

## What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Hearing Loss Prevention Program focuses on reducing occupational hearing loss through research on controlling hazardous noise, developing engineering noise controls, ensuring hearing protectors are used effectively, performing occupational hearing loss surveillance, and investigating damage risk criteria for impulse noise. The Program works with partners in industry, labor, trade associations, professional organizations, and academia.

## What do we do?

- Develop and evaluate engineering and administrative controls to reduce worker exposure to hazardous noise levels.
- Conduct surveillance of occupational hearing loss to identify workers at increased risk and monitor progress in prevention.
- Promote evidence-based best practices for work-related hearing loss prevention by developing NIOSH communication products, including guidelines and criteria documents.
- Advance hearing protector and fit-testing technology to ensure workers are protected when engineering or administrative controls have not yet been implemented or do not reduce noise to safe levels.
- Identify, characterize, and reduce risk factors associated with occupational hearing loss, especially intermittent and impulsive noise exposures that present greater risk.

## What have we accomplished?

- Presented three webinars on hearing loss prevention and noise control engineering for the [Public Safety Sector](#), [the Mining Sector](#), and [Audiology On-Line](#).
- Completed chapters for the American Industrial Hygiene Association *Noise Manual* 6th Edition on noise measurement, ototoxic chemicals and impulse noise exposure.
- Provided prevention information and gave audiometric screenings for more than 125 people at the 2018 Elko Mining Expo.
- [Published](#) noise controls and noise control strategies for load-haul-dump, jumbo drills, and haul trucks used in underground metal mining.
- Collaborated with the Occupational Safety and Health Administration to publish a Safety and Health Information Bulletin, [Preventing Hearing Loss Caused by Chemical \(Ototoxicity\) and Noise Exposure](#) warning of a potentially serious workplace hazard.
- Conducted workshops on hearing protector fit-testing technologies at the 2018 National Hearing Conservation Association meeting and American Industrial Hygiene Conference & Exposition.
- [Published](#) the prevalence of hearing loss for noise-exposed U.S. workers workers in Health Care and Social Assistance (HCSA) Sector. The overall prevalence for the HCSA sector was 19%.

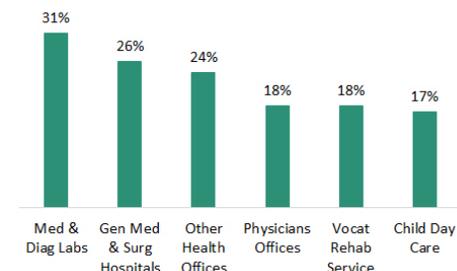
## What's next?

- Provide best practice recommendations for integrating fit testing into hearing loss prevention programs on a new NIOSH topic web page for hearing protector fit testing.
- Conduct hearing tests on over 100 wildland fire fighters before, during, and after the fire season in collaboration with the U.S. Forest Service to evaluate risks and develop better hearing loss prevention training for firefighters.
- Publish an article examining the prevalence of hearing loss in Mining and Oil & Gas Extraction Sectors.
- Develop updated age-correction tables that describe changes in hearing as a function of normal aging effects.
- Organize the Wikipedia Edit-a-thon for World Hearing Day 2020 to expand information available on Wikipedia for hearing loss prevention.
- Develop new acoustic standards for personal dosimetry and for measuring speech intelligibility when hearing protectors are worn.
- Publish a special issue in the *Journal of the Acoustical Society of America on Noise Induced Hearing Loss: Translating Risk from Animal Models to Real World Environments*. This issue will include a review of occupational noise exposure and hearing loss, acoustics of indoor and outdoor firing ranges, and prevalence of acoustic reflex in humans.

## At-A-Glance

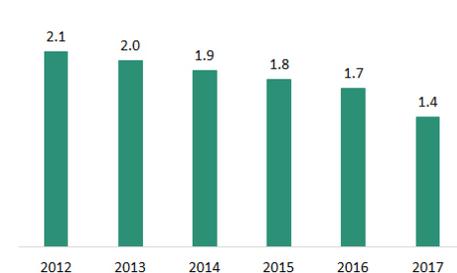
The Hearing Loss Prevention Program provides leadership to reduce the prevalence of occupational hearing loss. This snapshot shows recent accomplishments and upcoming work.

### Prevalence of hearing loss for noise-exposed workers within the Healthcare and Social Assistance Sector



Source: Adapted from Masterson et al. "Prevalence of Hearing Loss among Noise-Exposed Workers within the Healthcare and Social Assistance Sector"

### Incidence rate for hearing loss per 10,000 full time workers as reported for 2012 – 2017



Source: Bureau of Labor Statistics

### The NIOSH Hearing Loss Prevention Unit on location to conduct hearing tests with U.S. Forest Service, Wildland Firefighters.



To learn more, visit  
<https://www.cdc.gov/niosh/topics/noise/default.html>

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