**PS Asks**

**Dawn Castillo**

**PS:** In July, you were appointed director of the Division of Safety Research (DSR) at NIOSH. What have you learned since taking the position?

**Dawn:** I have worked in occupational injury research at NIOSH for nearly 20 years so there have not been any revelations per se. Since beginning my new position, however, I have reached out to groups that I have not previously been actively engaged with, including ASSE, to expand and build on division partnerships developed by others.

I’m impressed by the deep-seated commitment of numerous partners to improving worker safety, and enthusiasm for working together to leverage resources and increase the impact of our collective work on worker safety. It is very energizing and encouraging to have partners and a community who feel as strongly as I do about the importance of our work and the importance of working in partnership.

**PS:** Describe a challenge that you’ve faced as the head of DSR and what you did to overcome it.

**Dawn:** The most challenging part has been dealing with budget uncertainties and planning for potential budget reductions. NIOSH is currently operating under a continuing resolution with a FY2012 budget yet to be determined, and the specter of potentially deep budget cuts this year and in the next few years due to the national economic crisis.

Budget challenges are not new to NIOSH or DSR, and for years NIOSH has been forward-thinking in examining how to best position the institute to conduct meaningful and impactful research despite resources that are incommensurate with the research needs. Though challenging, I am confident that NIOSH and DSR will make strategic decisions and adjustments to ensure that important work and contributions to improving worker safety and health continue in force despite budget constraints. Working with partners to leverage resources and maximize impacts will be key.

As we plan for the future, I remind myself and staff of the critical nature of our work in improving the safety of workers, the need for us to remain energized in doing our important work, the need for us to be strategic in how we focus our work to ensure that our limited resources can and do lead to improvements in worker safety, and the importance, more than ever, of working with partners, such as ASSE, to leverage our limited resources so that collectively we can ensure that important worker safety research continues, and that research findings and prevention recommendations are effectively disseminated to individuals and groups positioned to act upon them to improve worker safety. The worker safety research needs will not go away in the current economic climate, and there is the potential for them to increase due to economic pressures on employers and workers. It is critical that DSR remain energized and committed to filling the most compelling research needs, recognizing that that we will not be able to do all that should be done.

**PS:** NIOSH’s Research to Practice (r2p) initiative was founded in 2004. How has it changed overall workplace safety since its launch?

**Dawn:** From my perspective, the r2p initiative has significantly advanced workplace safety. The initiative systematized within NIOSH best practices in workplace safety research that engage stakeholders and partners in the research continuum from surveillance to the translation and communication of results and recommendations. Within NIOSH, research proposals address various elements along this continuum, including partner involvement, as well as outline a comprehensive strategy for transferring our findings to impact and improve worker safety. Additionally, projects focused on disseminating and translating research findings into practice are specifically encouraged. r2p is also encouraged among our research grantees.

Since the initiative, there is increased engagement of stakeholders early in the research process to help ensure the relevance of research, expanded engagement of stakeholders in the actual research which contributes to a sense of ownership and responsibility, more targeted and refined dissemination plans, and expanded use of partners and stakeholders in dissemination. The expanded engagement of partners and proactive strategic thinking regarding transferring results to key stakeholders increases the likelihood that research results will be acted upon, and workers will be safer as a result of the research.

**PS:** How does r2p disseminate important information and findings?

**Dawn:** As part of the r2p initiative, all research projects and activities include strategies and specific steps for disseminating research findings to those in position to act upon the findings. This varies by research project, the nature of the project and findings. A critical element is identifying the target audience(s) and potential agent(s) of change.
For example, for much of our engineering research that develops and tests control technologies, our primary target audiences are voluntary standards committees that develop performance criteria or specifications for work processes and equipment. Division researchers participate on standards committees, including several ANSI committees, to ensure that relevant findings are known to and considered by committee members to incorporate worker safety into standards. By conducting research that can guide standards and working through the standards process, DSR researchers capitalize upon the market influence of standards on manufacturers and employers.

Working through the standards process is consistent with another NIOSH initiative, Prevention Through Design, which works to ensure that safety is considered upstream in the design of equipment, structures and processes to enhance prevention effectiveness and reduce the reliance on administrative and behavioral changes of employers and workers. DSR also contributes to NIOSH comments to regulatory agencies, synthesizing research to guide regulatory standards.

The division also conducts research that can inform employer policies and practices. For this type of research, DSR packages guidance for employers and workers, and seeks assistance in dissemination from employer, trade, professional and labor groups with connections to and networks of employers, occupational safety professionals and workers. ASSE is an important avenue for division r2p, given the organization’s extensive network of occupational safety professionals who are the industrial frontline for worker safety.

Additionally, NIOSH has begun using several social media platforms to communicate with its current stakeholders as well as reach new stakeholders with important worker safety information. The platforms that NIOSH has been active in include Facebook, Twitter, a science blog, YouTube and eNews (a monthly electronic newsletter).

**PS: How do you determine the effectiveness of your research and the r2p process?**

**Dawn:** NIOSH and DSR use quantitative and qualitative metrics to assess the effectiveness and impacts of our research. At the macro level, we establish quantitative injury reduction goals and monitor available data to assess progress. We do this with the recognition that these are crude measures, and that we cannot, nor can any group, take sole credit for progress or responsibility for a lack of progress. These metrics, however, that include reducing fatal and nonfatal injuries generally and by cause, industrial sectors and worker groups, help us monitor our contributions to successes and identify when we should modify our approach to better address the most compelling worker safety issues.

NIOSH and DSR also establish goals and objectives reflective of our indirect role in improving worker safety and drawing from our r2p planning. These goals and objectives address use of our research and findings by others, and include changes in regulations and voluntary standards, changes in equipment and work practices, changes in worker training programs, and changes in policy and practices of employers and workers. These goals and objectives are critical components of NIOSH strategic plans and individual project plans.

Projects identify and track specific examples of how their research will be used by others, drawing from r2p planning. Tracking impacts of our research is easier for some types of impacts than others. For example, identifying influences on regulations and standards is generally more straightforward than confirming our role in influencing changes in machinery or equipment, and the more downstream use of our research in worker training and changes in employer policies and employer and worker practices. These metrics are often qualitative, and frequently take the form of illustrative stories or examples of how our research influenced worker safety. We rely heavily on close connections with partners established through r2p planning to identify and document these successes. This is an inexact science but we believe these impact stories, in combination with quantitative data on injury incidence and rates, are meaningful metrics of our effectiveness and impacts on worker safety.

**PS: Can you give an example of when and where the r2p process has proved effective?**

**Dawn:** The NIOSH Childhood Agricultural Injury Prevention Initiative is one example where the r2p process has proven effective. Though this initiative preceded the formalization of the r2p initiative at NIOSH, it includes all the principles of r2p from its inception.

DSR’s first step was to draft an implementation plan for the initiative, seek stakeholder input on the implementation plan, and to revise the plan based on the input. NIOSH has periodically sought input from stakeholders since the initiative was developed to get input on progress and suggestions for program modifications. These efforts to seek stakeholder input into the mechanics of the initiative have helped ensure that the surveillance and research conducted by NIOSH is relevant to and meets stakeholder needs, and has helped position NIOSH data and recommendations for use by stakeholders to improve the safety of children on farms.

A critical component of the initiative was the establishment of venues for communicating data, research findings and recommendations to make improvements in childhood farm safety. These included establishing a center with responsibilities for conducting outreach and translating research findings into practice in farm communities and the
private sector, and establishing venues for communication with other federal agencies with potential roles in improving the safety of children on farms, including the Department of Labor that has responsibilities for enforcing and promulgating child labor laws.

NIOSH data have shown a 56% decline in the rate of childhood agricultural injuries between 1998 and 2009. The success of this initiative is a reflection of both the comprehensive nature of the initiative which includes surveillance, research and outreach, as well as the integral engagement of stakeholders through the r2p process throughout the initiative. Examples of how others have used NIOSH data and research findings to improve childhood farm safety include: parent use of guidelines for developmentally appropriate farm chores, targeted safety campaigns, development of curricula and health education materials, improvements to youth tractor safety training programs, the development of guidelines for creating safe play areas on farms, calls for revisions to child labor laws, and proposed legislation and rulemaking to revise child labor laws.

**PS: What do you enjoy most about your job?**

**Dawn:** I most enjoy when I see examples of how our work has been used to improve worker safety. I am fortunate to have terrific researchers, technical and support staffs in DSR who make it a pleasure to come to work every day, and who continually inspire me and make me proud of their dedication, innovation and scientific contributions to improving worker safety. I get a tremendous sense of satisfaction knowing that our work is valued and used by others, and is making work safer.

I also enjoy the opportunity to work with partners to identify points of common interest and to create platforms and specific plans to build upon common interests, leverage resources, and increase the opportunities and likelihood that collectively our efforts will lead to improvements in worker safety.

**PS: How do you stay on top of industry news and current events?**

**Dawn:** NIOSH routinely monitors news coverage, which helps me stay on top of developing events, and there are several journals and publications that I routinely peruse to stay abreast of industry news and current events. These include *Professional Safety*, *BNA Occupational Safety and Health Reporter*, NIOSH eNews and the OSHA QuickTakes Newsletter. In addition to staying abreast of industry news and current events, it is important to me that I stay abreast of the occupational safety literature. I subscribe to and weekly review a listing of scientific abstracts on injury research, and I routinely peruse the contents of several occupational safety and health research journals.

**PS: In what ways can ASSE and NIOSH work better together so that ASSE members may benefit?**

**Dawn:** As noted, I am somewhat new to ASSE. I recently visited ASSE headquarters and had the opportunity to meet with key staff and learn more about the organization. I also have spoken with NIOSH researchers who have had longstanding relationships with ASSE. I have been impressed by the strong, multifaceted and productive NIOSH and ASSE working relationship, which includes: ASSE leadership actively participating and providing input at NIOSH forums and meetings and into research agendas; NIOSH researcher participation in the annual professional development conference, in practice specialties and common interest groups, and on ASSE-managed standards committees; and communication of NIOSH research findings and recommendations through ASSE media such as *Professional Safety* and the ASSE website. I look forward to expanding my knowledge about ASSE operations to better identify opportunities for working together, and would welcome specific suggestions from ASSE leadership and members on how to do this. The easiest way to reach me is by e-mail at DCastillo@cdc.gov.

In terms of strengthening this partnership, specifically focusing on benefits for ASSE members, I plan to work more systematically with ASSE leadership to ensure that ASSE is aware of new NIOSH safety publications and guidance likely to be useful to ASSE members, and to work with ASSE leadership to discuss the most appropriate avenues of communicating the availability of new materials to the vast ASSE network. I would also like to explore additional avenues to encourage the inclusion of DSR findings and recommendations in ASSE-supported training programs.

**PS: How can ASSE members get more involved with NIOSH and its various programs?**

**Dawn:** NIOSH truly values stakeholder engagement and input, and routinely provides opportunities for interested parties to provide their input. Examples are NIOSH science blogs that invite comments on hot topics and emerging issues, and public dockets that seek document review and programmatic input. NIOSH’s website ([www.cdc.gov/niosh](http://www.cdc.gov/niosh)) includes links to the blog and docket, as well as links to NIOSH social media sites. My recommendation to ASSE members who would like to stay abreast of NIOSH work and products, and opportunities to be involved with NIOSH, is to subscribe to NIOSH eNews ([www.cdc.gov/niosh/enews](http://www.cdc.gov/niosh/enews)).
In addition, DSR has a couple of research projects addressing underreporting issues. These projects include: research to assess and quantify potential underreporting in the NEISS-Work system; research to estimate the numbers of injuries in the NEISS-Work system that occur among groups who by design are excluded from the BLS survey, including the self-employed.

DSR also works in collaboration with the Agriculture and Labor departments to collect data on injuries and hazards for farm children and workers, populations whose injuries are woefully underrepresented or absent in other data systems. NEISS-Work and agricultural injury data provide a different and complementary picture of occupational injuries to the BLS data, and provide insights into the overall burden, distributions and trends in occupational injuries.

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employed; and research into incentives and disincentives (barriers) for workers to report their injuries to their employers and healthcare providers. The goals of this research are to provide insights into the size of the underreporting problem, and make recommendations for improving the reporting of occupational injuries. NIOSH’s research on underreporting complements underreporting research being conducted by BLS and OSHA.

**PS:** How can SH&E professionals use the information from NIOSH to build a better business case for occupational safety programs?

**Dawn:** Many of the results from DSR research, such as the FACE case studies that identify recommendations for preventing future deaths and injuries under similar circumstances, and intervention evaluations showing reductions in the number or rates of occupational injuries, are key elements to developing the business case for occupational safety improvements or occupational safety programs. Many times, that is all that an organization requires prior to continuing or modifying an existing program or implementing a new initiative.

NIOSH and DSR recognize the value of providing guidance on developing business cases for occupational safety programs, and have initiated work in this area. As an initial step, DSR provided guidance in a document, Investing in Health and Safety: A Business Case Resource Guide. However, much of the work to date has been more theory- and research-oriented, and work remains to translate this into examples and additional guidance that will be specifically useful to SH&E professionals.

Division researchers have been developing methods and examples of deriving the business case for occupational safety programs. Key to this effort is recognizing that the compelling business case may vary substantially and is not always grounded in financial measures. For example, while financial savings was a lever for adoption of a mechanical lifting program in healthcare, worker satisfaction, worker safety and health, business objectives, environmental benefits and corporate social responsibility were levers for other occupational safety improvements studied by DSR researchers.

When DSR finishes this work, business case examples will be posted to the NIOSH website and disseminated through publications, including a planned submission to *Professional Safety*. DSR also plans to develop a user-friendly tool that could be used by others to develop business cases to demonstrate the value of occupational safety programs.

*Disclaimer: The opinions in this interview are those of Dawn Castillo and do not necessarily represent the views of NIOSH.*

**Dawn N. Castillo** was appointed as director of NIOSH’s Division of Safety Research in July 2011. The division serves as the focal point for traumatic occupational injury research and prevention programs at NIOSH. Prior to this, Dawn was chief of a division branch responsible for occupational injury data collection, analysis and interpretation. She holds an M.P.H. from the University of California, Los Angeles, and has authored numerous articles, book chapters and technical documents on occupational injuries. In 2000, Dawn was the fourth recipient of the James P. Keogh Award, an annual NIOSH award recognizing a current or former NIOSH employee for exceptional service to the field of occupational safety and health.