

NIOSH eNews



Director's
Desk



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Features

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From the Director's Desk

John Howard, M.D. Director, NIOSH



Photo by Getty Images

Coding Industry and Occupation Data Just Got Easier

With the new year, we also ushered in a new and improved [NIOSH Industry and Occupation Computerized Coding System](#). This system, also known as NIOCCS, was first released in 2012 and continues to evolve. This new release leverages the power of artificial intelligence (AI) to provide more accurate and timely industry and occupation data ready for analysis.

Surveys, case report forms, and death certificates all may contain industry and occupation information. Good analyses require good data. The best industry and occupation data are collected by asking people "What kind of business or industry do you work in?" and "What kind of work do you do?" People may answer in a variety of ways: A nurse working in an emergency room may say their industry is "hospital," "medical center," or "VA hospital" and their occupation is a "nurse," "registered nurse," or "RN." To be able to use this information for analyses, the work-related text descriptions must be converted to standardized industry and occupation codes. This is where NIOCCS comes in.

The NIOCCS system assigns standardized codes associated with each industry and occupation. Users enter a single record or a series of records containing industry and occupation descriptions, and NIOCCS assigns the corresponding numeric codes. In the example above, all three responses provided for "nurse" would be assigned the same occupation code. The three responses provided

for “hospital” would receive the same industry code. Standardized codes allow researchers to group and compare illnesses and injuries among industries and occupations.

In 2020, the coding operational system was upgraded to use machine learning, a form of AI, to select the appropriate industry or occupation code. Machine learning uses sophisticated prediction models and allows systems to learn and improve from experience.

This is our fastest and most proficient NIOCCS yet:

- Every industry and occupation record uploaded into NIOCCS will now receive a code. This is significant as previous versions of NIOCCS could only assign codes to about 85% of submitted records.
- Results are more accurate and consistent because of the machine learning platform.
- Industry and occupation text data will code faster than ever... the upgraded version can autocode files with tens of thousands of records in minutes! This is another major benefit of using machine learning to code data.

Additional features are being developed and tested and are planned for release in Spring and Summer 2021—we will share more about these features when they are ready.

The jobs and industries we work in can affect our safety and health, which is why it is vital we continue to make accurate work-related data easily available for public health professionals.

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 and outside of NIOSH from the past 50 years.

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NIOSH Now: Temporary Construction Workers Cite Barriers to Reporting Near Misses and Injuries

Despite beliefs that identifying workplace hazards and using situational awareness are the best means of protection, some temporary construction workers do not report jobsite risks and injuries, according to a study in the journal *Occupational and Environmental Medicine* [↗](#). In the workplace, situational awareness is the understanding of the environment and potential risks.

Temporary construction workers are at an increased risk of safety and health hazards and related physical injury, according to research. To understand these workers' perspectives, the NIOSH-funded Occupational Safety and Health Surveillance Program at the Florida Department of Health investigated their views on near misses where injuries almost occurred. Researchers talked to 43 temporary construction workers through six group discussions on safety and health risks associated with near misses and injuries. The study participants worked at temporary staffing agencies in South Florida and were mostly males with an average age of 41 years.

The group discussions, in English and Spanish, revealed that these workers made a clear distinction between near misses and injuries. They blamed themselves and coworkers for these incidents and believed that workers had the greatest ability to protect themselves. They said that they aimed to prevent injuries and near misses by connecting with more seasoned workers at new jobsites and shadowing, or observing, their safety behaviors. They identified a lack of safety and health priorities and policies within organizations, like not enforcing rules, as adding to the risk of workplace injury. In fact, these temporary construction workers said that the likelihood that they would report near misses and injuries was based on whether the incident is severe because they fear losing their job.

Although more research is needed to confirm these findings, they support the need for construction managers and seasoned or skilled workers to advocate for reporting hazards, near misses, and injuries. Jobsite-specific education on safety hazard identification and networks among workers to create hazard awareness are also supported by these findings.

More information is available: [NIOSH State Surveillance Program](#)

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NIOSH Then:

Pioneering 1976 Guidelines Targeted Work-related Cancer

Forty-five years ago, NIOSH released its guidelines for preventing work-related exposure to occupational carcinogens, substances found in the workplace environment that cause cancer. Published in the *Annals of the New York Academy of Sciences*, the 1976 guidelines were a pioneering step in NIOSH's ongoing efforts to translate science into policies to prevent work-related diseases. The guidelines were related to NIOSH efforts to develop criteria for recommended standards for the Occupational Safety and Health Administration (OSHA), as mandated by the 1970 Occupational Safety and Health Act.

The guidelines focused on the prevention of workplace exposure to occupational carcinogens. At that time, the guidelines recommended "no detectable exposure levels for proven carcinogenic substances" because safe levels of exposure could not be determined. In addition, the guidelines called for a system requiring employers to obtain a permit to use potentially hazardous chemicals and to register their use with OSHA. This allowed for specialized research and surveillance to protect workers.

Since the original publication of the 1976 guidelines, scientific advances in managing and measuring exposure to chemicals led NIOSH to issue its updated *Chemical Carcinogen Policy* in 2017. Recognizing that no safe level of exposure exists for occupational carcinogens, the updated policy continues to recommend using the *hierarchy of controls* to reduce exposure by eliminating their use, substituting a safer alternative, and using special methods, or engineering controls, designed to decrease risk.

In the updated policy, NIOSH classifies chemicals as carcinogens after it identifies a control level, known as a Risk Management Limit for

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 and input from experts and stakeholders.

- **COVID-19 Response Guidance for Businesses and Employers**

CDC recently updated their *Guidance for Business and Employers*, addressing shortened quarantine options and additional considerations for testing. The updates also clarify information around mask-wearing.

- **NIOSH Bucket Guide to Chemical Hazards: Potential Occupational Carcinogens**

CDC offers *Construction Checklists* to share ways employers can protect construction workers, and how these workers can protect themselves to slow the spread of COVID-19. The checklists are available as an interactive online tool or as a PDF in both English and Spanish.

- **Strategies for Optimizing the Supply of Isolation Gowns**

CDC recently updated their *Isolation Gown Optimization Strategies*, moving the prioritization strategy of gowns from crisis capacity to contingency capacity. The updated information also clarifies the situations where gowns should be prioritized.

- **Workplace SARS-CoV-2 Testing: Consent Elements and Disclosures**

This recently updated *webpage* describes the elements of consent and recommended disclosures necessary to support employee decision-making for participating in workplace-based testing. Workplace testing should not be

done without an employee's consent.

- **Easy to Read COVID-19 Safety**

CDC has recently published [Easy to Read COVID-19 materials](#). This information was primarily developed for people with intellectual and developmental disabilities and for those who read or listen with understanding below a third-grade level.

- **Toolkit for Essential Workers**

A new [communication toolkit](#) is available to help employers across various industries provide information about COVID-19 vaccines, increase awareness about vaccination benefits, and address common questions and concerns. The toolkit contains a variety of resources including key messages, FAQs, posters, newsletter content, and more.

- **Interim List of Categories of Essential Workers Mapped to Standardized Industry Codes and Titles**

An [interim list](#) is now available to help state, local, tribal, and territorial officials and organizations prepare for the allocation of initially limited COVID-19 vaccine supply. The interim list maps essential industries to [corresponding COVID-19 vaccination phases](#) and workforce categories, as recommended by the Advisory Committee on Immunization Practices.



Selecting Goals for Research Proposals

Are you a researcher planning to apply for NIOSH grant funding? If so, consider attending the upcoming webinar, [Selecting Goals for Research Proposals](#). This event will help you understand the [NIOSH Strategic Plan: FYs 2019–2023](#) and show you how to select goals from the plan that align with your research proposals. The webinar is Tuesday, February 23, 1 p.m.–2 p.m. (ET). Preregistration is required.

National Occupational Injury Research Symposium (NOIRS)

The [call for abstracts and session proposals](#) is now open for the National Occupational Injury Research Symposium (NOIRS) planned for October 19–21. NOIRS is the only national forum focused on occupational and work-related acute traumatic injury research. NOIRS brings together researchers, academicians, labor union representatives, safety professionals, industry leaders, and students from multiple disciplines and fields to advance the public health mission of keeping workers safe on the job. The abstract deadline is April 1.

FACE IT—Worker Safety Matters During Block Wall Construction Infographic

From the Fatality Assessment and Control Evaluation (FACE) Program: During a 33-mph wind gust, a poorly braced 24-foot block wall fell, killing a laborer and pipefitter and injuring a utility foreman. Check out the infographic, visual extension, and report with recommendations:

- Worker Safety Matters During Block Wall Construction—View the Infographic with Injury Prevention Recommendations, in [English](#) or [Spanish](#)
- FACE IT: Report Visual Extension: Laborer, Pipefitter, and Utility Foreman Crushed by Falling Block Wall—Tennessee, in [English](#) or [Spanish](#)
- NIOSH FACE Report: Laborer, Pipefitter, and Utility Foreman Crushed by Falling Block Wall—Tennessee, in [English](#) or [Spanish](#)

Upcoming Webinar on Use of Elastomeric Respirator in Healthcare Settings

NIOSH and Wayne State University will present a webinar on Tuesday, February 16, from 2:00-3:00pm (ET) on [Assessment of Elastomeric Respirators in Healthcare Delivery Settings: Just-in-time Elastomeric Training and Fit Testing \(JET FIT\)](#). Understanding how hospitals can quickly switch over to Elastomeric half mask respirators (EHMRs) during a crisis, such as a pandemic, is critical to understanding how to implement and use them. NIOSH initiated a study with university hospital partners to understand the requirements for a hospital to rapidly train staff to use EHMRs. This webinar will present Wayne State University's results from the Detroit Medical Center site and compare their results with other study sites. Registration for the webinar is available [here](#).

Monthly Features

New Communication Products & Reports

FACE Report

- [Semi-truck Driver Dies in Single Vehicle Collision After Truck Overturns —Kentucky](#)

Fighter Fatality Investigation and Prevention Program Report

- [Career Firefighter Killed, a Police Officer and a Civilian Wounded, when They Were Shot During EMS Incident—Wisconsin](#)

Tech News

- [Mining Publication: Technology News 564: MFIRE 4.0 Enhances Fire Modeling Capabilities](#)
-

NIOSH Science Blog

- [NIOSH Efforts to Keep Workers and the Country Safe During the Pandemic](#)
 - [Understanding the Broad Class of Carbon Nanotubes and Nanofibers \(CNT/F\) Used or Produced in U.S. Facilities](#)
 - [Most-viewed NIOSH Products of 2020](#)
 - [NIOSH Celebrates 50 Years in 2021](#)
 - [The Role of Organizational Design in the Future of Work](#)
 - [COVID-19 and Workplace Fatigue: Lessons Learned and Mitigation Strategies](#)
 - [Choosing the “Right” Fatigue Monitoring and Detection Technology](#)
 - [Overview of the ASTM F3407 Standard Test Method for Respirator Fit Capability](#)
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Federal Register Notice

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

The [notice](#) was posted on December 23. Comments must be received by February 11. The meeting will be held on February 18.

Proposed Data Collection Submitted for Public Comment and Recommendations: “Examining Safety and Health Among Aviation Industry Workers in Alaska: A Survey”

The [notice](#) was posted on December 18. Comments must be received by February 16.

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

The [notice](#) was posted on December 23. Comments must be received by February 17. The meeting will be held on February 24.

Advisory Board on Radiation and Worker Health (ABRWH), Subcommittee on Dose Reconstruction Review (SDRR), National Institute for Occupational Safety and Health (NIOSH)

The [notice](#) was posted on December 23. Comments must be received by February 18. The meeting will be held on February 25.

Proposed Data Collection Submitted for Public Comment and Recommendations—Proposed Project: “A Longitudinal Examination of Mental and Physical Health among Police Associated With COVID-19”

The [notice](#) was posted on January 26. Comments must be received by March 29.

NORA

NORA Mining Sector Council Events

- The NORA Mining Sector Council will host a technical session titled *Automation and Autonomy* during the [MineExchange 2021 SME Annual Meeting](#), March 1–5.
 - The next NORA Mining Sector Council meeting is planned for the week of February 22 and is open to the public. The meeting will include a discussion of the update to the National Occupational Research Agenda for Mining. To participate, contact [NORACoordinator](#).
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News from Our Partners

Study Links Agricultural Work to Higher Dementia Risk

Are agricultural workers at greater risk of developing dementia than nonagricultural workers? The Great Plains Center for Agricultural Health aimed to answer this question by examining longitudinal survey data from about 20,000 individuals over age 50 in the United States. Read more about this first-of-its-kind [study](#). The Great Plains Center for Agricultural Health is one of 11 NIOSH-funded [Centers for Agricultural Safety and Health](#).

OSHA Resources for Keeping Workers Safe at COVID-19 Vaccination Sites

New resources are available for workers administering COVID-19 vaccinations in a traditional healthcare setting or a pop-up vaccination site. These resources will help workers follow OSHA’s Bloodborne Pathogens standard to prevent sharps injuries. Posters are available in both [English](#) and [Spanish](#).

CPWR—The Center for Construction Research and Training Releases New Data Bulletin on Nonfatal Injuries

The latest issue of the [CPWR Data Bulletin](#) focused on nonfatal injuries in the construction sector is now available. This report identifies trends between 2003 and 2019 by injury cause, establishment size, subsector, and demographics. CPWR—The Center for Construction Research and Training is the NIOSH-funded [National Center for Construction Safety and Health Research and Translation](#).

New Publications From NIOSH Grantees

- Does poultry organic dust have bacteria-derived extracellular vesicles that cause lung inflammation? Researchers at

the Southwest Center for Agricultural Health, Injury Prevention, and Education aimed to answer this question. They recently [published their findings](#) in the *American Journal of Physiology, Lung Cellular and Molecular Physiology*. The Southwest Center for Agricultural Health, Injury Prevention, and Education is a NIOSH-funded [Center for Agricultural Safety and Health](#).

- Exposure to awkward postures and high movement speeds has been linked to musculoskeletal disorders among manufacturing workers. This [study examines exposures based on postures and movement speed](#) between manufacturing workers who have mostly repetitive, or cyclic, job tasks and those who do not perform repetitive tasks, known as non-cyclic work. NIOSH funds this research through a [career developmental research grant award](#).

Call for Proposals

- *20th Annual Virtual Health Literacy Conference*: The deadline to [submit](#) award nominations is February 19 or to [serve](#) as an award judge is February 16.
- *America Industrial Hygiene Association Conference & Expo 2021 (AIHce)*: The deadline to [submit proposals](#) for student posters, presentations, or short pop-up sessions is March 16.
- *National Occupational Injury Research Symposium*: The deadline to [submit](#) abstracts and proposal for sessions is April 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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