## **NIOSH Science Blog**

# 40 Years of Safety Research

Posted on June 14, 2017 by Dawn Castillo, MPH; Tim Pizatella, MSIE; and Sydney Webb, PhD

In 1977, the National Institute for Occupational Safety and Health (NIOSH) recognized the need for a separate group dedicated to safety research and as a result, the Division of Safety Research – or DSR – was created. DSR serves as the focal point for the nation's research program for preventing traumatic occupational injuries, such as: motor vehicle crashes, falls, workplace violence, machinery-related events, confined space incidents, and electrocutions.

Each day, on average, 13 U.S. workers die on the job from a traumatic injury, almost 2,500 suffer disabling injuries that keep them away from work, and many more sustain other non-fatal injuries (Bureau of Labor Statistics, 2017). An economic analysis suggested that traumatic occupational deaths and injuries cost the nation \$192 billion annually (Leigh 2012). While these numbers have improved over the past 40 years, due in part to the work of DSR, the numbers remain too high, and efforts to reduce the toll of traumatic injuries on U.S. workers continues.

Today marks the Division's 40<sup>th</sup> anniversary. Directors throughout the Division's 40 years include: John Moran (served as the first Director 1977-1978 and again from 1984-1987); Dr. James Oppold (1978-1983); Dr. Thomas Bender (1988-1993); Dr. William Halperin (1995-1996); Dr. Nancy Stout (1997-2011); and Dawn Castillo (2011-present). The Division currently has approximately 70 staff, including epidemiologists, statisticians, occupational safety and health specialists, research engineers, technicians, health communicators, and administrative staff. The Division's research is rooted in a public health approach which includes:

- Injury data collection and analysis
- Field investigations
- Analytic epidemiology
- Protective technology
- Safety engineering

Below is a chronological list of just some of the safety research highlights from the past 40 years.

**1979** DSR releases seminal publication on work in confined spaces.



Engineers from across DSR pose for a picture during the 2017 National Engineers Week observance.

**1982** NIOSH introduces Fatality Assessment and Control Evaluation (FACE) Program, which has investigated more than 2,500 worker deaths to date.

**1984** DSR investigates the first robot-related fatality in the U.S and publishes a NIOSH Alert.

**1989** DSR investigates multiple occupational electrocutions in Puerto Rico after Hurricane Hugo, and releases prevention recommendations.

1993 DSR identifies workplace homicide as a significant public health issue and publishes a NIOSH Alert.

**1996** New NIOSH facility in Morgantown is dedicated with new laboratories that expand DSR's safety engineering research program.

**1997** DSR hosts the first National Occupational Injury Research Symposium (NOIRS), with subsequent symposia held in 2000, 2003, 2008, 2011 and 2015.

**1998** NIOSH Fire Fighter Fatality Investigation and Prevention Program (FFFIPP) is funded by Congress, with more than 300 traumatic injury line-of-duty-deaths conducted by DSR to date.

**1999** CDC reports improvements in workplace safety in the United States from 1900 to 1999, noting contributions of traumatic injury prevention research as part of this progress.



DSR's Tonya Rowan, Christie Wolfe, and Srinivas Konda attend the 2015 NOIRS in Kingwood, WV.

**2001** DSR investigates a series of fatal falls from telecommunication towers and releases a NIOSH Alert.

2002 DSR develops NIOSH recommendations for updating child labor hazardous orders.

**2004** DSR publishes study demonstrating effectiveness of patient lifting devices for reducing back injuries.

**2005** The FFFIPP identifies previously unrecognized issues with fire fighter Personal Alert Safety System (PASS) devices that contributes to an updated standard to improve design.

**2008** The National Academies publishes an evaluation of the NIOSH Traumatic Injury Research Program for the period 1996-2005, and found that it had contributed to improvements in workplace safety.

**2010** NIOSH establishes the Center for Motor Vehicle Safety (CMVS) in DSR. DSR hosts the first International Conference on Fall Prevention and Protection.

**2011** CDC identifies occupational safety as a top 10 public health achievement in the 1<sup>st</sup> decade of the 21<sup>st</sup> Century, and cites DSR work in patient lifting guidance and childhood agricultural injury prevention as contributing to this progress.

**2013** Online workplace violence prevention course for nurses is available, with nearly 27,000 completing the course to date. DSR leads development of NIOSH's first smart phone app – the free NIOSH Ladder Safety app, with more than 170,000 downloads to date.

**2017** DSR's CMVS wins ClearMark Award of Distinction for Keep Workers Safe on the Road infographic. DSR releases a seven-part video series on new ambulance safety crash test methods. **40**<sup>th</sup> **Anniversary of the Division of Safety Research!** 

DSR staff and alumni are joining together to mark their many meaningful contributions to worker safety and research over the past 40 years. We look forward to another 40 years of keeping workers safe on the job!

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DSR celebrate Hispanic Heritage with a lunch and learn event.

### **References:**

Bureau of Labor Statistics (2017). Injuries, Illnesses, and Fatalities. https://www.bls.gov/iif/

Leigh JP (2011). Economic burden of occupational injury and illness in the United States. Millbank Q, Dec, 89(4):728-772. Posted on June 14, 2017 by Dawn Castillo, MPH; Tim Pizatella, MSIE; and Sydney Webb, PhD Categories Observances, Safety

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NIOSH was doing and will do the great work of safety research in the field of science. I am in awe after seen the list of the research works done in those years.

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Stuart, thank you for your kind words.

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