NIOSH Public Safety Program

May 2016

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Public Safety Program works with partners in industry, labor, trade associations, professional organizations, and academia. The program addresses national priority research topics, focused on these areas:

- Reducing injuries and deaths from motor vehicles among Public Safety workers
- Reducing structural and wildland fire fighter hazardous exposures, injuries and deaths
- Improving health and wellness among Public Safety workers, especially heart health

What do we do?

- Develop new technologies, best-practice guidance and other tools to help Public Safety workers drive more safely on the job.
- Investigate law enforcement officer motor vehicle-related deaths to understand what caused those events and provide agencies with recommendations for how they can be prevented in the future.
- Investigate structural and wildland fire fighter deaths to understand their causes and take steps to prevent future deaths.
- Study Public Safety Workers' exposures and risk factors for cancer, infectious disease, heart disease and respiratory disease. Use research findings to recommend prevention strategies.
- Share information about NIOSH programs, publications, and resources to increase awareness of injuries, illnesses and deaths among workers in the Public Safety Sector and how to prevent them.

What have we accomplished?

- Conducted crash testing of ambulances to understand how the layout, hardware, equipment, and restraints affect worker and patient injuries.
- Sent out a worker-friendly fact sheet on 5 ways that law enforcement officers can reduce their risk of a motor-vehicle crash to 250+ law enforcement agencies and related organizations nationwide.
- Fire Fighter Fatality Investigation Reports indicted self-contained breathing apparatus (SCBA) facepiece failures from high heat/flame exposure contributed to a number of fire fighter fatalities. Through NIOSH participation on the National Fire Protection Agency (NFPA) Technical Committee on Respiratory Protection Equipment, the NFPA 1981 Standard on Open-Circuit Self-Contained Breathing Apparatus for Emergency Services was revised. New test methods and performance criteria for a lens radiant heat test and a lens conductive heat/flame test were developed, validated and incorporated into the 1981 standard.
- Participated in two webcasted Q&A sessions coordinated by *Fire Engineering* and *Firehouse* magazines about the design and purpose of a NIOSH study of cancer and heart disease risks, which was viewed by thousands of fire service workers.
- Published longitudinal study of 30,000 career fire fighters followed from 1950 to 2009. Findings suggest fire fighters are at a higher risk of cancers of the digestive, oral, respiratory, and urinary systems when compared to the general population.

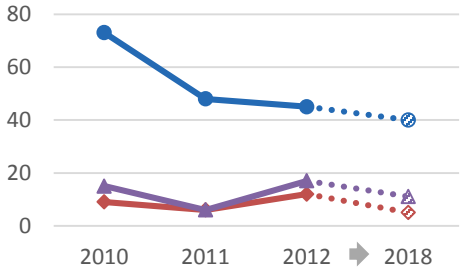
What's next?

- Use ambulance crash testing research to: a) develop 10 dynamic crash test methods for ambulance manufactures to use, and b) support three national standards to be used for designing ambulances going forward.
- Complete a prototype fire fighter field decontamination system, which will be designed to help firefighters avoid contaminating vehicles and fire stations with toxic agents after fires.
- Publish and share practical, science based recommendations to reduce exposure to smoke and other contaminants among wildland fire fighters.
- Participate and advise at least 10 NFPA consensus standards to incorporate NIOSH research and fatality investigation findings.

At-A-Glance

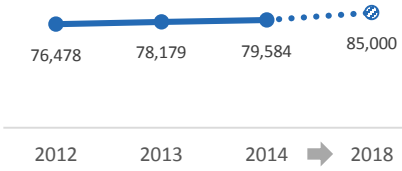
The Public Safety Program provides leadership to prevent injuries, illnesses and fatalities among workers in law enforcement, fire service, corrections, and the emergency medical service (EMS). This snapshot shows recent accomplishments and upcoming work.

Number of Motor Vehicle-Related Fatal Occupational Injuries in Police Protection ●, Fire Service ♦, and Other Public Safety Sub-Sectors ▲



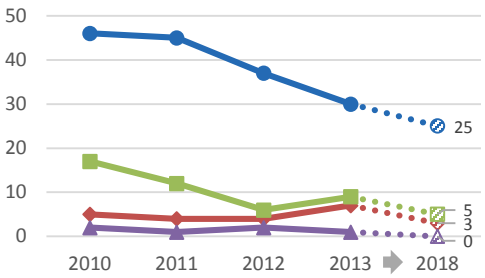
Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries (CFOI). Fatal injury totals were generated by NIOSH with restricted access to CFOI microdata. The views expressed here do not necessarily reflect the views of the BLS.

Visits to Fire Fighter Fatality Investigation and Prevention Program Web Page



Source: NIOSH Program Records

Deaths due to Heart Attacks in Fire Fighters ●, Wildland Fire Fighters ♦, Corrections Officers ▲, and Law Enforcement Officers ■



Source: US Fire Administration, National Wildfire Coordinating Group, National Fire Protection Association, Officer Down Memorial Page

DHHS (NIOSH) Publication No. 2016-144