

WORKPLACE

Material Handling & Safety

National Safety Month 2021



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June is National Safety Month, an observance begun in 1996 as a way of decreasing the number of preventable injuries and deaths in the U.S. by raising awareness of the health and safety risks that cause them. Our special National Safety Month ebook focuses on the workplace and includes articles that align with the four topics identified by the National Safety Council (preventing incidents, addressing ongoing COVID-19 safety concerns, feeling psychologically safe on the job and advancing your safety journey) as well as a guide to dealing with OSHA, which is expected to step up enforcement efforts under the Biden administration. *WMHS* hopes the information in this ebook helps you in making every month a safe month at your company.



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High Visibility Vests: 3 Things to Watch Out For

The ability to be seen, especially around moving equipment, is critical for worker safety. To make sure you're equipping your workers with the best high visibility vests that fit their needs, pay attention to these three areas of focus:

OVERALL FUNCTIONALITY

Now, more than ever, users expect more functionality than they ever did in the past. Previously, vest manufacturers weren't designing their solutions with the features that wearers need most. However, some newer manufacturers to the space are starting their research at the most important source – the wearer – and introducing solutions that directly address their needs. Look for the following:

1. A variety and breadth of storage. Many workers in the construction trades need to wear multiple hats and carry more tools and accessories than they ever had to before. Vests that provide a wide variety of pockets in multiple sizes allows these workers to accommodate a greater selection of tools.

2. Accommodation for technology. The 'digital jobsite' is not a future initiative – it is happening right now. Construction sites are seeing increased usage of wireless devices, yet most vests don't accommodate for this. Today's vests should be designed to provide storage for devices like tablets and phones. Additionally, these pockets should be reinforced and sealable.

3. The ability to adjust sizing. Unfortunately, many vests are "one size fits all" or, more accurately, "one size fits all poorly." Look for vests that allow wearers to size to their body for a better fit, such as an internal strap for quick and easy sizing adjustments. This will also allow wearers to size up the vest to fit comfortably over a jacket in colder conditions.

A FOCUS ON DURABILITY

Vest durability is a frequent complaint with many wearers; especially when it comes to one of the most important vest features, the pockets. Most wearers rip the bottom pockets first due to the weight of their tools and, once a vest's pockets rip, these wearers often just throw away the vest entirely. To alleviate this all-too-common complaint, vest pockets should ideally be reinforced with tear-resistant material for better durability. Another major point of durability concern is the pass-through harness hole. Many vests are uncomfortable to wear with fall protection or lack harness holes, leading wearers to resort to ripping their vests to pass-through a harness in order to stay compliant while operating in a lift. As fall protection continues to be an ever-present concern on jobsites everywhere, vests with reinforced pass through harness holes are incredibly important.



COMFORT NO MATTER THE CONDITIONS

The topic of heat stress has begun to proliferate as a major concern on construction sites across the nation. Recognizing the threat of illness or even death from exposure to heat, the Occupational Safety & Health Administration (OSHA) has provided some guidance to decrease risk factors and help prevent heat illness. Among the many tips is for workers to consider protective clothing that provides cooling features. This makes it only reasonable to search for vests that provide better breathability for wearers – such as mesh backs; as well as vests with evaporative cooling properties and fabric treatments such as moisture wicking and anti-microbial so workers can stay cool and dry fast while preventing odor and bacteria build-up. ■

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Psychological Safety in the Workplace

By: **Maureen Paraventi**

Among the National Safety Council's (NSC) topics for National Safety Week is one that refers to the importance of feeling psychologically safe on the job as well as physically safe. Harassment, bullying and retaliation on the part of co-workers, supervisors or management are not only detrimental to a worker's psychological well-being, they're also illegal. Nonetheless, those behaviors are prevalent in many U.S. workplaces.

Bullying is a form of aggression, actions or comments that can psychologically or 'mentally' hurt or isolate a person by causing them to feel offended, degraded or humiliated. Repeated incidents or a pattern of behavior - rather than an isolated incident - constitute bullying.

Harassment is defined by the U.S. Equal Employment Opportunity Commission (EEOC) as "unwelcome conduct that is based on race, color, religion, sex (including pregnancy), national origin, age (40 or older), disability or genetic information."¹ Harassment rises to the level of a regulatory violation when enduring it is a condition of continued employment, or when it is so severe and pervasive that it creates an intimidating, hostile or abusive work environment. "Severe" and "pervasive" are subjective terms. Unless they're very serious, isolated or minor incidents aren't harassment. Offensive jokes, racial slurs, intimidation, threats and ridicule are among the behaviors considered harassment by the EEOC.

Retaliation - as defined by OSHA - is "when an employer (through a manager, supervisor or administrator) takes an adverse action against an employee because the employee engaged in protected activity, such as raising a concern about a workplace condition or activity that could have an adverse impact on the safety, health or well-being."² Retaliation can take the form of a worker being fired, demoted, threatened, losing out on overtime or a deserved promotion, having hours or pay reduced or being ostracized or mocked. An employer may also make

conditions for the worker so intolerable that he or she quits or the employer may interfere with their ability to get work elsewhere.

Let's take a look at what happens when companies fail to address harassment and bullying or, worse, engage in retaliation against employees.

MENTAL HEALTH EFFECTS

Being exposed regularly to a negative environment at work can cause a host of mental health problems or exacerbate existing ones. People who are the targets of this kind of behavior may suffer from insomnia, loss of appetite, anxiety, panic attacks and problems concentrating. They are likely to take their stress home, where it can affect family dynamics.

These mental health issues result in very real costs to employers because they affect productivity, absenteeism and staff retention. Costs associated with employee assistance programs (EAPs), recruitment, and retaining trained and experienced personnel increase. Poor morale can affect every part of the organization, including customer service, where it has the potential to damage the corporate image, alienate customers and reduce profits.

Conversely, promoting a psychologically safe workplace can yield benefits, like greater productivity and talent retention. If these aren't compelling enough reasons to take action against bad behavior, consider this: both harassment and retaliation are specifically prohibited by federal regulations, harassment by Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, (ADEA), and the Americans with Disabilities Act of 1990, (ADA) and retaliation by [more than 20 whistleblower statutes](#) covering many different industries. Additionally, employers who are aware of harassment and don't take corrective action can find themselves facing hefty lawsuits based on the negative



Harassment and bullying on the part of co-workers, supervisors or management are not only detrimental to a worker's psychological well-being, they're also illegal.

effects that harassment has on employees who are on the receiving end of it.

HOW TO FOSTER A PSYCHOLOGICALLY SAFE WORKPLACE

Communicating to the workforce that bullying or harassment will not be tolerated is important, but so is making sure that everyone understands what those things are and what to do if they occur. Prevention and policies are the best tools to use to prevent a workplace from turning toxic.

- Hold informational sessions to clarify what is and is not acceptable workplace behavior.
- Encourage employees to act respectfully toward each other (and ensure that managers and supervisors model that behavior as well).
- Encourage employees to tell the harasser that the conduct is unwelcome and must stop.
- Implement a workplace policy that includes a confidential reporting system. Act on those reports as soon as possible, in order to prevent a situation from escalating.
- Train supervisors and managers in how to deal with complaints and potential situations.

National Safety Month offers an excellent reminder that workplace safety should include psychological as well as physical safety. ■

¹ www.eeoc.gov/harassment

² www.osha.gov/sites/default/files/publications/OSHA3905.pdf

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Dealing with OSHA: More Inspections, Greater Citations Ahead

By: **Phillip M. Perry**, Contributor

Employers trying to avoid costly OSHA citations are facing new challenges in the form of heightened enforcement activity and greater liability for workplace COVID infections. To lessen their exposure, businesses are retooling their operating environments to ensure compliance with state and federal mandates.

“I think you’re going to see much more aggressive OSHA enforcement under the Biden administration,” said former OSHA head Edwin G. Foulke, Jr., now a partner in the Atlanta office of Fisher & Phillips. He views a recent presidential executive order, “Protecting Worker Health and Safety” as a leading indicator of a more robust regulatory fervor.

The new federal posture may include a larger OSHA oversight staff. “The Biden administration said it wants to double the number of inspectors,” said William K. Principe, partner in the Atlanta office of Constangy, Brooks, Smith & Prophete ([constangy.com](https://www.constangy.com)). “While we don’t know if they will hire that many, it’s reasonable to assume there will be some increase. During the last administration vacancies weren’t always filled, so OSHA ended up being below the number of federal inspectors that had existed for a very long time.”

More inspectors mean more boots on the ground. OSHA observers expect an increase in the rate of inspections, along with more citations and higher penalties. And all this comes at a time when COVID is raising troublesome issues of its own. “The pandemic, with its greater safety requirements, has increased the risk of OSHA violations,” said Gary Heppner, a California-based independent OSHA safety advisor. He added that inspectors will be looking closely at how businesses are spacing personnel, mandating masks and cleaning the work environment.



Taking a proactive approach to interactions with OSHA can prevent costly citations down the road.

CONSTRUCTION TARGETED

OSHA is expected to pay increasing attention to building sites. “Construction falls are among the most frequent causes of workplace injuries or fatalities,” said Mark D. Norton, Director of Norton Safety Services, Tucson, AZ. “Because of that, OSHA tends to focus inspection activity on that area.”

Observers cite an influx of new workers as a key reason for the spike in accidents. “In the economic downturn of 2007 and 2008, many employees left the construction industry,” said Norton. “When the economy rebounded, people were hired without the same level of experience and knowledge. Less trained workers and an increasing demand for construction is a recipe for more accidents.”

OSHA is also taking greater interest in machine shops, another environment with high accident rates, according to Heppner. Here COVID is having an effect: Workers,

long required to wear safety glasses while using drill presses or hand drills, are now expected to add face shields and maintain appropriate distances from others. That can be difficult in restricted environments where people are working in close quarters. Any resulting laxity in safety considerations can spark illnesses and OSHA citations.

OSHA MANDATES

Most employers want their workers to be safe and healthy. And given the higher OSHA profile, businesses will be making a special effort to meet state and federal standards. That means conforming to the “General Duty Clause” of the Occupational Safety and Health Act, requiring workplaces “free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees.”

While the imprecise nature of the general duty clause allows leeway for employers to account for varying local

DETERMINE YOUR OSHA READINESS

How well have you secured your workplace against the risk of accidents and COVID infections? Find out by taking this quiz. Score 10 points for each step taken. Then total your score and check your rating.

1. Conducted a workplace risk assessment
2. Implemented measures to control risks
3. Developed a written accident and infection prevention plan
4. Assigned a COVID-19 mitigation plan coordinator

5. Trained employees on the plan and on preventive measures
6. Enforced the use of face coverings
7. Implemented temperatures/symptoms screening
8. Implemented cleaning protocols

9. Coordinated use of breaks and lunchrooms
 10. Ensured the enforcement of sick leave policies
- What's your score? 80 or more: Congratulations. You have gone a long way toward making your business environment safer for

your employees. Between 60 and 80: It's time to fine tune your prevention procedures. Below 60: Your business is at risk. Take action on the suggestions in the accompanying story.

Source: Constangy, Brooks, Smith & Prophete.

conditions, it also leaves plenty of room for inspectors to find unexpected violations. The lack of specific guidelines prompted OSHA to issue a comprehensive guidance document earlier this year. "Protecting Workers: Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace" lists steps employers can take to reduce potential spread. (Businesses can access the document at [osha.gov/coronavirus](https://www.osha.gov/coronavirus)).

Although the new guidelines are advisory in nature, OSHA observers expect specific regulations soon. "OSHA will likely issue an emergency temporary standard for workplaces," said Foulke. This standard will carry the force of law and employers will be fined for non-compliance with its terms.

How strict will the regulations be? That is still to be seen. "The emergency temporary standard is not expected to be as employer averse as the OSHA regulations in California, but will likely resemble the Virginia standard, which follows CDC guidance," said Foulke. Employers will likely be required to conduct workplace risk assessments and maintain written COVID-related action plans to include social distancing, masks, sanitation and training.

"One thing I think you're going to see during the Biden administration is a focus on musculoskeletal disorders (ergonomics, repetitive motions, lifting) and combustible

dust," added Foulke. "Also, I think sometime this year OSHA will go back to requiring that 250-plus employers in certain industries file not only 300A Summaries but also the 300 logs and the First Report of Injury forms."

Employer organizations will likely litigate onerous OSHA rules. "Trade associations have been successful in the past in getting injunctions against OSHA regulations deemed outside the agency's jurisdiction or overly burdensome," noted Douglas E. Witte, who represents businesses in labor and employment law matters at Madison, Wisc.,-based Boardman & Clark. "Sometimes the regulations are modified, or simply delayed for a year or longer."

WORK-RELATED ILLNESS

If an employee comes down with COVID and misses work time or goes to the hospital, is the illness recordable as work related? The answer is often less than clear. "Up until now, OSHA has not been pushing too hard on employers who claim COVID-19 infections occurred outside the workplace," said Witte. Employers have been operating under fairly liberal standards, thanks to OSHA guidance issued in the spring of 2020 that allowed COVID illnesses to be categorized as not work related if an "alternative explanation" could account for the infections.

Unfortunately, the term "alternative explanation" is vague, and OSHA does not provide examples. "The

guidance is being interpreted, by some, as indicating that if the employer can point to some exposure away from the workplace, then the case can be deemed not work-related," said Principe. Others are even taking the position that because COVID is being spread everywhere an infection is not work-related unless the employee has continually commuted in their own car, stayed in their own house, and not gone to a grocery store or interacted with the public in any way.

That kind of liberal interpretation, though, skirts the edge of justice. "I think you need more concrete evidence that the employee was exposed to an infected person away from work," cautioned Principe. "Perhaps their spouse, children or people they socialized with have COVID, or perhaps they attended a super-spreader event." Faulty categorizations can be costly. "OSHA issues citations to employers who fail to properly record or report cases," said Principe. "The agency is often tipped off by whistle blowers, or they get word of infections through hospitals or public health departments." Penalties for serious violations start at \$13,653, although the amount is sometimes reduced in the event of a good faith history. Citations for willful or repeated issues start at \$136,532.

Certainly, there is no need to record cases that are clearly not work-related. While an employer may do so out of fear of a citation, being too inclusive can backfire.



How well have you secured your workplace against the risk of COVID infections?

“Over-reporting can spark an OSHA inspection when the entries from an employer’s logs are entered on their 300A Summaries,” said Foulke. “Those are available for review not only to OSHA but also to plaintiff’s lawyers and community activists like Common Cause. Skewed numbers can impact a business’s ability to get future work from clients.”

So how about those cases that fall into a grey area? “My advice to employers would be that in the case of doubt, record or report the event,” said Principe. “You can always explain the facts, saying that you don’t believe it is work-related for the following reasons, but that you are including the case out of an abundance of caution. This will protect you from a citation.”

Many OSHA observers believe the Biden administration will tighten criteria, determining that more infections occurred in the business environment. There may be a return to earlier CDC guidance which mandated that an illness be designated work related if the employee had been within six feet of another COVID-infected worker for a total of at least 15 minutes. “The agency may start tracking

infections down to employer facilities if they can do so and support the change by claiming they are trying to halt the spread of COVID,” said Principe.

FINDING HELP

While the prospect of an OSHA inspection and citations can disturb any business owner, the federal agency can also be helpful. “Many businesses believe that every interaction with OSHA is negative,” said Norton. “They don’t realize that OSHA also provides consultative services at both the federal and state level.”

At the employer’s request, said Norton, OSHA will inspect the workplace for problem areas. While there is no charge for the service, the employer has to agree to fix whatever OSHA finds. “It’s all confidential, so nothing uncovered by the inspectors gets shared with the compliance side.”

That proactive approach can prevent costly citations down the road. “It’s very important to take the right steps to reduce the risk of infection in the workplace,” said Principe. “This will keep employees from getting sick and the employer out of trouble. I encourage businesses to track the OSHA and CDC websites on a regular basis. Know what the recommendations are. Then if OSHA shows up at the door, everything will be in order.” **WMHS**

Phillip M. Perry is an award-winning freelance writer based in New York City. His byline has appeared over 3,000 times in the nation’s business press. He maintains a website at www.EditorialCalendar.Net. ■

CONTROLLING THE OSHA INSPECTION

While OSHA has the right to conduct inspections of business premises, employers need to know and exert their own rights. “Just because a person has a government badge, that doesn’t mean they get to do whatever they want,” said former OSHA head Edwin G. Foulke, Jr., now a partner in the Atlanta office of Fisher & Phillips.

During an opening conference with inspectors, Foulke suggests employers set out guidelines such as the following:

- At least one management person needs to be present when OSHA inspectors visit the work site.
- One other management level person must be present when OSHA inspectors interview any supervisor or manager.
- The employer must be allowed to bring in their own industrial hygienist, as well as be present if OSHA does any kind of monitoring of air or noise.

During their inspections, OSHA representatives will look for the following evidence of violations:

1. There was a hazardous condition
2. The hazard was recognized
3. The hazard was causing or likely to cause death or serious physical harm
4. There was a feasible method to correct the hazard.

Finally, businesses should treat OSHA inspectors with respect while not offering more data than the law requires. “Some employers think that if they tell OSHA everything they know and they give every document they have, that somehow that’s going to make things better,” said Foulke. “It never does.”

The OSHA Recordkeeping Advisor: An Insider's View

By: **Edward Stern**, Contributor

OSHA has a powerful free tool to help employers (and employees) understand the agency's Recordkeeping Rules. It is the OSHA Recordkeeping Advisor, at <https://webapps.dol.gov/elaws/osharecordkeeping.htm>.

Why it is needed? A good clue is the text of the first page of the Advisor. It says, "... The OSHA Recordkeeping Advisor is intended to help determine:

- Whether an injury or illness (or related event) is work related
- Whether an event or exposure at home or on travel is work related
- Whether an exception applies to the injury or illness
- Whether a work-related injury or illness needs to be recorded
- Which provisions of the regulations apply when recording a work-related case".

To my mind, the OSHA Recordkeeping Rules are professionally written, and they are understandable to people who take the time to read them carefully. However, the rules cover a wide range of issues and circumstances.

OSHA provided help on these rules because there are so many things that might affect the answers to: Is it work related? Does an exception apply? Does it need to be recorded? And, if so, which provisions apply? Those are key issues, but there are many other situations that need to be analyzed, which are not on the list above. This article will touch on a few of these other issues.

WHY IS THE ADVISOR AN "EXPERT"?

OSHA's experts on the rules and the attorneys in the Occupational Safety and Health (OSH) Division of the Office of the Solicitor of Labor went over the questions, answers, notes and decision logic behind the Advisor with a fine-tooth comb. Then they signed off. So, you get the official guidance from OSHA and the Solicitor's Office.

Suppose you have a contract or temporary employee who gets sick or injured. Before you even consider whether the event is OSHA recordable, you would have to figure out whether your company or the person's employer is responsible for recordkeeping. The Advisor analyzes that. How?

It asks users necessary questions AND follows up with further questions prompted by your answers. Its online, interactive, expert interview finds the guidance appropriate to your responses. As it goes along, it recaps what you told the system and what your answers mean in terms of the rules. If you give an answer that is not correct, you can back up to give a different response.

SOME ISSUES TO BE ANALYZED

One early question is, "Did an event or exposure occurring in the work environment cause or contribute to the resulting injury or illness, or significantly aggravate a pre-existing injury or illness?" This is not a simple question. If you answer that you do not know whether an event "significantly aggravated" a pre-existing injury or illness, the system will ask further questions, beginning with:

"Did an event or exposure in the workplace result in the affected employee:

- Missing one or more days away from work?
- Having one or more days of restricted work?
- Having one or more days of job transfer?
- Getting medical treatment beyond first aid?
- Losing consciousness?
- Dying?
- Having Standard Threshold Shift in hearing?
- None of the above."

The Advisor may ask follow-up questions based on your answers to this question. It will

determine the issue of "significantly aggravated" and proceed to the next issue.

WHAT ABOUT WORKING AT HOME?

When we developed the Recordkeeping Advisor, relatively few people were working at home compared to 2020 and 2021. Still, it was an issue to be considered. If you said the person was working from home, you would get this message:

"You indicated that the event or exposure that caused the injury or illness occurred while the affected employee was working from home.

Was the injury or illness a direct result of the performance of work, or was the injury or illness directly related to an aspect of the home environment or setting?

- The injury or illness was a result of the performance of work.
- The injury or illness was related to the home environment.

For example, if an employee is working at home and drops a box of work documents and injures his/her foot, the injury would be considered work-related. If an employee is working at home and is electrocuted because of faulty home wiring, the injury would **NOT** appear to be work-related."

WHAT IF THE WORKER WAS TRAVELING FOR WORK?

If one of your employees got injured or sick while on travel for work, the system would need more information to understand what happened. Let us say that the employee had already signed into a hotel. The Advisor recaps what you told it and says:

"You indicated that the affected employee had checked into a hotel or other temporary residence.

During which activity did the event or exposure occur?

- Work-related activity (business meals, setting up for a conference, etc.)
- Personal activity (eating, dressing, walking, etc.)
- Commuting to the work location"

The circumstances make a difference as to whether an injury or illness is work related. Once the Advisor understands the circumstances, it will cite the relevant section of the rules—and give you a link to it.

EXCEPTIONS

To know whether an exception applies, the Advisor needs to ask about each of the exceptions. As you might expect, even the "exceptions" have follow-up questions to determine their applicability. Accidents in the company parking lot and mental illness are not simple matters. If you run into these, think carefully about the questions.

The Advisor is a powerful, analytical tool. It will be a huge help to someone new at this, and it will support your most experienced person on a tricky case. OSHA's experts and its attorneys developed the questions, answers, notes and decision logic in the Advisor. The Office of the Assistant Secretary of Labor for Policy handled the programming of this system. See similar tools at www.dol.gov/elaws. ■

Edward Stern spent 27 years at OSHA, developing and explaining OSHA regulations and serving on its Federal Advisory Committee on Compliance Assistance. His experience supervising the analysis of regulatory costs, benefits, impacts and exposure risks led to him suggesting interactive, diagnostic interviews (called expert systems) to provide guidance for businesses struggling to understand complex regulations. Stern wrote the decision logic that determines the guidance for OSHA's Recordkeeping Advisor, while the agency's experts and attorneys developed the questions, answers, notes and decision logic.

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COVID-19 Stress Among Your Workers?

Healthy Work Design and Well-Being Solutions Are Critical

A NIOSH Science Blog post

By: Jeannie A. S. Nigam, MS, Jessica M. K. Streit, PhD, MS, Tapas K. Ray, PhD, Naomi Swanson, PhD, Contributors

Experiencing an infectious disease outbreak can cause fear, anxiety and stress.¹⁻⁵ Along with overwhelming uncertainty and new behavioral ‘norms’ (e.g., cloth face covering or mask wearing, physical distancing), the COVID-19 pandemic has changed how we meet our daily needs, how we socially interact and whether, how and where we work.^{1,3} Millions of workers have lost their jobs.⁶ Some workers have continued to report to a physical workplace, while others have transitioned to full-time telework, and for many, the demands of work have changed or intensified. The nature of each situation is unique, but undoubtedly some of these changes are contributing to increasing levels of economic insecurity and occupational stress.^{3,7} Reducing occupational stress is a fundamental focus of the [NIOSH Healthy Work Design \(HWD\) and Well-Being](#) program. This post is one in a series of HWD-sponsored blogs addressing the effect of COVID-19 on workers. This post generally describes the stress workers may be experiencing and aims to help employers and policy makers better understand and support workers during this pandemic. Other posts in this series address economic and other insecurity, stress associated with jobs that cannot be done remotely and organizational support.

An outbreak can affect mental health and psychosocial problems comparable to experiencing traumatic incidents.^{8,9} People can suffer increased feelings of uncertainty, anxiety, irritation, anger and denial. It is not uncommon to lack motivation, have trouble sleeping or concentrating and to feel tired, overwhelmed, burned out, sad and even depressed.² If left unaddressed, experiencing such stress can lead people to engage in maladaptive coping (i.e., increased use of alcohol, tobacco or other drugs, or engaging in other unhealthy behaviors) and chronic health problems and mental health conditions

may worsen.^{2,4} The exact nature of the risks to worker well-being vary according to personal circumstances and work arrangements. Some have had to care for or have lost loved ones. It is important for employers and policy makers to recognize the spectrum of stressors that workers face.

Economic insecurity is affecting the millions who have lost their jobs or have seen their income decrease drastically due to reduced work hours or demand for their services. And those whose jobs are temporarily discontinued may worry about being laid-off and not re-hired, which further impacts emotional health.^{10,11}

PHYSICAL DISTANCING

Physical distancing by working at home and avoiding in-person meetings or social gatherings can help reduce disease transmission – but also affects access to social support and can result in feelings of isolation and added stress.¹ Not all jobs are amenable to remote work. Workers who must continue to report to a physical workplace may experience fear about their health and the health of their loved ones, as well as challenges arranging care for elderly or young dependents. Many jobs carry the risk of exposure to sick and asymptomatic individuals with COVID-19 – such as those in healthcare settings and others (i.e., service occupations) that must be done on-site and require frequent contact with the public. Workers’ well-being can be further impaired if they lose access

to health-enhancing benefits available at the formal worksite (e.g., access to on-site health clinics and health and well-being programs).¹²⁻¹⁵ And those who live or usually work alone may be particularly vulnerable to the “loneliness epidemic” as their infrequent person-to-person contact dwindles further.

Additional concerns can include: the struggle to attend to personal and family needs while working; managing a different workload; lack of access to tools and equipment



An outbreak can affect mental health and psychosocial problems comparable to experiencing traumatic incidents.



WORKING AT HOME

Working at home could be considered somewhat of a luxury during this time. Yet, telework presents its own risks. And, as the home has become the workplace for many, the issue of stress spilling over from one domain to the other has very likely increased.¹⁹ Many parents feel conflict when juggling dependent care, trying to oversee children's remote learning and meet their own work demands. Workers who are not used to telework may be at increased risk of injury if their workspaces are configured without appropriate employer guidance.²⁰ And, while technology use may help workers meet their job demands, it can also extend working hours and further blur work-home boundaries,²¹⁻²⁴ which can be consequential for workers and their families. Specifically, workers' ability to psychologically detach, or "switch off mentally" at the end of the workday can be compromised,²⁵ which has been associated with many indicators of poor well-being, including anxiety, depression, negative affect, emotional exhaustion and fatigue.²⁶

In terms of preventing consequences associated with this altered way of working, there are steps that individual workers can take to build resilience and increase their capacity to detach – such as using a journal to set work-related goals²⁷ and participating in mindfulness.^{2,4,5,28,29} From an organizational perspective, when supervisors support workers and encourage their efforts to manage work and non-work demands (e.g., increasing control over work and schedule flexibility or offering access to Employee Assistance Programs [EAPs] and paid time off), workers report lower levels of work-family conflict³⁰ and improvements to their sleep,³¹ schedule control,³² job satisfaction, well-being and physical health.^{33,34} Early identification of risk factors, strengthening peer support at work and promotion of mental health services (i.e., through remote access) could help workers cope with the ongoing challenges and prevent the onset of maladaptive behaviors.³⁵ ■

To read the rest of the blog post and the references, go to: <https://tinyurl.com/ydkfydmj>

Many jobs carry the risk of exposure to sick and asymptomatic individuals with COVID-19.

needed to perform work (including limited or no internet access for remote workers); feelings of not contributing enough to work or guilt about not being on the front-line; uncertainty about the future of the workplace and/or employment; and challenges related to learning new communication tools and dealing with technical difficulties.⁴ Compounding the risk, workers who already

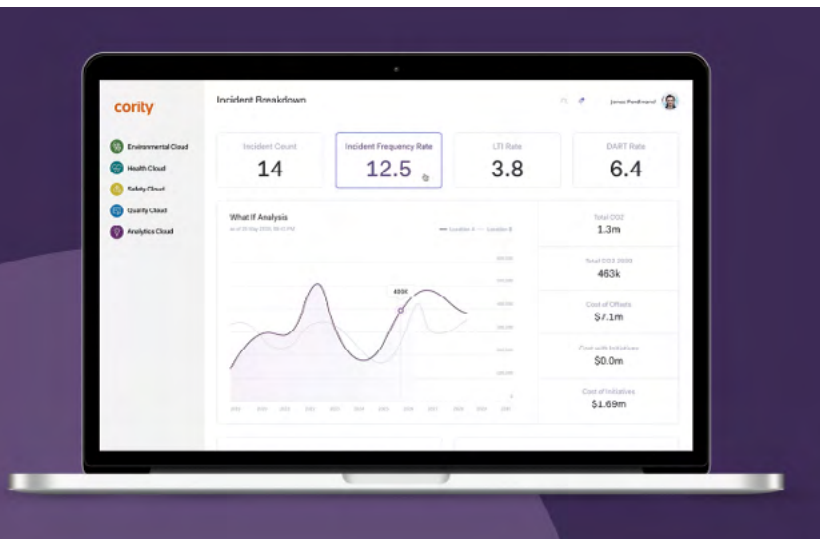
struggle with mental health conditions are particularly vulnerable to experiencing additional emotional symptoms and somatoform disorders during an outbreak,¹⁶ and those who must undergo quarantine are at additional increased risk for mental distress compared to workers who are not isolated.^{17,18}

How Predictive Analytics is Reshaping the Battle Against Serious Injuries & Fatalities

By: **Sean Baldry**, Contributor

Another Workers' Memorial Day came and went on April 28. The event, established in 1970, is intended to raise awareness of the lives lost as a result of occupational accidents, and encourage workers and employers to work together to reduce the risk of injuries and fatalities on the job.

According to the U.S. Bureau of Labor Statistics (BLS)¹, 5,333 workers died on the job in 2019, the highest since 2007. It's important to note that the rate of workplace fatalities has remained the same over the past 10 years, despite continued reductions in the rate of less-severe occupational injuries.



Any analysis performed is only useful if its outputs can be easily accessed and understood by those making decisions. Image courtesy of Cority.

But in looking at the latest published statistics, there's some doubt whether the steps organizations are taking to address workplace fatalities are really having the effect we want.

The lack of progress in reducing workplace deaths is an indication that past tools that enabled us to lower fatality rates aren't working as they once did, and new ideas are required. But where do we go from here?

IDENTIFYING PRECURSORS

In a 2018 whitepaper², the Campbell Institute argued that to prevent serious injuries and fatalities (SIFs) organizations must focus on identifying the specific attributes or "precursors" that increase the potential for an event to result in a serious or fatal outcome. In other words, while any incident *may* occur, the conditions that lead to catastrophic failures are unique. Incidents that do not have these precursors – high risk work and the lack of critical controls – are less likely to result in safety instrumented functions (SIFs). As a result, to prevent fatalities, organizations would benefit most by focusing their efforts and resources on those situations or tasks where precursors are present and recoverability is limited.

The paper highlighted three situations where uncontrolled precursors may be more likely to develop:

- In organizations in which deviating from accepted standards is tacitly accepted (the "normalization of deviation").
- In workplaces where risk isn't consistently perceived and tolerated amongst different workers.
- In organizations where decisions to address safety risk are not based on empirical data are more likely to have latent precursors lying in wait.

How can that last point be true? Organizations are collecting more data than ever before. Global data growth was expected to reach 40,000 exabytes by the end of 2020³. That's 13 million bytes of data created for every person on Earth every single day. How could employers possibly be lacking enough data to make sound, objective decisions on operational risk?

There are a few key reasons:

- 1. Data location:** Organizational data is often siloed in separate applications without meaningful connections that prevent quick data assimilation for analysis.
- 2. Data variety:** Differences in how data is structured creates challenges in aggregating different datasets to identify relationships.
- 3. Data analysis:** Many organizations tend to rely heavily on humans to analyze that data manually⁴. The extensive time and costs associated with manual data analysis results in much of its potential SIF prevention value being left unexploited.

REMOVING THE DATA ANALYSIS BARRIER

Natural Language Processing (NLP) is a branch of artificial intelligence⁵ designed to allow computers read,

¹ <https://www.bls.gov/iif/oshcfoi1.htm>

² <https://tinyurl.com/rpraz49p>

³ Poorniman, S. & Pushpalatha. M. 2016. Journey from Big Data towards Prescriptive Analytics. Journal of Engineering & Applied Science. 11(19)

⁴ Tixier, A. J-P., et al. 2016. "Automated content analysis for construction safety: A natural language processing system to extract precursors and outcomes from unstructured injury reports. Automation in Construction. (62): 45-56

⁵ <https://tinyurl.com/6fe7c5ja>

decipher and understand human language and apply it to different applications to solve problems.

Much of the safety data employers collect is unstructured – organized in no particular manner – and text heavy. That makes the data challenging for computers to analyze. NLP enables organizations to easily decode and interpret massive amounts of unstructured data to help identify where incidents are most likely to occur, or where precursors that could give rise to serious injuries and fatalities are most likely to exist.

In a 2016 study⁴, researchers from the University of Colorado at Boulder studied whether NLP could be leveraged to analyze historical safety data and identify the presence of specific attributes associated with injuries in the construction sector. By identifying common injury precursors and how workers normally interface with them, this data would help organizations identify where the next injury might occur, enabling them to take more targeted action to prevent the occurrence. By using NLP, the researchers were able to scan 2,200 unstructured injury reports and successfully categorize them for over 100 distinct attributes with over 95 % accuracy when compared to manual approaches, while drastically reducing the effort and time involved in data analysis.

Fortunately, enterprise EHS software solutions are making massive investments to expand the breadth and depth of their business intelligence and analytics features, including NLP, to offer organizations a greater toolbox to battle SIFs.

Here are a few things to consider:

- 1. Data Collection:** Involvement of front-line workers in the collection of safety data from the field, whether

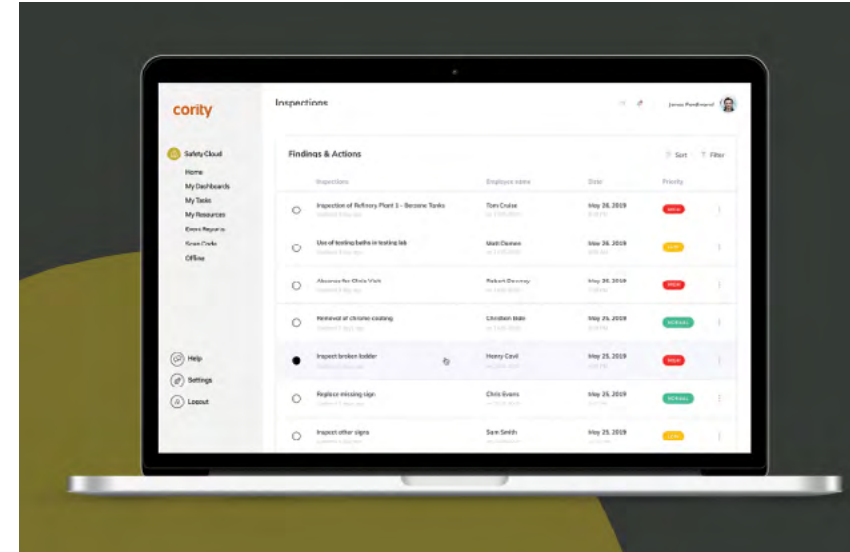
incident reports or observations of identified precursors, is critical. Mobile applications with a simple, intuitive user interface that remove barriers to enable prompt reporting of safety data definitely help in that regard.

- 2. Data Quality:** While most natural language processing tools use machine learning AI to overcome barriers in data interpretation, irregularities like spelling and grammatical errors can result in certain data being lost in the uptake. Employers looking to implement a predictive analytics approach must ensure that the solution selected can continuously assess the quality of data, and identify low data quality for immediate action.

- 3. Data Visualization:** Organizations should also closely assess what data visualization options are available in commercial software solutions to enable data to be easily presented, understood and consumed in a cadence aligned to the needs of the business.

We know that the things that hurt people aren't the same things that kill people. And while many organizations are sitting on a mountain of valuable intel to help them understand where SIF precursors may be lying in wait, few have the ability to synthesize that data efficiently to guide their SIF prevention strategy.

By leveraging predictive analytics tools like NLP, organizations can now extract greater value out of their safety data to help them detect SIF precursors with greater speed



Mobile applications with a simple, intuitive user interface helps front-line workers collect safety data in the field. Image courtesy of Cority.

and accuracy, and hopefully, ensure more people can get home to their loved ones at the end of each day. ■

Sean Baldry is a Product Marketing Manager supporting Cority's Health and Safety solutions (<https://www.cority.com>). He has worked for nearly 20 years in occupational health & safety with leading global corporations in the construction, mining, automotive and manufacturing sectors. He has worked at operational and executive levels, assisting teams to build effective systems and safety cultures that drive organizational excellence. Baldry is a Canadian Registered Safety Professional (CRSP).



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