Spring 2019

Management Support for Safety: Disrupting the Paradigm

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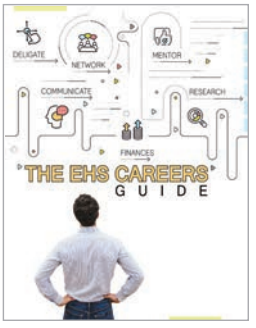

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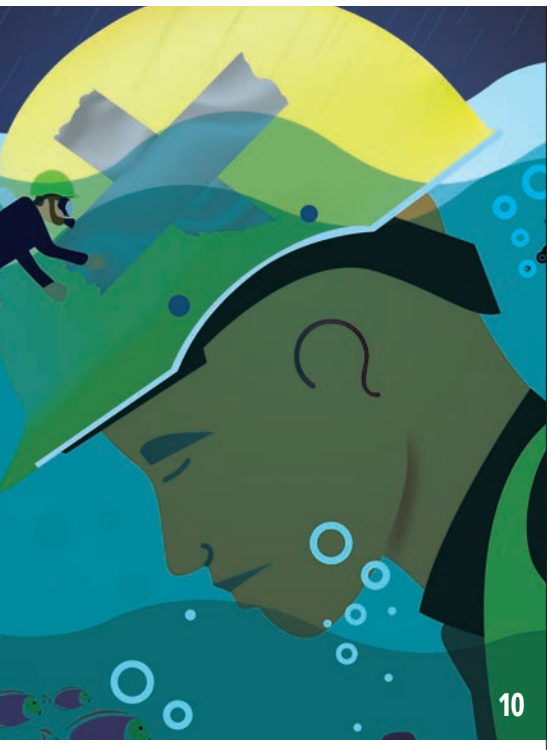

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MENTAL HEALTH: SAFETY MUST DEFEAT SILENCE AND STIGMA

We have some exciting news at *Safety Decisions*—our Fall/Winter 2018 issue is a Jesse H. Neal Award finalist for Best Single Issue of a Tabloid/Newspaper/Magazine! We won't know whether we have won until after this issue has gone to print, but we'll keep you posted in the *EHS Daily Advisor*. We are honored to be a finalist and are very proud of the work we do bringing our readers important workplace safety news, trends, and best practices.

And speaking of important trends in safety, our cover story this quarter is not to be missed. Mental illness affects everyone, either personally or through connections with friends, family, or coworkers. Construction workers, although they are in a very safety-conscious industry, are at a particularly high risk of suicide. In an in-depth article, Sally Spencer-Thomas, Psy.D., illuminates the facts of the issue along with evidence-based strategies for suicide prevention and other assistance for employees who may be struggling with their mental health. Addressing this safety issue is a great challenge today, and proper knowledge and intervention can be just as life-saving as fall protection training or personal protective equipment. Dr. Spencer-Thomas has provided our readers with a wealth of information and resources in her cover story—please do not hesitate to use them at your organization!

But while the safety professional is taking care of everybody else, who takes care of the safety professional? Often, good self-care is the key. SafeStart's Ray Prest tackles the flip side of the workplace mental health equation in his *Beyond Compliance* column, providing tips on how safety pros can avoid burnout and stay both physically and mentally healthy.

As always, stop by the *Keeping Up* section for 10 timely safety news items, and we have a wide selection of other articles in this issue as well:

- Management Support for Safety: Disrupting the Paradigm
- The Two-Way Relationship Between Workers' Comp and Safety
- Unaffected by Government Shutdown, OSHA Increases Penalties
- Lockout/Tagout: Are There Changes on the Horizon?
- An EHS professional profile of John Herr, CEO of Avetta
- A new cartoon plus OSHA challenge trivia on the *Just for Fun* page
- And much, much more!

At *Safety Decisions*, we love hearing from our readers! Drop us a line at safetydecisions@simplifycompliance.com to let us know how we're doing and what you'd like to see next.

Thanks for reading,

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OSHA BERYLLIUM ENFORCEMENT RAMPS UP

On March 11, OSHA began enforcing additional provisions of its general industry beryllium standard, specifically the requirements for change rooms and showers.

OSHA will begin enforcing general industry requirements for engineering controls to limit worker beryllium dust exposures a year later, on March 10, 2020. At construction and shipyard workplaces, the agency is only enforcing the permissible exposure limit (PEL), which is 0.2 micrograms per cubic meter ($\mu g/m^3$) of air averaged over 8 hours.

Inspection procedures for enforcing the PEL include:

- Using the agency's new sampling and analytical method for beryllium, OSHA Method 1023;
- Using Method 1023 to assess beryllium exposure levels if beryllium is found when sampling welding fumes using OSHA Method 125G (which cannot adequately assess exposure levels);
- Collecting one or more personal breathing zone samples on the first day of the inspection;
- Placing a sampling cassette outside of the helmet/hood to monitor for abrasive blasting exposures when an employee is wearing an abrasive blast respirator with a hood/helmet; *and*
- When collecting an air sample on a welder wearing a protective helmet, positioning a sampling cassette inside the helmet.

Avetta and BROWZ Merge to Become a Leading Provider of Supply-Chain Risk Management

Avetta and BROWZ, two leading providers of SaaS-based supply-chain risk management software, announced they have combined to form a new, market-leading organization focused on delivering the best in supply chain risk management services to companies worldwide. The transaction further solidifies Avetta's position as a world-class organization, innovator, and thought leader, expanding the company's global network to 85,000 customers in over 100 countries in the fast-growing $14 billion global marketplace for supply-chain risk management solutions.

Avetta and BROWZ combine more than 3 decades of experience in making industries safer, more sustainable, and compliant by vetting and qualifying the suppliers that support their global clients. Avetta's and BROWZ's 450 combined clients include blue chip companies in industry verticals such as energy, chemicals, manufacturing, utilities, construction materials, facilities management, communications, transportation, logistics and retail, mining, aerospace and defense, and food and beverage. These industry leaders require better visibility into supply-chain risks, such as workplace health and safety, sustainability, modern slavery, data privacy, antibribery and corruption, and regulatory and insurance compliance.

Read our profile of Avetta CEO John Herr in this issue of *Safety Decisions!*

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OSHA Revises Its Whistleblower ADR Policy

OSHA has updated its policies and procedures for Alternative Dispute Resolution (ADR) to resolve whistleblower retaliation complaints. The OSHA directive, CPL 02-03-008, amends an earlier ADR directive, replacing CPL 02-03-006, issued August 18, 2015, and makes changes to terminology and confidentiality procedures for the ADR process.

OSHA offers the ADR process as an alternative to a whistleblower complaint investigation. Under the ADR program, the parties involved in a whistleblower dispute can choose to participate in an early resolution process leading to a settlement agreement with the assistance of a neutral OSHA whistleblower expert. The process is voluntary; both parties must agree to ADR, and both must submit a written "Request for Alternative Disputes Resolution (ADR)" form.

In the new ADR directive, changes include:

- Revising the confidentiality section, explaining circumstance in which the OSHA official facilitating the ADR may share information with other agency officials;
- Making minor changes in the terminology used to describe the process and the OSHA personnel involved in the program; *and*
- Revising the ADR request form to incorporate new procedures and terminology.

The agency now refers to the staff member who facilitates ADR as "the Neutral." It previously referred to the neutral, OSHA expert who facilitated ADR as the Regional ADR Coordinator (RADRC).

Don't Forget Carbon Monoxide as a Cold Work Hazard

If cold weather lingers in your area this spring, don't forget about a hazard that is often overlooked. OSHA recently reminded employers about the carbon monoxide (CO) hazards of using portable generators, fuel-burning space heaters, and other equipment.

"Every year, carbon monoxide poisoning claims the lives of employees nationwide, usually when fuel-burning equipment and tools are used in buildings or semi-enclosed spaces without adequate ventilation," OSHA said in a public statement.

"The danger increases during the winter months when this type of equipment is used in indoor areas that have been sealed tightly to block out cold temperatures and wind," according to the agency.

Fuel-burning portable generators and space heaters are common sources of CO, as is anything that uses combustion to operate, such as:

- Compressors,
- Furnaces,
- Power tools,
- Welding equipment,
- Pumps, *and*
- Gas-powered forklifts and their motorized vehicles.

OSHA said employers should install effective ventilation systems, avoid using fuel-burning equipment and vehicles in enclosed or partially enclosed spaces, and use CO detectors in areas where CO hazards may exist.

NTSB Releases Transportation Safety 'Most Wanted' List

The National Transportation Safety Board (NTSB) released its 2019–2020 "Most Wanted List of Transportation Safety Improvements," the regulatory and voluntary changes the board feels will reduce transportation-related injuries and fatalities.

The NTSB is seeking 267 changes, 46 in the next 2 years, to address the following issues:

- Eliminating distractions,
- Ending alcohol and drug impairment,
- Ensuring the safe shipment of hazardous materials,
- Fully implementing positive train control,
- Implementing a comprehensive strategy to reduce speeding-related crashes,
- Improving the safety of Part 135 aircraft flight operations,
- Increasing implementation of collision avoidance systems in all new highway vehicles,
- Reducing fatigue-related accidents,
- Requiring medical fitness screening for and treating obstructive sleep apnea, *and*
- Strengthening occupant protection.

The Labor Department's Bureau of Labor Statistics recently reported that transportation incidents accounted for 40% of occupational fatalities in 2017, a—total of 2,077. Heavy and tractor-trailer truck drivers had the largest number of fatal occupational injuries with 840.

TELGIAN LAUNCHES CFATS COMPLIANCE SOFTWARE

Telgian Management Technologies (TMT), a leading supplier of software solutions that enhance chemical industry adherence to compliance regulation requirements, recently released a new module for its Telgian Compliance Manager. The module addresses the U.S. Department of Homeland Security's Chemical Facility Anti-Terrorism Standards (CFATS), a regulatory program focused specifically on security at high-risk chemical facilities.

This CFATS module is the first commercially available relational database software application designed specifically to track CFATS compliance solutions and security measures in a concise and effective platform. The module is flexible, scalable, and secure and provides consistent and efficient data management in real time, allowing users to manage all of their security protocols in one place. In addition, the Telgian Compliance Manager's CFATS module allows organizations to submit and track forms and reports related to various requirements.

The software also provides ongoing tracking of compliance activities, including plan or document reviews and revisions. As site security plan or alternative security program data are entered, the software offers continuous, one-step documenting and tracking of required annual audit information.

"For the chemical industry, this module release comes at a crucial juncture," explains TMT Program Manager Ashley Reiter. "Just weeks ago, Congress unanimously passed legislation to reauthorize the CFATS program."

Study Discovers Some Nurses Aren't Using PPE with Hazardous Drugs

Female nurses who give cancer patients their medications don't always wear gloves or gowns to protect themselves from hazardous drugs, according to a new National Institute for Occupational Safety and Health (NIOSH) study.

When nurses administer chemotherapy in pill or liquid form (in an intravenous drip, for example) to patients diagnosed with cancer, the nurses are exposed to hazardous drugs known as antineoplastic drugs.

While these drugs are vital for cancer patients—the drugs kill rapidly dividing cancer cells—the drugs also can threaten a nurse's healthy cells, as well as the cells of a developing baby.

The effects of these hazardous drugs include:

- Carcinogenicity (actually causing cancer in otherwise healthy cells);
- Cytoxicity (literally toxic to cells);
- Fertility impairment or reproductive toxicity;
- Genotoxicity (causing mutations);
- Organ toxicity; *and*
- Teratogenicity (causing mutations in embryos or fetuses).

The NIOSH study found that nurses—including those who were pregnant—reported not wearing protective gloves and gowns, the minimum protective equipment recommended when administering these drugs.

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NIOSH Resources Click with Employers

The National Institute for Occupational Safety and Health (NIOSH) announced the most accessed resources on its blog, social media accounts, and website during 2018.

Employers, workers, and the public can find evidence-based safety and health resources on the institute's site and social media accounts.

Users can download copies of NIOSH's print publications on its website, https://www.cdc.gov/niosh/index.htm. These include publications indispensable for complying with federal and state regulations. The ones most often downloaded last year were:

- NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings, 2016;
- NIOSH Pocket Guide to Chemical Hazards;
- NIOSH Lifting Equation; *and*
- NIOSH Manual of Analytical Methods.

Website users also frequently read NIOSH pages on emergency needlestick information, NIOSH-approved N95 particulate filtering face piece respirators, and the institute's World Trade Center Health Program, which provides medical monitoring and treatment for responders at sites of the September 11, 2001, attacks at the World Trade Center, Pentagon, and Shanksville, Pennsylvania.

The terms most often searched on the NIOSH website were:

- NIOSH,
- NIOSH pocket guide,
- NIOSH hazardous drug list,
- WTC health program, *and*
- Heat stress.

OSHA'S CITATION AND FINE OF WAL-MART VACATED

An Administrative Law Judge (ALJ) vacated OSHA's citation of Wal-Mart and one of its contractors for alleged violations of the lockout/tagout standard. The alleged violation was cited following an incident in which a worker at a Brundidge, Alabama, distribution center was struck by an automated trolley October 18, 2016, and sustained a serious leg injury.

OSHA had sought penalties of $126,749 each from Wal-Mart Stores East, L.P., and Swisslog Logistics, Inc. The ALJ with the Occupational Safety and Health Review Commission (OSHRC) dismissed the fines.

OSHA accused both Wal-Mart and Swisslog of willful violations of the lockout-tagout standard for failing to have documented procedures in place for the control of hazardous energy. The ALJ instead ruled that Wal-Mart had rigorous procedures in place; but that Wal-Mart and Swisslog employees failed to follow those procedures.

GAO Finds History of Safety Violations Among Defense Contractors

Department of Defense (DOD) contracting officials need to more closely focus on contractor safety performance when awarding defense contracts, the Government Accountability Office said in a new report.

The GAO also wants OSHA to consistently include a searchable company identification number in its inspection and enforcement data.

The GAO found a history of workplace safety and health violations among companies that were awarded defense contracts, according to its report, "Defense Contracting: Enhanced Information Needed on Contractor Workplace Safety." However, GAO auditors found it difficult to match defense contractors with company names in OSHA's database.

The GAO also recommended that the DOD take the following steps:

- Advise contracting officials that the OSHA website is a resource for information about contractors' workplace safety and health records.
- Explore the feasibility of requiring a safety performance rating for contracts in industries that have relatively high rates of occupational injuries, such as manufacturing, construction, and ship building and repairing.

The DOD concurred with both recommendations. SD

Keeping Up is compiled by staff and contributors of the EHS Daily Advisor *and* Safety Decisions *magazine.*

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KELLY CHURCH

WE CAN'T FIX MENTAL HEALTH WITH DUCT TAPE: A New Frontier in Safety

Historically, mental health and suicide have not been considered safety priorities—until now. Here is why industry should care deeply about these issues, along with evidence-based tactics to save lives and alleviate suffering.

By Sally Spencer-Thomas, Psy.D.

Safety professionals are well-versed in the "fatal four"—falls, struck by object, electrocution, and caught in between—and know that if they are able to prevent these forms of death, they will save almost 600 lives each year.[1] What most safety professionals are unaware of is that suicide in construction takes many more lives. A recent study published by the Centers for Disease Control and Prevention (CDC)[2] found that, in their sample, 20% of all men who died by suicide in the United States were in the construction/extraction industry. 47,173 people died by suicide in 2017, and 27,404 of them were men ages 20-64.[3] If 20% of these men were in construction/extraction, that means we can estimate that over 5,000 men working in this industry died by suicide—about nine times more than all of the fatal four deaths combined.

When a workplace fatality happens, the cause is very frequently determined to be "accidental" and a deeper investigation into *intent* to die is not undertaken. With this mindset, the remedy is often simple: more safety training. When we look at these fatal occupational injuries, however, the first two most common (transportation incidents and falls) are also common ways people think about taking their lives.[4, 5] Thus, it is possible that some, if not many, of these workplace fatalities are actually suicide deaths—which means that additional safety training may not be effective in preventing them.

The reason suicide has not widely concerned safety professionals before is that most suicide deaths do not occur at the workplace and thus were not considered work-related fatalities. Today, we know different, and there are many

things workplaces can do to prioritize suicide prevention and mental health promotion within their health and safety programs.

Why Is Construction at Risk?

[text]Not all workplaces are created equal when it comes the so-called "deaths of despair"—suicide, overdose, and the fatal outcomes of addiction.[6] In the U.S., the construction industry ranks first for all industries by highest number of suicides, and second for all industries by rate of suicide. White men of middle age have some of the highest rates and total numbers of suicide in the U.S.,[7] so part of the answer is due to the demographic working in construction; however, many aspects of the work also increase risk.

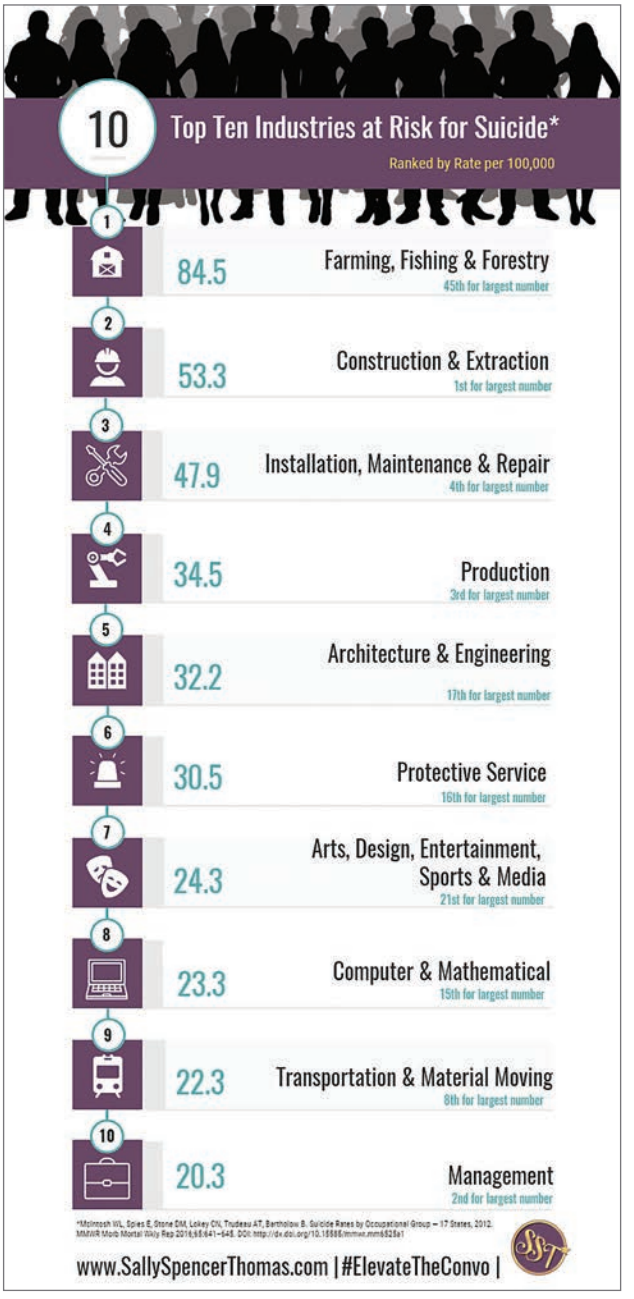
While self-reliance is often valued as a sign of strength and mental stability, it is paradoxically one of the strongest predictors of poor mental health and suicide risk when looking at several attitudes.[8, 9, 10] Therefore, industries that value self-reliance are often at heightened risk. Attitudes and beliefs such as "I can solve my own problems" and "Others do not need to worry about me" are often a major barrier to seeking support from family, peers, or professionals.

Thus, it is not surprising that occupations like construction that tend to be male-dominated and value stoicism and other traditional masculine norms have the highest rates (in construction's case, a rate of 53.3 per 100,000 workers) of suicide.[2]

Why Are These Workplace Safety Concerns?

There are many reasons why mismanaged mental health conditions and unchecked suicidal thoughts can lead to safety concerns.

- **Distraction.** Having suicidal thoughts and symptoms of illnesses like depression, anxiety, and addiction are intense, and trying to hide them from other people can make them all-consuming. For example, racing or intrusive thoughts as experienced by people living with bipolar condition, trauma, or thought disorders such as schizophrenia can be very distracting. This distraction can interfere with decisiveness and attention to safety.
- **Impulsivity, impaired perception, and bad judgment.** Agitation, tunnel vision, distorted thinking, and paranoia are common symptoms among several mental health conditions. When left untreated these symptoms can interfere with workplace security, safety, and morale.
- **Fatigue and microsleep.** Sleep disorders are common in many forms of mental illness and suicidal intensity. Insomnia is present in many forms of mood disorders, anxiety disorders, and substance use disorders. People living with depression often experience lethargy and what is known as anhedonia—the inability to feel pleasure. Sometimes extreme fatigue can result in microsleep,[11] where the brain involuntarily goes "offline" into a sudden sleep state for a matter of seconds. This state can have disastrous consequences for many safety-conscious professions, including those involving the operation of machinery and heavy equipment.
- **Other medical complications.** When mental health challenges reach crisis levels, other physical health challenges involving pain, gastro-intestinal problems, and heart function can result.
- **Risk-taking and disregard for safety precautions.** When people are overwhelmed by the emotional pain in their life and have come to a place where the only



way they can get out of this pain is to die, they often consciously or subconsciously start to take more risks or even practice suicidal behavior as they test out their capacity for self-harm.

What Contributes to Suicide Risk?

Mental Health Conditions

"Mental health conditions" is a broad phrase that encompasses a wide spectrum of issues, from what mental health providers call "adjustment disorder" (reaction to a stressful life event) to depression to bipolar condition to schizophrenia. The phrase can also include the wide range of substance use disorders like binge drinking and opioid addiction. Most of these conditions are dynamic and exist on a continuum, which means people can move up and down the severity scale of their symptoms. We tend to call something a mental health "condition" or "illness" or "disorder" when the symptoms get in the way of love, work, and play.

For instance, if your anxiety is so intense you cannot sleep well for the better part of two weeks, you might meet the criteria for an anxiety disorder. If you find yourself craving alcohol and continually overconsume despite consequences like hangovers or risky behaviors, you might meet the criteria for an alcohol use disorder.

Mental health conditions may be brought on by things that happen to us. Some people may succumb to mental health conditions like depression when experiencing overwhelming life challenges like divorce, layoffs, pain, or other health challenges. Still others may feel the effects of trauma from car accidents, sexual assault, or natural disasters.

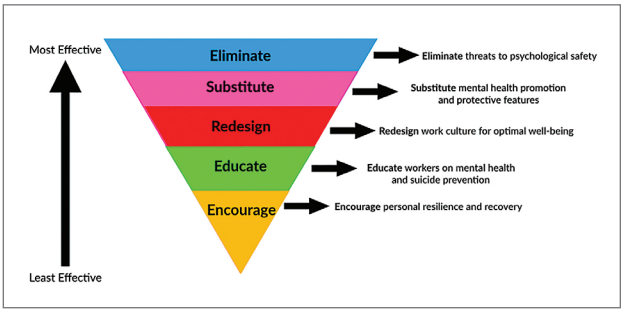
Some people may inherit a predisposition to certain mental health conditions based on their genetics or how their brains were wired when they were born. Some people live with chronic and severe symptoms; others experience symptoms only once or intermittently.

The good news is that treatment can be very effective for most people. According to the CDC, 80% of people with depression will improve with treatment.[12] When depression or other mental health conditions are not well managed, however, workplaces often see a drastic impact on productivity and absenteeism. For instance, in a three-month period, people living with depression experience an average of 11.5 days of reduced productivity and 4.8 missed work days. Of all the costs related to workplace depression, the American Psychiatric Association Foundation found that "presenteeism" was the biggest drain—in other words, people were showing up to work but they were unable to function.[13]

When left untreated, mental health conditions can progress, like cancer, to become life-threatening. The emotional pain and hopelessness can leave many to feel there is no other way to escape the unimaginable suffering. For others, the experience of feeling like a burden or feelin like important social connections have been lost can trigger suicidal thoughts. When an employee also has the "capability for suicide"—an innate or learned fearlessness of death—the risks for death by suicide increase.[14]

Job Strain and the Stress Injury Continuum

Many workplaces realize that the concept of "occupational health" has shifted to "total worker health." According to the National Institute for Occupational Safety and Health (NIOSH), "Total Worker Health" is a holistic approach to promote worker well-being through policy, programs, and practices.[15] Researchers are clear: Risk factors in the workplace can contribute to health concerns—including suicide risk—previously considered unrelated to work.[15, 16, 17] Thus, improvements in the psychosocial conditions of work may improve well-being and prevent suicide.



Adapted from NIOSH's Hierarchy of Controls

When we look at NIOSH's Hierarchy of Controls, workplaces striving to prevent suicide can first eliminate threats to psychological safety (e.g., bullying and/or toxic management practices) and substitute these unsafe practices with those that promote mental health and protective factors (e.g., cultivating a sense of belonging). Redesigning work culture for optimal well-being might include making access to quality mental health care easier or changing the process of performance reviews to make them more collaborative and mindful of how psychological distress impacts work abilities.[18] At the bottom of the hierarchy, we find personal empowerment interventions of education and training for psychological safety and encouraging individual practices of self-care and treatment. The environmental interventions at the top of the pyramid are more likely to be effective because they impact everyone is a systemic way.

Many workplace well-being hazards and "job strain" put workers at risk for suicide and significant emotional distress. These hazards include but are not limited to:

- Low job control, a lack of decision-making power, and limited ability to try new things;
- Lack of supervisor or collegial support and poor working relationships;
- Excessive job demands and constant pressure or overtime;

- Effort-reward imbalance, related to perceived insufficient financial compensation, respect, and/or status;
- Job insecurity, such as the perceived threat of job loss and anxiety about that threat;
- Bullying, harassment, and hazing at work;
- Prejudice and discrimination at work;
- Work-related trauma;
- Work-related sleep disruption;
- Toxic work design elements (i.e., exposure to environmental aspects that cause pain or illness); *and*
- Workplace culture of poor self-care and maladaptive coping (e.g., alcohol and drug use).

Of these, job security has been associated with higher odds of suicidal ideation and issues with job control appear to be more connected to a risk of suicide attempt and death.[16] Prospective evidence also exists that workplace bullying, especially physical intimidation, can lead to suicidal intensity.[17]

One study[16] found that proximal risks to the construction workers' suicide deaths included a transition in work experiences, a workplace injury resulting in pain or disability, and financial issues. The study also found that the decedent often disclosed to coworkers about suicide plans prior to death, indicating that peer support could be a life-saving intervention.

By understanding the interplay between environmental hazards and mental health, we can start to conceptualize workers' distress and despair. The U.S. Marine Corps has done this as a color-coded continuum, from the green zone of vibrant well-being to yellow and orange zones of reaction and injury to the red zone of potentially life-threatening illness. This continuum helps us to normalize these states and allows managers and employees to appreciate how people can move along this continuum when experiencing different life events, environmental threats, and internal challenges. Once we better understand the challenges, we are in a better position to take action.

Aspiring to a Zero Suicide Mindset at Work: Building a Resilient Workforce

The idea of "aspiring to zero" is not foreign to safety-conscious workplaces. Workplaces and industries that have successfully reduced work-related mortality and morbidity went beyond just compliance with workplace safety regulations. They fully embraced a 24/7 mindset and a paradigm-shifting commitment to safety that permeated all areas of their cultures and became closely tied to the core values of their organizations.[19] The concept of making construction a zero suicide industry is aspirational.[20] It is not "zero tolerance," a quick fix, a marketing strategy, or a short-term goal that we have "failed" if we don't reach it. The intent is to create a stress- and blame-free culture that examines every suicide death with this perspective—how can our company improve to save lives?

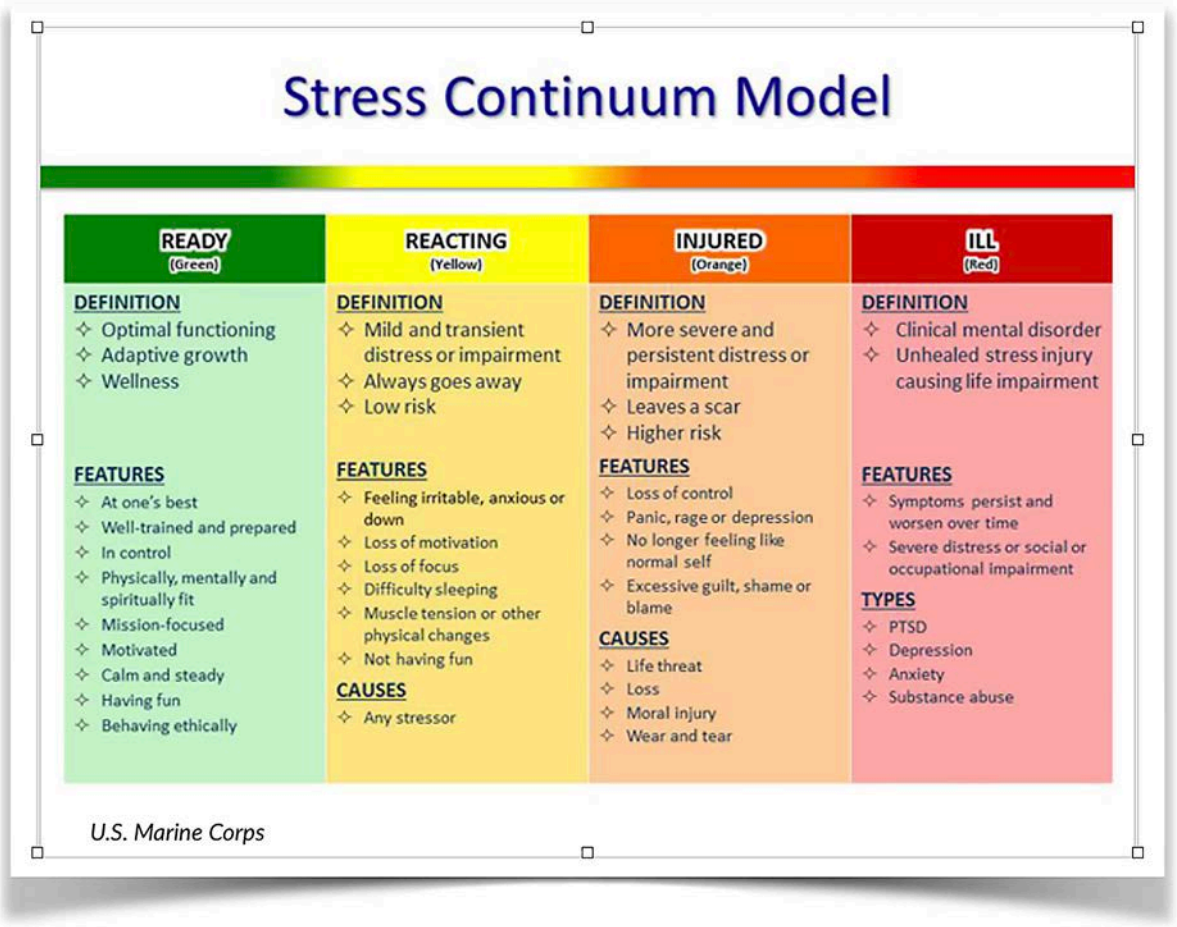
In order to prevent suicide and alleviate the suffering brought on by mental health conditions, companies must develop a comprehensive and sustained approach to prevention and risk mitigation. A comprehensive and sustained suicide prevention strategy does not consist of a "one-and-done" training session or a standalone awareness day. Rather, activities, communications, training components, and other elements are woven into the places where other health and safety activity is already happening. This

The Stream Parable

You are walking along a river one day and you hear a plea for help from someone who is drowning. You are startled but energized as you dive into the water and save him. Using all your strength you pull him to shore and start administering CPR. Your adrenaline is racing as he starts to regain consciousness. Just as you are about get back on your feet, another frantic call comes from the river. You can't believe it! You dive back in the river and pull out a woman who also needs life-saving care. Now a bit frazzled but still thrilled that you have saved two lives in one day, you mop the sweat from your brow. When you turn around, however, you see more drowning people com-ing down the river. One after another.

You shout out to all the other people around you to help. Now there are several people in the river with you—pulling drowning people out left and right. One of the rescuers swims out to the drowning group and tries to start teaching them how to tread water. This strategy helps some, but not all of them because it's hard to learn how to tread water when you are drowning.

Everyone looks at each other, completely overwhelmed, wondering when this will stop. Finally, you stand up and start running upstream. Another rescuer glares at you and shouts, "Where are you going? There are so many drowning people; we need everyone here to help!" To which you reply, "I'm going upstream to find out who or what is pushing all of these people into the river—and why."

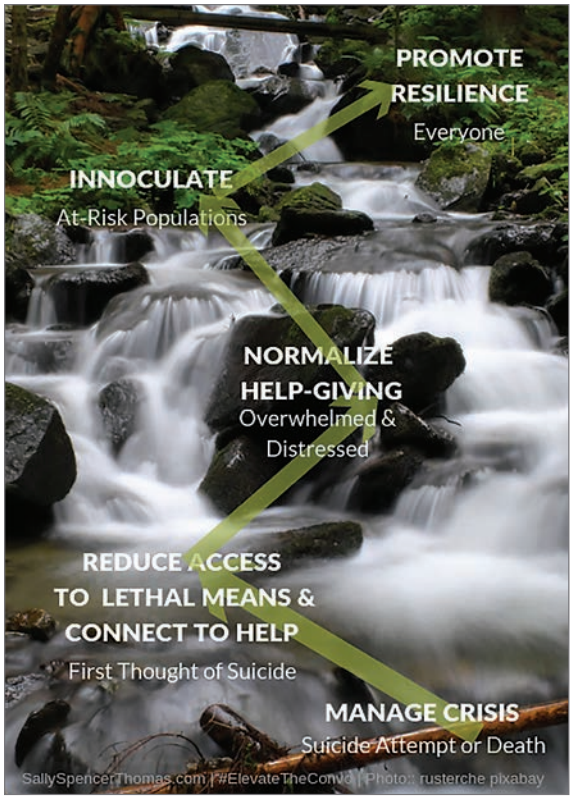


integration will not only help preserve the longevity of the efforts, but it will also help people connect the dots between these varying health and safety priorities.

Framework for a Comprehensive Approach: The Stream Parable

What the research tells us is that our best outcomes in reducing suicide rates come from comprehensive and sustained efforts where training is just one component of an overall strategy.[21] Viewing a common parable (see the sidebar) from a public health perspective illuminates what a comprehensive approach might entail. Upstream, mid-stream, and downstream approaches are needed to prevent suicide.

Upstream strategies build protective factors that can mitigate risk, such as cultivating a healthy culture of respect, compassion, and dignity and eliminating stigmatized language and discriminating actions against people living with mental health conditions. Additionally, companies can focus on building resilience by enhancing life skills and mental hardiness and by bolstering mental health and suicide prevention literacy. With an upstream focus we can build a smarter workplace design with more flexibility and greater individual and team input into decision-making. We can also focus on psychosocial harm and hazard reduction.



External Links and Resources

General Resources for Workplace Mental Health and Suicide Prevention

- Construction Working Minds: http://www.constructionworking-minds.org/
- Construction Industry Alliance for Suicide Prevention: http://www.preventconstructionsuicide.com/
- Suicide Prevention Resource Center resource: *Preventing suicide among men in the middle years: Recommendations for suicide prevention programs*: http://www.sprc.org/sites/default/files/resource-program/SPRC_MiMYReportFinal_0.pdf
- Partnership for Workplace Mental Health: http://www.workplace-mentalhealth.org/

Upstream Resources

- KyndHub, an online community (with workplace partners) that fosters daily practices of volunteerism, intentional acts of kindness, and gratitude: www.KyndHub.com
- Right Direction (addresses depression in the workplace): http://www.rightdirectionforme.com/

Midstream Resources

- Man Therapy: www.ManTherapy.org
- Screening for Mental Health, Inc.: www.mentalhealthscreening.org
- Interactive Screening Program by the American Foundation for Suicide Prevention: https://afsp.org/our-work/interactive-screening-program/

Downstream Resources

- National Suicide Prevention Lifeline: http://www.suicidepreventionlifeline.org/
- Crisis Text Line: www.CrisisTextLine.org

Communication

- Framework for Successful Messaging in Suicide Prevention: http://suicidepreventionmessaging.org/

Training

- Mental Health First Aid for Workplaces: https://www.mentalhealthfirstaid.org/at-work/
- Working Minds: https://www.coloradodepressioncenter.org/workingminds/
- safeTALK: https://www.livingworks.net/programs/safetalk/
- Question, Persuade, Refer (QPR): https://qprinstitute.com/
- Advanced Crisis Intervention Training (ASIST): https://www.livingworks.net/programs/asist/

A major key in developing a proactive mental wellness mindset is leadership engagement. Successful programs will have top-level leaders that see issues of mental health promotion and suicide prevention as cutting edge issues and imperative to workplace ethics. Cultivating the mindset of civility in community and a culture of trust comes from the top. True leadership isn't afraid to be bold; true leaders are vocal, visible, and visionary with no fears of stepping forward to do the right thing. Communication from leadership on building a caring culture where people look out for each other's well-being and pull together when times are tough needs to be tied to the mission and vision of the organization—and properly communicated to the workers. Leaders demonstrate this commitment by investing resources of time and money into mental health resources, training, and education and by modeling appropriate self-care and compassion.

Midstream approaches help identify those workers facing emerging risk and then link them to appropriate support before the issues develop into a suicidal crisis. Midstream strategies include screening for mental health conditions and suicidal thoughts, promoting and normalizing help-seeking behavior, and training populations on how to have difficult suicide-specific and mental health support conversations.

At the heart of midstream psychological safety workplace programs is effective peer support. No longer is it only the mental health professionals' responsibility to prevent suicide—everyone can play a role. In fact, as the founder of the well-known suicide prevention gatekeeper training program Question, Persuade, Refer (QPR), Dr. Paul Quinnett states, "the person most likely to save your life from suicide is someone you already know." Some companies have developed an informal "buddy check" program that goes beyond looking out for physical safety but also has coworkers noticing patterns of emotional distress.

Other groups have set up more formal peer support programs as a way to promote a caring culture and increase the chances of early intervention. Many military and first responder communities have discovered this type of program is often the key in building a link in the chain of survival, especially among their stoic, "tough guy" cultures where men in particular are reluctant to seek professional mental health services.

We know that many of those most at risk for suicide are sometimes the least likely to reach out to professional clinical services,[22] but they often will reach out to a trusted peer or colleague. A properly selected, trained, and supervised peer has the potential to decrease loneliness through empathic listening and shared lived experience, and he or she may provide hope as a model of recovery.

Downstream tactics are necessary when determining how best to respond when a suicide crisis has happened, including acute thoughts of suicide, suicide attempts, or suicide deaths. Downstream approaches support recovery by helping employees reintegrate and receive help during and after stressful life events and challenges with mental illness. This support includes allowing for sick leave and

other accommodations just like would be provided after other major illnesses, injuries, or accidents.

Having access to the right mental health services through a quality Employee Assistance Program (EAP) program is essential. Mental health conditions top the list of the most costly illnesses in the United States, far outpacing the cost burden of cancer, obesity, heart disease, and stroke; one-third of this cost burden is connected to productivity loss, disability, and decreased work performance.[23]

Unfortunately, only 50–60% of adults with these mental health conditions are getting the services they need. Because many people who have suicidal thoughts do not connect their despair to a mental health issue, and the majority who die by suicide do not have a known mental health condition,[22] the assumption can be made that many people living with suicidal thoughts are also not getting any treatment.

When people do get treatment for depression, they improve in work and in life. One report23 mentioned that 80% of people who were treated for depression improved quickly, especially when the problems were identified early in the progression. Additionally, 86% of employees who were treated reported a decrease in absenteeism/presenteeism and an increase in work performance.[23]

Downstream approaches also address what to do after a mental health or suicide crisis has impacted the workplace. These events cannot be swept under the carpet—they must be addressed head-on with compassion and dignity for all involved.

Suggested Activities

Toolbox talks. Many construction companies are now integrating mental health and suicide prevention topics by developing toolbox talk briefings that educate the workforce on what to look for and what to do (see some examples from Construction Working Minds at http://www.constructionworkingminds.org/toolbox-talks.html).

Stand Down for Suicide Prevention. This very well-established OSHA program usually focuses on preventing falls and is highlighted in May of each year, involving millions of employees.[24] Others have now taken up this concept in suicide prevention. For example, the U.S. Army has conducted a Stand Down for Suicide Prevention where a mandatory servicewide shut down occurred so that service members could be trained in suicide prevention.[25] Union Pacific (UP), an organization with 10,000 employees, also conducts a stand down event every year on World Suicide Prevention Day.[26] Nearly 200 volunteers throughout the UP system make personal contact with employees as they report to work or leave work, handing out wallet-sized cards about suicide and giving employees a key chain with the inspirational message, "Stay Connected."

Tackle prejudice by educating and inspiring your workforce. Too often our reluctance to talk about mental health and suicide stems from fear, and this fear is the result of ignorance—we fear what we don't understand. Providing education and awareness can help reduce this fear and replace it with a reassuring reality.

Education on mental health and suicide prevention literacy primarily focuses on three things:

1) Knowledge about mental health conditions and substance use disorders (especially alcohol and opioid use), as well as how these are connected to other health issues like pain and sleep dysregulation;
2) Familiarity with mental health resources, support tools, and treatment options; *and*
3) Stories of hope and recovery.

Of these three, the last is the most powerful in creating change. Facts and frameworks are helpful, but getting to know people who have "lived expertise" with depression, anxiety, addiction and suicidal thoughts does more to undo stigma than all other methods.

One innovative approach that helps with all three goals is "Man Therapy," a program designed to reach the "double jeopardy" man—the man who lives with a number of risk factors for suicide and also is the least likely to reach out for help himself. Man Therapy uses compelling, humorous media to drive men to the Man Therapy website portal (www.ManTherapy.org), where they can take the 20-point head inspection. The results help answer the question "How bad is it?" when it comes to their depression, anxiety, substance use issues, or anger. Based on the results, the website then helps link the man to specific resources based on his presenting concerns. Some are self-help tips, others are external resources, and some are inspirational videos of real men in recovery.

Develop a tiered training program. One best practice for a comprehensive mental health promotion and suicide prevention program is to build out a stratification of roles and skills. At the bottom level everyone gets some basic mental health awareness and skills training. The more

"Workplace mental health promotion and suicide prevention is not only a good safety priority, it's the right thing to do. Workers who know that their well-being is connected to the mission of the company are more likely to be engaged and productive."

people know, the more eyes we have on the playing field and the more likely someone will notice and take action when needed. Indeed, research supports the conclusion that greater awareness of symptoms of suicidality is associated with greater help-seeking.[27]

At the middle tier are managers, peer supporters, wellness coordinators, safety man-agers, and the like with advanced mental health and suicide prevention awareness/skills and psychological first aid skills. MATES in Construction (http://matesinconstruction.org.au/about/how-mic-works/), an evidence-based work-place program, call this tier "The Connectors." This tier is like the EMT level of the comprehensive suicide prevention community. They are the ones people turn to in or-der to see if problems can be resolved with basic active listening, empathy, empowerment, and caring follow-up, or if a more rigorous intervention is needed.

At the top level are highly trained and supported EAP mental health professionals and trusted community mental health partners—these professionals assist with the most complicated and acute cases. The top level also helps supervise the middle tier, regu-larly providing state-of-the-art continuing education to sharpen their skills on suicide risk assessment, management, and recovery.

Anonymous and confidential screening. Anonymous and confidential screening can help engage those most reluctant to seek help on their own. Frequent and regular screenings for testicular cancer or blood pressure can help identify problems before they develop into life-or-death situations—similarly, the prognoses for mental health conditions are most favorable when they are detected early and treated appropriately.

Like other medical checkups, screenings for mental health conditions are most effec-tive when they are repeated over time and considered a standard part of one's overall healthcare routine. Screenings are a universal tool—anyone can use them to help de-tect signs and symptoms of larger issues. They should not be used to diagnose, but they can provide a snapshot to help identify low- and high-risk populations and pro-vide a call to action. Screening that is given throughout a workplace sends a strong cultural message—we value what we measure.

Kick the tires of your Employee Assistance Program. EAPs are a valuable asset to the workplace. They help employers by offering psychological assessment and short-term counseling, managing critical incidents, and conducting fitness for duty evalua-tions, to name just a few services. EAP providers can be critical consultants when an employer is concerned about a staff member's safety and can help develop reintegra-tion plans for employees who need to go on medical leave due to a mental health problem.

The problem with most EAPs is that they are a hidden benefit when offered by em-ployers. Most people don't know how to access their EAP or what services are offered. Not all EAPs are equal—some provide state-of-the-art care in a wide range of ser-vices, while others just provide superficial, short-term, or inadequate referral services. Therefore, the first step in promoting mental health services like EAPs or other com-munity mental health centers is to kick the tires a bit. Company leaders should personally investigate or even partake in the services to understand the experience and ei-ther advocate for better services or simply be an informed liaison to the existing services. Once a quality EAP has been identified, the benefit needs to be promoted regularly through multiple communication channels along with on-site opportunities to meet providers and ask questions.

Promote crisis resources. The National Suicide Prevention Lifeline (NSPL) repre-sents the prevailing network of hotlines today. Calls to this national toll-free number, 1-800-273-TALK (8255), are funneled through this network to local call centers across the U.S. based on the area code of the caller. During calls, the crisis call counselors listen empathically and empower callers to make decisions that resolve their own cri-ses. They offer information and resources, and they help callers craft plans for how they will prevent, cope with, or get help for their emotional crises.

The Crisis Text Line (www.CrisisTextLine.org) also offers immediate support during any type of crisis. Just like

the NSPL, the Crisis Text Line is free and offers 24/7 support for those in crisis. People in crisis (and/or the people who are supporting them) just text HELLO to 741741 from anywhere in the U.S. to be connected via text to a trained crisis counselor.

The New Safety Frontier

To help you on your journey to keep your workforce safe from both physical and mental health hazards, we've provided an extensive array of external links on page 18. Please don't hesitate to use them!

Workplace mental health promotion and suicide prevention is not only a good safety priority, it's the right thing to do. Workers who know that their well-being is connected to the mission of the company are more likely to be engaged and productive. It's time safety professionals embraced this new frontier of safety—because no one should die in isolation and despair. SD

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Sally Spencer-Thomas, Psy.D., is a clinical psychologist, inspirational international speaker, and an impact entrepreneur. She was an invited speaker on men's mental health at the White House in 2016, discussed mental health promotion and suicide prevention in a recent Tedx Talk, and has also held leadership positions in the International Association for Suicide Prevention, the American Association for Suicidology, and the National Suicide Prevention Lifeline. Find her on Facebook (@DrSallySpeaks), Twitter (@sspencerthomas), and LinkedIn (https://www.linkedin.com/in/sally-spencer-thomas-8539424/), or visit www.SallySpencerThomas.com.

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Management Support for Safety: Disrupting the Paradigm

"In order for safety to be effective in any organization, you must gain management's support." That has been the mantra of the safety profession for decades.

By Scotty Dunlap, EdD, CSP

It is a challenge that has been accepted by safety professionals in both recent and long-past generations. We have accepted it as part of the unchangeable status quo, and it is a challenge that has been met with mixed success in individual careers and across the safety profession as a whole. We have filled safety academic programs of study and professional development seminar rosters with tricks of the trade on how to accomplish this daunting task.

But imagine a world where this challenge, which is pivotal to the success of injury reduction efforts, is a fraction of what the safety profession currently experiences.

Current Strategies

The safety profession has employed numerous strategies to gain management support for safety efforts. Though intuitive to those in the safety profession, efforts to protect human life in organizations' operational processes can actually be met with resistance. This resistance is not necessarily intentional but can be the result of a lack of integrating occupational safety into the career trajectory of industry leaders.

To overcome resistance, the safety profession has resorted to various methods to gain management support for workplace safety efforts. Some of these methods include the following.

Learning Their Language

A brief Internet search of the term "leadership" reveals thousands of books and models on the topic. The challenge for the safety professional is determining how to integrate occupational safety best management practices into any given management style or philosophy in a facility or organization. To accomplish integration, safety professionals must learn how to speak the language of existing management.

For example, worker engagement has long been a component of a successful occupational safety and health management system and is represented in the newly published global standard, ISO 45001. In the event that servant leadership is the leadership style of a given industry leader, a safety professional can effectively reach him or her with the concept of worker engagement, as servant leadership focuses on those who do the work as having the true answers to the organization's challenges.

Marketing the Benefit of Safety Professionals

Safety professionals are often forced to market themselves as valuable to the organization. Safety might simply be perceived by industry leaders as a regulatory requirement rather than an important part of organizational operations. Safety professionals might find themselves having to market their value to an organization through services that help meet organizational goals.

Marketing the Value of Safety

Safety's true value to an organization might be difficult to demonstrate on the surface due to safety investments possibly being perceived as a cost of doing business. Safety professionals must establish the business case for safety. This has traditionally been achieved through processes such as presenting the sheer volume of direct-cost loss through medical bills and property damage loss.

The business case for safety is further bolstered through indirect-cost loss. Indirect loss includes such items as poor production quality as a result of placing a less-experienced worker in place of a highly experienced worker who might

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be away from work due to an injury. Lower product quality could result in loss of customers, which, in turn, results in decreased organizational sales. Indirect costs have been shown to be a factor of as much as three times the direct cost, though the exact multiplying factor will vary based on the unique industry and associated hazards.

Engaging Management

Safety professionals might often find themselves having to educate industry leaders on the importance of occupational safety in organizational operations, which might not be the case of their peers in such disciplines as operations, human resources, and maintenance. Industry leaders can be engaged in safety activities that include:

- **Incident investigations.** Department and shift operations managers can be included in injury and property damage investigations. This experience can help managers understand what has occurred, why the incident occurred, the factors that influenced the incident, and what can be done to prevent recurrence. Incident investigations are an outstanding avenue that provides industry leaders with a detailed understanding of specific safety issues.
- **Facility inspections and audits.** Industry leaders can be asked to accompany safety professionals on facility inspections or audits. Whereas engagement in incident investigations is a reactive activity, engaging industry leaders in facility inspections or audits is a proactive activity. Safety professionals can use facility inspections and audits as opportunities to educate industry leaders on hazard identification and elimination, as well as general safety management system issues.
- **Safety as a meeting agenda item.** Safety professionals can provide key topics, and even narrative, that can be included in primary organizational meetings. These meetings can include preshift departmental meetings, shift meetings, and plant meetings. Safety's being a component of these meetings can communicate that it is an important part of organizational operations.
- **Including safety metrics in operational discussions.** From a strategic perspective, safety professionals can include both leading and lagging measures of organizational safety performance in meetings where other similar discussions are had—to include profit and loss discussions and quarterly business reviews. Safety metrics can be presented in a way that indicates how safety can be used to support the accomplishment of organizational goals.

Though the list presented here might not be comprehensive, it touches on a spectrum of tools safety professionals have utilized to integrate safety into organizational operations and leadership strategies. These tools have all been utilized to gain management support for safety—a task that has been ingrained in our profession for decades.

However, imagine an environment where such effort is not needed as much as it is now; an environment where industry leaders can converse with safety professionals on critical issues with the same ease with which they converse with peers in disciplines that include human resources, operations, finance/accounting, and maintenance; a world where "gaining management support" is not as necessary as it is in the current environment; or a world where management support for safety comes naturally.

The 'Something Occurred' Gap in Leadership Development

To create such a world, a basic examination must occur to determine where the challenges of the safety profession exist. Many safety professionals report to industry leaders who hold positions that range from plant manager to vice president of operations. Fundamentally, these industry leaders graduated from high school, something occurred, and then they obtained their position of leadership over a safety professional. The challenge is to investigate the "something occurred" phase of the leaders' professional development.

The Master of Business Administration (MBA) curriculum is a gold standard for educating industry leaders and could be part of the "something occurred" that resulted in an individual's being in a position above a safety professional. This makes the MBA curriculum a key issue that could impact how industry leaders and safety professionals reach a high level of partnership in accomplishing organizational goals.

A study of the MBA curriculum included an analysis of the leading MBA program in the United States, as well as participant interviews at a regional comprehensive university's college of business, where participants were limited to those who were near the completion of their program of study and had experience in industrial leadership. These findings should be of great concern for the safety professional:

- The MBA curriculum offered little, if any, clear educational experience for industry leaders to help them understand the value of occupational safety in protecting workers and the impact of occupational safety on organizational performance. This was evidenced through examining coursework in the MBA program, which examined both core courses and elective courses, as well as through interviewing the MBA students. The closest connection to occupational safety in the MBA curriculum was revealed through participants' references to safety possibly being included in a course addressing human resources.
- Research was also conducted by exploring potential occupational

safety content in professional development courses for industry leaders offered through the American Management Association. It was found that exposure to safety content was limited.
- Interviews with industry leaders who were near completion of an MBA program revealed that personal experience was the primary driver for engagement in occupational safety. For example, one participant had a family member who had been injured at work, which highlighted the need to focus on safety in the workplace. Though this focus could be considered positive, it is without context and could actually result in nonproductive effort in addressing workplace safety issues.

To date, the fundamental problem is that education on workplace safety among industry leaders lacks cohesion and design. Industry leaders do not necessarily need to become subject matter experts in occupational safety, but they do need to understand the benefits occupational safety brings to an organization, such as meeting operational goals and protecting our most valuable asset: our workers. Integrating safety into the educational curriculum would make it equal to other operational disciplines, such as human resources, operations, and maintenance.

Disrupting the Paradigm

The status quo must be disrupted. In the previous example, industry leaders graduate from high school, something happens, and then they arrive in a position to which occupational safety professionals report. In the "something happens" phase, safety management education must occur so they are equipped with the fundamental information that will allow them to understand why occupational safety must be integrated into organizational operations. Strategically integrating occupational safety into the career trajectories of industry leaders can be accomplished through a number of avenues:

- **Higher education curriculum.** Applicable courses in business, engineering, or other degree programs can be used to integrate occupational safety where appropriate. The protection of workers can be presented as an ethical, legal, and operational responsibility of industry leaders. Details can be provided to give industry leaders an understanding of personal responsibility for worker safety and what they can do to impact safety as a component of organizational culture.
- **Professional development.** Trade organizations and mainstream leadership development training agendas can be used to introduce industry leaders to concepts of occupational safety and how related efforts can be used to accomplish organizational goals. Tactical initiatives can be introduced that focus on industry-specific efforts that can be made to address workplace safety.
- **Leadership books.** Applied leadership texts can be written and utilized to help industry leaders understand the importance of occupational safety in organizational performance. In the realm of adult education, organizations provide mainstream leadership books to leadership teams to read and discuss ideas that can enhance organizational performance. Leadership books focused on occupational safety can be used to open the dialogue among leaders to identify opportunities for safety improvement that can impact not only worker safety but also organizational performance.
- **Targeted journal articles.** Similar to leadership books, articles can be written for publications read by industry leaders that will introduce them to concepts of workplace safety. Deming introduced principles of quality management, and that dialogue can be expanded to include worker safety and quality of life within quality management systems.

Though occupational safety has been a mainstream issue since the Williams-Stiger Occupational Safety and Health Act of 1970, a great deal of opportunity for improvement exists through strategically integrating occupational safety into the career trajectories of industry leaders. Currently, industry leaders might have limited exposure to occupational safety as a component of organizational operations, which exacerbates the problem of the unnecessary workplace injuries and fatalities that occur each year.

Exposing industry leaders to the value of occupational safety in their career development through targeted educational opportunities should position safety professionals on a similar level to peers' disciplines, such as human resources, operations, and maintenance, where issues can be effectively discussed and worker protection strategies identified and implemented. SD

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Preventing Would-Be Rescuer Tragedies

According to the Canadian Centre for Occupational Health and Safety, an estimated 60% of confined space entry fatalities have been among the would-be rescuers. A would-be rescuer is a person who is trying to help someone who has become unresponsive in a confined space. We sat down with gas detection training specialist Mike Platek to understand atmospheric hazards in confined spaces and how to prepare for potentially dangerous entries or rescues.

1. Can you describe an example of a would-be rescuer scenario?

Two workers prepare to enter a confined space. They open the manhole, set up barricades to prevent accidental entry, and gather the necessary tools to perform the assigned tasks of the entry. The first employee enters the space. While descending the ladder, he is overcome with a lack of oxygen due to an unknown gas leak. His partner outside of the space hears his gasp for air and sees him fall off the ladder. In a panic, he calls to a passer-by to call 911 for the fire department. He then descends the ladder himself to rescue his friend. Unfortunately, he too is overcome with the lack of oxygen and falls to the bottom of the manhole. The fire department arrives, sees the two men at the bottom of the ladder, and attempt to rescue them. They too become victims of the same oxygen deficiencies. These tragic deaths could have been prevented had the workers checked the atmosphere before entry.

2. What are some reasons why a confined space would have hazardous atmospheric conditions?

There are both natural and man-made causes of hazardous atmospheric conditions in confined spaces. For example, rotting vegetation and the decomposition of organic materials will give off toxic and flammable gases. Not only are these gases dangerous, but in larger concentrations, they can displace oxygen. When confined spaces are designed to store chemicals or are part of a working chemical process, the remaining material after the confined spaces are emptied will pose atmospheric hazards.

3. What's the best way to check for gases before entering a confined space?

Current laws require confined spaces to be free of all hazardous conditions before someone enters. This includes toxic and flammable gases and requires the oxygen to be at a safe volume. There are multiple methods to adhere to when evaluating confined space environments. Ambient air must be evaluated prior to entering the space (pre-entry checks), during entry (continuous), and when an entrant exits the confined space and re-enters. Gases stratify based on their weight, and depending on the gas compound, there can be a stratification effect of gases sinking or rising in a confined space. Workers should use a gas detector with a pump to evaluate the quality of the air in the space, so the entrant can understand the atmospheric conditions before entering.

When using an instrument with a pump, the user must wait for the gas to reach the sensor to have an accurate reading. Sample time will vary per instrument and accessories being used, so proper training on the equipment is essential to gathering correct atmospheric gas readings.

4. If you check the atmosphere before entering the space, why do you need a gas monitor during the entry?

The condition of the confined space atmosphere can change due to the activities performed during the entry. Welding is a perfect example. Depending on the type of welding being performed, hazardous gases can emit from the arc or oxygen-depleting gases can collect inside the space. During conventional stick welding, carbon monoxide and nitrogen dioxide gases are released. When conducting metal inert gas (MIG) welding, carbon dioxide and argon are typically used. Both gases are heavier than air and will force the oxygen out of the space.

5. What are some of the common mistakes you see people make when performing a confined space entry?

I can sum it up in one word, complacency. Too many times I have heard, "I've been doing this for twenty years and nothing has happened." Well, it only takes that one time. In a previous question, you asked about would-be rescuers. The story I told was true, and the men who entered that space had performed that same job at that same location for years. And that one time, it ended in tragedy.

6. How can training help you better prepare for confined space safety?

Training workers on confined space entry will open their eyes to the dangers of confined spaces and explain how incidents can occur. Educating them on how different gases act, where they come from, and how they affect the body is critical to safe operations in a space. Workers also need to be comfortable using the equipment that is made to save their lives. Conducting hands-on training with gas detectors will greatly increase workers' skills in operation and application. Through training, workers will understand that using gas detectors is not difficult. Demonstrating how the instruments react to changing atmospheric conditions will help them become more comfortable with the gas detectors, which will ultimately keep them safe.

7. What if a company is on a tight budget? What are some alternative training resources?

Life-saving training is worth the investment, but if you are truly limited by budget, there are helpful resources available. Online classes usually cost less than live training, and in some cases may be free of charge. Online training is also less of a time commitment than face-to-face training. It may only be a few hours long versus traveling for a multi-day class. Online training is a great option for those who are already familiar with the course content and just need a refresher or recertification. Some people also prefer online training because they can take the course in a quiet place without the distractions encountered in a classroom. Like a face-to-face course, online courses can be customized to focus on the areas that an organization needs the most help with. Online training classes also have flexible scheduling and are ideal for companies that have sites across multiple regions.

"Online training classes also have flexible scheduling and are ideal for companies that have sites across multiple regions."

In an online gas detection course, a live instructor delivers the course material and uses a camera to show attendees what he is doing with the gas detectors. The camera allows the instructor to show attendees how to properly calibrate, operate, or repair an instrument in real-time. Instructors can also introduce software to the students and walk them through how to use it within their organizations. Although online courses are not as interactive as in person, they do offer the option to submit questions and feedback through the dialogue box. Attendees who have a computer or phone with an internet connection can participate from home or work and still receive a certificate of completion for passing the class exam.

Another beneficial option that many companies offer is online video training. Online videos are available for viewing 24 hours a day, seven days a week, and are broken up into short clips no more than two minutes long. If a worker is trying to find a specific topic, it is easy to locate it without having to watch a long training video or participate in a one- or two-day class. Although pre-recorded videos don't offer the same interaction that face-to-face or live online courses do, they give students the flexibility to watch whenever and as often as needed. For companies that have small training budgets, taking advantage of online video training is a great way to supplement worker education.

8.How can wireless gas detection technology improve safety in confined space entries?

The question many confined space entrants have asked is, "How do I know the attendant knows I'm OK?" With new, wireless gas detectors, the attendant will know immediately if an entrant is exposed to a hazardous atmospheric condition. In addition to gas alarms, the instruments now have man-down and panic alerts that are transmitted to other instruments in a wireless network. So not only does the attendant get notified, but fellow workers in your area can respond and render aid if it's safe and necessary.

9. If you had to give one piece of training guidance to someone working with gas detectors in confined spaces for the first time, what would it be?

Wear your gas detector! There are gases you cannot see or smell, and they can kill you. Carbon monoxide is odorless and colorless and is known as the silent killer. In its natural form, methane is also odorless and colorless, and a concentration between 5-15% by volume will explode if an ignition source is present. As a First Responder and Hazmat Technician, I will not approach a hazardous area without my gas detector. ■

Mike Platek serves as Senior Gas Detection Specialist at Industrial Scientific Corporation. He started with Industrial Scientific in 1985 and has worked in many departments including engineering, sales, and training. As a Training Specialist, he hosts Gas Detection Made Easy classes both in-house and regionally throughout North America, as well as at customer locations.

Mike is also certified nationally for Firefighter I, and in the State of Pennsylvania, as an EMT. He holds certification in Hazardous Materials and Confined Space Supervision and participates in classes for training and safety. He is a volunteer firefighter and serves on his county's hazardous materials team.

https://www.ccohs.ca/oshanswers/hsprograms/confinedspace_intro.html

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All the HazCom Updates You Can Expect This Year

Revisions are coming. Here's what you can expect to see—but don't jump the gun on aligning your hazard communication programs just yet. **By Guy Burdick**

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The Occupational Safety and Health Administration (OSHA) is expected to revise its hazard communication (HazCom) standard this year to bring it in line with the current Globally Harmonized System (GHS) of Classification and Labelling of Chemicals and formalize various enforcement policies that have been issued since the last major update to HazCom in 2012. Employers that manufacture, import, distribute, or use hazardous chemicals may face additional compliance requirements once the revisions take effect.

The GHS is meant to facilitate international trade with a uniform set of chemical labels and standard practices for creating safety data sheets (SDSs) for chemicals in commerce. The GHS was agreed upon by the United Nations (UN) with the goal of adoption of the system in as many countries as possible by 2008. OSHA and other federal agencies have long participated in GHS negotiations. Negotiators have agreed to many changes to the GHS since the third edition that formed the basis for OSHA's March 2012 revisions to the Hazard Communication Standard (HCS).

Although the agency incorporated elements of the GHS in a March 2012 rulemaking, those revisions brought the HCS in line with the third edition of the GHS. However, the GHS is a "living document" that is revised about every 2 years, and the UN just completed the seventh edition. With each revision, the UN has updated what can be included in precautionary statements for various hazards and how such statements should be worded.

OSHA said in the autumn 2018 agenda of regulatory and deregulatory actions that it planned to issue a notice of proposed rulemaking in March 2019 to update the HCS to incorporate elements of the latest edition.

Changes Since Third Edition

The fourth edition of the GHS included new hazard categories for chemically unstable gases and nonflammable aerosols, as well as further adjustments to the precautionary statements and some clarifications of criteria for precautionary statements to avoid differences in their interpretation.

The fifth edition included:

- A new test method for oxidizing solids;
- Miscellaneous provisions intended to further clarify the criteria for some hazard classes (skin corrosion/irritation, severe eye damage/irritation, and aerosols);
- Revised and simplified classification and labeling summary tables; *and*

- A new codification system for hazard pictograms.

The sixth edition included:

- A new hazard class for desensitized explosives;
- A new hazard category for pyrophoric gases;
- Miscellaneous provisions intended to clarify the criteria for some hazard classes (explosives, specific target organ toxicity following single exposure, aspiration hazard, and hazardous to the aquatic environment);
- Additional information to be included in the safety data sheets; *and*
- New examples addressing labeling of small packages.

The seventh edition includes:

- Revised criteria for categorization of flammable gases within Category 1;
- Miscellaneous amendments intended to clarify the definitions of some health hazard classes;
- Additional guidance to extend the coverage of section 14 of the Safety Data Sheets to all bulk cargoes transported under instruments of the International Maritime Organisation (IMO), regardless of their physical state;
- Revised and further rationalized precautionary statements in Annex 3; and
- New example in Annex 7 addressing labeling of small packages with fold-out labels.

GHS does not require participating agencies to adopt the system "as is," and OSHA has not yet indicated which elements of the updated GHS it intends to adopt. However, any changes to hazard classifications, SDS requirements, and labeling practices are likely to impact companies that manufacture, import, or distribute hazardous chemicals, as well as all employers whose employees could be exposed to hazardous chemicals on the job. At a minimum, affected employers would need to train their employees on any changes to labels and SDSs and provide information regarding any new hazard classifications that apply to chemicals in use at the workplace.

"EMPLOYERS THAT MANUFACTURE, IMPORT, DISTRIBUTE, OR USE HAZARDOUS CHEMICALS MAY FACE ADDITIONAL COMPLIANCE REQUIREMENTS ONCE THE REVISIONS TAKE EFFECT."

Formalizing Guidance

According to the entry in the Fall 2018 regulatory agenda, the other goal of OSHA's HazCom revisions is to "codify a number of enforcement policies that have been issued since the 2012 standard."

Exactly what that might entail is not yet public. However, since the implementation of the 2012 standard, OSHA has issued a number of directives, letters of interpretation, and memos intended to clarify points of confusion for stakeholders. Many of these would likely form the basis for any revisions to the standard.

Issues addressed in LOIs and other guidance since the implementation of the 2012 standard include:

- Labeling of small packages
- The use of concentration ranges on SDSs
- The use of non-GHS hazard symbols on labels and SDSs
- Information on Hazards Not Otherwise Classified (HNOC) on labels and SDSs
- Classification of flammable and nonflammable aerosols
- Combustible dust hazards

Takeaways for Employers

Some employers may be tempted to preemptively align their HazCom programs with the Seventh Edition of the GHS; however, this approach can backfire. Not only has OSHA not yet indicated which elements of the Seventh Edition it intends to adopt, but according to OSHA's 2015 Inspection Procedures for the Hazard Communication Standard, where a later version of the GHS conflicts with the current HazCom standard, employers may be cited with violations if their use of a more recent version of the GHS contradicts or casts doubt on OSHA-required information. For the time being, HazCom 2012 remains the standard by which OSHA will assess employer compliance.

Therefore, the best course of action for employers aiming to prepare for HazCom revisions is simply to focus on compliance with the current standard, which remains the most frequently cited standard in general industry and the second most frequently cited standard across all industries.

Common violations under the current HazCom standard include:

- Failure to develop and implement a written hazard communication program that meets the requirements of the standard
- Failure to provide adequate employee training
- Failure to maintain copies of SDSs for each hazardous chemical and ensure they are readily available to employees
- Failure to train employees on labels and SDSs
- Failure to properly label chemicals in the workplace SD

Guy Burdick is a contributing editor of Safety Decisions.

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Lockout/Tagout: Are There Changes on the Horizon?

The Occupational Safety and Health Administration (OSHA) may be planning to explore alternative methods of ensuring workers are protected from sources of hazardous energy (chemical, electrical, hydraulic, mechanical, pneumatic, thermal, and others).

By Guy Burdick

HAILSHADOW/GETTY.COM

OSHA announced plans in the Department of Labor's (DOL) most recent agenda of regulatory and deregulatory actions to issue a prerule request for information (RFI) on alternatives to its existing lockout/tagout standard.

There are computer-based controls now available that may be effective in protecting workers but that don't meet the requirements of the existing OSHA lockout/tagout standard. The agency plans to publish an RFI on the strengths and limitations of this new technology and any potential hazards.

Equipment manufacturers have increasingly incorporated computer-based controls into their designs. There also are industry consensus and international standards that recognize and accept the adoption of such technology for safeguarding workers.

Yet, the OSHA standard has not kept pace with technological advancements.

'Old School' Lockout/Tagout

The traditional control measures to prevent the unexpected start-up of machinery being serviced have been physical locks and tags (lockout/tagout) that can only be removed by "authorized employees" who have received special training.

The lockout/tagout standard (29 CFR 1910.147) was the fifth most frequently cited OSHA standard in fiscal year (FY) 2018. It usually is among the top ten most cited standards and typically in the top five.

OSHA's lockout/tagout standard was issued in 1989 and is based primarily on an existing industry standard. The American National Standards Institute (ANSI)/American Society of Safety Engineers (ASSE) Z244.1 Lockout Standard was published in 1982. The ANSI/ASSE standard has been updated every 5 years since to reflect technological advances in controlling machinery

and hazardous energy, while OSHA's lockout/tagout standard has mostly remained static since 1989.

Existing Standard Becoming an Issue

While the technology for protecting workers from machinery shutdown for service or hazardous energy has advanced, OSHA's standard has not kept up with these changes. In its latest regulatory agenda notice, the agency acknowledged that it has recently seen an increase in requests for variances from the lockout/tagout standard for these alternative controls.

While OSHA has not updated the lockout/tagout standard to include approval for computer-based safety devices, regulators in other nations have.

The existing standard creates problems for manufacturers that want to incorporate sensors in equipment and machinery for sale in the United States, as well as, elsewhere. The standard also limits the choices available to U.S. employers that wish to take advantage of the latest technology.

No, No, No

The regulated community has looked to OSHA both for guidance and flexibility. For instance, on November 11, 2011, a safety consultant wrote the agency asking whether light-emitting diode (LED) sensors confirming equipment de-energization would satisfy the lockout/tagout standard. In its response, the agency told the safety consultant that LED sensors could not be used to satisfy a number of requirements such as:

- Verifying that the isolation and de-energization of a machine or piece of equipment have been accomplished;
- The requirement for a "qualified person" to test equipment and verify de-energization; and
- An alternative method of verifying de-energization.

To each of the consultant's requests for flexibility, the agency answered "no" in its standard interpretation letter.

The agency, so far, has not revised the lockout/tagout standard to reflect updates to ANSI Z244.1 or incorporated the revised consensus standard by reference. OSHA previously has claimed that parts of the revised industry standard do not provide protections to workers as effective as those in the federal standard.

If OSHA were to revisit this position through revisions to the lockout/tagout standard, it could give employers a greater variety of options for protecting their workers.

'Unexpected' Change

On the other hand, some lawyers and consultants interpret OSHA's plans for the lockout/tagout standard differently. Blog posts on their websites include headlines like:

- "Deleting a single word in OSHA standard could upend lockout/tagout;"
- "What the new lockout/tagout revision could mean for you;" *and*
- "Why Did OSHA Propose to Remove the Principle of 'Unexpected Energization' from its Lockout/Tagout Standard?"

What is this supposedly monumental lockout/tagout rulemaking? It was a push by the previous administration to deal with what it thought was a misinterpretation of the original standard. It sought to reverse a defeat suffered 20 years earlier during the Clinton administration.

Late Obama Administration Move

On October 4, 2016, OSHA proposed removing a single word—unexpected—from the lockout/tagout standard.

The existing standard starts off by defining its scope:

"This standard covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy, could harm employees" (29 CFR 1910.147(a)(1)(i)).

The agency proposed removing the word "unexpected" from subparagraph (a)(1)(i) and elsewhere in the standard as part of its Standards Improvement Project (SIP).

The agency wanted to remove "unexpected" from the standard because it felt the language had been misinterpreted in a number of legal decisions.

GMC Delco

In the most famous case, involving General Motors Corporation (GMC) and its Delco Chassis Division., the Occupational Safety and Health Review Commission (OSHRC) ruled against OSHA's citing of GMC Delco for violations of the lockout/tagout standard.

In this incident, workers were servicing machines that required following

"THE EXISTING STANDARD CREATES PROBLEMS FOR MANUFACTURERS THAT WANT TO INCORPORATE SENSORS IN EQUIPMENT AND MACHINERY FOR SALE IN THE UNITED STATES, AS WELL AS, ELSEWHERE."

an 8-to-12-step start-up procedure. Start-up of the machinery was signaled by audible and visual warnings.

The review commission ruled that, because the machinery was equipped with warning signals before starting up, that start-up could not be considered "unexpected."

The Clinton administration appealed the OSHRC's decision, and Labor Secretary Robert Reich lost his case in the U.S. 6th Circuit Court of Appeals. The appeals judges sided with the OSHRC, dismissing Reich's challenge.

Obama DOL Move

In the waning days of the Obama administration, the DOL tucked the proposed change to the lockout/tagout standard into a SIP rulemaking. It would be part of the fourth SIP rulemaking.

The SIP rulemakings usually are reserved for easing the regulatory burdens on employers. These rulemakings most often incorporate industry consensus standards by reference or adjust existing standards to more closely conform to industry consensus or international standards.

The proposed lockout/tagout change was unlike any other SIP proposal and was met almost immediately with objections from employers and employers' representatives.

The U.S. Chamber of Commerce filed a comment, objecting that removing the word "unexpected" would change employers' duties under the standard. It also said the legislative history of the Occupational Safety and Health Act did not support such a change.

The SIP Phase IV rulemaking was listed on the Labor Department's latest list of planned regulatory and deregulatory actions in the final rule phase. However, it is unknown whether the lockout/tagout revisions are still included.

Although the SIP Phase IV agenda notice still contains references to changes to General Industry standards (29 CFR 1910), which could include the lockout/tagout standard, the notice states that most of the revisions impact construction regulations.

The rulemaking is described as addressing:

- Removing unnecessary provisions; reducing burdens of paperwork;
- Removing requirements that employers include an employee's social security number on exposure monitoring, medical surveillance, and other records; and
- Reducing the number of necessary employee X-rays and elimination of posting requirements for residential construction employers.

Status of the 'Unexpected' Rulemaking

Is the rulemaking to remove "unexpected" from the wording of the lockout/tagout standard still planned for 2019? It's possible, though not certain.

It would be surprising if a Trump administration Department of Labor chose to burden employers with onerous new lockout/tagout requirements. It also is unlikely regulators could sneak such a change into the Code of Federal Regulations, eluding the watchful eye of the White House Office of Information and Regulatory Affairs.

However, OSHA has not taken the step back from enforcement that many expected under the current administration. Without a permanent Trump-appointed OSHA head in place, the administration has not shifted agency priorities in the same way it has elsewhere.

"WHAT IS LESS CONTROVERSIAL, THOUGH STILL LIKELY TO BE SEVERAL YEARS AWAY, IS A LOCKOUT/TAGOUT STANDARD THAT RECOGNIZES THE TECHNOLOGICAL ADVANCES OF THE PAST 30 YEARS."

A Modern-Day Lockout/Tagout Standard

What is less controversial, though still likely to be several years away, is a lockout/tagout standard that recognizes the technological advances of the past 30 years.

There has been rapid advancement in sensor technology. For example, Amazon is reportedly testing sensor vests to prevent robots from striking or colliding with human workers. Lockout/tagout and other standards need to accommodate such advances in safety technology.

In the meantime, employers should ensure their current lockout/tagout procedures and programs are fully compliant with the existing standard.

Employers should:

- Develop and implement a written program for controlling hazardous energy, including lockout/tagout procedures, employee training, and inspections;
- Provide training on methods of energy isolation and control to production workers, as well as to maintenance workers;
- Ensure that workers receive training in their primary language;
- Clearly label isolation devices, such as breaker panels and control valves; and
- Provide workers with a sufficient number of lockouts, tagouts, and any other necessary hardware. SD

Guy Burdick is a contributing editor of Safety Decisions.

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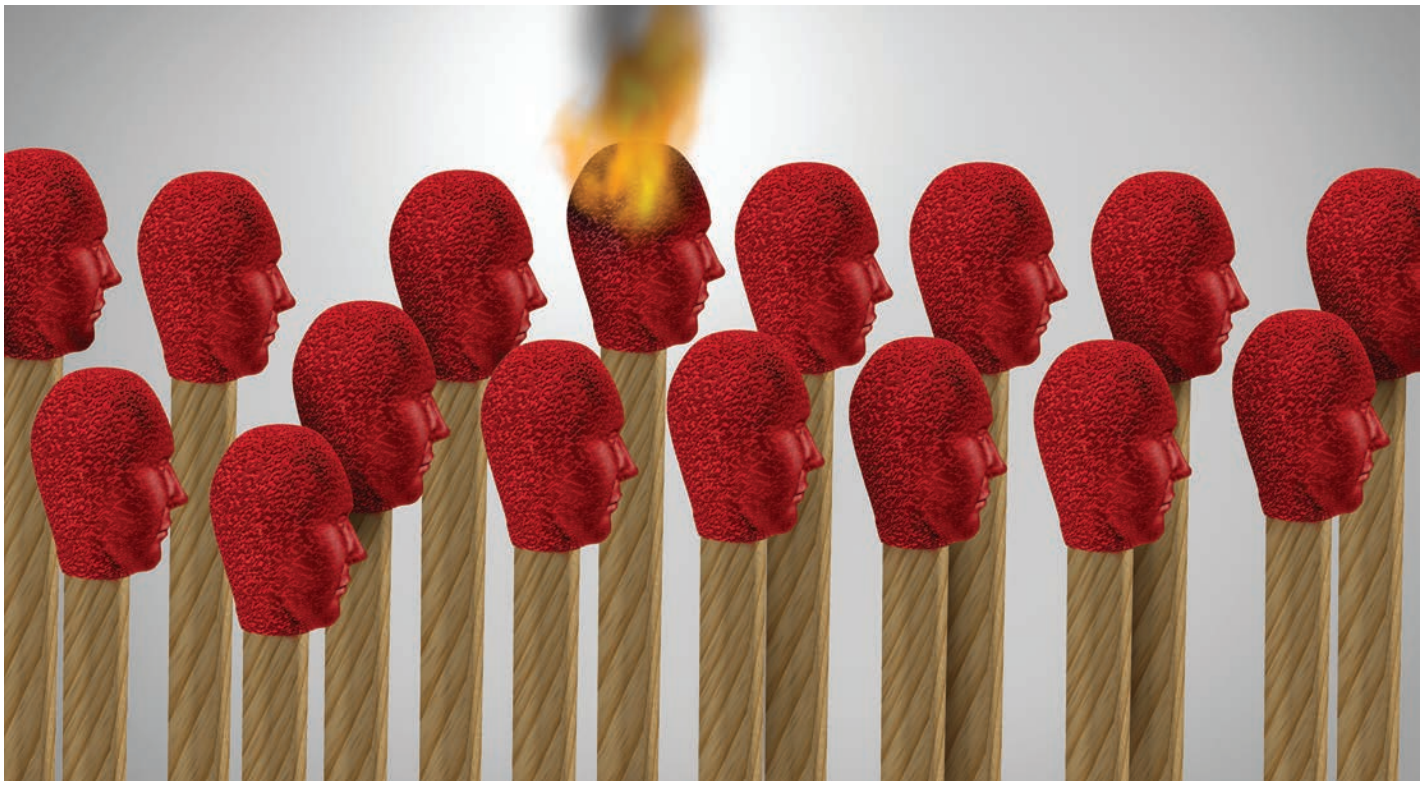

Taking Care of the Safety Professional

By Ray Prest

If you work in safety, then you know what it means to work. Sixty-hour weeks. Countless responsibilities. First, you're rolling up your sleeves on the worksite, and then, you're wading through spreadsheets in your office. When a serious incident occurs, it's your phone that rings in the middle of the night.

Most environment, health, and safety (EHS) managers push themselves week after week because they know how important their job is. They've experienced what it's like to save someone's life. Nobody needs to tell safety folks how important their job is—they're already motivated by a desire to do whatever they can to keep people safe.

But there's a downside to being so driven. Burnout is always lurking around the corner. With a never-ending to-do list and a lack of recognition for the sizable load that they carry, there's a high risk of exhaustion setting in.

Safety folks act as caretakers of the workforce. But when burnout looms and they need to be taken care of, who will look after them?

By and large, the answer is no one. The nature of safety jobs means there's no one tapping you on the shoulder to suggest that you get some rest. And because safety managers are so focused on their work, they find it easy to push through the first hints of burnout.

Unfortunately, a little bit of burnout leads to a lot more burnout. Your productivity diminishes, you no longer have insightful moments, and your spark is extinguished. At that point, you're helping no one.

In the safety profession, there are a few major causes of burnout. Unfortunately, most of them are baked into the job description. Management conflicts, a high degree of repetition, a lack of downtime, general stress—any of these sound familiar? If you're an EHS manager, I bet you're well versed in at least a couple of them.

Does this mean burnout is unavoidable for safety folks? If you're looking for a silver bullet to slay chronic exhaustion, then you're probably out of luck. But while burnout can't be banished from safety careers, it can be mitigated—and the solution starts with self-care.

Self-Care for Safety Professionals

Self-care is a concept that most safety professionals should be familiar with. After all, EHS folks regularly preach personal awareness in order to stay safe. And many are also responsible for health and wellness initiatives at their site. So it's hardly a stretch to suggest they apply these same principles to themselves.

WILDPIXEL/GETTY.COM

Before every commercial airline takes off, a flight attendant reminds passengers that in case of emergency, they should put on their own oxygen mask before helping passengers who need assistance. The message is simple: You can't help others until you help yourself first.

People in the safety industry are notoriously bad at taking care of themselves. As a profession, we've gotten quite good at keeping stress, burnout, and job fatigue in the shadows.

That's why I want to shine a light on the problem—and highlight the steps you can take to stave off burnout and keep yourself mentally and physically healthy, day after day and year after year. To that end, here are a few things safety professionals should consider if they're feeling exhausted by their jobs.

Time Off

Short breaks are one of the easiest ways to prevent workers from becoming fatigued on the job (and increasing their risk of injury as a result). The same is true for you. If you find yourself feeling chronically tired, give yourself permission to take some time to recover.

Not only is it important to take some time off from work, but it's also important to do other things. A change is as good as a rest, as the old saying goes, and you can recharge your batteries by spending time on a nonsafety pursuit.

Physical Care

You are what you eat—and you are how you exercise, too. I'm not going to lecture you on eating better or getting a gym membership but only because magazines like *Forbes, Fortune,* and *Inc.* have already been doing so for years. They've all touted the job-performance benefits of executives taking care of themselves. And the same principles apply to safety folks.

Leaders can better keep up with the rigors of their jobs if they keep themselves in relatively decent shape. You don't need a six-pack to deliver safety training—but you're more likely to engage trainees if you can muster the energy for class after class.

"LEADERS CAN BETTER KEEP UP WITH THE RIGORS OF THEIR JOBS IF THEY KEEP THEMSELVES IN RELATIVELY DECENT SHAPE."

Job Renewal

Stress and long hours are inherent parts of the job. But wheel-spinning and a high degree of repetition aren't. If you find yourself stuck in a rut, it's time to do something about it.

The first option is to initiate a change in your job. This could mean looking for a new gig—but it doesn't have to. You can also look for ways to restructure your job description, or you can dedicate yourself to developing new skills to become a better manager.

You work hard, and you deserve learning opportunities. Seizing these opportunities will help you feel proactive rather than reactive and make you feel more like you're taking back control of the safety agenda.

Finally, you can also look for new ways to solve the everyday safety headaches. Look into new concepts and programs that offer new avenues of injury prevention—and that might renew your enthusiasm for your job.

Motivation

One of the surest signs of burnout is a loss of motivation. When this happens, it's time to reconnect with what motivates you.

Ask yourself what you first loved about your job. Is it the ability to save lives? The opportunity to stand in front of a room of people and teach them important safety skills? The ability to provide hands-on coaching to help people perform their jobs more safely and effectively? Identify your early sparks for EHS, and then dote on them in an effort to rekindle your motivation.

What Are You Going to Do?

The Occupational Safety and Health Administration (OSHA) is never going to create a self-care standard. So, you need to create one for yourself. Take some time to determine what you can do to help yourself recover when you've had a few tough weeks—or months—on the job.

And then comes the tough part: developing the habit of actually taking care of yourself. It doesn't matter what you do as long as it works for you and, most importantly, you actually do it.

Start small by deliberately integrating self-care into your everyday routine. Plan a 15-minute break in the middle of your day, go for a short walk after work to clear your head, or schedule time in your calendar to think about exciting things you'd like to accomplish in the future.

Whatever you choose to do, remember that by taking care of yourself, you're improving your ability to look out for others—and that's a form of care we can all agree is worthwhile. SD

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The Two-Way Relationship Between Workers' Comp and Safety

Do you fully understand how your workers' compensation programs and policies interact with your organization's safety program?

By Guy Burdick

Ensuring compliance with federal or state occupational safety and health laws and regulations is only part of a workplace safety and health professional's job. Often, safety managers also handle aspects of an employer's workers' compensation program. The two aspects of the job have different demands.

OSHA, a federal agency within the Department of Labor, develops workplace safety and health standards that apply nationwide. Despite the fact that approximately half of U.S. states operate under state plans for occupational safety and health, there is a high degree of overall uniformity in workplace safety compliance obligations from one state to the next.

Meanwhile, workers' compensation is administered at the state level. It shields employers from liabilities for workers' injuries, illnesses, and deaths while covering the costs of workers' medical treatments and lost wages or providing death benefits to the surviving spouse and children of a worker killed on the job.

Most states' original workers' compensation laws predate the federal Occupational Safety and Health (OSH) Act of 1970, and the provisions of these laws vary greatly from state to state. All states except Texas require employers to purchase workers' compensation insurance coverage.

Insurance coverage may be sold and provided by private insurers, or it may be offered through a state-run program. Some employers have the option of self-insuring or joining a group self-insurance pool. Some states have publicly funded insurance pools to cover claims at workplaces where an employer has neglected to buy insurance coverage.

Employer Responsibilities

The OSH Act and state workers' compensation laws create competing and complimentary responsibilities for employers. Some of these responsibilities

fall directly on safety managers, while others may be primarily managed by Human Resources or another division within an organization. Depending on the company, safety managers may be tasked with:

- Ensuring compliance with federal or state safety standards, as well as the OSH Act's General Duty Clause;
- Administering workers' compensation claims;
- Monitoring workers on leave because of workplace injuries and illnesses;
- Handling an injured worker's return to work or arranging for and monitoring light-duty programs for workers not yet recovered enough to resume their regular duties; *and*
- Containing the employer's costs for workers' compensation claims or premiums.

When a workplace injury or illness occurs, the first task is to ensure that the employee receives proper medical attention. If the injury or illness is compensable under workers' compensation rules, the employee may need assistance in filing a claim and navigating the insurance system.

Remaining in contact with workers out on leave because of an injury is essential. This communication serves the practical purposes of confirming that injured workers are receiving proper treatment and monitoring the progress of recovery, in addition to maintaining a dialogue with the injured employee and demonstrating the employer's concern for his or her recovery.

Throughout the process, employers should be mindful of the end goal: returning workers to their regular duties. A worker's absence can mean a loss of critical knowledge, as well as a loss of productivity.

Once an injured worker has recovered, a physician or another medical professional will certify whether a worker is fit to return to normal duties or if the worker must be assigned light or alternate duties. Light- and alternate-duty programs frequently require a safety manager's involvement, working in coordination with Human Resources and other personnel to meet an injured employee's work restrictions.

"SAFETY MANAGERS CAN HELP THEIR EMPLOYERS CONTAIN THE COSTS OF WORKERS' COMPENSATION CLAIMS AND PREMIUMS BY SPOTTING AND CORRECTING WORKPLACE HAZARDS BEFORE THEY CAUSE AN INJURY AND BY FOSTERING A STRONG CULTURE OF SAFETY THROUGHOUT THE ORGANIZATION."

Alternate or light duty may involve less strenuous parts of workers' regular jobs, or it may involve temporarily filling a different job at the same company. The best designed light-duty programs manage to offer meaningful work opportunities—rather than mere busywork—while still staying within the limits of what a returning employee can do safely without jeopardizing his or her recovery.

Regardless of the return-to-work assignment—regular, alternate, or light duties—the safety manager should closely monitor the work to ensure the worker doesn't become reinjured.

Fraud Concerns

Some employers and insurers worry about having to pay out fraudulent workers' compensation claims. Fraud is rare, but it does happen. Fraudulent claims may involve:

- Faked injuries or malingering to avoid work;
- Non-work-related injuries;
- Not returning to work once an injury has healed while continuing to collect "lost" wages; *or*
- Old injuries or injuries from previous jobs.

Safety managers must tread carefully. They have a duty to report suspicious claims to their employer and its insurance carrier. However, it is the insurance provider's responsibility—not that of the safety manager—to investigate suspicious claims. Confronting a worker about a suspicious workers' compensation claim can foster an adversarial relationship and undermine employee morale, in addition to creating potential liability problems for the employer.

Fraudulent or Uncertified Providers

While fraudulent claims can and do happen, fraud and impropriety can happen on the provider end, too. Not everyone who offers workers' compensation insurance coverage is aboveboard. In December, California's Insurance commissioner penalized American Labor Alliance and CompOne USA $4,345,000 for selling workers' compensation and liability policies to employers of farmworkers without being properly licensed by the state's Department of Insurance.

Any policies sold in California by American Labor Alliance and CompOne USA are invalid. On February 13, the state's Labor commissioner reminded California employers that the commissioner's office can cite the

"BEING AWARE OF AND ENGAGED IN WORKERS' COMPENSATION IS A NECESSARY AND CRITICAL PART OF A SAFETY PROFESSIONAL'S JOB."

employer $1,500 per employee not covered by valid workers' compensation insurance.

Fraud's Flip Side: Underreporting

There is a flip side to employees' filing of false, fraudulent, or ineligible workers' compensation claims: underreporting injuries. Workers may be afraid of retaliation from their supervisors or employers and may not report legitimate workplace injuries.

If a worker suffers a legitimate workplace injury—one that would qualify for workers' compensation—but doesn't report it, this can create legal problems for the employer, in addition to undermining safety at the company and increasing the chances of an injury or illness worsening.

Such an injury probably is recordable under OSHA's injury and illness recordkeeping regulations. If an injury goes unreported, the employer could be cited and penalized for recordkeeping violations.

OSHA requires employers to record a work-related injury if it involves:

- Death;
- Days away from work;
- Restricted work or transfer to another job;
- Loss of consciousness;
- Diagnosis of a significant injury or illness by a physician or licensed healthcare provider; *or*
- Certain other specific outcomes, such as needlesticks, work-related tuberculosis, and hearing loss.

Controlling Premium Costs

Workers' compensation insurance premiums can vary by state. Each state has its own formula for calculating premiums. An individual employer's premiums are also affected by the risks inherent in its industry and the company's claim history.

The key metric for employers is the experience modification rate (EMR), which is a numerical expression of an employer's claims history and safety record in comparison to other companies in the same industry. An EMR of 1.0 indicates an average level of risk for the industry, while an EMR below 1.0 indicates a lower risk (i.e., better than average safety performance for the industry), and an EMR above 1.0 indicates a higher risk (i.e., worse safety performance or more claims than the industry average). Generally speaking, a higher EMR translates to higher premium costs.

The best defense against high premiums and claims is the same as the best defense against being cited by OSHA: preventing accidents, illnesses, and injuries.

How Can Safety Professionals Help?

Safety managers can help their employers contain the costs of workers' compensation claims and premiums by spotting and correcting workplace hazards before they cause an injury and by fostering a strong culture of safety throughout the organization.

Safety managers can make sure employees stay on top of housekeeping—fixing slip, trip, and fall hazards before they become slip, trip, and fall injuries. They can hold safety meetings or give toolbox or tailgate talks—educating employees about hazards inherent to their jobs and instructing them in hazard controls or proper use of personal protective equipment (PPE).

They can conduct regular safety audits to identify and correct problems on the job and make sure workers are following the workplace safety policies and procedures. Even the best intended policies and procedures are worthless if employees aren't following them.

Workers' compensation carriers can often assist in these efforts. Many offer consultation services and other safety resources to help employers take proactive steps to prevent injuries and control costs.

Simply Complicated

Being aware of and engaged in workers' compensation is a necessary and critical part of a safety professional's job—on top of the responsibilities of complying with federal or state occupational safety and health regulations. In many ways, the workers' compensation part of the job is simple:

- Prevent accidents, injuries, and exposures that lead to occupational illnesses;
- Ensure injured workers receive prompt medical care;
- Monitor their progress while out on leave; *and*
- Coordinate their return to work.

What complicates this part of the job is money—the money involved in:

- Ineligible or fraudulent claims;
- Poorly administered treatment;
- Reinjury after workers return to work; *and*
- Higher insurance premiums as a result of an excessive level of injuries and claims. SD

Guy Burdick is a contributing editor of Safety Decisions.

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Employers See the Effect of Rises in Marijuana and Opioid Use

The use and misuse of both illicit and prescription drugs are affecting a growing number of employers.

By Guy Burdick

Whether marijuana or opiates are obtained legally or illegally, both are present in the workplace. An increasing number of workers are even dying on the job from drug and alcohol overdoses. The most acute hazards are faced by firefighters, police officers, and other emergency responders, as well as cleanup workers.

These issues have been fueled by a number of developments:

- Several states have enacted laws allowing recreational use of marijuana in addition to existing laws recognizing medical uses of marijuana;
- Physicians have prescribed opioid painkillers for work-related and non-work-related injuries; *and*
- As some individuals became dependent on or misused these prescription painkillers, they switched to illicit opioids.

These have led to four key problems:

1. Health and safety hazards in the growing, processing, and retail sale of marijuana;
2. Worker impairment from marijuana and opioid use;
3. Overdoses and deaths in the workplace; *and*
4. Health hazards faced by emergency responders and law enforcement officers encountering synthetic opioids like fentanyl.

Marijuana Use Growing

Marijuana was the most commonly detected substance in worker drug tests, according to Quest Diagnostics, a company that tests workers' urine samples for employers and performs patient blood, urine, and other diagnostic tests for healthcare providers. Quest reported that positive results for marijuana increased by more than 33% between 2015 and 2017.

Some users fail to exercise caution surrounding their marijuana use.

Over half of medical marijuana users reported driving while "a little high," according to University of Michigan researchers. They found that 56% of the users surveyed reported driving within 2 hours after using marijuana; 51% reported driving while "a little high," and 21% reported driving while "very high."

With more states enacting laws approving medical or recreational marijuana use, an industry has quickly expanded to meet consumer demand. The American Industrial Hygiene Association (AIHA) voiced several concerns about the cannabis industry in its recent public policy agenda, including:

- Worker impairment due to marijuana use;
- Health and safety hazards posed by the growing, processing, and retail sale of marijuana and the need to reach out to the industry to implement hazard controls; *and*
- The need for research into identifying and characterizing worker impairment, as well as a voluntary prohibition of marijuana use by workers in safety-sensitive positions until impairment caused by marijuana use is better understood.

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Steep Learning Curve for an Emerging Industry

Participants in the emerging cannabis industry may be unprepared for and ill-equipped to handle the health and safety hazards involved with the growing, processing, and retail sale of marijuana.

The California Division of Occupational Safety and Health (Cal/OSHA) recently cited a marijuana processing company for a workplace explosion in which an employee suffered burns. When the employee was using propane to extract cannabis oil from leaves, the propane ignited, causing an explosion.

The National Institute for Occupational Safety and Health (NIOSH) has published two Health Hazard Evaluation reports following investigations at cannabis industry facilities.

At an outdoor organic farm where marijuana is harvested and processed, NIOSH reported finding that:

- Tetrahydrocannabinol (THC) was present in every surface wipe sample; *and*
- Some hand-trimming activities required a lot of hand motions, and employees were concerned about repetitive-motion injuries.

Investigators recommended the employer rotate workers to reduce the duration of repetitive hand motions and wipe work surfaces to remove the THC. At a medical marijuana processing facility, NIOSH researchers had a longer list of suggestions for the employer. They suggested that the employer:

- Install local exhaust ventilation to reduce exposures during grinding operations;
- Move the decarboxylation process (to extract cannabinoids) to a seldom-occupied area in the facility to prevent unnecessary exposures to potentially hazardous substances;
- Limit access to the areas where higher-exposure tasks are occurring;
- Redesign security doors to allow emergency egress without needing a badge to exit the facility; *and*
- Develop and implement a written respiratory protection program that meets the requirements of OSHA's respiratory protection standard.

Overdoses on the Job

Overdoses and even overdose deaths are becoming increasingly common occurrences in the workplace.

The Labor Department's Bureau of Labor Statistics (BLS) reported that the number of fatal overdoses has increased by at least 25% for 5 straight years. The number of overdoses has been rising since 2012:

- From 65 in 2012 to 82 in 2013,
- To 114 in 2014,
- To 165 in 2015, *and*
- To 217 in 2016 and 272 in 2017.

The 272 drug and alcohol overdoses accounted for 5.3% of all fatal injuries in 2017.

Quest Diagnostics noted a spike in positive results for opiates. Quest has performed over 10 million worker drug screens over a 3-year period, from 2015 through 2017, and found the highest rate of positive results for opioids in the following industry sectors:

- Health and social assistance, .47%;
- Public administration, .47%;
- Construction, .34%;
- Manufacturing, .33%; *and*
- Accommodation and food services, .31%.

NSC Surveyed Employers

A National Safety Council (NSC) survey found most employers are unprepared to cope with opioids and especially prescription opioids in the workplace.

The NSC found that:

- More than 70% of employers are affected by prescription drugs in the workplace;
- 76% do not offer training to identify the signs of misuse;
- 81% lack a comprehensive drug-free workplace policy; *and*
- 41% of those that test employees for drugs do not test for synthetic opioids.

The standard five-panel drug test checks for amphetamines, cocaine, heroin, marijuana, and phencyclidine (PCP). It does not screen for dilaudid, fentanyl, hydrocodone, or oxycodone.

Opioids include:

- Natural opioids, such as morphine and codeine, derived from the opium poppy;
- Semisynthetic opioids, including illicit heroin and the prescription drugs hydrocodone and oxycodone; *and*
- Synthetic opioids, such as methadone, tramadol, and fentanyl.

The NSC went on to develop a set of recommendations for employers specific to responding to prescription opioids in the workplace. The group first recommended that employers reevaluate their drug-free workplace policy and drug testing program. The NSC said an effective drug-free workplace policy consists of five components:

1. A clear, written policy;
2. Employee education;
3. Supervisor training;
4. An employee assistance program (EAP); *and*
5. Drug testing.

The policy should clearly state that prescription drugs should be taken in the standard dosage according to a physician's instructions. The NSC also suggests that employees share their job description with the prescribing physician to determine whether a prescribed medication would interfere with the employees' assigned duties. The employees also should ask whether a nonopioid medication could be prescribed for pain.

Supervisors should be trained to recognize typical behavioral and performance-related signs of impairment.

An employer-sponsored EAP can be a cost-effective way to address prescription painkiller dependence or addiction. However, the NSC noted that while many companies offer EAPs, few employees use them. Employees can often fear a stigma or negative ramifications resulting from using their employer's EAP. The NSC suggested that employers educate their employees in the value of their EAP.

The NSC also suggested that Prescription Benefit Managers (PBMs) have technology that can help stop prescription painkiller misuse. The council suggests employers ask the following when evaluating PBMs:

- Does the PBM provide information about total opioid drug spending and trends?
- Does your PBM have a flag for repeated attempts for "too early refills" that would potentially show noncompliance with the prescriber's recommendation?
- Are dose levels flagged, including morphine equivalents exceeding 120 milligrams per day?
- If the "duration of therapy" limit is flagged, what is the process when an opioid prescription has been changed during the course of treatment?
- Is there a system flag when opioids are combined with other drugs, especially in combination with sedative benzodiazepines (like Valium and Xanax)?
- Does the system show if an employee is seeing multiple physicians who prescribe the same or similar prescription opioid painkillers?

Employer Naloxone Programs

Because overdoses, even fatal ones, are occurring on the job, NIOSH has recommended that employers consider having Naloxone on hand in the workplace to reverse opioid overdoses. Naloxone, sold under the brand names Narcan® and Evzio®, can reverse an opioid overdose.

The symptoms of an overdose include:

- Slow breathing or no breathing,
- Drowsiness or unresponsiveness, *and*
- Constricted or pinpoint pupils.

Police officers, emergency medical services providers, and other responders routinely carry Naloxone for that purpose. However, Naloxone only counters the effect of opioid overdoses and not overdoses of other drugs or alcohol.

NIOSH developed a fact sheet for employers considering implementing a Naloxone program.

Employers contemplating a Naloxone program must weigh a number of issues, including:

- Does your state allow the administration of Naloxone by nonlicensed individuals?
- Does your state's Good Samaritan law provide a shield from liability for providing Naloxone?
- Has your workplace experienced an overdose or are there signs of opioid misuse on-site (drugs or drug paraphernalia)?
- How quickly can emergency responders arrive at and gain access to your workplace?
- Can Naloxone be added to first-aid kits or automatic external defibrillators (AEDs) already on-site?
- Is there a high risk of opioid overdoses in your geographic area?

NIOSH Fentanyl Resources

The greatest hazards are faced by police and emergency responders to scenes where synthetic opioids like fentanyl and its analogues are present. A quantity as small as a poppy seed can be fatal to humans. Even police working dogs exposed to fentanyl or other synthetic opioids have suffered fatal overdoses.

Emergency medical services providers, firefighters, and police officers face the risk of exposure to fentanyl in liquid, powder, or tablet form.

Fentanyl, a synthetic opioid, is 50 to 100 times more potent than morphine; and one of its analogues, carfentanil, is 10,000 times more potent.

As part of the federal government's response to an epidemic of opioid use, NIOSH developed a health and safety topic page on its website about prevention of fentanyl exposures among emergency responders and law enforcement officers. Law enforcement personnel at risk include special operations officers and crime scene and evidence technicians, as well as workers who clean up seized opioid manufacturing sites.

Emergency response, fire, and police employees face the risk of several routes of exposure, including:

- Ingestion,
- Inhalation,
- Mucous membrane contact, *and*
- Needlesticks.

Skin contact is less likely to produce an overdose. However, NIOSH recommended several hazard controls depending on the hazards present at various response scenes. Recommended personal protective equipment (PPE) range from nitrile gloves; safety goggles; and disposable N100, R100, and P100 face piece respirators to:

- Sleeve covers, gowns, and overalls;
- Air-purifying respirators (APRs);
- Powered air-purifying respirators (PAPRs); *and*
- Self-contained breathing apparatus (SCBA).

The institute also recommended postexposure decontamination: washing hands with soap and water. NIOSH cautioned against using alcohol-based hand sanitizers or bleach solutions, which can actually enhance absorption of fentanyl. SD

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OSHA Explains Hybrid SDSs

Still confused about some of the finer points of the HazCom and GHS standards? You're not alone, and OSHA recently provided some guidance. **By William C. Schillaci**

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In 2012, the Occupational Safety and Health Administration (OSHA) completed a comprehensive revision of its Hazard Communication Standard (HCS), with the general objective of achieving alignment with the United Nations' (U.N.) 2009 Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The revision provided much-needed improvements in how information about hazardous chemicals in the workplace is communicated to employees, but there remain questions about implementation of the HCS and particularly about one of its critical components: safety data sheets (SDSs).

OFor example, in a recent letter of interpretation (LOI) to a company that provides worldwide services related to the HCS and similar international programs, OSHA's directorate of enforcement programs answered questions about the applicability of the HCS and the SDS requirements to imported products. The company's main question concerned the degree to which SDSs can include information and be formatted to meet both OSHA's HCS requirements and the requirements of Health Canada's Hazardous Products Regulations (HPR) and its Workplace Hazardous Materials Information System (WHMIS). The LOI also addresses whether a company contracted to develop SDSs for a chemical manufacturer or importer may be a liable party with regard to meeting the HCS requirements. While the letter covers these and other aspects of SDS requirements, OSHA's main point seems to be that additional information can be included in *hybrid* SDSs as long as it does not "contradict or cast doubt" on the information required in SDSs.

Background

OSHA issued the original HCS in 1983. Chemical manufacturers and importers were required to evaluate the chemicals they produce or import and provide hazard information to downstream employers and employees by putting labels on containers and

"PERHAPS THE MAJOR PROBLEM WITH THE 1983 MSDS REQUIREMENT WAS THAT IT WAS *PERFORMANCE-BASED*. WHILE CERTAIN INFORMATION ABOUT THE CHEMICALS AND THEIR HAZARDS WAS MANDATORY, THERE WAS NO REQUIREMENT THAT THE INFORMATION BE PROVIDED IN A SPECIFIC FORMAT."

preparing material safety data sheets (MSDSs). Information that was mandatory in MSDSs included the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.

Perhaps the major problem with the 1983 MSDS requirement was that it was *performance-based*. While certain information about the chemicals and their hazards was mandatory, there was no requirement that the information be provided in a specific format. Accordingly, chemical manufacturers and importers conveyed the required information in MSDSs and on labels in whatever format they chose. Manufacturers were also required to *evaluate* the potential hazards of chemicals—a vague word that resulted in more information disparities among MSDSs. The result was that employers were forced to continually *relearn* how to read and understand MSDSs that were dissimilar in how they presented data and described hazards.

In its 2012 final rule, OSHA revised the HCS to conform to the U.N.'s GHS (Rev. 3, 2009). The revisions included adoption of the GHS's standardized format for MSDSs. To differentiate from the original HCS, OSHA introduced a new term for the new format: safety data sheet. The information required in SDSs was largely the same as what was required in MSDSs. But the new format (which chemical manufacturers had already been using for years on a voluntary basis) comprises 16 sections presented in a specific order. Items of primary interest to exposed employees and emergency responders are presented at the beginning of the document, while more technical information is presented in later sections. Also in line with the GHS, the revised HCS requires that chemical manufacturers and importers provide their chemicals with labels that include harmonized signal words, pictograms, and hazard statements for each hazard class and category. Precautionary statements must also be provided.

"The modifications to the HCS will significantly reduce burdens and costs, and also improve the quality and consistency of information provided to employers and employees regarding chemical hazards by providing harmonized criteria for classifying and labeling hazardous chemicals and for preparing safety data sheets for these chemicals," OSHA stated in the preamble to the revision.

United States and Canada Signed MOU

All this brings us back to OSHA's LOI, which you can find online at www.msdsonline.com/wp-content/uploads/2018/10/OSHA_Letter_of_Interpretation_091818.pdf. As noted, the thrust of the letter was to determine how information in SDSs required by Canada's WHMIS can be incorporated into or is interchangeable with information in SDSs required by OSHA's HCS.

Cooperation on this issue has already been addressed by the two nations. For example, in June 2013, OSHA and Health Canada signed a memorandum of understanding (MOU) to formalize implementation of the GHS in ways that reduced differences between the two jurisdictions and to build a common approach to future changes of the GHS (see the OSHA memo at https://www.osha.gov/laws-regs/standardinterpretations/2016-09-21). Also, in May 2015, OSHA announced that it would continue its partnership with Health Canada to align the U.S. and Canadian regulatory approaches regarding labels and SDSs and classification requirements for workplace chemicals.

"Where an SDS element is required by Health Canada's WHMIS, and not by OSHA's Hazard Communication standard, it is permitted/allowed by OSHA, unless the information would contradict or cast doubt on the required information," the memo states. "Similarly, an SDS element that is required under HCS 2012 is permitted in Canada. An example applies to carcinogenicity. The HCS 2012 requires that if a chemical is identified as a carcinogen by OSHA, the International Agency for Research on Cancer (IARC), or the National Toxicology Program (NTP), then this information must be disclosed in SDS section 11, Toxicological information. Health Canada permits this information on the SDS even though under WHMIS the IARC and NTP listed carcinogens are not required to be disclosed on the SDS. However, if an SDS from Health Canada is sent to the U.S., the SDS must disclose information on any OSHA, IARC and NTP listed carcinogens."

Avoiding Confusion

Points made in the LOI include the following.

- Section 1 of the SDS must include the name, address, and telephone number of the manufacturer, importer, or other *responsible party*.

(The HCS defines *responsible party* as "someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary." A *responsible party* may also be a partnership, association, corporation, business trust, legal representative, or any organized group of persons. These parties automatically become the *responsible party*.)

- Section 1 must also include an emergency phone number. "The address must be in the United States, and the phone number must be a domestic number," states OSHA. "If a manufacturer, importer, distributor, or employer chooses to add a foreign address to an SDS, it may be listed in Section 1 if the responsible party believes they may be able to provide additional supplemental information and it is done in a fashion that does not cause confusion. To avoid confusion, the supplemental information may instead be provided in Section 16 of the SDS."
- The party or importer that receives the chemical shipment from a foreign supplier is liable for all HCS 2012 requirements for that chemical, including classification and developing an SDS as soon as it is in the importer's possession. If the chemical arrives at the facility without an SDS, the importer must create an HCS-compliant SDS. If the shipment arrives at the facility with an HCS 2012-compliant SDS, the importer may use that SDS to meet the HCS requirement.
- If the chemical will not be leaving the facility, the U.S. importer may follow the workplace labeling requirements at 29 Code of Federal Regulations (CFR) 1910.1200(f)(6), which provide several options not available when chemicals leave the workplace.
- Health Canada's 2015 WHMIS regulation does not require an importer to include its address on its SDS for chemicals to be used on-site. OSHA's HCS does require that all SDSs include a U.S. address in Section 1 of the SDS. OSHA says it does not currently plan to change this requirement.
- A contracted company that provides additional information for a hazardous chemical may be an SDS author or contracted preparer. In this arrangement, a manufacturer or importer may agree to list the contracted company on its chemical label and SDS as the party to be contacted to provide additional or emergency information. However, the manufacturer or importer remains the responsible party and, as such, maintains the ultimate responsibility for compliance with OSHA's HCS. The contracted party may not claim responsibility for the SDS and its contents.
- Hybrid labels and SDSs that contain all the required HCS elements may include foreign country information as long as no information contradicts any requirement in OSHA's HCS.
- A responsible party may follow the most recent version of the GHS as long as the hazard information does not contradict or cast doubt on the HCS 2012 required information. If the hazard and precautionary statements in Canada's HPRs differ from 2012 HCS statements because they were adopted from a more recent revision of the GHS, the responsible party may use them as long as the hazard information does not cast doubt on the HCS 2012 required information. Minor differences are acceptable. (See OSHA Standard Interpretation at https://www.osha.gov/laws-regs/standardinterpretations/2017-11-29.) However, classification or hazard categories may be different in a more recent version of the GHS than in HCS 2012. In these cases, it is not permissible to use the hazard and precautionary statement from the more recent revision of the GHS because it would contradict or cast doubt on HCS required information.
- The HCS requires inclusion of health hazards not otherwise classified (HNOCs) in the SDS. Also, HNOCs may be included on the label as supplemental information. Additionally, OSHA permits the use of the exclamation mark pictogram to indicate the hazards of an HNOC on the label and SDS if the label also indicates that the pictogram is being used for an HNOC. However, the exclamation mark pictogram may appear only once on a label; if it already appears as a required pictogram for a classified hazard, it may not appear a second time as supplemental information for the HNOC.
- Canada's HPR requires the use of precautionary statements for hazard classes not covered by the GHS. These hazard classes are combustible dusts, simple asphyxiants, pyrophoric gases, physical hazards not otherwise classified (PHNOC), and biohazardous infectious materials. The question was whether OSHA would allow the hybrid SDS to add precautionary statements for hazard classes not covered by the GHS. OSHA responded that while it does not require precautionary statements for HNOCs, it permits them as supplemental information as long as the statements do not contradict or cast doubt on the requirement information. HCS 2012 requires hazard statements for combustible dust, pyrophoric gas, and simple asphyxiants but does not require precautionary statements for those hazards. SD

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Safety Professional Profile

John Herr

CEO
Avetta

It's been a busy time for John Herr, CEO of supply chain risk management software provider Avetta. In mid-February, the company announced that it had combined with supply chain solutions provider BROWZ, expanding Avetta's global network to 85,000 customers in more than 100 countries. The ultimate goal? To elevate safety and sustainability in workplaces around the world.

Shortly after the merger was announced, Herr shared with *Safety Decisions* some reflections on the current state of risk management and what he's most excited about when he considers the future of safety.

Tell us a little bit about your experiences working in the risk management and safety space. What inspired you to get involved in the industry?

Every year some two million men and women lose their lives through accidents and diseases linked to their work. Hearing this and the corresponding stories of the real people affected inspired me to propel risk management into the forefront of the market. The more people realize what is at stake, the more proactive they become in ensuring every worker makes it home safely each night, and I am no different.

While I've only led Avetta for five years, I've been involved in risk management for almost two decades. I've learned that no matter what industry you're in, there will always be liabilities and hazards. As a result, risk management is a topic that needs to be brought into every boardroom discussion.

Working across various industries has given me unique insight into the wide variety of risks factors that handicap a company. From supply chain inconsistencies to data security breaches and everything in between, no company is immune. The first step to building a strong and sustainable business is making safety a priority. Once you can ensure that your

employees will arrive home to their families safe each night, then you can start tackling the tougher issues of business.

What are the biggest supply chain safety and risk management issues giving organizations problems today?

The biggest impediment to safety and strong risk management is tradition. We work with industry leaders who use outdated paper and filing cabinet systems simply because that's the way it's always been. What they don't realize is that their own systems are frequently causing inconsistencies and weaknesses in their supply chain. As compliance requirements become more complex, such processes will only become more inefficient and error-prone.

Oftentimes it takes an incident occurring to help businesses realize there's a better way to manage their teams. Our goal is to help companies recognize their unique risks before something tragic happens. While supply chain risk management comes with costs, the cost of noncompliance is even more devastating, not just for the company but for the lives and families of affected workers as well. A third-party platform can help reduce these risks, while at the same time lowering administrative costs. What once took an entire team a full week or more to manage, can now be automated on our platform in less than a day. More important than the massive savings companies have found is the confidence they have gained in their supply chain, the confidence that their employees and their brand are protected.

What innovations in safety are you most excited about, and what concerns do you have for the future of safety?

The future of risk management is progressing rapidly, with new developments hitting the market every month. It's an amazing and exciting time to be part of the industry! Currently, I'm interested in the power of analytics to predict unfavorable events and prevent them from occurring. Our system enables companies to track trends in their supply chain. Through intuitive reporting tools, data visualization, and in-application modeling, they receive pragmatic data points that are then used to make informed and efficient business decisions.

As these analytics and automation advancements continue, business will gain unparalleled insights into every aspect of their supply chain, from far-reaching overviews of compliance all the way down to the compliance level of individual workers. Not only that, but at the same time this increase in data will give them the power to implement real changes that make a difference. While the ability to protect and manage your supply chain from anywhere in the world is already reality, better automation and analytics will make it a household item for companies.

One of my main concerns is that with expanding global supply chains comes a lack of knowledge on how to navigate across borders and languages effectively. This opens the door to compliance and safety liabilities that will greatly impact the success of companies. Fortunately, while this is a large stumbling block for many professionals, the solution already exists—a proactive risk management system. Looking to the future, companies will be able to bypass safety and compliance issues by preemptively auditing and monitoring their supply chain.

What advice do you have for safety professionals looking to optimize their use of technology within their programs?

My main message is one of encouragement. Implementing and optimizing new technology into existing programs will always be an adjustment, but it's worth the effort. Our technological daydreams from 20 years ago are simple children's playthings today. This progress was only made because people were willing to look past what has always been done and instead see what could be possible. Strategically and continuously doing so, regarding technology adaptation, will not only strengthen your business but sustain it through the natural rises and falls as well.

One of best ways to optimize technology is to choose platforms that are adaptable to your specific needs. Many companies set themselves at a disadvantage by choosing a "one-size-fits-all" solution. On paper these appear nice, but the truth is you end up paying more for services that don't benefit you. And when it comes time to adapt, your technology is often the issue that's lacking. Here at Avetta, our clients are able to configure our platform to their specific needs. Your business and supply chain are unique, so your solution should be too.

As always, you should look to the people who are going to be using the technology on regular basis. As an executive it's easy to mandate what systems will be used further down the line. However, if the individuals tasked with using the program aren't supportive or compliant with these requests, the technology will never be leveraged to its full extent. That's one of the reasons why we spend so much time here at Avetta ensuring that the contractors and suppliers using our platform find value in it as well. Through our unique Marketplace and Insurance offerings these contractors get discounts on products they already use simply for being our customer—no extra charge. When it comes to creating and optimizing a world-class, technological platform, we look at the customer experience from the entire operational standpoint. This has helped us successfully help businesses reduce their Total Recordable Incident Rate (TRIR) without disrupting their existing supply chains. SD

Check out our Keeping Up *section in this issue of* Safety Decisions *for more details on how Avetta and BROWZ joined forces to become a world leader in supply chain risk management. To learn more, visit www.avetta.com.*

Reprint: SD_0319-10

Unaffected by Government Shutdown, OSHA Increases Penalties

The government shutdown several months ago affected many federal agencies and contractors but not the Occupational Safety and Health Administration (OSHA).

By the *Safety Decisions* Staff

JERRY2313/GETTY.COM

Both OSHA and the Mine Safety and Health Administration (MSHA) were fully operational during the shutdown. Due to a minibus appropriations bill signed by President Donald Trump in September 2018, the agencies are fully funded through September 2019. Employers therefore expected the same level of inspections, enforcement, and compliance assistance that was in place pre-shutdown.

However, the Chemical Safety and Hazard Investigation Board (CSB) had approximately 95% of its staff furloughed, and all of its investigations were suspended. The remaining staff were on call in case a serious incident occurred during the shutdown. The Department of Justice's (DOJ) enforcement efforts were also affected, as its lawyers were furloughed. DOJ lawyers requested that their civil cases be stayed and deadlines postponed for the length of the shutdown.

The following chart compares the 2019 penalties with the 2018 levels:

Violation	2018 Penalty Levels	2019 Penalty Levels
Any willful violation of OSHA rules or standards	Minimum of $9,239 up to $129,336	Minimum of $9,472 up to $132,598
Any repeat violation of OSHA rules or standards	Up to $129,336	Up to $132,598
Any serious violation of OSHA rules or standards	Up to $12,934	Up to $13,260
Any OSHA violation deemed not serious	Up to $12,934	Up to $13,260
Failure to correct a violation	Up to $12,934 for each day the condition continues	Up to $13,260 for each day the condition continues
Violation of posting requirements	UUp to $12,934	Up to $13,260

"EFFECTIVE FEBRUARY 6, 2019, THE MAXIMUM CIVIL PENALTIES THAT THE EPA MAY IMPOSE FOR VIOLATIONS OF VARIOUS ENVIRONMENTAL STATUTES HAVE INCREASED BY JUST OVER 1%."

Higher OSHA Penalties Now in Effect

During the final days of the shutdown, OSHA's final rule to increase its civil penalties by approximately 2.5% for 2019, with a new maximum single-violation penalty for willful and repeat violations of $132,598, was published in the Federal Register and took effect immediately on January 23, 2019. The penalty increases adjust for inflation as required by the Federal Civil Penalties Inflation Adjustment Act of 2015, which initially raised civil penalties by 78% after over 2 decades without a penalty increase and mandated annual adjustments each year.

The new levels were not expected to take effect until the partial government shutdown ended but instead were published during the shutdown. The new penalty levels will apply to all violations occurring on or after January 23, 2019.

Higher EPA Penalties for Noncompliance Are Also Now in Effect

If your duties extend beyond safety into the environmental compliance arena, you should also know that, although delayed by the government shutdown, the U.S. Environmental Protection Agency (EPA) has also finalized regulations adjusting its civil penalties to account for inflation. Effective February 6, 2019, the maximum civil penalties that the EPA may impose for violations of various environmental statutes have increased by just over 1%.

For example, maximum penalties have increased as follows:

- **Clean Air Act (CAA)** violations: from $97,229 to $99,681 per day per violation;
- **Clean Water Act (CWA)** violations: from $53,484 to $54,833 per day per violation;
- **Resource Conservation and Recovery Act (RCRA)** violations: from $72,718 to $74,552 per day per violation;
- **Safe Drinking Water Act (SDWA)** violations: from $55,907 to $57,317 per day per violation;
- **Toxic Substances Control Act (TSCA)** violations: from $38,892 to $39,873 per day per violation;
- **Emergency Planning and Community Right-to-Know Act (EPCRA)** violations: from $55,907 to $57,317 per day per violation; and
- **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)** violations: from $19,446 to $19,936 per day per violation.

The new penalty levels apply to all violations occurring after November 2, 2015, for which penalties are assessed after February 6, 2019.

While the increased maximum penalties may not impact the actual penalties the EPA seeks when dealing with a specific environmental violation, the Agency believes it is important that the maximum penalties reflect inflation to maintain the intended deterrent effect and promote compliance. SD

Keep an eye on the EHS Daily Advisor *for further developments. For more information on federal regulatory enforcement in the environment, health, and safety (EHS) space, visit www.osha.gov and www.epa.gov.*

Reprint: SD_0319-11

A Trove of Fatality Data Released from the Labor Department

The federal government has long tracked both fatal and nonfatal workplace injuries. The Labor Department's Bureau of Labor Statistics (BLS) has been compiling and releasing a national Census of Fatal Occupational Injuries (CFOI) since 1992.

By Guy Burdick

On December 18, 2018, the BLS released its most current figures for 2017. The overall results were encouraging. After 3 straight years of increases, there were 43 fewer workplace deaths in 2017 than in 2016.

The bureau reported a total of 5,147 fatal work injuries in 2017—down from 5,190 in 2016. The total brought down the rate of fatal injuries from 3.6 per 100,000 full-time equivalent workers in 2016 to 3.5 in 2017.

The bureau also reported decreases in deaths due to certain causes and in certain types of incidents:

- Violence and other injuries by persons or animals decreased 7% in 2017— homicides dropped by 8% and suicides decreased by 5%.
- Incidents involving contact with objects and equipment were down 9% (695 in 2017, which is down from 761 in 2016), with caught in running equipment or machinery deaths down 26% (76 in 2017, which is down from 103 in 2016).
- Crane-related workplace fatalities fell to their lowest level ever recorded in the CFOI at 33 deaths in 2017.

All-Time Lows for Private Manufacturing

Some industries saw decreases in fatal injuries. In the private manufacturing and wholesale trade industries, the number of workplace deaths was its lowest since the BLS began breaking out figures for these industries in 2003. There were 303 fatalities in manufacturing in 2017 and 174 in the wholesale trade—down from 318 and 179, respectively, in 2016. While there was a decrease in the number of wholesale trade deaths, the rate of fatal injuries held steady at 0.2 (still well below the overall rate of 3.5 for all industries).

However, the fatal injury rate for manufacturing dropped from 2.0 in 2016 to 1.9 in 2017.

STURTI/GETTY.COM

Increases Also Reported

However, despite the overall reduction in fatal injuries, some types of incidents reached all-time highs, and certain occupations remained extremely dangerous. For example, fatal falls reached their highest level in the 26-year history of the survey, accounting for 887 (17% of) worker deaths. Other increases included:

- Alcohol and drug overdoses on the job;
- Deaths of heavy and tractor-trailer truck drivers; *and*
- Deaths of fishing and logging workers.

In fact, fishers and related fishing workers and logging workers had the highest published rates of fatal injury in 2017.

Fishing Remains Most Dangerous Job

Fishing remained one of the deadliest occupations. While only 41 fishers and related fishing workers died in 2017, the fatal work injury rate for the occupation was 99.8. Other occupations with significantly high fatal injury rates include the following:

- Logging workers, 84.3;
- Aircraft pilots and flight engineers, 48.6;
- Roofers, 45.2;
- Refuse and recyclable material collectors, 35.0; *and*
- Structural iron and steel workers, 33.4.

Fatalities were down slightly for ground maintenance workers and supervisors. There were 244 fatalities in 2017—a small decrease from 247 who died in 2016. However, that still was the second-highest total since 2003. A total of 36 deaths were due to falls from trees, and another 35 were due to being struck by a falling tree or branch.

Transportation Takes a Heavy Toll

Heavy and tractor-trailer truck drivers had the largest number of fatal occupational injuries at 840. This represented the highest number of deaths since the BLS began tracking injuries for the occupation in 2003.

In fact, two occupational groups, the transportation and material moving group and the construction and extraction group, accounted for 47% of all worker deaths in 2017.

Overall, transportation incidents accounted for 40% of occupational fatalities—a total of 2,077. Those also include:

- 126 in aircraft incidents,
- 48 in rail vehicle incidents,
- 313 in pedestrian incidents (56 struck by a vehicle in a work zone),
- 68 in water vehicle incidents, *and*
- 337 in roadway incidents involving a collision with an object other than a vehicle.

Jackknifed or overturned vehicles resulted in 197 roadway and 111 nonroadway deaths.

There were 1,084 fatal occupational injuries among motor vehicle operators. So, a large share—40%—of all fatal workplace injuries results from causes outside the purview of the federal Occupational Safety and Health Administration (OSHA) or state worker safety and health agencies.

Several Department of Transportation and Department of Homeland Security agencies and a patchwork of state motor vehicle and local police departments are responsible for safety in the air and on roads and waterways. The Federal Aviation Administration and Transportation Security Administration are responsible for air safety. The U.S. Coast Guard oversees safety on the waterways.

Employees vs. Self-Employed

The rate of fatal injuries also was much higher for self-employed workers than for wage and salary employees. While 4,069 wage and salary employees died on the job in 2017, their fatal injury rate was 2.9. The rate for self-employed workers remains at 13.1. In 2017, 1,078 self-employed workers died on the job.

Deaths of Older Workers

There also was a significant correlation between worker age and both the number and the rate of fatal workplace injuries. For example, while only seven 16- to 17-year-old workers died in 2017 at a rate of 0.8 per 100,000, workers aged 55 to 64 years old accounted for the highest number of fatal injuries—1,155—at a rate of 4.6.

"FISHING REMAINED ONE OF THE DEADLIEST OCCUPATIONS. WHILE ONLY 41 FISHERS AND RELATED FISHING WORKERS DIED IN 2017, THE FATAL WORK INJURY RATE FOR THE OCCUPATION WAS 99.8."

The highest fatal injury rate in 2017 was seen among workers aged 65 years and over. They accounted for 775 deaths at a rate of 10.3. Workers aged 65 or over accounted for 15% of fatally injured workers an all-time high in the 26-year history of the CFOI.

The toll was especially high among older farmers, ranchers, and agricultural managers. Approximately 63% of farmers killed in 2017 were aged 65 and over, and 48 of those were 80 years old or over. There were 258 fatalities overall among farmers,

ranchers, and agricultural managers; 103 of those involved a farm tractor.

There also was a gender disparity in both the numbers and the rates of workplace deaths. Men accounted for nearly 93% of all fatal injuries. In 2017, 4,761 men died on the job at a rate of 5.8 per 100,000. However, 386 women died at a rate of 0.6.

Fatalities incurred by non-Hispanic black workers and non-Hispanic Asian workers each decreased 10% from 2016 to 2017. However, workplace deaths among Hispanic or Latino workers rose from 879 in 2016 to 903 in 2017.

Overdoses on the Job

Not all workplace deaths were due to job-related causes. Drug and alcohol abuse contributed to a growing number of occupational fatalities. Fatal overdoses on the job increased 25% from 217 in 2016 to 272 in 2017. The number has increased over several years and now accounts for a significant portion of workplace deaths.

Unintentional overdoses due to nonmedical use of drugs and alcohol have increased by at least 25% for 5 straight years. The number of overdoses has been rising since 2012:

- From 65 in 2012 to 82 in 2013,
- To 114 in 2014, *and*
- To 165 in 2015.

The 272 drug and alcohol overdoses accounted for 5.3% of all fatal injuries in 2017.

Other Causes

Many workplace deaths were the result of a handful of causes and types of incidents. While suicides were down from 291 in 2016 to 275 in 2017, suicides represented 5.3% of fatal workplace injuries in 2017. Other causes accounted for even larger percentages of deaths:

- 317 deaths due to exposures to harmful substances—6% of all deaths;
- 458 homicides—8.9%; *and*
- 663 fatalities in roadway collisions involving another vehicle—12.9%.

Slips, Trips, and Falls

The 887 fatal slips, trips, and falls accounted for 17.2% of deaths. In fact, fatal falls were at their highest level in the survey's history.

Along with falls, many of the leading causes of fatal occupational injuries closely correspond to the violations most frequently cited by OSHA. In fiscal year (FY) 2018, the most frequently cited federal standards were:

- Fall protection, construction;
- Hazard communication;
- Scaffolding, general requirements, construction;
- Respiratory protection;
- Control of hazardous energy (lockout/tagout);
- Ladders, construction;
- Powered industrial trucks;
- Fall protection training requirements, construction;
- Machinery and machine guarding; *and*
- Eye and face protection, construction.

Mixed Results Among States

A total of 27 states had fewer fatal workplace injuries in 2017 than in 2016, while 21 states and the District of Columbia had more.

The number of fatalities remained unchanged in California and Maine. However, the rate of fatal injuries in Maine increased from 2.4 in 2016 to 2.7 in 2017.

Fatalities increased in Arizona, Arkansas, Connecticut, the District of Columbia, Georgia, Idaho, Indiana, Louisiana, Minnesota, Mississippi, Missouri, New Mexico, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Tennessee, Vermont, Washington, West Virginia, and Wisconsin.

The number of deaths went down in Alabama, Alaska, Colorado, Delaware, Florida, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Montana, Nebraska, Nevada, New Hampshire, New Jersey, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, and Wyoming.

The three states with the highest rates of fatal occupational industries were:

- Alaska with 10.2 per 100,000;
- North Dakota with 10.1; *and*
- Wyoming with 7.7.

Invaluable Research Source

Like the Survey of Occupational Injuries and Illnesses (SOII), which tallies and characterizes nonfatal injuries, CFOI data are invaluable resources for industry and academic researchers. The BLS offers access to tables, charts, and database searches of data collected over decades.

The BLS's collected data are available online at https://www.bls.gov/iif/home.htm. While the bureau identified 5,147 fatal injuries in 2017, it reported 2,811,500 nonfatal injuries and illnesses in 2017. These resulted in 8 median days away from work. BLS data tables sort these incidents by case circumstances and worker characteristics, as well as by industry.

The CFOI is compiled by the BLS's Occupational Safety and Health Statistics program from various state, federal, and independent data sources. For its 2017 data collection, BLS researchers review over 23,400 unique source documents. However, BLS figures may not always correspond to data reported by others. Some of the data used in the CFOI may be outside the scope of other agencies or regulatory coverage.

The national data compilation also excludes certain territories and U.S. possessions. It does not include figures for Guam, Puerto Rico, and the U.S. Virgin Islands. The CFOI does include data for the District of Columbia. SD

Guy Burdick is a contributing editor of Safety Decisions.

Reprint: SD_0319-12

OSHA Challenge Trivia!

1. Other than the Occupational Safety and Health Act of 1970, for how many federal statutes is OSHA responsible for investigating and resolving whistleblower retaliation complaints?
A) None
B) 12
C) 21
D) 24

2. According to the Bureau of Labor Statistics, which of the following groups is responsible for the highest percentage of workplace homicides?
A) Robbers
B) Coworkers
C) Customers, clients, and patients
D) Relatives or domestic partners

3. Which version of the United Nations Globally Harmonized System for the Classification and Labelling of Chemicals (GHS) is OSHA's current hazard communication standard based on?
A) Revision 1
B) Revision 3
C) Revision 5
D) Revision 7

4. What is the compliance date for the Employer Identification Number (EIN) to be included with injury and illness data submitted under OSHA's electronic recordkeeping rule?
A) March 2, 2019
B) March 2, 2020
C) December 31, 2020
D) July 1, 2020

Hungry for more OSHA Challenge Trivia?
Visit oshachallenge.blr.com to sign up for weekly questions, view leaderboards, and compete for prizes!

Don's April Fools' Day toolbox talk was *not* appreciated.

What would YOU like to see in the next issue of *Safety Decisions*?

We want to be sure that we're addressing our readers' top safety needs. Do you have a request for a future article topic or have questions or comments on this issue or previous issues of *Safety Decisions*? We'd love to hear from you!

Send your comments, questions, or requests to our team at *SafetyDecisions@simplifycompliance.com*.

Answer Key to Trivia: 1. C; 2. A; 3. B; 4. B

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