

## A Working Research Agenda for OSH

Through advocacy, education and standards development, ASSE and the ASSE Foundation have played a leading role in advancing research to protect workers from injury and illness. However, OSH research has rarely focused on issues related to the value the profession brings to worker protection or to the value of key concepts underlying OSH practice. By determining that value through research, OSH professionals can better educate themselves, better serve workers and better engage employers.

To that end, ASSE, the ASSE Foundation and various stakeholders have established a research agenda to encourage and focus the decisions of academic, nonprofit and government entities that seek to conduct OSH research in new directions that will help us better understand the OSH profession. While each of the nine issues identified demands better understanding, ASSE has prioritized three areas as the most important to focus its initial efforts to encourage research.

### Three Focus Areas for OSH Research

#### *Validate the Effectiveness of OSH Management Systems*

The safety community has long endeavored to quantitatively measure the effectiveness of OSH programs. Injury and illness prevention is the stated goal of most OSH programs, yet if an injury or illness has been prevented as the result of an OSH program, how would one know? Nonevents cannot be measured, and even if fewer injuries occur, one cannot be certain that the OSH program produced that reduction.

Safety professionals have historically measured program effectiveness by comparing year-end incident rates. Some within the safety community have recognized that measuring this lagging indicator leads only to a yo-yo effect on outcomes because more resources are allocated to injury prevention when the rate is high and fewer resources are allocated when the rate is low. However, the recognition that it is not enough to measure lagging indicators has led to an overemphasis on leading indicators. The OSH community advocates leading indicators as better measures because they are proactive in that they allow adjustments to be made before an injury or illness occurs.

Unfortunately, neither approach has proven to be a true measure of performance. No one can definitively say that any change in injury or incident rates is due to anything being done as part of the OSH program. Using either leading or lagging indicators is not sufficient to prove program effectiveness. However, much of the literature does not adequately address the interactive effects between performance variables and the cause-and-effect relationships between leading and lagging indicators. Thus, empirical evidence is needed to validate OSH systems.

#### *Demonstrate That Increasing the Quality of Safety Interventions Improves OSH Outcomes & Company Performance*

OSH interventions aim to prevent injuries and illnesses while providing organizations with tangible and intangible business benefits such as greater profitability, reliability, productivity, efficiency, job satisfaction and reputation. Further, as more organizations embrace sustainable business practices, protecting the safety and well-being of employees, customers and communities is becoming an operational necessity.

Empirical data on quality of safety interventions is limited. Most of the existing research focuses on the quantity of interventions rather than on their quality. Thus, the OSH community needs research that examines the value of using safety professionals, reviewing companies with and without safety professionals, as well as examining the effectiveness of safety practitioner

education and credentialing. Another consideration is research on specialized work by safety professionals in certain high-risk industries that could be used as a basis to address appropriate credentialing and training.

Such research would clearly identify and measure the effect of interventions that facilitate the achievement of OSH goals and create business value. Such data would enable organizations to optimize resources and better predict outcomes. Additionally, such research would demonstrate a positive correlation between OSH performance and business performance in organizations of varying sizes and OSH maturity levels.

#### *Provide Employers With a Better Understanding of the Value of Integrating Overall Worker Wellness With OSH*

While organizations are adopting elements of NIOSH's Total Worker Health strategies, the integration of wellness with OSH and into the practice of OSH professionals remains undeveloped.

Health promotion programs usually target personal health habits or activities people can do to improve their health. These programs aim to prompt workers to modify their behaviors to prevent the onset of negative health consequences. In contrast, most injury and illness prevention programs involve a more direct intervention by employers. Instead of convincing workers to modify risky behavior, employers usually modify the workplace to directly reduce the risk of injury, utilizing four major categories of interventions: engineering, administrative, personal and multiple interventions.

Research on health promotion, and injury and illness prevention typically attempts to assess the effectiveness of these programs by measuring their impact on a health outcome, such as the onset of a disease or injury, or on a cost measure, such as medical care expenditures. In general, the literature finds that these programs can reduce health risks and improve individual outcomes.

Thus, of interest is research that supports inclusion of wellness as a leading indicator used to measure safety; that can provide the basis for developing safety risk profiles similar to health risk assessments; and that can help establish the return on investment for the integration of wellness with OSH programs.

### Additional OSH Research Priorities

In addition to the three focus areas described, these six research issues are of interest to the OSH community:

- Quantify the effectiveness of the risk assessment approach.
- Review the quality of occupational incident investigations.
- Determine ways to disseminate pertinent research to practitioners and workers in usable formats.
- Establish best approaches for OSH professionals to communicate safety and health.
- Determine effective leading indicators.
- Examine the role of culture and gender in establishing safe and health workplaces.