0345 **LINE OF DUTY DEATHS AMONG U.S. FIREFIGHTERS: AN ANALYSIS OF FATALITY INVESTIGATIONS**

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10.1136/ip.2010.029215.345

Firefighting is a high hazard occupation. In the U.S. alone, over 100 firefighters die in the line-of-duty each year and over 80 000 are injured. In this presentation, we summarise results from an independent analysis of firefighter fatality investigations completed by the National Institute for Occupational Safety and Health (NIOSH) between 2004 and 2008 (N=143). Of the 143 investigation reports reviewed, 80 involved medically related fatalities and 63 involved fatal traumatic injuries. The 143 investigations produced a total of 867 recommendations for improvements or corrective actions: 417 from medical investigations and 450 from trauma investigations. Using spreadsheet and relational data base software, we identified 35 high frequency recommendations. These high frequency recommendations were mapped onto the major components of firefighting operations (personnel, incident command, operations/tactics and equipment) using a fishbone or Ishikawa diagram. The personnel component of the fishbone diagram accounted for 14 high frequency recommendations and three contributing factors: readiness, training and staffing. A total of nine recommendations were classified within the incident command component and arrayed in terms of four contributors: risk assessment, accountability/rescue, role maintenance and standard operating procedures (SOPs). These results point to deficiencies in personnel management and operational supervision, and suggest that many firefighting organisations routinely accept very thin margins of operational safety. The NIOSH investigative protocol, while quite thorough, provides only very limited insight into the organisational and/or cultural forces that give rise to such acceptance. Recommendations for addressing this situation are discussed.