



National Occupational  
Research Agenda (NORA)  
Councils:  
FY 2019 Highlights

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April 2020



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## Additional Information

For more information about the National Occupational Research Agenda (NORA), visit the web site [www.cdc.gov/nora](http://www.cdc.gov/nora).

For a monthly NORA update, subscribe to *NIOSH eNews* by visiting [www.cdc.gov/niosh/eNews](http://www.cdc.gov/niosh/eNews).

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# Introduction

The National Occupational Research Agenda (NORA) is a partnership program to stimulate innovative research and improved workplace practices. Unveiled in 1996, NORA runs in ten-year cycles.<sup>1</sup> The third decade began on October 1, 2016, and runs until September 30, 2026. NORA is organized into ten industry sectors based on major areas of the U.S. economy, and seven health and safety cross-sectors organized according to the major health and safety issues affecting the U.S. working population.

Sectors	Cross-Sectors
<ul style="list-style-type: none"> <li>• Agriculture, Forestry, and Fishing</li> <li>• Construction</li> <li>• Healthcare and Social Assistance</li> <li>• Manufacturing</li> <li>• Mining</li> <li>• Oil and Gas Extraction</li> <li>• Public Safety</li> <li>• Services</li> <li>• Wholesale and Retail Trade</li> <li>• Transportation, Warehousing, and Utilities</li> </ul>	<ul style="list-style-type: none"> <li>• Cancer, Reproductive, Cardiovascular, and Other Chronic Disease Prevention</li> <li>• Hearing Loss Prevention</li> <li>• Immune, Infectious, and Dermal Disease Prevention</li> <li>• Musculoskeletal Health</li> <li>• Respiratory Health</li> <li>• Traumatic Injury Prevention</li> <li>• Healthy Work Design and Well-Being</li> </ul>

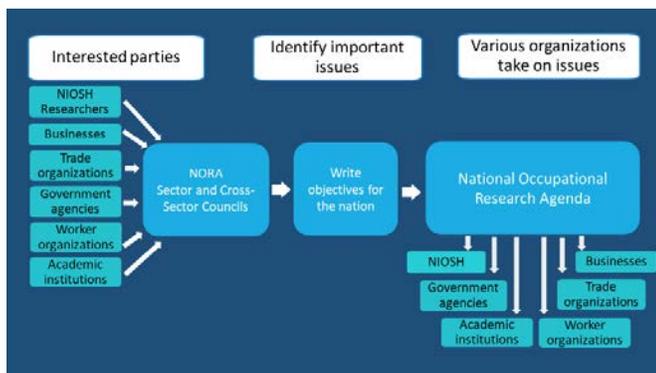
Each sector and cross-sector has a council of stakeholders from universities, large and small businesses, professional societies, government agencies, and worker organizations. Each council writes and maintains a research agenda for the nation, which collectively make up the National Occupational Research Agenda. Councils work on the areas identified in their agenda through information sharing, partnerships, and enhancing dissemination and implementation of evidence-based practices.

NIOSH is just one of many organizations that make NORA possible. Councils are platforms that help build close partnerships among members and broader collaborations between councils and other organizations. The resulting information sharing and leveraging efforts promote widespread adoption of improved workplace practices based on research results.

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<sup>1</sup> For more on the history of NORA, see <https://www.cdc.gov/nora/history.html>

As the steward of NORA, NIOSH supports this effort in two main ways. First, NIOSH organizes its portfolio of [research programs](#) according to the NORA framework. NIOSH sector/cross-sector program leaders co-chair the NORA councils alongside a person from another organization. Second, NIOSH uses the national agenda as a critical input into its own [strategic plan](#).



Flowchart for NORA. Credit: NIOSH

This report highlights the activities and accomplishments of the 17 NORA councils in fiscal year (FY) 2019 (October 2018 – September 2019) and serves as a follow up to the [report on achievements in FYs 2016-2018](#). Accomplishments from the first and second decades of NORA are available in reports on the [NORA website](#).

## Accomplishments

### Research Agendas

Each council started the third decade by writing a research agenda for the nation. Members considered the numbers of workers at risk for a particular injury or illness, the seriousness of the hazard or issue, and the probability that new information and approaches will make a difference when setting research priorities. Once drafted, agendas had a public comment period of at least 60 days. Councils considered public comments, made revisions where needed, and published their agendas online. Five councils published the final version of their agenda in FY 2019, bringing the total to 16 agendas. All are available on the [NORA agendas webpage](#).

#### *Sector Agendas*

- [National Occupational Research Agenda for Healthcare and Social Assistance](#)
- [National Occupational Research Agenda for Public Safety](#)

#### *Cross-sector Agendas*

- [National Occupational Research Agenda for Hearing Loss Prevention](#)
- [National Occupational Research Agenda for Immune, Infectious, and Dermal Disease Prevention \(IID\)](#)
- [National Occupational Research Agenda for Respiratory Health](#)

Councils worked to spread the word about their NORA agendas to other researchers through presentations and posters. The Hearing Loss Prevention Council presented on their agenda at three different conferences to reach different audiences (National Hearing Conservation Association, Acoustical Society of America, and Inter-Noise 2019). The Musculoskeletal Health

Council had posters at three conferences (Applied Ergonomics, Prevention of Work-related Musculoskeletal Disorders [PREMUS], and the Human Factors and Ergonomics Society). Eight Musculoskeletal Health Council members co-authored a proceedings paper from the third conference.<sup>2</sup> Finally, several posters at the Work, Stress, and Health Conference featured NORA Councils and NIOSH programs, including Cancer, Reproductive, Cardiovascular and Other Chronic Disease Prevention; Healthcare and Social Assistance; Healthy Work Design and Well-Being program; IID; Oil and Gas Extraction; Public Safety; Transportation, Warehousing, and Utilities; Traumatic Injury; and Wholesale and Retail Trade.

## Information Sharing

One of the most important functions of NORA councils is information sharing. Some councils routinely feature presentations from council members and invited guest speakers during their council meetings. Examples include:

- Dave DeJoy of the University of Georgia Athens, co-chair of the Healthy Work Design and Well-Being Council, presented on safety culture and safety climate, using examples from fire service. The [presentation](#) is available online.
- Gary Jarvis of Safety Solutions was guest presenter at a NORA Wholesale and Retail Trade Council meeting to speak on prevention versus claims management. Prevention management seeks to reduce work related incidents and promote a safe and healthier work environment and workforce.
- Daniel Patterson, of the University of Pittsburgh and a Public Safety Council member, presented on sleep, fatigue, and safety of emergency medical service (EMS) first responders during a meeting.
- The NORA Oil and Gas Extraction Council, at the request of council members, hosted presentations and a panel discussion on the current “state of silica” in the oil and gas industry during a council meeting. The presentations covered the current uses of sand during hydraulic fracturing, engineering controls used by companies, barriers to decreasing exposures to respirable crystalline silica, and the need for improving surveillance.
- The Services Council held a meeting during which Paul Schulte of NIOSH presented on the future of work, Dorothy Wigmore of National Council for Occupational Safety and Health presented on a toolkit for the informed substitution of cleaning chemicals, and guest speakers Drs. Jenn Cavallari and Jennifer Garza from the University of Connecticut presented on a training intervention for custodians.

Other councils held events focused on a particular topic, usually in connection with one of the objectives in their research agenda. Examples include:

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<sup>2</sup> Lu M-L, Rempel DM, Marras WS, Fox RR, Babski-Reeves K, McGowan B, Meyers AR, Gallagher S [2019]. Proceedings of the Human Factors and Ergonomics Society Annual Meeting 63(1):1331-1333

- NORA Healthcare and Social Assistance (HCSA) Council hosted the “NORA Healthy Work Design in the HCSA Sector Workshop” in collaboration with the Healthy Work Design Council. This workshop featured 20 different speakers. Many of the [presentations](#) are available online, along with a toolkit of resources compiled after the workshop.
- The Transportation, Warehousing and Utilities (TWU) Council devoted a meeting to injuries and injury data in TWU. It included presentations by council members Ximena Vergara, Electric Power Research Institute (EPRI), and Jack Sahl, J. Sahl Associates. Steve Wurzelbacher, NIOSH Center for Workers’ Compensation Studies, also presented. Discussions centered around injury databases and elements of surveillance systems useful in TWU.
- The Traumatic Injury Prevention Council held a meeting focused on the human/machine interface. Joel Haight of the University of Pittsburgh and council co-chair presented on adaptive automation and implications for worker safety and health. Carole Franklin from the Robotic Industries Association presented on consensus robot safety standards. Anthony Washburn, National Safety Council, presented on a new initiative, Work to Zero, aimed at utilizing technology to prevent work-related fatalities.

Still other councils put together sessions and presentations at conferences on topics related to their NORA agendas:

- The Mining Council hosted a technical session during the Society for Mining, Metallurgy and Exploration Conference, “National Occupational Research Agenda and the Future of Miners’ Health.” It was moderated by the Mining Council co-chairs and featured eight presentations.
- The Manufacturing Council had a presence at the American Industrial Hygiene Association Conference (AIHce). The Emerging Technologies Workgroup contributed a presentation by Dr. John Snawder, NIOSH, on wearable sensor technologies in the workplace and related ethical concerns, potential risks, and benefits. The Data-Driven Occupational Safety and Health Improvements Workgroup had a presentation on ways to improve use of industrial hygiene data. This presentation was given by Dr. Taylor Shockey, NIOSH.

Beyond presentations, councils routinely share information informally. Several councils devote time at meetings to round-robin updates, and others are in frequent email contact to share new resources. The Wholesale and Retail Trade Council publishes a [newsletter](#) one to two times a year, with articles on topics of interest to council members.

## Partnerships

The NORA councils are an important vehicle for developing and maintaining partnerships. Some partnerships are informal in nature, with members and their organizations sharing their time and expertise on an ad hoc basis. For instance, members of the Healthy Work Design and Well-being Council collaborated to develop four sessions and one workshop for the Work, Stress, and

Health 2019 conference. In another case, the NORA Agriculture, Forestry, and Fishing (AgFF) Council was invited to provide a speaker for the Western Regional Ag Safety and Health Conference. The council asked Jeannie Nigam, from NIOSH, to present at the conference on “Stress, Mental Health, and *Total Worker Health*® in AgFF.”

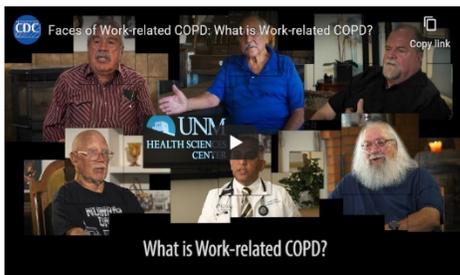
Council partnerships led to productive research projects in FY 2019. One example comes from the Construction Council. Trenching is a common activity in construction to install pipes, wiring, or underground supports, but it is also dangerous. The Construction Struck-By Workgroup collaborated with CPWR – The Center for Construction Research and Training and United Rentals to conduct a trenching survey to better understand why trenching accidents occur and how to prevent them. The survey showed that more preplanning was needed along with use of competent persons on site. Increased training and education on trench safety were needed. The results of this work were presented at the National Safety Council Congress & Expo in San Diego, California.

A second example comes from the Oil and Gas Extraction Council. A council member presented on how their company uses potential Serious Injury or Fatality (SIF) events as a leading indicator to proactively reduce injuries and fatalities. The company uses root cause analysis software in their investigations, leading a NIOSH researcher (and fellow council member) to attend training to better understand and interpret the investigative process and subsequent reports on SIFs. This presentation resulted in a new data analysis project where NIOSH will analyze the company’s SIF data to determine if this approach has had any impact on injury frequency.

Partnership efforts to expand and improve occupational safety and health information in Wikipedia continued this year. Members of the Hearing Loss Prevention and Manufacturing Councils participated in the Wiki4WorldHearingDay2019 in collaboration with the World Health Organization. The outreach was intended to improve the information that is available regarding hearing loss, deafness, and hearing-related topics. On Wikipedia during the one-month tracking period, 90 articles were modified and generated over 2.8 million article views.

## Promoting Evidence-Based Solutions

NORA councils also work to communicate the findings of occupational safety and health research. The NORA Respiratory Health Council and NIOSH produced *Faces of Work-related COPD*, a series of four short videos on Chronic Obstructive Pulmonary Disease (COPD). They



Thumbnail for a *Faces of COPD* video.  
Source: NIOSH

feature a physician, Dr. Akshay Sood, co-chair of the Respiratory Health Council, explaining what the disease is, along with interviews with patients diagnosed with work-related COPD. The patients discuss work exposures, their quality of life having the disease, and ways to minimize the risks of getting the disease. The [videos](#) are available online in both English and Spanish. Additionally, short video clips were shared on Twitter to generate interest. In the first five months after release, there were 1,028 total YouTube video views and 2,650 short video clip views on Twitter.

Other councils have updated and expanded websites with safety and health information. The Oil and Gas Extraction Council Health Workgroup partnered with CPWR to add oil and gas sand use content to their website [silica-safe.org](http://silica-safe.org) where companies can go to create a silica control plan. This [new page](#) is now “live” with oil and gas specific content. Another example comes from the Healthcare and Social Assistance Council, which published a refreshed version of the [Stop Sticks Campaign website](#). Stop Sticks is a communication intervention aimed at raising awareness among health care workers about their risk of workplace exposure to bloodborne pathogens from needlesticks and other sharps related injuries. Stop Sticks was originally created by NIOSH but is now updated and maintained by the NORA council.

The NORA Construction Council continues to actively participate in the [National Campaign to Prevent Falls in Construction](#). The signature annual event of the campaign, the [National Safety Stand-Down to Prevent Falls in Construction](#), began in the Construction Council in 2012. This effort is coordinated by NIOSH, the Occupational Safety and Health Administration (OSHA), and CPWR-The Center for Construction Research and Training. Several fall prevention webinars were conducted, and the council contributed to [four new infographics](#) for the 2019 Campaign and a [NIOSH Science Blog post](#).

Along the same lines, the Services Council Landscaping Safety Workgroup created a small social media campaign for Workers’ Memorial Day to raise awareness about the high rates of injuries among landscaping and tree care workers, which included posts on the NIOSH Facebook and Twitter pages. It is estimated that these messages had the potential to reach over 8,000 people.

Another avenue to promote evidence-based solutions is through public webinars. The Respiratory Health Council convened a webinar on working safely with natural and engineered stone products in partnership with the OSHA, the California Department of Public Health’s Occupational Health Branch, CPWR – The Center for Construction Research and Training, and the Natural Stone Institute. This webinar covered the dangers of silica exposure, employer requirements to comply with OSHA’s Respirable Crystalline Silica Rule, and methods employers can use to protect workers. Approximately 200 people attended, and the [recording](#) is archived online.



*Screenshot of landscaping and tree care safety social media post. Source: NIOSH*

## Looking Forward

The 17 NORA councils are poised to have another successful year in FY 2020. Information sharing will continue with high quality presentations and fruitful discussions during council meetings and at professional conferences. The relationships built between council members have led to productive partnerships and will likely continue. Many councils have formed workgroups and are actively working on projects such as health and safety campaigns and

resource guides. Those interested in joining a council are welcome to contact [NORACoordinator@cdc.gov](mailto:NORACoordinator@cdc.gov)



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