



The LTI Fallacy

In Australia the current method for reporting injuries is through the use of a mathematical calculation contained within an Australian Standard. Commonly referred to as Lost Time Injuries (LTI's). The Standard that most industries use is AS 1885.1:1990 and related documents (AS1885.1 SUPP 1:1991 and MP58-1991), that provide information on how to record information on injury and disease experienced in the workplace.

The Standard includes the calculation methods for a business's incidence rate, frequency rate and average lost time rate. Historically, these methods have been used to establish a Lost Time Injury Frequency Rate (LTIFR) which is broadly used term as a measure of OHS performance that is relatively easy to measure; it may be used to compare like businesses as a benchmark and often forms part of influencing the awarding of tenders and or contracts.

In more recent times, recognising the limitations associated with the LTIFR (including the ability to manipulate measures), some organisations have adapted the frequency rate to establish a Medical Treatment Injury Frequency Rate (MTIFR) and/or an All Injuries Frequency Rate.

Relying on outcome measures such as these has long been recognised as largely determined by luck. A major risk could be present for an extended period without causing injury, then the circumstances arise that result in a significant, and sometimes catastrophic outcome, e.g. the Longford Gas Explosion in Victoria Australia on 25 September 1998. Much has been written about the importance of process safety in response to major disasters, such as the Gulf of Mexico Blowout – e.g. see *Disastrous Decisions: The Human and Organisational Causes of the Gulf of Mexico Blowout*; Hopkins, Andrew, (2012), chapter 6. In these extreme scenarios it is easy to see that measuring LTIFR does not reflect a realistic measure for process safety issues in environments where imminent risk still remains, moreover elusively looming in the background. A risk of a major OHS, or environmental disaster remains present, that is often falsely misrepresented or downplayed under the guise of a low ranking LTIFR. The same low LTIFR that is meant to reflect a rosy happy healthy safe workplace.

This concern is just as relevant to personal health and safety. A large percentage of fatalities and lost time injuries occur in situations where work is being carried out in the same manner as it has been for extended periods of time, "this is the way we've always done things around here" type of approach. The fact that an organisation records a Lost Time Injury after 780 days without a lost time injury previously during that period, does not mean that their safety performance has suddenly deteriorated; and yet that is the conclusion that can be reached by organisations that place too much emphasis on LTIFR as a measure. These measures also become less relevant for measuring performance in relation to gradual onset injuries such as musculoskeletal disorders and psychological harm, as they relate to when the injury is reported, or time is lost, rather than when the harm occurred or developed.

Further, incidence measures are very volatile for small to medium enterprise. Assuming a 38 hour week, for 48 weeks per year: one injury for an employer with 50 workers would result in an LTIFR of approximately 10; for an employer with 20 workers, the same injury would result in an LTIFR of approximately 27; and for an employer with 10 workers that same single injury would result in LTIFR of approximately 54. It is unlikely that the employer with 10 workers is really 5 times worse at managing safety than the employer with 50 workers.

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Focus on LTIs and TRIFR distracts attention from the management of controls for fatalities and permanent incapacity critical risks. The Building and Construction Industry (BCI) need to seize the huge opportunity to reduce the number, length and complexity of Safe Work Method Statements (SWMS) for High Risk Construction Work (HRCW) and increase talking about the work to be done and the work that has just been completed.

A focus on evidence of the myth of the safety pyramid advised to beware the fallacy of thinking that if we control the causes of first aid injuries we will also have controlled the causes of fatalities! A study of fatality and accident rates in the Finnish construction industry over 15 years showed that, “the fatality rate in the construction industry increased when the accident frequency declined”. This was reflected in evidence from the American journal of industrial medicine 56:509-519 (2013) showing the states with low non-fatal injury rates have high fatality rates and vice-versa, indicating an inverse relationship between injuries and fatalities.

In the construction sector, states with high fatal injuries had low rates of non-fatal injuries. The converse was also true; states with lower fatal injuries had higher rates of these non-fatal injuries; Concluding that fatality rates appear to be a more valid measure of risk.

Which poses the question many of us in the BCI ask why is there such a focus on lag indicators such as LTI's? When leadership focus should encourage more conversations with people, such as, are the critical controls in place and working well? What worked well? What did not go according to plan or was difficult or frustrating? What could have gone better? What can we do to improve things around here? Other positive performance indicators that should receive more heavily weighted focus on what most BCI businesses do, day in and day out include planning, site preparation and readiness, consultation, toolbox talks, take fives, pre-starts, onsite training, High Risk Workshops, risk assessments, risk and opportunity registers, one hundred percent compliance with onsite inductions, emergency preparedness to name a few.

Safe Work Australia is unable to supply the national number of lost-time injuries involving the loss of one day/shift or more from work. Instead Safe Work Australia publishes rates based on accepted workers' compensation claims that involved the loss of one or more working weeks (termed serious claims). The reason for this data scope is explained in more detail. Data used by Safe Work Australia is from the National Data Set of Compensation based Statistics (NDS). Safe Work Australia asks jurisdictions to supply data scoped broadly the same as that set out in the Australian Standard: claims that involved either a death; permanent incapacity; or a temporary incapacity for which payments have been made (including common law claims). However, there are differences between the jurisdictions in the amount of time the employee must be off work before the employer can claim against their workers' compensation policy known as the employer excess. Employer excesses range from one day to ten days across the jurisdictions. Although an employer should inform the relevant Workcover organisation of incidents that fall within their excess period, this does not happen in all cases. This results in under-reporting of short-term work-related incidents. To improve comparability across jurisdictions, the standard Safe Work Australia publication scope is limited to serious compensation claims: thus excluding claims of less than one working week.

There is a trend within the BCI to move away from the words “known as the Workplace injury and disease recording standard” to the “Measurement of Occupational Health and Safety Performance” or the use of positive performance indicators to measure effective OHS performance. The rationale that supports this new approach is that industry is tired of reactive retrospective reporting on trends where the horse has already bolted, so to speak. Industry has taken the initiative to support continual improvement where they can. The new focus will draw on contemporary research and international standards that may be relevant to establishing guidance on how to identify appropriate measures that consider how OHS is being managed, rather than the number of incidents (lost time or otherwise) being recorded. The new focus reflects the level of responsibility required for officers in relation to OH&S legislative obligations. As we all know the WHS and OHS legislation leaves no individual outside the net of the law, as everyone is a PCBU and therefore accountable and able to be prosecuted. Organisations will need to identify which of

these newly focused performance measures are appropriate and relevant to the size and maturity of their organisation and their risk profile. Specific targets for improvement will need to be determined by each organisation. Therefore, these performance measures are not intended to be used for the purposes of benchmarking unless organisations share a common goal, in which case they will have selected the same criteria to be measured against.

There is an appetite both Nationally and Internationally¹ within the OHS Standards development arena to develop guidance on how to measure effective OHS performance. It is intended to provide organisations, including SME's with guidance, on how to improve their management of health and safety which will not only reduce their operating costs but reduce their workers compensation claims of injury and ill-health which places a burden on public health costs. Work-related injuries, illnesses and deaths impose both direct costs and indirect costs on employers, workers and the community.

Positive outcomes will provide workers (the workforce) with a common Nationally recognised document/framework to help understand how to measure proactive OHS performance and thereby how to prevent and manage a range of hazards and risks which can negatively impact health and wellbeing in the workplace. The intention of focusing on positive performance indicators is aimed to reduce the number of workplace injuries, incidence of disease through establishing agreed measures that assist organisations to effectively measure their OHS performance. Sound workplace health and safety standards have a significant contribution to society and communities as people remain productive and, in the workforce, and healthier throughout their lives. Having a clear understanding of how to measure proactive contributions to OHS improvements will help contribute in the avoidance and or reduction in frequency of having to deal with incidents, injury, ill-health or the death of a co-worker, colleague, friend, member of the community or loved one, through the increased awareness and better understanding of positive safety principals in the management of hazards and risks in the workplace.

Introducing an improved standardised performance measure methodology will contribute to organisations having a greater opportunity to demonstrate their ability to carry out work in a way that is healthy and safe, without being measured purely by LTIFR which is volatile (especially for small businesses) and can be easily manipulated. Statistics already gathered by ISO reflect improved workplace safety processes and safer productivity as a result of the adoption of ISO Standards when they are implemented as intended.

It goes without saying the shift in focus from industry to be more evenly weighted from recording LTIFR's and transferred to measuring the positive performance indicators being implemented will provide a more accurate representation of a Contractors effective safety management performance on site, which can only be a good thing.

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¹ Both SF-001 the Standards Australia National Technical Committee responsible for Standards development in the Occupational Health and Safety Management field and ISO TC283 the International committee responsible for the same, are working towards the development of a new international Standard for Performance Evaluation/OHS Metrics.

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