





eNews: Volume 19, Number 4 (August 2021)

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Volume 19, Number 4 (August 2021)

From the Director's Desk

John Howard, M.D. Director, NIOSH

Keeping Workers Safe From Extreme Heat and Smoke During the 2021 Wildfire Season

As we move into the height of the 2021 summer wildfire season, we are bracing for above average wildfire potential influenced by extreme heat and drought conditions across the Western United States. June 2021 was the hottest June on record for the United States with historical heat waves from coast to coast—including a “heat dome” over the Pacific Northwest [1]. The National Interagency Fire Center predicts above normal potential for significant wildfires through September for much of the West [2].

Extreme heat can create both dangerous fire activity and an environment that puts outdoor workers at risk of heat stress. This serious condition can result in heat stroke, heat exhaustion, heat cramps, or heat rashes. The [NIOSH Heat Stress webpage](#) lists the risk factors related to heat stress. It has information for employers and workers to prevent heat stress and treat different types of [heat-related illness](#) caused by heat stress.

Severe wildfire activity and extreme environmental conditions puts workers at risk, both on and off the job. Wildfire smoke exposure is a major concern, as it contains a mixture of gases and particles from burning vegetation. And in areas where wildland vegetation and urban areas overlap, the smoke can include synthetic materials [3]. Workers in other outdoor occupations, such as agriculture, construction, landscape, utility, and facility maintenance, are at risk for wildfire smoke exposure.

Health risks associated with wildfire smoke exposure are not fully understood for workers, especially across multiple fire seasons. Research shows that outdoor workers may develop eye and respiratory tract irritation, worsening asthma and other respiratory diseases, and adverse cardiovascular outcomes from smoke exposure [4]. Previous studies have linked wildland firefighter smoke exposure with short-term health effects, such as increases in inflammation and respiratory issues [4].



NIOSH employee Kathleen Navarro working as a wildland firefighter on the 2019 Cow Fire in Oregon. Photo by NIOSH

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In 2018, NIOSH, in partnership with the U.S. Forest Service and the U.S. Department of the Interior, started the [Wildland Firefighter Exposure and Health Effects study](#). The study aims to better understand the potential occupational hazards and exposures affecting wildland firefighters' health, especially after multiple fire seasons. Our [NIOSH Science Blog](#) and [Wildfire Resources webpage](#) provide more information for fire managers and wildland firefighters on the many hazards in wildland firefighting. These hazards include noise and [rhabdomyolysis](#), which is the breakdown of muscle damaged by heat or other causes.

The wildfire environment is incredibly dynamic. To stay up to date on wildfire conditions in your area, see [InciWeb](#) for wildfire information and the [National Fire Situational Awareness Map](#) for fire locations. Smoke conditions in your area can be monitored by visiting the Environmental Protection Agency's [U.S. Fire and Smoke Map](#). This map provides the Air Quality Index for a specific location, and then using a color-coded tool, rates the air quality in a range from good to hazardous. To learn more about the health effects of wildfire smoke to outdoor workers and what employers can do to reduce smoke exposure, visit the [NIOSH Outdoor Workers Exposed to Wildfire Smoke webpage](#).

The 2021 wildfire season is already shaping up to be an active fire year. NIOSH continues to explore the exposures, health effects, and hazards faced by workers affected by wildfires. Additional information can be found on the [NIOSH Fighting Wildfires webpage](#).

References

1. National Oceanic and Atmospheric Administration. [June 2021 was the hottest June on record for U.S.](#) July 9, 2021.
2. Predictive Services National Interagency Fire Center. [National significant wildland fire potential outlook](#). Outlook Period—July 2021 through October 2021.
3. NIOSH Science Blog. [Wildland firefighter health: some burning questions | Blogs | CDC](#)
4. Adetona O, Reinhardt T, Domitrovich J, Broyles G, Adetona A, Kleinman M, Ottmar R, Naeher L [2016]. [Review of the health effects of wildland fire smoke on wildland firefighters and the public](#). *Inhal Toxicol* 28(3):95-139.

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Research Rounds

For the NIOSH 50th Anniversary, please enjoy this limited time series of "NIOSH Now" and "NIOSH Then" where we look back at research efforts inside & outside of NIOSH from the past 50 years.

NIOSH Now: Universities Can Facilitate Collaboration to Address Precarious Work

As the landscape of work changes, occupational safety and health researchers and practitioners face new questions, including how to protect worker well-being in [nonstandard and precarious work](#), such as temporary and contract, or gig, jobs.

Precarious working conditions often make it hard to carry out the usual health and wellness programs. Researchers at the University of Illinois

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John Howard, M.D., Director

Chicago (UIC) [Center for Healthy Work](#), a NIOSH [Center of Excellence for](#)

[Total Worker Health](#)[®], are exploring how universities can help connect and support diverse organizations to address precarious work and worker well-being.

Researchers at UIC engaged organizations interested in developing initiatives to address precarious work. Content experts served as technical assistance (TA) providers focused on facilitating learning and critical thinking among group members. Twenty-two people participated in this study. These included TA providers from UIC, labor-focused organizations, and health-focused organizations, mostly in public health and healthcare fields, according to the study published in the [International Journal of Environmental Research and Public Health](#).

The TA providers helped bring together organizations from different disciplines that usually do not work together. Focus groups and interviews revealed a trust based on the longstanding relationship with the university. This feedback shows promise that other universities may be able to draw connections between community organizations that might not occur otherwise. In this study, the UIC TA providers introduced healthcare workers to labor representatives who shared insight into barriers to health that workers in precarious work arrangements might face. Findings from this study suggest that encouraging these relationships may help organizations increase well-being in precarious work arrangements.

More information is available:

- [NIOSH Total Worker Health Program](#)
- [UIC Center for Health Work Research Brief](#)  

NIOSH Then:

High Risk for Workplace Homicide Led to Call for Increased Protection and Research

Nearly three decades ago, an influential NIOSH study found an increased risk for workplace homicide among certain occupations and groups of workers, leading to a call for increased protection and research. The 1994 study appeared in the [Journal of Occupational and Environmental Medicine](#).

The researchers used death certificates from a nationwide database, the National Traumatic Occupational Fatalities Surveillance System, and annual employment estimates to calculate average yearly rates of workplace homicide from 1980 through 1989 for specific industries and occupations. They also examined rates by sex and race.

Overall, 7,581 workplace homicides occurred during the nine years studied. In terms of the yearly rate, this number translated to nearly one (.71) homicide per every 100,000 workers. By industry, taxi drivers far exceeded the yearly rate for all workers. Specifically, the yearly rate of nearly 27 per 100,000 taxi drivers was almost 40 times higher than that for all other workers. The next highest rate was among liquor store workers, with almost 8 homicides per 100,000 workers.

Nearly all of the workplace homicides occurred among men, whose yearly rate was three times higher than that of women. Similarly, significant racial differences in risk emerged. In comparison with White workers, the rate of

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workplace homicide was more than twice as high among Black workers and those of other races.

These findings led to a call for immediate worker protections and focused research efforts among high-risk industries. Despite these efforts, the problem of workplace homicide persists, with 454 in 2019, according to the [Bureau of Labor Statistics](#). Today, NIOSH continues to study risk factors for workplace homicide and prevention methods to protect workers.

More information is available:

- [NIOSH | Occupational Violence](#)
- [NIOSH | Fast Facts: Taxi Drivers](#)
- [Work-related Violent Deaths in the U.S. Taxi and Limousine Industry 2003 to 2013: Disparities within a High-risk Working Population](#)

Highlights

COVID-19 Update

As part of NIOSH's efforts to keep our stakeholders up to date on the CDC and NIOSH COVID-19 response, here is a summary of new information available.

- **New Survey on Workplace Testing for COVID-19**

NIOSH and partners are conducting a national survey asking business leaders about their experiences with workplace testing for COVID-19. The goal of the survey is to identify barriers and facilitators of COVID-19 testing in the workplace. The [online survey](#) is now open and will be available until September 15. For more information about this survey, please contact [Paul Schulte](#) or [Adrienne Eastlake](#).

- **New Research Projects on Contact Tracing and Ventilation**

The NIOSH Mining Program has developed [two research projects](#) to help prevent the spread of COVID-19. One project explores digital contact tracing tools to protect essential grocery, retail, and food manufacturing workers. The other project examines point-of-use ventilation systems to protect workers from virus-contaminated particles.

It's Here! Safe + Sound Week: August 9–15

Please join NIOSH and our partners as we host and participate in the [2021 Safe + Sound Week](#) August 9-15. Learn about the [many ways you can participate](#) and then [sign up](#) to share how you are recognizing this important event.



Total Worker Health® Webinar Series: Introducing the NIOSH Worker Well-being Questionnaire

[Registration](#) is open! Join the NIOSH *Total Worker Health* Program as they present on the newly released [NIOSH Worker Well-being Questionnaire](#) (WellBQ). This new tool provides an integrated assessment of worker well-being. Featured speakers, Chia-Chia Chang from NIOSH, Dr. Gwenith Fisher from Colorado State University, and Dr. Ramya Chari from the RAND Corporation, will describe the development of the tool as well as practical applications and next steps.

New Webpage Answers Common NIOSH Funding Announcements Q&A

The NIOSH Office of Extramural Programs has a new [webpage](#) with common questions and answers for published NIOSH funding announcements. You can also find a list of all NIOSH funding announcements on the [website](#).



Prevent Struck-by Incidents at Crash Scenes

More than 200 law enforcement officers died by struck-by incidents from 2005–2019, which was 24% of motor vehicle-related officer deaths. NIOSH recently published an [infographic](#) outlining four ways that law enforcement officers can lower their risk of being struck by a passing vehicle while outside the patrol vehicle.

In Case You Missed It: Recording Available for NIOSH 50th Anniversary Webinar

The [recording](#) of the May presentation “Looking Back: The Important Role of Science in Fulfilling the Occupational Safety and Health Act” is now available. The webinar featured current and past NIOSH leaders discussing key scientific

accomplishments during their tenure. This event was held as a part of the NIOSH 50th Anniversary Science Webinar Series. The series will continue through the end of the year and include a variety of presentations from current and former NIOSH staff and partners. See the [NIOSH 50th Anniversary webpage](#) for a list of other NIOSH 50th activities.

New Video Introduces Workplace Supported Recovery

NIOSH has released a [new video](#) to introduce the concept of Workplace Supported Recovery and to encourage the adoption of Workplace Supported Recovery principles. The video describes how these principles can help employers prevent their workers from being exposed to factors that could cause or worsen substance use disorder. The principles also support lowering barriers to seeking or receiving care and maintaining recovery. For more information employers and workers can visit the [Workplace Supported Recovery](#) webpage or contact the [NIOSH Office for Total Worker Health®](#).

Call for Abstracts or Session Proposals for NOIRS 2022!

The NIOSH National Occupational Injury Research Symposium (NOIRS) was rescheduled from October 2021 to May 10–12, 2022. The **NEW** October 1 abstract and session proposal due date is fast approaching. Visit the [NOIRS](#) webpage for links to the submission portals and additional information.

Save the Date: NIOSH to Host Symposium to Address Underserved PPE User Groups

NIOSH will host a virtual symposium to highlight ongoing activities that address the needs of worker populations who are underserved in personal protective equipment (PPE) use, availability, accessibility, acceptability, or knowledge. Underserved PPE user groups may include workers who are of an atypical size; members of a gender, racial, ethnic, or linguistic minority group; perform nontraditional worker activities; or are members of subdisciplines that are not the primary focus of the current PPE activities within their larger field. Presentations and discussions will highlight pertinent issues, ongoing advocacy efforts, research, and knowledge gaps in this area. The event will be held February 2–3, 2022, 10 a.m.–3 p.m. (EST). For more information, please contact [Tyler Quinn](#).

New Partnership to Promote the Safety and Health of Temporary Workers

NIOSH and the American Staffing Association recently announced a five-year partnership agreement to advance the protection of temporary workers, those who are paid by a staffing company and assigned to work for a host employer company. Read the [full NIOSH Update](#).

Seeking Members for the Advisory Board on Radiation and Workers Health

The NIOSH administered Advisory Board on Radiation and Worker Health is now [accepting nominations](#) for members representing scientific, medical, and worker perspectives.

NIOSH Congratulates

- **New Award Recognizes Prevention through Design**A new award recognizes individuals, teams, businesses, or other organizations that have improved worker safety and health by designing-out hazards or contributing to the body of knowledge that enables Prevention through Design (PtD) solutions. The annual award is presented by NIOSH, the American Society of Safety Professionals, and the National Safety Council. Fred A. Manuele, received the inaugural award in July for his outstanding foresight, wisdom, tireless effort, and major accomplishments in preventing harm to workers by helping organizations avoid and prevent hazards. Read the [full NIOSH Update](#).
- **NIOSH Engineers Nominated for International Media Award**
[EXAMiner](#)—a customizable hazard recognition training software—is in the running to receive an award from the [International Media Festival for Prevention](#) . The software allows mine workers to perform a workplace examination search task of preloaded images as well as images trainers load into the software by marking hazards with mouse clicks. A debrief session reviews hazards found and missed, and then offers helpful information about their performance. The software can also be used by other industries to help train their workers to better find hazards in their work environments.



Monthly Features

New Communication Products & Reports

Fire Fighter Fatality Investigation and Prevention Program Report

- [41-Year-Old Captain Suffers Fatal Heart Attack After Participating in a Multi-Unit Training Drill—Indiana](#)
- [One Firefighter Dies and Another Injured in Natural Gas Line Explosion—Wisconsin](#)

Program Performance One-Pagers (PPOP)

- [Center for Occupational Robotics Research](#)
- [Hearing Loss Prevention Program](#)

Web Page

- [Per- and Polyfluoroalkyl Substances \(PFAS\)](#)

Workplace Solutions


- [Safe and Proper Use of Disinfectants to Reduce Viral Surface Contamination in Correctional Facilities](#)
-

NIOSH Science Blog


- [Noise Myths Debunked—Fact and Fiction Behind all the Cicada Buzz](#)
 - [Changing with the Times: The Journey to Interactive Charts](#)
-

Federal Register Notice

Final Environmental Impact Statement; Acquisition of Site for Development of a Replacement Underground Safety Research Program Facility for the Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health in Mace, West Virginia

The [notice](#)  was posted on July 16. The meeting will be held on August 5.

Board of Scientific Counselors, National Institute for Occupational Safety and Health, National Firefighter Registry Subcommittee

This [notice](#)  was posted on June 4. Comments must be received by August 6. The meeting will be held on August 13, from 1–4 p.m. (EDT).


Advisory Board on Radiation and Worker Health (ABRWH), National Institute for Occupational Safety and Health (NIOSH)

The [notice](#)  was posted on July 12. Comments must be received by August 11. There will be a public meeting on August 18.

Needs and Challenges in Personal Protective Equipment (PPE) Use for Underserved User Populations

The [notice](#)  was posted on June 24. Comments must be received by August 23.

World Trade Center Health Program; Request for Information

The [notice](#)  was posted on July 22. Comments must be received by August 23.

Proposed Data Collection Submitted for Public Comment and Recommendations: Energy Employees Occupational Illness Compensation Program Act (EEOICPA) Dose Reconstruction Interviews and Forms

The [notice](#)  was posted on July 12. Comments must be received by September 10.

Draft-Approaches to Developing Occupational Exposure Limits or Bands for Engineered Nanomaterials: User Guide and Technical Report

The [notice](#)  was posted on July 13. Comments must be received by September 13.

Proposed Data Collection Submitted for Public Comment and Recommendations: Assessment of Occupational Injury Among Fire Fighters Using a Follow-back Survey

The [notice](#) was posted on July 19. Comment must be received by September 17.

Proposed Data Collection Submitted for Public Comment and Recommendations: Evaluating the Use of EHMRs in Health Settings to Improve Organizational Implementation and Worker Adoption During and After the COVID-19 Pandemic

The [notice](#) was posted on July 19. Comments must be received by September 17.

NORA

In Case You Missed It: Silica in the Oilfield 2.0

The [recordings and presentation materials](#) from the Silica in the Oilfield Summit 2.0 are now available. The NORA Oil and Gas Extraction Council organized the summit with support from the Center for Health, Work & Environment. This virtual event brought together over 300 representatives from industry, government, and academia to provide state-of-the-art knowledge on the control of workers' exposures to respirable crystalline silica in the oilfield.

News from Our Partners

New Tools to Help Keep Workers Safe in the Heat

- OSHA has new [infographics](#), posters and videos on how to recognize the signs and symptoms of heat illness and how to treat them to keep workers safe this summer.
- The University of Washington Agriculture Safety and Health Center recently released their [Heat Education & Awareness Toolkit](#) that includes train-the-trainer information, a mobile app to monitor weather conditions, worksite posters and interactive educational materials for workers, providing a comprehensive approach to heat illness prevention by addressing risk factors for agricultural workers at the individual, workplace, and community levels.

Partners and the NIOSH 50th

Check out [new information from our partners](#) who are recognizing the NIOSH 50th anniversary, along with their successes and accomplishments from partnering with our institute.

Study Links Home Care Aides' Safety and Health to Delivery of Home Care Services

Researchers at the University of Massachusetts Lowell recently published a [journal article](#) on how home care aides' workplace safety and health is connected to the overall delivery of services to their patients and clients. In the United States, home care is one of the fastest growing industries, and the need for home care aides is increasing due to a rapidly aging U.S. population. These workers' injuries and illnesses disrupt delivery of care to clients. NIOSH funds this research through an [Occupational Safety and Health Research \(R01\) grant award](#).

New Construction Research Key Findings

CPWR—The Center for Construction Research and Training has a [new publication available](#) that looks at injury inequalities among U.S. construction workers by race and ethnicity. CPWR is the NIOSH-funded [National Center for Construction Safety and Health Research and Translation](#).

Data Needed on Exposures in Construction

CPWR is looking for exposure measurements for silica, welding fumes, lead, or noise, to use for the expansion of its [Exposure Control Database \(ECD\)](#). ECD is a free online tool that estimates workers' exposure to common health hazards. If you have data to share, please [contact](#) CPWR. The information you share will help to make the ECD more accurate and reliable.

New Publication From the Center for Health, Work & Environment

The latest [newsletter](#) is now available from the Center for Health, Work & Environment at the Colorado School of Public Health—one of six NIOSH-funded [Centers of Excellence for Total Worker Health®](#). In this newsletter, you will learn about new tools and publications the center has developed related to worker safety, health, and well-being.

Registration for the 2021 NCHCMM Is Now Open!

The National Conference on Health Communication, Marketing, and Media (NCHCMM) brings together individuals representing academia, public health researchers, and practitioners from federal, state, and local governments, as well as other public and private organizations. The conference provides a forum for collegial dialogue for all attendees. Visit [NCHCMM](#) to register for this free event happening August 24–26.

CDC's Disability ALLY Campaign—Inclusion for All

Is your medical practice, office, or facility accessible for people living with disabilities? Adjustable exam tables, lowered check-in desks, and providing paperwork in simple text or braille are just a few examples of changes that will improve accessibility, customer service, and patient care. For more examples of how your community can be more inclusive for all, visit CDC's [Disability Inclusion](#) and [Disability A.L.L.Y. campaign](#) webpages.

Call for Proposals:

- *Art & Science of Health Promotion Conference*: The deadline to [submit](#) proposals for sessions is August 7.
- *National Occupational Injury Research Symposium*: The deadline to [submit](#) abstracts and proposals for sessions is October 1.

Conferences, Meetings, Webinars, & Events

This page provides a list of publicly available occupational safety and health-related [conferences, meetings, webinars, and events](#) sponsored by NIOSH as well as other government agencies, and nongovernment agencies, such as universities, professional societies, and organizations.

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