the line of duty. The outcome of the reports are distributed in many ways including mailings to the major fire service organizations and postings on the NIOSH website.

The reports are beneficial to the volunteer fire service for a variety of reasons. These include prevention of firefighter death and injury. The NVFC has used the informative reports to educate the volunteer fire service through its newsletter and website. Oftentimes, the recommendations made require additional funding for equipment, training, etc. The NVFC educates members of Congress through the reports as well.

Most recently, a report identified that if firefighters involved in a wildland fire had had more equipment, lives may have been saved. This type of equipment is made available to volunteer firefighters through the Volunteer Fire Assistance

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ABSTRACTS

National Occupational Injury Research Symposium

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