

WISCONSIN

SAFETY VOICE

October 2017 Issue 2

Predictive Analytics in

WORKPLACE SAFETY

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A New Face at the Wisconsin Safety Council

By Katie Yeutter

WMC Vice President of Operations/Finance
Interim WSC Executive Director

It has been quite a summer at the Wisconsin Safety Council, and I want to start off by saying thank you for your continued efforts to make Wisconsin safer and your continued support of the Wisconsin Safety Council.

I had the privilege over the past couple months to visit many of the facilities that our Corporate Safety Award winners call home, and I was more than impressed. The focus on safety and making sure every worker goes home safe every night has been abundantly apparent at all the stops I made.

This is not something that happens overnight, which is why I am excited that so many of you remain dedicated to improving the culture of safety not only at work, but at home, too. As we head into 2018, I hope that we can continue to partner with each of you as we try to end preventable injuries. It is quite a challenge, but I know we are up to the task.

My experiences noted above have made it a pleasure to serve as the WSC Interim Executive Director this summer and early fall. However, I am also excited to announce we have made a permanent hire for the role.

Joining us this month, Janet Metzger will be the new Executive Director of

WSC. I have no doubt that Janet will be a terrific addition to our team, and I look forward to working closely with her as we continue to improve the programs and services WSC offers.

Janet has decades of experience in sales management and leadership. She is also a seasoned public speaker and truly understands the importance of business development.

In my conversations with her, I have found Janet has a complete dedication to keeping Wisconsin safe. She will begin right away expanding the awareness of WSC and ensuring a prosperous future for the organization.

In fact, before Janet even joined our team, she drove to Indianapolis for the National Safety Council Congress and Expo in late September. She learned best practices from other Safety Council's around the country and is ready to hit the ground running.

I will work closely with Janet in the coming months as we prepare for a new year, and I hope you are as excited as I am to welcome her to WSC.

Thank you again for your support of the Wisconsin Safety Council. ■

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Wisconsin Safety Voice is published quarterly by Wisconsin Safety Council. WSC is Wisconsin's leading provider of safety training and products in the state, serving members of all sizes and every sector of the economy. WSC is a program of the WMC Foundation.

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What Will Skipping Sleep Cost You?

By Emily Whitcomb

Senior Manager of the National Safety Council Fatigue Initiative

Most of us first try skipping sleep in order to meet a deadline. “Pulling an all-nighter” is a time-honored test of a teenager’s steely resolve to procrastinate on studying for a test, finishing a research paper or writing a lab report. Sometimes it works, sometimes it doesn’t. One thing for certain: a long nap ends up on the docket for the next day.

For adults in the workaday world, that’s generally not an option.

Workplace nap rooms may be a boutique benefit at some companies, but the typical American worker is expected to be alert and productive for eight or more hours a day. Add up work hours, the demands of commuting, family, chores, plus a little “me time,” and adequate sleep can fall to the bottom of the must-do list. We’re a fatigued nation – and it’s affecting our safety, productivity and decision-making ability on the job. According to a recent NSC report, 43 percent of Americans say they don’t get enough sleep to handle risks that can jeopardize their safety at work and while driving. The workplace itself can contribute to fatigue in the following ways:

- Shift work can mean working at night or rotating schedule frequently, making it difficult to keep a consis-

tent sleep schedule

- Task type can affect fatigue, such as mentally demanding work, tedious or repetitive tasks, and too much time on one task

- Poor indoor air quality and lighting can add to fatigue

The just-released NSC Fatigue Cost Calculator allows companies to figure out how fatigue affects their workforce based on location, industry, size and shift work. The calculator uses an algorithm that incorporates data from peer-review scientific literature, providing an instant cost estimate that factors in absenteeism, decreased productivity and added healthcare costs.

For example, an office-and-administrative focused organization in a Midwestern state with 325 employees might lose more than \$422,000 annually as a result of fatigue. For a larger organization, the costs can climb into the tens of millions of dollars. These dollars are being lost in an environment where sleep—and the benefits that come with it—is too often sacrificed.

Tens of billions of dollars are lost, according to one study, through the role of fatigue in car crashes, decreased productivity, medical costs and workplace injuries.

There are solutions that contrib-



ute simultaneously to a company’s bottom line, the well being of the employees and the safety of the workplace. By optimizing schedules, allowing napping where feasible, educating employees about the importance of sleep and creating a culture that promotes sleep health, a company can see a better rested workforce. In addition, individuals can take their own steps to become more consistent and more successful in getting the rest they need to function at their best.

Reducing fatigue, simply by getting an extra hour or two of sleep a day, can enrich your personal and professional lives. When you’re alert, mentally engaged and energetic, you’re able to work more safely and productively, and engage with others more meaningfully. ■

An earlier version of this column appeared in the online Thrive Global Community in September, 2017.

Predictive Analytics in Workplace Safety

By Cory Goldschmidt
Boldt Corporate Safety Director

Many industries and business functions are taking advantage of their “big data” sets by performing advanced analytics to make predictions about the future. When applied correctly, predictive analytics allows leaders to gain deep insight into their business and deploy their scarce resources in an optimal way. Advanced and predictive analytics have revolutionized many industries. For manufacturing and construction, predictive analytics can be used by business leaders and safety professionals to predict and prevent workplace injuries.

Safety inspection data used to fuel the predictive models (leading indicators) is preferred over other safety data (lagging indicators). Think about it, would you rather perform safety observations or would you rather perform an incident investigation? The results of this data, applied to workplace safety, brings us one step closer to the vision many of us share of sending every employee home safe, every day. After all, if workplace injuries can be predicted, they can be prevented.

Can workplace injuries and safety incidents be predicted before they happen? Yes. This has been confirmed by research conducted by teams from Predictive Solutions Corporation and Carnegie Mellon

University (CMU) — the same CMU team that helped develop the Watson supercomputer. Using a subset of Predictive Solutions’ data set of over 112 million safety observations and their associated safety incidents recorded from over 15,000 individual worksites’, the researchers proved that workplace incidents can indeed be predicted before they happen with high levels of accuracy. The researchers developed several predictive models with accuracy levels between 80 and 97% in predicting injuries at actual worksites.

Once it was determined that safety inspection data could drive accurate predictions, the researchers went back to the safety inspection data to determine what factors affect incident levels the most. The safety inspection data yielded four Safety Truths that are not just great predictors of incidents, but also can be deployed toward injury prevention activities once a prediction is made.

Safety Truth #1

More inspections predict a safer worksite. An increase in inspections and observations will lead to a reduction in incidents. Getting people out there looking at conditions, behaviors and situations where someone could get hurt, and correcting those opportunities, will decrease the likelihood of an

incident. The quantity of observations influences potential risk and will influence how you can predict and prevent incidents. The more information you get, the better you can predict.

Safety Truth #2

More inspectors, specifically more inspectors outside the safety function, predict a safer worksite. Studies have shown the probability of having an incident decreases as the number and diversity of the people performing inspections increases. Having a large number of diverse inspectors doing a few inspections each is better than a few inspectors doing a large number of inspections, even if they are highly trained safety professionals. A world class safety culture would include a large number of diverse inspectors, each doing a large number of inspections.

Safety Truth #3

Too many “100% safe” inspections predicts an unsafe worksite. The safest worksites often have inspections that record a moderate level of unsafe observations. The proportion of unsafe conditions found remains fairly steady as organizations continue to improve their safety performance. If most inspections are returning 100% safe, the worksite



Cory Goldschmidt leading a safety demonstration at Boldt.

or location may be “flying blind,” meaning the worksite is at a higher risk of having an incident, but the inspectors are either not seeing, or reporting, the leading indicator signs of those incidents.

Safety Truth #4

Too many unsafe observations predicts an unsafe worksite. To state the obvious, a persistently high level of unsafe conditions/behaviors is associated with a high level of incidents. What often occurs is that a lot of inspections are done with a high level of unsafe observations. However, the levels of unsafe observations keeps increasing because they are not being resolved. This “inaction” stage

is where the inspection program is strong, but the resulting injury prevention activities are not. Analysis of the data showed that companies in this group (too many unsafe observations) have nearly the same level of risk as those companies that find virtually no unsafe conditions (the “flying blind” stage outlined in Safety Truth #3).

To answer the question in the second paragraph, proactive safety inspections and observations are better than reactive incident investigations. Safety inspections and observations are the cornerstone of an effective safety program. Just as we take measurements of temperature,

wind speed, pressure, humidity, etc. over time to arrive at a weather forecast, safety inspections and observations provide the raw data needed to drive the prediction of workplace injuries and safety incidents. While it is true that historical data can also reasonably predict future incident rates, relying on incident data for injury prevention has several flaws. Waiting for incidents to occur before preventing new ones sends a very chilling message to employees about the company’s safety culture.

Research and information provided by Predictive Solutions. For more information, visit www.predictivesolutions.com. ■

Deadline to Report Data to OSHA Looms

By Chuck Palmer
Managing Partner, Waukesha Office
Michael Best & Friedrich LLP

Are you ready to make your 2016 work place injuries and illnesses public information?

If the current administration makes no further changes before December 1, 2017, work related injuries and illnesses must be reported to Federal OSHA on a publicly accessible website by no later than December 1, 2017.

By now most employers have become aware of the OSHA standard known as Improve Tracking of Workplace Injuries and Illnesses. But with the outcome of the election and the announcement of regulatory reform, most employers have taken a wait and see approach. That was the right decision, but now employers should take some steps to prepare.

The regulation requires reporting of 2016 injury and illness data starting in 2017. The precise deadline for reporting was changed from July 1 to December 1 of this year. There has been no signal from Washington D.C. that will change again.

The one clue we have that the rule will remain in place, and employers will be required to report data by December 1, is that the website for reporting was activated. The website, known as the Injury Tracking Application ("ITA") went on-line as of August 1, 2017. So, employers can start the process of recording now. But wait;



don't start recording the information on the website just yet.

There are some things to consider first. Only employers with more than 20 employees must report, and for employers with 20–249 employees, only certain industries are covered. Those industries are listed on OSHA's website: [osha.gov/recordkeeping](https://www.osha.gov/recordkeeping).

Additionally, the ITA has had security and function problems, so report-

ing now is unwise. Plus, the rules may still change.

While it is a smart idea to wait and see if you must report this information to OSHA, you should not wait to take certain steps to prepare your report.

Set up an audit team to audit your data. The data that must be reported is contained on the OSHA 300A Form that most employers with more than 10 employees must keep. That Form contains annual summary information about injuries and illnesses and should have been completed back in February 2017. The audit team should review the underlying data for accuracy and for any changes before reporting in December.

You should also designate an individual responsible to complete the reporting who will be available to do so toward the end of November.

Schedule a claim review on open cases with your worker's compensation insurance provider.

Lastly, determine your company's stand on various aspects of reporting as discussed below.

While reporting itself is simply a matter of data entry, several important decisions need to be made, which could change the impact the data reporting has on your company:

- Reporting is required on an "establishment" basis. The definition of establishment is going to impact

If the current administration makes no further changes before December 1, 2017, work related injuries and illnesses must be reported to Federal OSHA on a publicly accessible website by no later than December 1, 2017.

whether an employer is required to report at one or more of its locations, or report at all. A decision will need to be made regarding which employ-

Chances are, the approach you take this year is going to be difficult to change in future years, without triggering inquiries from the government.

ees (and injuries) are assigned to a specific establishment for reporting purposes, especially those who travel to multiple locations, work from home or otherwise do not have a fixed location. Depending on where employees (and injuries) are assigned for reporting purposes an establishment

may or may not be big enough to report, and the injury incident rate may change.

- Depending on how the person entering the data chooses to do the entry, an employer may make it easier for the public to review all of its data for all of its establishments in one place. A quick review of the ITA indicates one account can be set up for multiple establishments, or each establishment may have its own account. A decision should be made on how the data for multiple establishments will be entered.

These and other inquiries should begin prior to November, 2017, so that decisions are not being made under pressure in late November. Worker's compensation, safety and other company managers should begin auditing this reporting activity now.

Starting in July 2018, employers are expected to perform even broader reporting. Your audit team should begin now to prepare for December 1, 2017 reporting and consider the larger term impacts of even broader work place injury record keeping in future years.

Chances are, the approach you take this year is going to be difficult to change in future years, without triggering inquiries from the government. The data you report now will be publicly available for many years to come.

It will be used for numerous purposes, including government inspections, liability considerations, customer decisions, employment decisions, and many other purposes not currently anticipated. Planning in September and October, should make reporting at the end of November less stressful and help avoid mistakes. ■

UPCOMING EVENTS

NOVEMBER 9 - MADISON AREA **Ergonomics: Managing for Results**

Learn to take control of the #1 cause of workplace injuries by designing and implementing a practical, effective ergonomics program. This course shows you how to recognize risk factors, conduct an ergonomics worksite analysis, evaluate and rank hazards, and select appropriate control methods.

NOVEMBER 14 - MADISON AREA **NEW! The Five Fundamentals of Safety**

Vince Lombardi built championship football teams by focusing on the fundamentals of football and relentlessly pursuing their perfection. In any workplace, "safety" doesn't just happen; it must be built and relentlessly perfected. These Five Fundamentals of Safety are the foundation of every successful safety program without them you will not succeed at building or maintaining a safety program that protects employees.

DECEMBER 4-7 - MILWAUKEE AREA **OSHA 30-Hour Voluntary Compliance for General Industry**

This compliance course is designed to present detailed information about how the provisions of the Occupational Safety and Health Act (OSHAct) may/must be implemented in the workplace, not only to achieve OSHA compliance, but to achieve profitability and survivability in today's cost-conscious environment. We will introduce attendees to the OSHA

standards that govern General Industry, explain how to read and use the Code of Federal Regulations (CFRs), and provide an overview of compliance programs and procedures that are required for the workplace. Topics covered are intended for all private sector personnel, and those public sector employers who utilize Federal OSHA standards as directed by state requirements.

During this extensive course, in-depth workshops will assist you in applying learned skills, increasing familiarity with using the CFR book, advancing your knowledge of OSHA regulations. OSHA's most frequently cited serious violations will be covered as well as mandated training requirements, and safety policies and procedures. A workshop hazard perception challenge activity will engage active learning techniques.

DECEMBER 12 - MADISON AREA **Effective Team Safety**

Many safety committees simply become a list generator for the maintenance department. Though important, their potential is much greater if they have defined objectives and action strategies in place. Participants will learn how to form effective safety committees, how to revitalize current committees and how to get the most out of their members. This seminar will give you the expertise needed to make your safety committee a success.

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WSC SEEN & HEARD



WMC President/CEO Kurt R. Bauer and WSC Interim Executive Director Katie Yeutter present NextEra Energy Point Beach Nuclear Plant with their Corporate Safety Award flag in Two Rivers.



Lakehead Painting staff pose with their Corporate Safety Award flag after a facility tour.



WSC Interim Executive Director Katie Yeutter poses with ABB, Inc. staff and their Corporate Safety Award flag after touring their facility in New Berlin.



M3's Chris Halverson, member of the WSC Advisory Board, and WMC President/CEO Kurt R. Bauer present Fincantieri Bay Shipbuilding staff with their Corporate Safety Award flag.



Denise Greathouse, attorney at Michael Best & Friedrich, presenting to more than 100 attendees at the 2017 Worker's Compensation Law Symposium and Best Practices at the Edgewater Hotel in Madison.

Safety is Superior to Everything Else

*By Tim Murphy, Adam Chesney and John O'Brien
Lake Superior Safety Council Steering Committee Executive Members*

Over the past two years, safety professionals from a number of organizations in Northwest Wisconsin (Superior, WI and surrounding communities) have gathered to sponsor a Superior Safety Day event. The group realized there was a need for safety training and outreach in the area tailored to local businesses. The goal of the event is to educate employees with the hope that they share this information with their organization and ultimately improve the safety and health of their workplace. Over its short history, Superior Safety Day has hosted a number of great presenters covering a broad range of topics.

At last year's Superior Safety Day event, George Jerome (a member of the Regional Indianhead Safety Council and last year's keynote presenter) approached several of us and asked if we were interested in creating a local safety council. The purpose of the council would be to provide various training topics throughout the year to continue our mission of educating employers and employees in our region. Without hesitation, we all agreed to start meeting monthly to establish the Lake Superior Safety Council (LSSC). The LSSC's mission is "to advance the safety and health of employees, businesses, and communities in the greater Lake Superior area."



Adam Chesney (left), Tim Murphy (middle) & John O'Brien (right)

At this year's Superior Safety Day, scheduled for December 5th at Wisconsin Indianhead Technical College (WITC) in Superior, LSSC members will be talking to attendees to determine what safety training is needed among companies in the region. This will help the council provide meaningful training topics that local businesses will find useful. Starting February 2018, employers and employees near Superior, WI can look forward to LSSC lunch and learn sessions (11am – 1pm) delivered every other month.

The Lake Superior Safety council is still in its infancy with its first meeting taking place earlier this year. Currently, the LSSC is administered by a steering committee comprised of the following members:

- Tim Murphy, Calumet Superior, LLC. (President)
- Adam Chesney, Superior Water, Light & Power (Vice President)
- John O'Brien, Calumet Superior, LLC. (Treasurer)
- Todd Larson, WITC
- Dave Sletten, Douglas County
- Adam Olson, Douglas County
- Carol Lindberg, Retired Safety Professional
- Lindsey Maas, UW Superior
- Kelsey Moreland, Graymont

The LSSC looks forward to working with WSC to promote safety and health in Northwestern Wisconsin for many years to come. Should you have any questions related to the LSSC or the Superior Safety Day please reach out to Tim Murphy by phone: 715-398-8242. ■

WSC



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Our renowned event attracts more than 1,500 safety & health professionals from the Midwest over three days. We feature well-known keynote speakers to kick off each morning and offer 55+ safety educational sessions as well as numerous full day professional development courses. With dedicated vendor time, our attendees will have an opportunity to meet with you one-on-one.

Our safety conference is one of the largest in the Midwest. Don't miss your chance to showcase your goods and services.

Contact WSC at 608.258.3400 or visit wisafetycouncil.org with your exhibiting or sponsorship opportunity inquiries.

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