



Special Issue: NOIRS  
Letter from the Guest Editors

## 2018 National Occupational Injury Research Symposium: Advancing worker safety in the 21st century through research and practice



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### 1. About NOIRS

The National Occupational Injury Research Symposium (NOIRS), held October 16–18, 2018 in Morgantown, West Virginia, was the 7th in a series that was initiated in 1997. NOIRS is the only regularly held research forum in the United States dedicated to occupational injury and prevention research. We are appreciative of the *Journal of Safety Research* partnering on this and previous special issues that highlight some of the high-quality research presented at NOIRS, making the research available to a larger audience than symposium attendees.

NOIRS 2018 was conducted in partnership between the National Institute for Occupational Safety and Health (NIOSH), National Safety Council, American Society of Safety Professionals, Society for the Advancement of Violence and Injury Research, Board of Certified Safety Professionals, and West Virginia University (School of Public Health, Safety and Health Extension, and Benjamin M. Statler College of Engineering and Mineral Resources). This collaboration fostered broad expertise in developing the scientific program, perspectives and inclusion of safety practitioners who are the ultimate consumers of this research, inclusion of students who are the future for research and practice, and resources

to provide a dynamic forum that encouraged networking among symposium attendees.



Photo. Lunchtime topic tables at 2018 NOIRS.

More than 330 persons attended NOIRS 2018. Most were scientists who work at NIOSH, universities, other federal and state government agencies, and research organizations. There was a small contingent of researchers from outside the United States. Safety practitioners and students also attended the symposium. One of

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the symposium highlights was a dynamic closing plenary that included a panel from different backgrounds who provided their unique perspectives looking to the future on opportunities and challenges for worker safety:

- Industry (Michael Formaini, CSP, Vice President Health Safety & Environmental & Quality for Matrix North American Construction),
- Labor (Rebecca Reindel, MPH, Senior Safety and Health Specialist, AFL-CIO),
- A federal regulatory agency (Andrew Levinson, MPH, Deputy Director, OSHA Directorate of Standards and Guidance),
- An occupational safety training program (Mark Fullen, EdD, Professor and Director, West Virginia University Safety and Health Extension),
- A state public health agency (Robert Harrison, MD, MPH, Senior Scientist, California Department of Public Health), and
- A student (Kayla Faust, PhD Candidate, The University of Iowa College of Public Health).

## 2. Article selection

In selecting articles to feature in this special issue, we sought to include presentations that reflected the two organizing principles for the symposium: (1) the theme, and (2) the National Occupational Research Agenda (NORA) for Traumatic Injury Prevention ([NORA Traumatic Injury Prevention Council, 2018](#)). We also wanted to include research from different disciplines, including public health, social and behavioral sciences, and engineering.

**Theme-** The NOIRS 2018 theme was “Advancing Worker Safety in the 21st Century through Research and Practice.” This special issue includes three short commentaries that embody this theme. The commentaries by Joel Haight, and Carole Franklin et al. address rapidly advancing technologies associated with the 4th industrial revolution, which is transforming how work is conducted ([Schwab, 2016](#); [NIOSH, 2020](#)). The commentary by Cunningham et al. addresses translation research, which rigorously studies how research effectively moves into practice.

**NORA for Traumatic Injury Prevention-** this research agenda was published just prior to NOIRS 2018. NORA is a public/private partnership comprising 10 industry sectors and seven health and safety cross-sectors. NORA agendas are intended to stimulate innovative research and improved workplace practices through 2026. While NIOSH is the steward for NORA, the intent is for the agenda to guide all those interested in improving worker safety through research and the translation of research to practice. NORA agendas are specific to the United States but have relevance to other developed nations. The agenda for the Traumatic Injury Prevention Cross-Sector includes eight objectives.

Several articles in this special issue address major objectives in the Traumatic Injury Prevention Agenda. Four of these objectives address the leading causes of occupational injuries: motor-vehicle crashes, falls, violence, and machines and evolving technologies. The article by Guan et al. has implications for motor-vehicle safety of emergency medical services workers. Articles in this issue by Hemler et al. and Robson et al. address occupational falls, with the Hemler et al. article addressing falls on the same level, and the Robson et al. article addressing falls from height. Articles by Murray et al. and Brown et al. address violence. The commentaries by Haight and Franklin et al. address machines and emerging technologies.

Four additional objectives are cross-cutting: non-standard work arrangements, occupational safety equity across worker populations, organization-based injury prevention, and rigorous evaluation of occupational injury prevention programs. This special issue includes articles addressing three of these cross-cutting

objectives. The occupational safety equity across worker populations objective highlights the importance of research on industries and occupations at high risk for traumatic injury and research by worker demographics. Several articles in this special issue focus on industries and occupations with higher risks for traumatic injury: construction (Schwatka et al., Dale et al., Robson et al.), mining (Yorio et al.), public safety (Guan et al., Davis et al., Murray et al.), and healthcare (Figueiro and Pedler, Lopez Gomez et al.). The article by Brown et al. focuses on young workers. Several articles address organization-based injury prevention (Schwatka et al., Yorio et al., Davis et al., Dale et al.). Five articles use rigorous methods to evaluate occupational injury prevention programs or strategies (Schwatka et al., Figueiro and Pedler, Davis et al., Dale et al., Robson et al.).

**Multidisciplinary research-** The causes and prevention of occupational injuries are complex and interconnected, including physical hazards, sociocultural dynamics, and worker characteristics. Solutions to preventing occupational injuries benefit from multiple perspectives and scientific disciplines. Thus, in selecting research to highlight in this special issue, we sought to include work from multiple disciplines. Most articles use public health and social science approaches. Two articles (Lopez Gomez et al., Gu et al.) explore associations between mental health and occupational injury. Five articles draw from engineering principles and approaches (Haight, Franklin et al., Guan et al., Hemler et al., Figueiro et al.).

## 3. Concluding remarks

Since the first NOIRS in 1997, worker safety has improved in the United States and research presented at NOIRS has become more robust. In 2018, there were about 1,000 fewer traumatic occupational injury deaths than in 1997, and the rate declined from 4.7 to 3.5 deaths per 100,000 fulltime equivalent workers ([Bureau of Labor Statistics, 2020](#)). Research presented at NOIRS over the years has expanded beyond describing occupational injuries and developing and evaluating intervention approaches, to studying how to ensure that research is put into practice (Cunningham et al.). While there has been progress in advancing the prevention of occupational injuries, there is more to be done. We need to be attentive to dramatic changes associated with the 4th industrial revolution and other changes described in the NIOSH Future of Work Initiative ([Schwab, 2016](#); [NIOSH, 2020](#)).

NIOSH looks forward to working with partners to co-sponsor the 8th NOIRS, tentatively planned for October 2021. We anticipate that the next NOIRS, in addition to addressing NORA Traumatic Injury Prevention objectives, will address projected transformations identified in the NIOSH Future of Work Initiative ([NIOSH, 2020](#)). These include changes in the workplace (such as non-standard work arrangements), work (such as increased automation and digitalization), and the workforce (increased diversity).

## Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the National Institute for Occupational Safety and Health.

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