Leading safety at Probuild

Ramsay Health Care: taking the lead on OHS

Predicting safety: analytics comes to OHS

5 steps to becoming a more effective safety leader
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Features

5 steps to becoming a more effective safety leader: Why OHS professionals need to become less of an auditor of safety regulations, and more of a businessperson, writes Phil La Duke

Predicting safety: analytics comes to OHS: Safety can benefit significantly from the application of analytics, however, OHS leaders need to improve their safety analytics capability

Drugs and alcohol in the workplace: reducing OHS risks: Why companies need to take a proactive approach to the management and mitigation of workplace drug and alcohol risks

How to stay ahead of the change curve in OHS: The upcoming SIA Visions Conference will feature a range of keynote speakers, WHS regulators and experts discussing current industry topics

Research on extreme heat and workers’ health recognised: Dr Jianjun Xiang of the University of Adelaide on his Doctor of Philosophy thesis on extreme heat and workers’ health in South Australia

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The practical application of safety leadership

A business’s executive leadership plays a key role in the OHS successes (or failures) of any organisation, and OHS needs to work hand in hand with the executive team to realise workplace health and safety goals.

Good leadership is synonymous with many positive outcomes in business, from better strategy and financial results, through to stronger staff engagement and retention, as well as more sustainable and healthy organisational cultures. Good leadership is also critical to better OHS, and pretty much every business with sound workplace health and safety has executive-level leaders who support the same at every level of their organisation.

This is evident in at least two feature articles in this edition. The first one is our cover story which focuses on tier one construction company Probuild, which has reduced its LTIFR from 8.31 lost time injuries per million hours worked to 1.97 over the past five years. However, its group HSE manager, Sarah Cuscadden, says “LTIFRs are simply a measure of how good you are at being bad” – and a more important step is executive commitment to positive safety behaviours and outcomes and the stopping of unsafe practices. For the full story see page 12.

The profile feature for this issue (page 22) is on Ramsay Health Care, which has a similar story of OHS success. With industry-leading OHS metrics, its key indicators have been improving year on year for more than a decade. Its head of OHS, Chanelle McEnallay, says: “Staff safety comes from the top and from the board and the CEO down.” McEnallay (who sits on the executive team) works closely with CEO Daniel Sims, and they both explain the importance of executive leadership and commitment to OHS in order to make a business and its people safe.

Also on the topic of leadership is the feature on 5 steps to becoming a more effective safety leader (page 8). This article explains that as OHS professionals advance through their careers, they need to become less of an auditor with an encyclopaedic knowledge of safety regulations, and more of a businessperson. The job of the safety leader is to develop big-picture safety initiatives that support the company’s business model and enable safety to be hard-wired into everything the company does – and there are a number of important steps OHS leaders need to take in this process.

OHS leaders also need to stay on top of technological advances that may benefit the practical application of OHS. The technology feature for this issue focuses on analytics, which has been rising in prominence in recent times. Research has indicated that workplace injuries and safety incidents can be predicted before they happen with accuracy levels between 80 and 97 per cent. However, analytics is a cross-functional exercise which requires a different skillset – and OHS needs to play a front and centre role in the process. For the full story turn to page 18.

Craig Donaldson, editor, OHS Professional

“Workplace injuries and safety incidents can be predicted before they happen with accuracy levels between 80 and 97 per cent”

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- Industrial Foundation for Accident Prevention (IFAP)
- International Network of Safety & Health Practitioner Organisations (INSHPO)
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- Monash University Accident Research Centre (MUARC)
- National Disability Services (NDS)
- New Zealand Institute of Safety Management
- Professions Australia
- SafeWork NSW
- SANE Australia
- Standards Australia
- The Australasian Institute of Mining and Metallurgy (AusIMM)
- WorkSafe Victoria

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### Safe Work Australia concerned about rise in workplace bullying

There has been an increase in the reported prevalence of workplace bullying in Australia, from 7 per cent in 2009-2011 to 9.5 per cent in 2014-15, according to a Safe Work Australia research report. The *Bullying & harassment in Australian workplaces: results from the Australian Workplace Barometer project 2014/2015* report provides information on the prevalence of bullying and harassment in Australian workplaces. It showed that workplace bullying was affected by aspects of people’s jobs, and as the psychological and emotional demands increased in jobs, so did reports of bullying. In contrast, as job resources and the psychosocial safety climate (or management commitment to psychological health and safety) increased, reports of bullying decreased. This research also indicated that the impact of these factors can be far reaching – when comparing back to the 2012 Australian Workplace Barometer survey, a poor psychosocial safety climate, lack of job control, and emotional demands were associated with increased reporting of bullying four years later.
Welcome to this edition of OHS Professional. The way we lead and manage impacts safety outcomes. In this edition we explore the theme of leadership and culture and its importance to OHS.

Leadership is about what we say, what we do and how we do it, and this applies to all facets of being a leader, safety or otherwise. Leadership is about setting a direction and a vision. In OHS, developing a vision statement is not a difficult task – the desired goal is shared across industries and the country, and is often achieved without any “push back” from executives.

However, leadership is also about having a plan to realise the vision. The plan should articulate how improvement will be achieved to reach certain targets. Often as OHS professionals we can spend a great deal of time and energy in defining the what, when more time could be devoted to identifying and understanding how. Being clear about how leaders can be personally involved in the journey, engaging with people, recognising contributions of the team, monitoring progress and providing space for delivery and execution are all important elements to leadership generally.

Expectations of the modern-day OHS professional continue to evolve. The expectations of how we deliver in our roles are also mounting. Our advice and thought leadership should enable executives to invest with confidence in the OHS function to support more effective risk management strategies. Maintaining the trust of those we work with is crucial to realising change, and that applies both to the frontline and those in the boardroom. As OHS professionals we have a role to support and coach leaders in the organisation about integrating safety into their own leadership styles and approaches. Our role is not simply to deploy safety leadership courses and programs and hope that they penetrate, but to integrate OHS within the leadership framework and context of the organisation. As OHS practitioners and professionals, we sometimes have a tendency to work outside or in isolation of the business context, and this is often done to the detriment of OHS outcomes.

The economic pressures of today mean that there is not an endless supply of monetary resources for us to spend on safety leadership programs and safety initiatives. Our answer to many problems is another safety initiative, procedure and awareness training program. We need to think differently and identify the few things that need to be done, be relentless in doing them well and be clear on their impact within the wider organisational strategy. Often there are only a few simple levers that need to be pulled across an organisation to make a difference. While this goes against the grain of developing long, complex and convoluted OHS action improvement plans, it provides a greater opportunity to cut through within our organisations.

As Einstein said: “Out of clutter find simplicity; From discord find harmony; In the middle of difficulty lies opportunity.”
Resources companies found wanting on mental health and wellbeing

An audit of West Australian resources companies has found that they need to improve on a number of fronts when it comes to the mental health and wellbeing of staff. WA’s Department of Mines and Petroleum (DMP) recently conducted an audit of more than 140 companies, reviewing management systems, resourcing, consultation and the preventative measures put in place to protect staff mental health and wellbeing. The department collected information from 126 companies involved in mining operations and 17 operators of petroleum and major hazard facilities, analysing the results against four key criteria. The results from the audit program have shown that there are areas for improvement across all four areas, however, the most significant area for improvement is in the level of consultation with workers.

Process safety business case lessons from Deepwater Horizon

OHS professionals need to be able to build strong business cases and improve their change management skills in order to secure support for process safety improvements and operationalise these through an organisation, according to an adviser to the investigation into the BP Deepwater Horizon disaster in the Gulf of Mexico. OHS professionals need to be able to articulate business cases, in a realistic way which is also backed up by data, in improving process safety, said Peter Wilkinson, general manager – risk, at Noetic Group and an international safety expert in the oil and gas sector, who recently spoke at a series of Safety Institute of Australia “Deepwater Horizon Revisited – Investigative Insights” events in New South Wales, Victoria, Queensland and South Australia. “This is a key factor and determinant in whether or not attempts to improve process safety are going to be successful,” he said.

Poor psychosocial safety climates cost employers $6 billion

Productivity losses associated with low levels of management commitment to psychological health and safety in the workplace cost employers an estimated $6 billion per annum, according to a Safe Work Australia research report, Psychosocial safety climate and better productivity in Australian workplaces: cost, productivity, presenteeism, absenteeism. It found that workers in low psychosocial safety climate workplaces had significantly higher sickness absence and presenteeism than those in high psychosocial safety climate environments: they took more sick days per month and had a higher performance loss at work, equating to an annual cost to employers of $3887 per employee. The total cost of a low psychosocial safety climate to Australian employers is estimated to be approximately $6 billion per annum, according to Safe Work Australia director of research and evaluation, Dr Fleur de Crespigny.

What SHEQ skills do employers want?

There is growing demand for SHEQ (safety, health, environment and quality) systems managers, workers’ compensation/RTW specialists and injury management advisers, according to a recent survey. “The demand for workers with safety, health, environment and quality [SHEQ] skills has been growing for a few reasons, said Eliza Kirkby, regional director of Hays Human Resources, which recently released the Hays Quarterly Report. “Firstly, employers are more focused on safety than ever before. Secondly, legislative change saw organisations review gaps in their SHEQ management system. The increasing number of claims is also a factor. And of course the active construction market in the eastern states and South Australia has increased vacancy activity.” Employers also want people who can focus on both physical and psychological health and safety, according to Kirkby.

OHS laws & regulators failing to keep up with technological changes

OHS laws and regulators are not keeping pace with developments in the world of business and need to adopt newer approaches and technology in order to stay ahead of OHS risks and challenges, according to leading OHS lawyer Michael Tooma. “Regulators need to get with the times,” said Tooma, the Asia Pacific lead partner of Clyde & Co’s regulation and investigation practice. They need to employ data analysts. They need to invest in artificial intelligence. “Investigations of the future will be about data mining of the digital crumbs trail left behind by businesses in their business operations.” Tooma said big data and data mining can have positive effects on safety prevention, also in helping identify and predict patterns in the lead-up to incidents and therefore prevent them.

“Improper crossover” between industrial matters and safety issues

The safety landscape is getting no easier for the safety profession, according to a leading OHS lawyer, who said there is an increased trend towards an “improper crossover” between industrial matters and purported safety issues. Steve Bell, partner and co-leader of Herbert Smith Freehills’ Asia Pacific work health and safety team, said this is particularly the case in construction or construction-related work. “With the more active regulation of industrial laws relating to right of entry, permits and union official misbehaviour, there is an increase in the use of right of entry procedures under safety laws. There is no doubt that unions, HSRs, employers and managers have the ability to work in unison to dramatically improve safety outcomes. The more safety is ‘misused’ for industrial reasons, the more this is undermined,” said Bell, who will be speaking at the SIA Herbert Smith Freehills annual OHS breakfast.
If you love your job but find yourself ambitious and upwardly mobile, you may be on a collision course with reality. As you advance in your career, so too do your day-to-day responsibilities. In my experience, the bigger the pay envelope, the bigger the headaches. So what does the safety leader need to learn to be successful?

1. Less preaching, more teaching. Nobody likes to listen to some sanctimonious gasbag lecture him or her on, well... anything, but particularly safety and the right thing to do. Most business schools don't teach a class on safety, and so most executives have learnt what they know about safety from the safety people with whom they've worked over the years. It is your role to teach them that no enterprise can be truly successful if it continues to hurt workers.

As long as safety professionals don’t have the right to fire you (with no hope of appeals to leadership or the Union), safety professionals are fairly impotent when it comes to swinging the hammer. I was recently working as a production safety consultant (a job held in such little esteem that it doesn’t appear in the credits, although the catering company does) when one of the crew, a tall and burly brute, would always make it a point to make a snide comment about “the safety guy”. “Okay, everybody better watch out, the safety guy is here”, he would say in exaggerated fear and awe whenever he saw me approach. “Everybody better make sure you’re following all the rules.” It was irritating. In fact, it bugged the living crap out of me. I was there to do a job; nothing more, nothing less. I wasn’t looking for reasons to jam anybody up, in fact, that was the last thing I wanted. Like everyone else on this very dangerous movie set, I just wanted to do my job and go home under my own power in my own car instead of an ambulance or a coroner’s wagon. (Those who don’t work in safety seem to forget that safety professionals are often put in the most dangerous situations on a given site. I’ve walked across catwalks that were corroded so badly that I could feel them start to give, which would have sent me tumbling 14 stories to the concrete below; I’ve had poisonous gas vented just below me; worked in a mine where the entire camp’s soil was flammable; and been nearly struck by countless recklessly driven vehicles.)

My goal, selfishly, is to go home safe every day, and if I can do it while helping others to go home safe as well, so much the better. So one day I approached a group of crew building a set. We exchanged pleasantries and I asked them what they will be doing that day and what, if any, safety concerns they might have. It was fairly routine work and these guys were experts, so I just left them with a “I’ll check in with you later just to see if you need anything, but if anything comes up just hit me on the radio”, and walked away. As I was leaving, my old buddy the town crier came up to me with a sneer and in a challenging voice filled with disdain asked, “So, Mr Safety, is everyone following the rules?”

I looked at him and said, “Look, I don’t know who you think I am so let me make something clear. I’m not your mother and I’m not your boss. My job isn’t to get you to follow the rules, I can’t fire you, I can’t write you up, in fact, there’s nothing I can do to force you to follow the rules. I’m here to help you to make informed decisions about the safety of the choices you make. So I would appreciate it if you stopped treating me like I’m your babysitter or your substitute teacher. I give advice; you can take it and maybe it will save your life or...”
“My goal, selfishly, is to go home safe every day, and if I can do it while helping others to go home safe as well, so much the better”

Keep you from killing someone, or you can ignore it and kill yourself or someone else. The choice is entirely up to you. From that point on he never announced my visit except to say, “Good morning, Phil”. He was friendly and congenial and I grew to like him very much.

Going into this situation I had absolutely no authority or power, and this is the same for most people reading this – whether you are a safety neophyte fresh from university or a grizzled veteran with 30 plus years on the job. What’s more, as you advance through your career you need to become less of an auditor with an encyclopaedic knowledge of safety regulations and more of a businessperson.

2 Know the cost of injuries.

Forget multipliers and industry averages, they aren’t real to most operations leaders, but “those aren’t our numbers” calculate the direct (and as much as possible, indirect) cost of every injury. It may take some doing – these costs are all recorded but they tend to be scattered across the organisation. Safety leaders need to have these costs be more than a number, however. When an operations leader asks how that number was calculated or what that number means, the safety leader must be prepared with a quick and easily understood answer.

Many people find it difficult to calculate the cost of injuries. The table on the following page illustrates the relative ease of applying real, known costs to injuries.
#### Calculation of the cost of injuries

<table>
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<th>Cost of incident response</th>
<th>Wages</th>
<th>Time</th>
<th>Cost</th>
<th>Time</th>
<th>Cost</th>
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<td>Supervisor wage</td>
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<table>
<thead>
<tr>
<th>Cost for non-recordable injuries</th>
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<table>
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<th>Cost for incident investigation</th>
<th>Wages</th>
<th>Cost</th>
<th>Time</th>
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<td>Plant manager wage</td>
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</tbody>
</table>

Cost for each of these categories is calculated by multiplying the worker's wage with the amount of time it took to perform a task; for example, if it takes 10 minutes (there and back) to escort a worker to the clinic or plant nurse, and the escort makes $10.00, that time cost the company $100.

The difficult thing about calculating the cost of the injury is getting an accurate time. When I have worked with clients, I have rewritten their incident investigation form to include the time for these tasks (which includes filling out the paperwork). Most of my clients are shocked at how big and real an impact a single injury can have on the company's bottom line, and all this is aside from the human cost, which as we all know can be tremendous and life-changing. Once you know the cost of an injury you can reduce these costs even if you don't eliminate the injury, which is a good indicator of severity, but also something as simple as the time it takes to complete the witness interviews (the sooner you conduct the interviews the faster they tend to go as people are still fresh and engaged and not struggling to remember exactly what happened).

Influence, don't demand.

The safety leader of the future has to be an astute politician, someone who can convince other function leaders of the business's justification for safety. Safety is more than just saving lives, it's about saving money. Injuries cost a lot of money, and successful safety leaders have to come down off their moral high horses (“safety is the right thing to do”) and remember that the primary goal of every business is to stay in business, and to achieve this goal the business needs to make money. For many decades safety has been seen as a cost centre, not just by operations but by the safety professionals themselves. The safety leader must understand that every dollar spent on safety needs to enable safety, not impede it.

A friend once said to me, “People nag when they have no power”, and I think that is somewhat correct. Too many safety professionals nag the organisation in the name of influencing it. If your argument doesn't persuade me the first time you say it, saying it again over and over isn't likely to do anything but get my rancour up – I heard you the first time! Influence is the art of convincing me that what I want is what you want. It's the classic win-win scenario. It can be tough to convince someone that protecting workers is in a leader's best interests, and that is why money is such a good means of persuasion.

In a very real sense, we are paid to do one of two things: we either make money for the company (which, by the way, scarce few of us do) or we are paid to save the company money (either through reducing waste or protecting the company from fines). Position your function in safety as a means of reducing waste (real waste that can be quantified and measured and make them look good) instead of merely protecting them from something that may or may not happen.

Another good way of influencing is to get in the business of saying yes. Instead of shutting down an operation and lecturing a supervisor or worker about the importance of safety, suggest a safer way of doing things. Don't come at the person like an avenging angel full of recrimination, rather, approach as a trusted adviser who wants the same thing as the worker – to go home in one piece.
**“Nothing gets the attention of a plant manager, or depot manager, or construction project manager, more than talking about the money that the problem is costing them”**

4 Speak the language of operations. I am surprised at the number of safety professionals, even safety leaders, who don’t know their company’s business model. Are you a sales organisation? Is production king? You must know the business model (in most basic terms, how your company makes money). I have seen safety professionals waste their careers fighting against the organisation’s business model. “Leadership doesn’t support me”, they whine, when in truth they aren’t supporting leadership. Safety leaders must understand the primary driver of the organisation and express injury costs in those terms.

If your company has a sales culture, speak of injury costs in terms of how many more sales you would have to make to replace the money wasted on injuries. Likewise, if profit is the primary driver, express the costs of injury in terms of the amount by which profit must be increased to cover the cost of injuries. Speaking the language of safety makes safety real to other executives; it explains safety in terms that the other leader can understand but that he or she also values.

Years ago I was working with a manufacturer of heavy equipment. The attitude there was “Safety first in the front offices, production first in the shop area”. I was talking to a general manager and a supervisor when I casually asked how much money it cost to shut down production. They eagerly told me that if they shut down just their work cell it cost the company about $20,000 a minute! But if the problem was severe enough to shut down the entire plant, the cost jumped to $120,000 a minute in lost production. I knew cost and production were drivers at this particular plant, so I asked them how long the average injury shut things down and they answered (not making the connection) that an average injury usually shut the entire plant down for at least 10 minutes. “Hmmm…,” I said, “so the average injury costs the plant $1,200,000 before it is even treated?” They were gobsmacked. They had never before drawn the correlation between injuries and lost production. While previously concerned about the human costs, in an instant they went from being largely indifferent to the hard costs of safety to safety evangelists. In that instant, safety made sense to them and became a value.

In another instance a safety supervisor would routinely report out the extra number of products the plant had to build to recoup the lost costs of production caused by injuries and the cost of treating those injuries. Nothing gets the attention of a plant manager, or depot manager, or construction project manager, more than talking about the money that the problem is costing them.

5 Develop big-picture solutions. Becoming an effective safety leader is as much about letting go as it is about acquiring new skills. One of the most difficult transitions in my life was when I moved from being a “single-contributor” to a manager. I liked doing many of the things that my staff were now doing and did a lot of that work alongside them.

One day, my boss, the CFO, told me that I would have to stop doing staff work and start working like a manager. It was sort of like being the first chair violinist in an orchestra and getting promoted to conductor – I couldn’t do both at once without doing a poor job as the other. The job of the safety leader isn’t to buy safety gloves or to figure out the best price for Band-Aids. The job of the safety leader is to develop big-picture safety initiatives that support the company’s business model and enable safety to be hard-wired into everything the company does.

_Phil La Duke is a partner with ERM, an international provider of environmental, health, safety, risk, and social consulting services with more than 200 offices in 42 countries. He also speaks extensively on organisational change and worker safety, and frequently guest lectures at universities including presentations at Tulane, Loyola Medical School, the University of Michigan, Johns Hopkins, and Wayne State._

[Image]
Leading safety at Probuild

Safety leadership is a priority for tier one construction company Probuild. Craig Donaldson speaks with its group HSE manager and group director of operations about how it drives safety outcomes across its entire workforce, with impressive OHS statistics to show for it.

The construction industry is one that suffers from a high number of workplace incidents and fatalities – so much so that it has been identified as a priority industry in Safe Work Australia’s Australian Work Health and Safety Strategy 2012-2022. According to Safe Work Australia research, there were 30 workplace deaths in construction last calendar year (behind agriculture, forestry and fishing at 41, and transport, postal and warehousing at 64). Its frequency rate (or serious claims per million hours worked) stood at 7.2 in 2013-14, while the incidence rate (serious claims per 1000 employees) was 14.7.

While safety standards are improving in the industry (often due to a reactive and compliance-driven approach), some construction companies have taken a more proactive approach. Tier one construction company Probuild is one such example – with impressive safety metrics to show for it. It is one of Australia’s largest construction companies with more than 1300 employees, a national pipeline of projects worth $5 billion and an annual turnover of $2 billion.

In the past, Probuild has focused significantly on Lost Time Injury Frequency Rates (LTIFR) as a business, and over the past five years its LTIFR has declined from 8.31 lost time injuries per million hours worked to 1.97 lost time injuries per million hours worked. “In my mind, LTIFRs are simply a measure of how good you are at being bad,” says Sarah Cuscadden, group HSE manager for Probuild. “As an executive we pledged our commitment to measuring our non-negotiables – the reason for this being that these activities promote positive safety behaviours and outcomes and stop unsafe practices.”

LTIFRs and MTIFRs are now the only lag indicators Probuild measures, and as a result of this Cuscadden says there has been an increase in lead indicators. “For example, the number of HSE interactions completed by the executive and senior management has increased by more than 50 per cent this financial year. This has had a direct correlation to an increase in the number of task observations being completed at project level,” she says. “In FY 2015-16 we achieved a 78 per cent completion rate, while we have achieved a 92 per cent completion rate...”
for task observations in the current FY 2016-17. Additionally, targets have been established for subcontractors to participate in HSE interactions – one per quarter: this target is being met and in some cases exceeded.”

**Leading safety from the top**

Probuild’s executive plays an active role in leading and driving OHS outcomes at every level of the business. Its group director of operations, Arthur Williams, explains that expectations are that all staff will make OHS normal business as usual. To help drive engagement in this, all employees are consulted on health and safety, and their ideas

**Advice for OHS leaders**

For other OHS leaders, Cuscadden says it is important that they focus on the people aspect, ensuring the front-line leaders of their organisation have the right safety attitudes and behaviours. “Identify opportunities to improve safety culture and make sure it is at the forefront,” she says. “Inspire people to want to do safety; don’t make it difficult and cumbersome. Listen to what the people who are doing the task have to say, they generally know the best solution. We are not the experts, we [OHS professionals] are change managers – everyone is an OHS professional in our organisation.”
are considered and incorporated into Probuild’s strategic approach, he explains. “Our company expectation is that our health and safety professionals support and encourage the correct behaviours which underpin our culture and drive our desired business outcomes. As a leadership team we establish a clear expectation of what ‘safety’ looks like in our business. We work together to achieve a common goal. To achieve this, we extend our collaboration to our subcontractors and other external stakeholders,” says Williams.

“It is important to me and an expectation that every single Probuild employee and our subcontractors take safety seriously. Working safely is in our DNA. To ensure that safety is at the forefront, we must lead by example and set the standard that we expect to be demonstrated by our front-line leaders. I expect anyone – not just the senior leaders of the business – to hold everyone accountable for safety. If someone is behaving unsafely, we all have a responsibility to stop what they are doing and also educate them. Safety has to be the first and last thing we do and should not be treated in isolation; it must be intuitive to our business operations and we should apply this approach to every situation.”

OHS risks and challenges
There are a number of obvious and well-known physical high-risk activities in the construction industry. These risks are defined by legislation and are easier to control, according to Cuscadden, who says there are a number of other risks “under the surface” that play a more significant role in the management of OHS risks at the coalface.

For example, a predominant number of construction activities in Probuild are undertaken by subcontractors. “Currently, we have circa 200 subcontracting organisations working for us, comprising some 5000 construction workers across our construction workplaces in Australia. This in itself is a significant challenge, in influencing culture and changing behaviour. Each individual has their own safety culture, their organisation has its own safety culture, the Probuild construction site has its own safety culture and each jurisdiction has its own culture,” says Cuscadden, who explains that maintaining consistency is a significant challenge with such a large workforce nationally.

A second challenge is that the “legalisation” of workplace health and safety is still in its infancy, Cuscadden explains. “If we think back to the Robens report, it is really only 30 years old. The construction industry has been somewhat draconian in ‘keeping up with the times’ in...
The role of leading OHS

As group HSE manager for Probuild, Sarah Cuscadden spends a lot of her day listening to the ideas of front-line leaders and the safety aspirations of the executive, and then working with relevant people to develop a vision and strategy for execution. “It is important for me to understand the challenges with making changes or implementing something new at the workface, and the commercial implications and the return on investment,” she says.

A recent example of this is the introduction of hook cameras on all tower cranes. “We formed a working group to identify what operational challenges we may encounter, which developed a plan for resolution. In parallel to this working group, I briefed the board on why we needed to invest in the cameras and the commercial advantages to the business,” says Cuscadden.

On the front line, she says it is important to listen to what they believe are the key challenges and discuss solutions with them, with a focus on seeking feedback once implemented, and identify people within the business who are advocates for safety.
comparison to our mining and manufacturing brothers. Recently, there has been a lot of hype around ‘safety disruption’. One of the biggest challenges currently facing us is staying ahead of the times and utilising the plethora of technological advances available to us,” she says.

For example, the mining industry has had driverless trucks for the past five years, and this has significantly reduced – and almost eliminated – injuries. The closest parallel Cuscadden can draw in the construction industry is that a ‘hook camera’ was recently installed on Probuild tower cranes. This provides tower crane operators with 100 per cent visibility of the suspended load, which could be as far as 200 metres below. In addition to this, Cuscadden says Probuild has transitioned to a paperless HSE management system over the past two years. “The biggest challenge with implementing the paperless system was managing people’s emotion around changing a process,” she explains.

A third challenge for the business is the evolving skyline, and Cuscadden says the kind of buildings being constructed are ever-changing: “the footprints are smaller, the towers are taller, the quality of finishes is higher,” she explains. Probuild was recently awarded the Greenland Centre in NSW, which will be Sydney’s tallest residential tower ever at 235 metres and will involve the partial demolition and refurbishment of a 23-level building – and another 50 levels added on top. “I see this as a significant risk when you assess all of the elements together,” she says.

Another example is the erection of a “ladder climbing crane”, and Cuscadden explains that this is only the second time this methodology has been used in Australia. “Various risk workshops were conducted to ensure that the entire project team understood the methodology, associated risks and appropriate controls,” she says.

Drivers of OHS outcomes
There are three fundamentals which help drive strong OHS outcomes in Probuild, according to Cuscadden: collaboration, empowerment and visibility. In 2016, for example, Probuild established a national HSE working group comprising managing directors, HSE managers, operational managers and other executives as required. The working group convenes quarterly, and the mission of the working group is to recognise key areas for improvement and to develop strategic action plans for execution.

Each managing director is accountable for communicating and implementing the action plan in their jurisdiction, and to achieve this a HSE working group is established in each region. Members of these working groups are challenged to develop solutions for the action plan and present their solutions to the board for endorsement. Subcontractors and external stakeholders are also involved in the working group to warrant unsurpassed outcomes.

Each year, Probuild also convenes a national HSE conference, communicating the OHS road map for the year to front-line leaders of the
business. This then cascades to jurisdictional HSE conferences with participation from subcontractors and external stakeholders. Quarterly subcontractor information sessions are also facilitated, providing an opportunity for subcontractors to give feedback on how Probuild can improve OHS at its construction sites.

The Probuild board has also established targets to drive senior leader visibility across construction sites. “Every director in the business has a target to complete a defined number of HSE interactions. The approach has been applied at a jurisdictional and project level, and most recently to directors of subcontractors. The purpose of interactions is to formally record a proactive inspection of a current or upcoming high-risk activity,” says Cuscadden.

“The construction industry has been somewhat draconian in ‘keeping up with the times’ in comparison to our mining and manufacturing brothers”
Advanced and predictive analytics is reshaping many industries globally by helping businesses gain deeper insights and deploy often limited resources in an optimal way in order to deliver the best result.

OHS is a relative newcomer to the field of analytics. A recent whitepaper, Predictive analytics in workplace safety: four ‘safety truths’ that reduce workplace injuries, observed that safety can provide a rich and large source of safety data, with research suggesting that workplace injuries and safety incidents can be predicted before they happen with accuracy levels between 80 and 97 per cent.

Most organisations have mastered the basics in terms of standard reporting and statistical analysis (for example, what happened, how many times, where, how often, what actions are needed etcetera) but often struggle with achieving dramatic workplace safety results thereafter; “that is, answering the ‘why is this happening’ and ‘what will happen next’. To that end, from our experience, most organisations continue to struggle with undertaking safety-related data analytics, particularly predictive analytics,” says Michael Negendahl, who specialises in WHS as assistant manager in the HSE team under EY’s climate change and sustainability services practice. There are a number of reasons that may explain this, including:

• safety-related metrics being focused on lag indicators
• siloed systems that do not integrate and thus key data points not being used
• poor quality of the data being collected and analysed
• lack of the skillset and tools to undertake such advanced analysis.

Phil Bolton, an analytics strategy adviser and director in PwC’s consulting
practice, also says it’s fair to say that most organisations could be doing a lot more in safety analytics. Bolton agrees that one of the reasons for this is that there is a “strong anchoring to entrenched safety analysis ‘looking backwards’ and reporting norms and metrics within both the safety profession and a lot of organisations. This generally takes the form of producing a monthly safety report that contains information such as TRIFR/LTIFR, number of field leadership observations, bodily injury locations, and so on. However, to avoid injuries and detect ‘black swan’ events or systemic issues, more advanced analytical approaches are required,” he says.

PwC works with clients who have a range of safety analytics maturity levels – from very basic and who are only just starting to explore their safety data, through to teams which are pushing the traditional boundaries of HSE by accessing and analysing operational data in ways that have never been done before. “A current client of ours is analysing their vehicle fleets’ in-cab GPS data in combination with rosters, their dispatch system, weather and leave patterns to better understand fatigue,” says Bolton. “However, most organisations are generally down the low end of the analytics maturity curve, and very few are utilising predictive analytics or prescriptive analytics techniques.”

Analytics in general is still a maturing field in Australia, according to How Boon Tay, lead safety data analytics director at Deloitte, who says this is certainly the case in terms of executives and boards understanding the very tangible value that it can generate. “It can be very industry specific in terms of that maturity scale. For example, in finance it’s pretty high, but in safety, typically organisations are pretty low on the maturity scale,” he says.

“While organisations do have forms of analysis, a lot of this is focused on lag indicators, so this includes calculations or reporting on what has happened, or the scale of the incidents, or the type of injury. However, a lot of it isn’t about the causes.”

**Safety analytics trends**
Organisations’ safety teams are just starting to explore their own data, according to Bolton, who says this is most commonly done through data visualisation – but most teams are limited by the world of “data dumps in Excel”. There are also more ideas around how to collect more and varied data (such as wearables, apps, tracking and sensors), but he says there is still not enough thinking about how the data could actually be analysed and used. “GPS data is a good example of sensor technology that is now much more mainstream for most large fleets, and some safety teams are starting to tap into that organisational data asset to better understand the workforce and quantify risks rather than relying on anecdotes,” he says.

“We are seeing organisations becoming more interested in the possibilities that advanced analytics has to offer the safety profession in providing new insights and the ability to test specific hypotheses, and bust long-standing organisational safety myths. While organisations are becoming more aware of advanced analytics, they still typically lack the skills and knowledge to know how to go about it,” he says.

Boon Tay observes that there is increased interest from some organisations in tackling high-risk incidents and understanding the root cause of these incidents. “I think we’ve exhausted the traditional type of root cause analysis and what valid data can tell us about this. So now there is emphasis on exploring this data to actually predict, profile and use leading indicators of high-risk incidents,” says Boon Tay, who adds that another important factor is the operational side of reducing safety costs, workers’ compensation costs and insurance costs, as well as lost productivity associated with these. “If we recognise the commercial climate that we’re in, there is a strong focus on cost,” he says.

**5 common pitfalls in safety analytics**

Michael Negendahl, assistant manager in EY’s HSE team, says there are five common challenges that organisations face in safety analytics:

1. **Poor data** – i.e. quality and completeness are common challenges facing organisations starting their data analytics journey
2. **“Challenges in combining data sources”** is the top issue to overcome when implementing any data analytics project
3. **Lack of skillset and tools in the business to analyse the data**
4. **Poorly defined strategy to deployment and lack of clear ROI measures**
5. **Lack of funding necessary for moving to more advanced tools**

Negendahl also notes that there is a trend towards leveraging additional data sources. With the advent of “big data”, cheapening storage solutions and powerful tools to synthesise the data, he says business can now effectively incorporate more data points when building safety “models” – “for example, the combination of employee-centric data points (such as incident reports, absenteeism, roster scheduling, training, leave balances and tenure) with factors (such as production, maintenance and jobsite data) and other external open-source data sources (such as weather, cultural and geospatial data).”

**Safety analytics steps**
There are a number of important steps organisations can take on the safety analytics journey, and one of the most important is senior executive support,
Michael Negendahl, assistant manager in EY’s HSE team, says the OHS function needs a specific number of requirements and skillsets in order to deliver safety analytics:

1. Having a basic understanding about statistical analysis can obviously help the OHS professional begin to analyse and interpret any data they collect.

2. Successful deployment requires three distinct skillsets:
   - **Technical skills** – to understand the organisation’s systems and advise on acquiring additional technology
   - **Domain knowledge** – familiarity with the relevant risk areas in the business and the ability to interpret analytics results in the context of the organisation
   - **Data analytics (e.g. data science) expertise** – mathematical, computer science and business intelligence techniques, such as pattern recognition, statistical analysis, query design and data visualisation.

3. Systems and tools to be able to run the safety analytics data through and also populate the outputs with insightful commentary.

Skilling up the OHS function for analytics

“You would often be far better off hiring a credit analyst from a bank into the HSE team; they know a lot more about what’s possible with data and analytics and you can teach them what they need to know about safety”

according to Tony Morris, head of workplace health & safety sustainability services at Deloitte. “It’s got to come from the top down. If it’s a token effort it will fizzle out pretty quick. Then beyond that, it’s about making it real. You could do a lot of fancy analytics and employ very advanced artificial intelligence techniques, but unless it delivers real, tangible information which leads to decisions that are acted upon – with resulting benefits – then we can lose focus about what the analytics are driving,” he says.

“Organisations need to think about the data collected for health and safety. It should be aligned with strategy, so go back to this and what’s important for your organisation and your risk profile, and make sure that you start collecting and analysing data around that.”

Boon Tay also observes that one thing that prevents organisations from beginning the journey is a belief that the data quality or availability isn’t up to scratch. As such, he says there is a reluctance to even begin the journey. “That’s such a limitation that they put on themselves, but there are a lot of ways we can deal with data quality,” says Boon Tay, who explains that one of the ways is to start with “bite-sized chunks” – which starts with organisational strategy and key questions in relation to business objectives, related safety improvement initiatives and key stakeholder challenges.

“A change in safety performance isn’t just in the answer that analytics provides, but what we normally tease out are the cultural and process issues in the organisation. For example, we might on-board contractors quite differently to employees despite the fact that we think we treat them the same. So we’re challenging a lot of long-held beliefs and then giving them the facts to substantiate that – this is quite a useful way of getting initial buy-in,” he says.

Similarly, Bolton says the best place to start is to try and analyse existing safety data, then the gaps, data quality challenges, inconsistent use of incident classifications, limitations around merging and joining onto different datasets and access to the right analytics skills/talent within the organisation will soon become evident. “One of our clients has just started analysing their training data in combination with their incident data to measure the impact of their training interventions and inform their training calendar and spend for next year. Then once you’ve delivered on a pilot project and the value has been proven, taking the next step is to hire or contract the right talent for ongoing access to insights,” he said.

Another important step for safety leaders is to start socialising and creating an awareness among their leadership teams about what’s possible, and challenging their current safety reporting approach and targets.

“To be able to make progress, safety analytics should really be featuring in your multiyear safety strategy and be planned and budgeted for. But to get support for this, key decision makers in your business will have to have an understanding of what’s possible and what you’re trying to achieve,” he said.

Skillsets for safety analytics

Analytics is not something most OHS professionals are traditionally trained or skilled in, and dedicated analytics professional(s) who bring the necessary skills to be able to source, prepare and analyse organisational data are critical. “Otherwise you’ll only ever be doing just the ‘basics’; i.e. a long way from predictive,” says Bolton, who adds that another valuable skillset to look for is their ability to interpret the analysis and work side by side with the HSE teams to co-design and test interventions.

As for the broader team, HSE is typically an experience-driven profession, and Bolton says this is where decisions are based on gut instinct and organisational myths from years of experience in the field, for example: “contractors are more dangerous”. “You need a HSE team that is going to be open to insights generated from data analysis and who are prepared to challenge their own beliefs about what might be the drivers of unsafe outcomes or considered as ‘high risk’,” says Bolton.

Boon Tay observes that individuals who have seen the power of data in other previous professions or organisations bring a different perspective, and particularly when they’re from the utilities sector, or sometimes from the UK and other parts of the world. “They’ve seen data actually make a tangible difference, and that’s actually stirred conversations about, ‘Well, what is this big data thing and how can we exploit it?’” he says.

While analytics professionals are very good at their job, Morris points out that “they’re not work health and safety professionals either. In other words, the
work health and safety professional has a significant part to play in the analysis and the assessment of the data, with the analytics technician to interpret what the data is telling them,” he says. “No one knows their organisation better than the in-house work health and safety professional, who has been there for years, so they should be able to sit down with data analytics professionals to work out what the data means in the context of the business’s environment.”

**Common safety analytics challenges**

In starting out on the safety analytics journey, it is important for the OHS team to think laterally and more broadly across the enterprise in terms of the information the organisation is already collecting, and how those data sources could be used in safety analytics. Successful analytics extends beyond training, payroll and HR data, into operational, maintenance and other data sources from different functions, says Bolton. “A project delivered recently tapped into over 20 different organisational data assets – most of which had never been accessed by the safety team before. When you start analysing larger and more complex data sets, then you need to also start leveraging more sophisticated analytics tools and techniques,” he says.

“There is a wide range of analytics tools and techniques that are already well tested in other areas of business, for example, pricing, supply chain, marketing, and so on. Another common trap is hiring a HSE professional into a HSE data analyst role and thinking you’re going to get ‘data analytics’. You would often be far better off hiring a credit analyst from a bank into the HSE team – they know a lot more about what’s possible with data and analytics and you can teach them what they need to know about safety,” he says.

Another important factor to remember is that the process is still about people and the need to engage key stakeholders in the process, rather than reports being generated by an analyst in a back room and handed to the business for action. As such, key stakeholders should be involved in the process so they are brought into the concepts and the outcomes, Bolton says. “This begins with creating an awareness of the process and approaches that will be used, involvement in generating hypotheses and organisational safety myths, validating insights and outcomes and co-designing initiatives,” he says.

**The role of the OHS leader in analytics**

Advancing the case of safety analytics in the OHS function is primarily the responsibility of the OHS leader. Even though they don’t need to be a technical expert in analytics themselves, they play a critical role in the success of any analytics projects or initiatives, according to Negendahl. “The role of the OHS leader is to develop and champion the narrative for the benefits of applying predictive data analytics to the management of safety,” he says.

“To do this, the OHS leader must articulate the potential cost savings through improved productivity and loss mitigation as well as the obvious benefits of staff satisfaction and wellbeing. The role of the OHS leader is to also collaborate with other parts of the business for data points and insights.”

Similarly, Bolton says it is important that OHS professionals recognise that in the future, every facet of an organisation is going to be data-driven, and that leaders are going to want evidence-based decisions. “It’s unavoidable and it’s already happening,” he says. “The OHS leader needs to be able to drive that change within their own HSE team, but also across the organisation and the executive, to be able to move their organisation towards a culture of making fact-based decisions.”

To drive this change, the OHS leader needs to first get informed about what’s possible when it comes to advanced safety analytics, so they are in a position to influence internal stakeholders, create a vision for the future and drive change. OHS leaders should also be including safety analytics capabilities in their multiyear safety strategies, if they are serious about driving a shift in their department’s capabilities and the value they can deliver to the organisation, Bolton adds.

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### Six important steps

**Michael Negendahl, assistant manager in EY’s HSE team, says there are six important steps in the safety analytics journey:**

#### The data

**What data is available? Understanding your data landscape.**

The first step would be getting an understanding of what data your organisation collects. This can be a difficult process, with many organisations having a number of standalone systems that are not integrated with each other, therefore, having oversight over what systems exist and what data they collect is a challenge.

**Is the data any good? Determining the quality of your data.**

Once the systems and the data they collect have been identified, the next step is to determine the quality of the data being collected. Data quality is generally about how well the data is fit for the purpose of assisting in the planning and decision-making process. Reliability of the data is also important – are all fields completed, are they accurate, do we report everything?

**Do I need to collect more data?**

Determining the gaps in your data. If the answer is yes, then commitment from across the organisation is required to collect the necessary data to integrate into the analysis.

#### The purpose

**What questions am I trying to answer?**

Being clear about the goal.

The type (and hence sophistication) of data analytics will be determined by the questions you are seeking to answer. Where and when will injuries happen next? How will I measure success? Being clear about your ROI. Any data analytics project, especially in the area of predictive analytics, should have a clear ROI and quantifiable measures of success to enable reporting to management and the board. Investments in data analytics can be large, and as such, clear measures of success are critical to management acceptance.

**Am I ready to action what I find?**

Understanding if the organisation is ready to action the results. Organisations need to understand how they will use the results they generate and identify if the business is ready to implement the necessary changes (if applicable) so that they can successfully leverage the insights gained.
Ramsay Health Care: taking the lead on OHS

Ramsay Health Care has OHS metrics which are industry-leading. Craig Donaldson speaks with the business’s OHS leader, Chanelle McEnallay, about this and how she works with executives to drive strong OHS outcomes.

Chanelle McEnallay, chief risk officer (Australia) and national safety, property and environment manager for Ramsay Health Care Australia, with CEO Daniel Sims

Ramsay Health Care is one of the top five private hospital operators in the world, with 238 hospitals, day surgery centres, treatment facilities and rehabilitation & psychiatric units across six countries. Its revenue last financial year stood at $8.7 billion, while the company employs more than 60,000 staff and treats almost 3 million patients each year.

OHS is a particularly strong focus for the group, and Ramsay Australia has metrics that are industry-leading. Its key indicators have improved year on year for more than a decade, and its lowest-ever national LTIFR on record was achieved in June 2015 with a low of 1.95 – which is less than a quarter of the national health industry benchmark.

There are a number of reasons behind
“As a member of the Ramsay Australia executive team, reporting directly to the Australian CEO, I can drive meaningful and practical outcomes in work health and safety”

As a member of the Ramsay Australia executive team, reporting directly to the Australian CEO, I can drive meaningful and practical outcomes in work health and safety,” says McEnallay, who holds the dual role of chief risk officer as well as national safety manager. She also sits on the Australian risk management committee (a board sub-committee) where she regularly reports on

this impressive result, according to Chanelle McEnallay, chief risk officer and national manager of safety, workers’ comp, environment, property, public liability and staff health for Ramsay Health Care. Chief among these reasons is a supportive executive, who she says are very focused on and committed to staff safety. “Staff safety comes from the top and from the board and the CEO down. Ensuring our staff are safe is our most important success factor,” she says.

“As a member of the Ramsay Australia executive team, reporting directly to the Australian CEO, I can drive meaningful and practical outcomes in work health and safety,” says McEnallay, who holds the dual role of chief risk officer as well as national safety manager. She also sits on the Australian risk management committee (a board sub-committee) where she regularly reports on

WHS outcomes in the business. “There is a great level of commitment and interest from the board, the managing director and the Australian CEO in this area, and I have been asked to present to the board on several occasions. As part of the executive, I work hand in hand with our operations managers and teams and can ensure that our safety management system adds value whilst improving the safety of the workplace.”

3 key OHS strategies
While Ramsay Australia has a number of strategies, processes and other measures in place to drive strong OHS outcomes across the business, McEnallay says the three most important drivers are the national safety team, its internal audit platform and injury management system.

The national safety team is spread all over
Australia and comprises nurses, allied health staff and specialist staff in workers’ compensation.

The overall safety management system of Ramsay Australia, including the injury management system, is the “envy of many organisations because of the team who work behind it,” says McEnallay. “We are clinicians and specialist health personnel working to protect and rehabilitate clinical and hospital personnel. We know the business, we understand the risks and the operational realities, and we continually strive to add value in an ever-increasing bureaucratised OHS/WHS and return-to-work model.”

Ramsay’s auditing platform looks at key areas of risk, McEnallay explains. “It does not blindly test a facility on each minutia of the legislation; it is intelligent and effective. It was written in-house, has been continually improved for over two decades now and comprises a fully integrated digital platform with real-time results and recommendations that can be tracked nationally and efficiently. It allows for greater trend analysis and identification and recommendations that add value and align to operational requirements – primarily patient safety and quality,” she says.

The business’s injury management system is also a proven (and award-winning) product, McEnallay says. “Written in-house over a decade ago and continually improved by my team of workers’ compensation and injury management specialists, it is liquid, flexible and robust with improved worker outcomes being our number one priority.”

Major OHS risks and challenges
One of the major challenges faced for some time is the ageing demographic of Ramsay Health Care’s workforce. “Nursing is a physical job, and as we know, ageing can lead to increased hazards like falls and back strains, for example. Ramsay Health Care has chosen to embrace our ageing workforce, as they are the backbone of our business and possess immeasurable depth of knowledge. To this end, we must ensure that our safety management systems are responsive, robust and innovative. They must work to protect every worker – be they vulnerable, young, aged, injured or inexperienced,” says McEnallay.

A second major OHS challenge, which dovetails with the above, is both patient and materials (objects) manual handling. This is an issue that all industries have grappled with for decades, and in hospital care, McEnallay says it is patients who often require handling, which adds an increased level of complexity. “When you perform a risk assessment on a pallet of boxes or a load of timber, you can assess the weight, height, movement and predictability of the load you are ‘handling,’” she says.

“However, with a person you can do a complex and thorough assessment, assign the correct number of people relevant to the determined risk and then the person can move in a way that was not predicted. This brings a level of complexity to the risk. Having exposure to this risk for the 53 years that we have been in business, Ramsay is very good at assessing these risks, which is invaluable to protecting our people.”

The third major OHS risk in the business is occupational violence stemming from the public and patients to staff, particularly in hospitals which operate emergency departments. “We are a health service provider and so we cannot refuse entry to the public. However, we must ensure we are precise, clinical and effective in recognising and responding to occupational violence when it presents,” says McEnallay.

“Safety leadership

“It is an old adage but if your leaders are not engaged, a very difficult, if not impossible, road lies ahead,” says McEnallay, who explains that Ramsay is so successful in both its service provision and in safety because the very top of the organisation are engaged and take it seriously.

“The Ramsay Way, which is our culture and a living, breathing way of doing things, is real and it’s what sets us apart from our competitors. It’s about people caring for people. It means something and safety is fundamental to it,” she says. “Safety cannot be a ‘bolt on’ or a sidenote. It must inform decisions, be part of the process, be embedded in a real way. If we make all our decisions and then consider WHS at the end, the battle is lost.”

“We must ensure we are precise, clinical and effective in recognising and responding to occupational violence when it presents”
Leading OHS outcomes

Having been with Ramsay for many years, McEnallay has had the benefit of having written or been part of the writing of a lot of the systems. “As a member of the Ramsay Australia executive team, I can be effective in making sure they are implemented fully and giving effect to compliance. I also see the challenges firsthand that come from operations and can build these into the safety management systems, effectively tailoring these to the business,” she says.

“I see my role on the executive team as informing the business at the top level of what is happening on the ground, what works and what does not. Having worked through our organisational layers, processes and procedures, I can provide direct recommendations on how to drive effective change.”

A good example of this is Ramsay’s audit platform, and at the executive level, McEnallay is reporting on the audit platform and its results, providing feedback in real time about how each facility is performing (together with how they are expected to perform) and also advising the business on what initiatives require resources based on the results of the audit. “At a frontline level, I personally train managers and executives in our facilities on the audit itself, what to expect, what is the intended purpose of the audit (to add value) and what we expect from them. I am a big believer in training and get out to the hospitals at every opportunity. I cannot be effective sitting in head office all of the time. I need to see the operational realities and mould my systems around them,” she says.

Resulting OHS outcomes

As mentioned, Ramsay Health Care has metrics that are industry-leading. Its key indicators (such as LTIFR) have improved year on year for more than a decade, while its SLTIFR (as comparable to the SWA rate) is less than one-tenth of the industry rate for health. “Our rate of incidents follows the same improvement line and our premium is the envy of the industry,” says McEnallay, who can’t divulge this statistic for commercial reasons. “We know good safety leads to a more cost-effective workplace, so we don’t need to convince our team to be safer. The evidence is clear.”

Leading OHS from the top

Providing a safe workplace for employees, contractors and other stakeholders is of major importance to Danny Sims, CEO of Ramsay Health Care’s Australian operations. “I work with Chanelle McEnallay very closely and stay abreast of the issues surrounding and impacting safety in our many workplaces,” he says. “Chanelle and I meet frequently and talk frequently about the maintenance of a safe workplace for our staff. We are never far apart, as her office is two doors down from mine in our head office.”

As an employer of more than 30,000 people in Australia alone, Sims says he is aware of the acutely aware of the responsibility to ensure a safe workplace for employees and all other stakeholders who visit the group’s hospitals and other locations. “We must continually strive for an outcome where, each and every day, every employee working in Ramsay Australia leaves work in a physical condition no worse than when they arrived at work. We are a 24-hour a day, 7-day a week business, so the challenge is large,” he says.

“Everyone in our organisation has a role to play in ensuring a safe workplace, and the key is for everyone to ‘think safety all the time.’ Our people are supported by a superlative group of OHS professionals, lead by Chanelle. These professionals support our hospital managers and our return to work coordinators who are ‘on the ground’ at all of our locations. Mitigating the risks surrounding a safe workplace, and responding in a timely manner if an issue does arise, has allowed Ramsay Australia to achieve tremendous results.”
Alcohol and other drugs cost Australian workplaces an estimated $6 billion per year in lost productivity, according to a 2013 study from the Institute of Criminology. Furthermore, it has been estimated that 2.5 million work days are lost annually due to alcohol and other drug use, at a cost of more than $680 million.

The OHS risks associated with use of alcohol and drugs in the workplace are obvious. If a worker’s ability to exercise judgment, coordination, motor control, concentration and alertness are impaired, this can lead to increased risk of injury or incidents to themselves or others. Research has found that up to 15 per cent of workplace injuries worldwide are attributable to drug and alcohol use, while around 60 per cent of individuals who consume drugs and alcohol at harmful levels are in full-time employment.

Workplace drug and alcohol trends
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LaneWorkSafe provide trusted results for your on-site drug testing.

At LaneWorkSafe we provide a holistic approach to workplace drug testing programs for organisations of any size. Specialising in leading-edge drug and alcohol testing devices, our knowledge and expertise is catered to a wide range of industries where safety is paramount.

- We can help develop a bespoke policy and program, and provide the on-going technical support needed for greater WH&S protection.
- LaneWorkSafe offer e-learning tutorials, industry experience and up-to-date insight to ensure you workplace programs are of a gold star standard.
- The new Accurate One Step Cup available exclusively from LaneWorkSafe, can detect for up to 13 drug groups and includes “designer drug” Synthetic Cannabinoids in its on-site detection.
- The in-built evacuation port unique to the Accurate One Step Cup allows for a total elimination of specimen handling. This innovative design promises safer and cleaner handling of sample for collectors.

Our expertise in the field is what sets LaneWorkSafe’s capabilities apart as Australian leaders in on-site drug testing. In order for YOUR team to Worksafe, they must Workwell.

61% of people frequently use drugs and/or alcohol whilst in full time employment

25% of workplace accidents are drug or alcohol related

10% of workplace deaths are drug or alcohol related

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“One of the other biggest challenges OHS professionals can face, especially in managing drug-related risks, is preventing the use of non-compliant devices for their programs”

“Conducting LC/MS-MS as the only method to detect this substance was costly, not to mention inconvenient, for workplaces, with potential stand-downs and time delays for offsite toxicology testing.”

LaneWorkSafe has an “Accurate One-Step Urine Cup”, which is an “all-in-one” testing device that includes the prescribed six main drug groups mentioned in Australian Standards 4308, plus the metabolites found in synthetic cannabinoids. It also has the capability to detect up to 13 additional drug groups, based on specific needs or concerns for other drug groups (such as fentanyl, oxycodone, buprenorphine or methadone). “The introduction of the Accurate One-Step Cup has allowed workplaces to reliably detect for the presence of synthetic marijuana at a fraction of the alternate cost,” says Lane.

Similarly, there have been reports of a marked increase in the use of methamphetamines, referred to frequently as the “ice epidemic” in the media over the past 12 months. While this is not considered a new drug, Lane says “ice” is a substance workplaces should be rigorously screening for and ensuring their device can reliably detect. LaneWorkSafe’s saliva and urine testing range has the capability to detect for the drug groups listed in the respective Australian Standards, which includes the drug group methamphetamine.

Construction industry developments
One of the latest developments in the field would be to the Australian construction industry, with the recent changes to the Building Code 2013, says Lane. These changes came into effect on 16 October 2015 and stipulate that Commonwealth-funded projects must include mandatory testing for drugs and alcohol with a focus on zero tolerance.

While the changes are only compulsory for Commonwealth-funded projects, he says LaneWorkSafe has helped successfully implement national drug and alcohol testing programs within privately funded sites as well. “There has been a noticeable flow-on effect across the industry over the past 16 months,” he says.

“Companies largely need to decide whether testing programs conduct urine screening or oral swab analysis. Both are permitted under recent changes. With this in mind, LaneWorkSafe had an oral swab testing device designed especially to meet the recent Building Code 2013 changes, which so far has proved to be a great success in helping to meet recent requirements.

“We have also assisted from a training and educational perspective, ensuring contractors are fully aware of what is required under this new legislation. LaneWorkSafe has been working within the construction industry for over a decade, and understands that changes to government legislation can be difficult to implement.”

Managing workplace alcohol and drug risks
Most workplaces respond to risks associated with drugs and alcohol in the workplace in a positive, sensible way when it comes to keeping up to date with emerging drug and alcohol trends, says Lane. This is largely due to information being so readily available online. “Many workplaces have heard of new designer drugs and know programs should stay up to date to reflect such changes,” he says.

“With this said, however, there have been some issues around misinformation found on the internet which is unsubstantiated and unfortunately misguiding for some organisations. Partnering with a trusted provider who can help make this information available and easy to access, is key to any organisation’s success with an alcohol and drug policy,” he says.

“By including synthetic marijuana into workplace programs, we have seen firsthand how organisations greatly reduce the associated risks, including the shutting down of potentially dangerous situations,” he says.

“One of the other biggest challenges OHS professionals can face, especially in managing drug-related risks, is preventing the use of non-compliant devices for their programs. Failure to ensure urine testing devices have been issued with a certificate of compliance, is essentially ensuring the organisation’s non-compliance with the relevant regulations,” he says.

“The cost of non-compliant devices can hugely disrupt productivity efforts and undermine the team morale in any organisation, or in some cases, result in workplace injury or death – this being largely attributable to invalid or incorrect readings. False negatives are equally as dangerous. Returning an employee to the workplace, who is not truly negative, may have serious ramifications.”

Successful drug and alcohol policies
According to research by the National Centre for Education and Training on Addiction at Flinders University, about 75 per cent of Australian workplaces have a drug and alcohol policy of some form, with testing policies in around 7 per cent of workplaces. Every workplace is unique, and when it comes to a drug and alcohol policy “one size does not fit all”, according to Lane.

“Closely in line with this is the transparency of a policy and program – through a tailored policy, workplaces can consult with all stakeholders involved, making the document workable and programs easy to understand and complete. Setting out how, when and why testing may occur, everyone has a clear understanding of the workings of the policy,” he says.

While urine screening is considered by most informed decision makers to be more accurate as to presence in employees’ urine, it should be clearly understood that device accuracy leading to trusted results remains paramount to a successful alcohol and drug policy, whichever modality is chosen for their programs.

Another key consideration is ensuring a workplace drug and alcohol testing program can continue to meet with what is required long term: “this is vital to maintaining a successful program,” says Lane. “OHS professionals may choose to manage the testing process and programs in-house to ensure this is met. This allows workplaces to have greater control of their testing schedule and gives them the ability to maintain their program cost-effectively for the business long term. There are workable legal options available.”

In line with this, Lane says OHS
professionals should understand fully what the program and/or testing involves, who should be tested and how frequently and, perhaps most importantly, understand the complexities involved when choosing a modality for their workplace screening programs.

“Companies should decide whether testing programs conduct urine screening or oral swab analysis when setting up a drug screening program. We believe there is no silver bullet when it comes to testing, but the premise of achieving a zero tolerance to drugs is a robust approach to ensure safer working environments,” she says.

Regulatory developments in breath testing

One would assume that an Australian Standard applied to an item of employee testing instrumentation would be all that is required to satisfy the rigours of industrial and legally justifiable requirements, according to Robyn Hughes, managing director of Lion Breathalysers Australia. However, that is not the case with AS 3547:1997 “Breath Testing Devices for Personal Use”, he says.

“It’s the last three words that hold the key to the degree of relevance to the regulatory and industrial marketplace – ‘for personal use’. This particular standard was developed when nothing else was available, and its development commenced back in the days when alcohol breath testing involved blowing into a bag. Recent years have seen the market flooded with breath testers that ‘tick the box’ in relation to this outdated and irrelevant standard.”

Australian Police Forces have always led and continue to lead the way with alcohol breath testing, says Hughes. They use both screening (hand-held) instruments as well as much more sophisticated evidential (desktop) instruments.

AS 3547:1997, while acknowledged by the various Australian Police Forces, never met the particular policing specifications required for hand-held instruments, she adds. “They developed and have used their own specifications for instruments to be assessed against prior to entering field use,” says Hughes.

Evidential (desktop) instruments have different specification requirements again, and as these instruments are contestable in court, Hughes says they need to stand up to an extremely high standard of both legal and scientific scrutiny. These particular instruments must be approved to the Australian National Measurement Institute NMI R126 standard.

NMI R126 is both current and relevant to the nature of evidential instruments currently being manufactured and used within Australia, however, she says AS 3547:1997 is not relevant for regulatory use in policing or employee testing.

“A review of AS 3547 has been requested; Standards Australia has approved the proposal and is currently working to map the allocation of resources to this project. It is anticipated that the review will address the specification requirements for regulatory use of both police and employee testing,” says Hughes.

“While industry awaits the outcomes of this review, OHS professionals may best serve the interests of their respective organisations and their associated employees by using reputable instruments that meet the specifications of an Australian Police Force.”
How to stay ahead of the change curve in OHS

The upcoming SIA Visions Conference will feature a range of high level, contemporary keynote speakers along with WHS regulators and industry experts discussing current industry topics

The 25th Annual Occupational Health and Safety Visions Conference, which will be held in Toowoomba from 21-23 May 2017, has a long-standing reputation for being an event with a special blend of networking, socialising and exploring new and developing trends in work health and safety, for both the people making safety work on the ground as well as those leading in the field. Speakers at this year’s event include Norton Rose Fulbright Lawyers’ Aaron Anderson, Central Queensland University’s Peter Marshall, HWL Ebsworth’s Alan Girle and Griffith University’s Drew Rae, who will be presenting on whether safety practices actually improve safety.

Is OHS guilty of false assurances? Speaking ahead of the conference, Rae questioned how much time safety professionals spend on typical OHS practices and their effectiveness. “We investigate and explain accidents and incidents. We conduct risk assessments, or we make other people conduct risk assessments,” he said. “We institute controls around work, and we make sure those controls are being followed; in fact, we are doing more and more of these things – more investigations, more risk assessments and other people conduct risk assessments,” he said. “We institute controls around work, and we make sure those controls are being followed; in fact, we are doing more and more of these things – more investigations, more risk assessments, and more controls and audits.”

However, Rae said safety requires a balance of “ensurance” (actually making things safer), assessment (discriminating between safe and unsafe) and assurance (communicating honestly about safety). “The real world is filled with uncertainty, and no approach to safety which tries to hide that uncertainty is ever going to work. At best, we will provide comfort without true safety. What should a pragmatic, honest and reflective safety professional do in this world? In my opinion, we need an approach to safety practice which embraces doubt, rather than trying to eliminate it. This is a humbler path, but it will ultimately provide more true assurance that we are doing the right things to manage safety,” said Rae, who serves as manager of Griffith University’s safety science innovation lab and program director for Griffith University’s Graduate Certificate and Master of Safety Leadership in the School of Humanities, Languages and Social Science.

Rae also said that every accident is a “catastrophic realignment of belief with reality”. By definition, he observed that no one intends an accident to happen, so people head into disaster, unaware of the full extent of the risk they are experiencing. “The moment of the accident redefines both the future and the past. What appeared to have been safe is not only now unsafe, but with hindsight never has been safe,” he said.

“The real world is filled with uncertainty, and no approach to safety which tries to hide that uncertainty is ever going to work”

For decades, safety theorists have tried to understand how individuals and organisations end up with tragically inaccurate beliefs about risk, said Rae. “Why did the operators of Chernobyl and Three Mile Island control their respective nuclear plants towards rather than away from danger? Why was Challenger allowed to launch in freezing temperatures, despite evidence that the O-ring seals would underperform in those conditions? How did management of the BP Texas City plant come to believe that the organisation had ‘turned the corner’ towards improved safety shortly before a major explosion?”

Rae said every one of these organisations was trying hard to be safe, using the best tools and techniques available to them. “It’s very easy with hindsight to blame them for inadequate safety management. The scary truth is that these accidents happened despite safety effort, not because of a lack of safety effort. There has to be a point where we stop asking for more safety action and start questioning whether our safety actions make sense,” he said.

“Where is the evidence that our techniques, our processes, our procedures, our systems, are worth the effort and attention we give them? How can we really know that our efforts to manage safety are working? The answer is both frightening and liberating. We can’t. From a quantified, controlled, empirical standpoint, we cannot link specific actions in the present to accidents (or the absence of accidents) in the future. Denying this reality leads us to the ‘dark side of safety’. It causes us to measure what is easy to measure, instead of what is meaningful. Our lack of control leads us to seek more and more authority, restricting the ability of other people to do their jobs autonomously and with initiative. Our inability to quantify risk encourages more and more complex numerical structures, building towers of analysis on grains of knowledge. We replace ‘be safe’ with ‘be compliant’.”

A lot of safety work is about creating certainty, according to Rae, who noted that no responsible person can look at modern work without at least a little bit of doubt. “Should we really be doing this? Can we keep going? At what point do we need to stop? The techniques we use to manage safety were deliberately designed to provide assurance – to remove doubt in our own minds, and in the minds of our customers and regulators. They give us comfort that things are safe.

“What happens, though, if we admit doubt in the techniques themselves? What if we’ve been doing safety for so long that safety practices have become a kind of choreographed, institutionalised and regulated safety dance? We follow the steps and go through the motions, and the enactment of the ritual gives us the comfort we seek. But accidents happen despite safety management, often when we are feeling most secure and complacent. Are we really assured of safety once we have followed our standards, processes and regulations?”

Rae calls this problem “false
assurance”, in which individuals are being made to feel comfortable simply by the fact of “doing safety” – even when doing safety doesn’t make individuals safer. “False assurance is neither inevitable nor universal in safety practice. There is overwhelming evidence that both engineered systems and human-services operations are becoming consistently safer over time. The problem is that we are becoming more safe, but we do not understand why. Only by accepting the reality of false assurance can we begin to discard practices which are unhelpful,” said Rae.

Safety disrupted: what can OHS professionals expect?
Also speaking at the upcoming SIA Visions Conference is Tim Gilchrist, client partner at GCG Health Safety & Hygiene, a consulting firm which helps organisations create and maintain safe and healthy working environments for people. Gilchrist will be presenting on the future of the OHS profession and said there are a number of big trends in store for OHS over the coming 10 plus years.

“I expect to see a continuation of the general trend we see in organisational hiring practices of health and safety professionals,” he said. “We see a two- to three-year cycle in hiring practices where organisations manage their health and safety through a deep internally skilled team, then over a period of time this shifts to a contractor model. This is usually most apparent in the hiring practices applied for subject matter experts as opposed to health and safety generalists.”

Gilchrist also observed that there is “some incredible talent” coming out of universities across Australia. “Being affiliated with a number of universities across Australia gets me a sneak peek at the new professionals as they embark on a journey into a variety of industries. I expect these young professionals to make a lot of noise and challenge most of the existing structures in our field and organisations generally for the better,” he said.

Gilchrist also predicted that health and safety as a profession will further mature over the next decade, through collaborating and working together. “I think we will be closer to accepting a model of health and safety practice nationally that our professionals can constructively criticise and work together to scientifically evaluate and improve,” he said.

Technology is also having a significant impact on the profession, with digital transformation radically changing the face of many industries across the globe. “I think we will see a vast increase in screen-based work which is routine in nature being taken off people's hands – and given to a computer program. This change has already started to change the way that companies compile and report statistics through the use of bespoke software,” he said.

“For hands-on work, we will continue to see a shift towards automation where the available technology has passed through its initial versions and becomes an affordable reality for many organisations. Market leaders and early adopters have already jumped on board to lead the charge. There are parallels here to the way Tesla is using their sales of high-end sports cars to fund the research and development into affordable electric cars for the rest of us.”

Things are not going to slow down, according to Gilchrist, who said that the volume of work and production is only going to increase. “It is startling to review and see what can be completed in a single day when compared to 15, 25 and 50 years ago. Professionals in all fields are going to be expected to produce at meteoric rates,” he said.

The main challenge for OHS professionals in this process will be developing their skills and collaborating with the profession in a meaningful way, Gilchrist said. “We have been given more collaboration and networking tools than ever that allow us to connect to the other side of the world in seconds. The real stuff still matters most though, as the interactions tend to be transactional and sometimes lack the empathy and consideration needed for true growth and improvement,” he said.

However, there are a number of steps individuals can take to help prepare themselves both personally and professionally for these changes. Lean in and get involved in initiatives across your workplace and industry,” said Gilchrist. “By getting more connected and informed about technological changes to your workplace and industry, you can find out how you can best contribute and get on the front foot in identifying the hazards that will inevitably be introduced.”

It is also important for OHS professionals to make sure they represent health and safety at any technological transformation project in their organisation. “The most successful applications of our craft come true with integration of our practice into the day-to-day operations of an organisation. If we don’t get involved in tech projects at our workplaces, our work is often seen as an add-on that doesn’t quite fit. This will take some convincing at times, so make sure you have a logical and planned solution that is consistent with the project's constraints and parameters,” he said.

Gilchrist recommended OHS professionals try out a new piece of tech every two to three months. This could be a productivity app, a digital assistant or something that piques their interest. “If it works and saves you time, reduces your stress or gets you more digitally integrated – great! Add it to the tech tool belt. If it doesn’t work, it can be chalked up as a miss you can learn from, because we all have our own styles and ways of working.”

The Safety Institute of Australia (Queensland Branch) is organising the 25th Annual Occupational Health and Safety Visions Conference, which will be held in Toowoomba from 21-23 May 2017. For more information visit www.visions.org.au or see the advertisement on the inside front cover of this edition of OHS Professional magazine.
Research on extreme heat and workers’ health recognised

Late last year, the Safety Institute of Australia together with the Australian OHS Education Accreditation Board awarded Dr Jianjun Xiang of the University of Adelaide the prestigious Eric Wigglesworth OHS Education (Research) Award for his Doctor of Philosophy thesis on extreme heat and workers’ health in South Australia.

The award, which includes a $5000 professional development fund, is awarded for doctoral research that demonstrates a significant contribution to the OHS body of knowledge, potential for application in preventing work-related fatalities, injuries, disease and/or ill-health and demonstrated dissemination of research outcomes to relevant parties.

In presenting the award, SIA Chair Patrick Murphy said Xiang has developed the knowledge of the impact of heat on workers by linking daily temperature with work-injury claims at a population level. “This opens up a whole new field of attention for OHS professionals and policymakers in the development of injury prevention strategies,” said Murphy.

“Australian workplaces may not be well prepared for the likelihood of increasing incidence of heat stress due to climate change”

Commenting on the award and his research, Xiang said that occupational heat exposure can increase the risk of work-related illnesses and injuries. With predictions of more frequent and intense bouts of hot weather in Australia, workplace heat exposure presents a growing challenge to workers’ health and safety. However, to date, Xiang said it has been unclear as to what extent Australian workers are affected by weather-related heat exposure at a population level; which groups of workers are at higher risk of heat-related illnesses and injuries; which types of illnesses and injuries are most prevalent during hot weather; how workers and relevant stakeholders perceive the risk of heat stress in a warming climate; to what extent Australian workplaces are prepared; and what new adaptation strategies can be developed to reduce the impact of climate change on workers’ health and safety.

Key research finding
Xiang’s research found there was a reverse U-shaped relationship between daily maximum temperatures ($T_{max}$) and workers’ injury claims. Overall, a 1°C increase in $T_{max}$ between 14.2°C and 37.7°C was associated with a 0.2 per cent increase in daily injury claims. Identified vulnerable subgroups include male workers; young workers aged ≤24 years; those working in industries such as agriculture, forestry and fishing, construction and electricity, gas and water; labourers, production and transport workers; and tradespersons in small and medium-sized businesses.

“During heatwaves, daily claims increased significantly by 6.2 per cent for outdoor industries. Over-represented in hot weather injury claims were male labourers and tradespersons aged ≥55 years, and those employed in agriculture, forestry and fishing, and electricity, gas and water. Occupational burns, wounds, lacerations and amputations as well as heat illnesses were significantly associated with heatwaves. Similarly, moving objects, contact with chemicals, and injuries related to environmental factors increased significantly during heatwaves, especially among middle-aged and older male workers.”

Results of questionnaire surveys suggest that Australian occupational hygienists and specialists showed concerns over heat stress but did not show strong willingness to amend heat prevention recommendations to management or companies.

Xiang said that Australian workplaces may not be well prepared for the likelihood of increasing incidence of heat stress due to climate change. A high proportion of survey respondents (53 per cent for occupational hygienists and 49 per cent for outdoor workers) were not satisfied with current heat prevention measures, indicating there is a need for further development of current heat management strategies in Australian workplaces.

Furthermore, the major heat prevention barriers identified included lack of awareness, lack of training, lack of management commitment, and low compliance with heat policies. Further heat training should focus on those undertaking physically demanding work outdoors, in particular young workers and those over 55 years with low education level. “Findings of this study make a valuable contribution to the knowledge of the impact of heat exposure on workers’ health and safety at a population level. It may also provide implications for heat-related policy development and practical interventions locally and internationally in a warming climate,” said Xiang.

Room for improvement
Traditionally, he said the management of heat stress has focused on preventing illness, with scant attention in guidance documents given to a potentially larger injury problem under moderately hot, as distinct from extremely hot conditions. “Mild days occur more often than extremely hot days and may importantly contribute to the burden of work-related injuries,” said Xiang. “Therefore, this needs to be taken into account when developing new heat prevention policies and education plans to reduce the adverse effects of environmental and process-generated heat in the workplace.”
Currently, there are systematic technical guidelines and manuals in place for heat stress monitoring, risk assessment, control and prevention. Nevertheless, Xiang said the unenforceable and non-mandatory nature of the guidelines may raise the problem of low compliance. “Heat prevention measures seem straightforward, common sense, and simple – for example, drinking water frequently, wearing light-coloured and permeable clothes, taking breaks in the shade, and responding to early symptoms,” he said.

However, a variety of factors at multiple levels in the workplace may constrain such implementation, such as production quotas, worries of being considered ‘soft’, and workers’ fears of losing their job. Regarding the suggestions for heat stress control and management, in the short term it may include the establishment of workplace heat alert systems, real-time health surveillance for workers undertaking tasks outdoors, the flexible combination of self-regulated and mandatory heat stress management, specific and clear enforceable heat regulations, and the promotion of heat awareness campaigns.”

In the long term, Xiang said this may include changes to building and urban design to mitigate the impacts of increasing global temperatures, the improvement of work conditions, and measures to reduce greenhouse gas emissions. Interdisciplinary and multisectorial efforts are also required to minimise the negative impacts of a changing and warming climate on workers’ health and safety, he said.

Implications for OHS and business
In his PhD research, Xiang investigated perceptions of occupational hygienists and safety professionals on workplace heat exposure and their views on current and future preparedness for extreme heat.

“The findings may stimulate possible future in-depth discussions among the WHS professional community regarding the development of more effective heat stress management”
future in-depth discussions among the WHS professional community regarding the development of more effective heat stress management," said Xiang, who noted that identified heat adaptation barriers existing in the workplace have implications for their everyday WHS practice in the summer.

Specifically, potential application of the research outcomes for the WHS professional may include:

- evidence-based training material for WHS trainers, highlighting the significance of heat-related injury as well as heat-induced illness
- industry-specific heat health and injury warnings, e.g. for a range of outdoor work, and especially for young workers
- industry preparedness plans for heatwaves
- targeted regulatory interventions.

"Some efforts should be made to help employers realise the benefits of effective heat stress management – for example, the reduction of productivity loss due to heat and the decreased occupational diseases burden – because employers' support is very important for the implementation of heat regulations and policies," said Xiang.

Implications for government and regulators
Multidisciplinary collaboration and comprehensive efforts from all levels of the workplace is the key to the development and implementation of a successful heat stress control program, according to Xiang. “The team may consist of workers, employers, management, regulators, occupational physicians, nurses, hygienists, ergonomists and toxicologists. Employers, heat policymakers, managers and supervisors play an important role in heat stress management, implementation, and the development of heat prevention policies,” he said.

“The implementation and development of heat regulations and policies, the establishment of early heat alert and warning systems, the launch of heat prevention campaigns, and heat education and training need co-operation between institutions from various sectors and administrative levels,” said Xiang, who added that involved institutions may include industry regulators, the Bureau of Meteorology, Health Departments, trade associations, unions and professional bodies, and training institutions.

“It is important to decide who are the overall responsible lead bodies co-ordinating co-operation, interventions, joint activities, and resource allocation. To date, the federal government has not released its national regulations specifying explicit standards for maximum temperatures in the workplace. Moreover, no state or territory has specific legal requirements for heat stress control and prevention, whereas guidelines and educational materials relating to heat stress are available on each state’s Safe Work and/or Department of Health websites.”

In addition, Xiang said climate change, urban heat islands and diverse populations can compound the risks for workers during hot weather. “Heat-related occupational health and safety will need to stay on the agenda, and existing guidelines will require continual review in the future,” he said.

The Award
Xiang’s research underlined a successful ARC Discovery Grant application led by Professor Dino Pisaniello to comprehensively examine the association between heat exposure and work-related injuries at a national level. In accepting the award, Xiang acknowledged the contributions of his supervisors and co-researchers Professor Peng Bi, Professor Dino Pisaniello and Dr Alana Hanson.

Pam Pryor, registrar of the Australian OHS Education Accreditation Board, said that Xiang’s work will make an important contribution to the OHS body of knowledge and will be incorporated into the upcoming review of the OHS BoK chapter on thermal environment. “Xiang’s approach to his research and his outcomes would be welcomed by Dr Eric Wigglesworth for whom this award is named. He not only was a major influence in OHS education but was a strong advocate for critical research to underpin practice,” said Pryor.

Xiang’s doctoral research was selected from a strong field of candidates, all of whose research is important to the OHS body of knowledge. The judges gave special recognition to Dr Karen Klockner of Central Queensland University for her work on accident modelling for complex socio-technical systems.
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