Effective Measurement for Safety

MISSION: ZERO

Guide

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Definitions

The definitions are intended to clarify common health and safety terms used in Saskatchewan workplaces. While not all definitions are referenced throughout the materials, they may be of use as the employer develops, implements and maintains a measurement system for safety as part of the health and safety management system.

It is important to note that definitions explain words. When words are presented in OHS legislation, it is imperative to abide by the interpretations of those words as set out by legislation.

Accident: An unwanted, unplanned event that results in a loss; these losses could include production loss, property damage and/or injury or illness including death; *Joint Industry Committee, A guide to the Framework of Standards for Health and Safety Programs*

Arising out of employment: Means the injury must have a link to, originate from, or be the result of a hazard from employment; WCB Policy Manual 6.1 Arising Out of and In the Course of Employment (POL 12/2013)

Claim suppression: Actions undertaken by an employer that hinder the appropriate reporting of a worker's injury or illness resulting from work; *Institute for Work & Health, Issue Briefing Suppression of workplace injury and illness claims: Summary of evidence in Canada*

Direct cause: Usually happens immediately before the incident; what led directly to the incident, described by: struck by, fall to lower level, caught in or between, contact with, exposure to, etc. WorkSafe Saskatchewan OHC Level 2 Inspections and Investigations Workbook.

Duty of employer to notify board of injury: Within five days after the date on which an employer becomes aware of an injury that prevents a worker from earning full wages or that necessitates medical aid, the employer shall notify the board in writing of: (a) the nature, cause and circumstances of the injury; (b) the time of the injury; (c) the name and address of the injured worker; (d) the place where the injury happened; (e) the name and address of any physician who attends the worker for his or her injury; and (f) any further particulars of the injury or claim for compensation that the board may require; The Worker's Compensation Act (27)

Employment: Means employment in the service of an employer whether the worker's duties are performed at, near or away from the employer's place of business; The Worker's Compensation Act (Preliminary Matters 2(1)(n))

First aid: Means immediate assistance given in case of injury until medical aid has been obtained; Occupational Health and Safety Regulations Interpretation 2(1) (y)

> In the context of safety statistics a "**first aid**" includes any one-time treatment and any follow-up visit for the purpose of observation of minor scratches, cuts, burns, splinters, or other minor industrial injuries, which do not ordinarily require medical care. This one-time treatment, and follow-up visit for the purpose of observation, is considered first aid even though provided by a physician or registered professional personnel;

Occupational Health and Safety Administration (OSHA). First Aid include visits to a doctor or health care professional solely for observation or counseling, diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and any procedure that can be labeled first aid.

Frequency: How often a given type of incident occurs; for example, a lost time frequency would express how many lost time incidents are taking place per a given number of hours worked (e.g. TL/200,000 hours).

Hazard: The inherent potential to cause injury or damage.

Health care professional: Means a physician, dentist, chiropractor, optometrist, psychologist, occupational therapist, physical therapist, nurse or any other person who is registered or licensed pursuant to any Act to practice any of the healing arts; The Worker's Compensation Act (Preliminary Matters 2(1)(p))

Hours worked/exposure hour: All employees (including management), training & overtime hours worked. Exclude leave, sickness, and other absences.

Incident: An unplanned, unwanted event that results in or could have resulted in a loss; these losses could include production loss, property damage and/or injury including death. An accident and near miss are different categories of an incident.

Indirect cause: These substandard acts, procedures and conditions that set the stage for the accident. Examples are lack of training, departures from safe work practices, using inadequate or defective tools, equipment or materials, inadequate guards or barriers.

Injury: Means all or any of the following arising out of and in the course of employment: The Worker's Compensation Act (Preliminary Matters 2(1) (r))

i. The results of a willful and intentional act, not being the act of the worker
ii. The results of a chance event occasioned by a physical or natural cause
iii. A disabling or potentially disabling condition caused by an occupational disease
iv. Any disablement

Injury: For the purposes of the Act and in these regulations and all other regulations made pursuant to the Act, "injury" includes any disease and any impairment of the physical or mental condition of a person. The Occupational Health and Safety Regulations, 1996 Preliminary Matters 2(2)

"**In the course of employment**" means the injury must:

(a) Happen in a time and place linked to employment, and
(b) Be the direct result of a worker performing a task which is part of their obligations and purpose of employment.

(WCB Policy Manual 3.1.1 Arising Out of and In the Course of Employment (POL 03/2017)

Job Hazard Analysis (JHA), Job Safety Analysis (JSA): The process of systematically evaluating a job, task, process or procedure to identify hazards and their associated risks, and then eliminating or reducing the risks or hazards to as low as reasonably practicable in order to protect workers from injury. To conduct a JHA:

- Break the job down into its basic steps
- Identify the hazards present in each of the steps
- Assess the risk associated with each hazard
- Develop controls to eliminate or reduce the risk associated with each hazard

Lagging indicator: A measure of past performance and trends after the fact.

Leading indicator: A measure of future performance, management commitment or systems to drive performance change.

Measurement: A means to qualify, order and quantify certain events and use the results as a basis for the control and prediction of performance.

Medical aid: Means the provision of medical and surgical aid, of hospital and professional nursing services, of chiropractic and other treatment and of prosthetics or apparatus; The Worker's Compensation Act (Preliminary Matters 2(1)(v)).

Medical restrictions: Clear and specific limits, including, but not limited to, specific work activities, exposures, body motions, time frames, and lifting capabilities, as identified by the injured worker's Health Care Practitioner, required to protect the worker from further injury. Medical restrictions arising from an injury may be physical, cognitive and/or psychological and be of a temporary or permanent nature.

Medical treatment: In the context of safety statistics, sometimes referred to as a medical aid being medical treatment beyond first aid. Involves a significant injury or illness diagnosed by a physician or Health Care Professional; Canadian Association of Petroleum Products (CAPP) Reporting of Occupational Injuries June 2008.

Near miss: An unwanted, unplanned event that didn't but could have resulted in a loss (production, property or human).

Occupational disease: Means a disease or disorder that arises out of and in the course of employment and that results from causes or conditions that are: (i) peculiar to or characteristic of a particular trade, occupation or industry; or (ii) peculiar to a particular employment; The Worker's Compensation Act (Preliminary Matters 2(1) (aa)).

Occupational health and safety: means

- The promotion and maintenance of the highest degree of physical, mental and social well-being of workers;

- The prevention among workers of ill health caused by their working conditions;
- The protection of workers in their employment from factors adverse to their health;
- The placing and maintenance of workers in working environments that are adapted to their individual physiological and psychological conditions; and
- The promotion and maintenance of a working environment that is free of harassment The Saskatchewan Employment Act (SEA) 3-1(1)(o).

Permanent disability: Any disability from which an injured worker is not expected to recover to his/her pre-injury level.

Probability: The likelihood that a given event will occur; often is a combination of how frequently an individual is around a hazard in combination with how likely the event is to occur.

In the context of hazard identification and control; the process of systematically evaluating a job, task, process or procedure to identify hazards and their associated risks, and then eliminating or reducing the risks or hazards to as low as reasonably practicable in order to protect workers from injury.

Record: Something that recalls or relates past events, a body of known or recorded facts regarding something or someone; *Implementing an Occupational Health and Safety (OHS) Program Canadian Centre for Occupational Health and Safety (CCOHS).*

Recordable or recordable incident: In the context of safety statistics a medical aid is sometimes referred to as a recordable or a recordable incident. A recordable definition could include those work-related injuries and illnesses that result in:

- Death;
- Loss of consciousness;
- Days away from work;
- Restricted work activity or job transfer; or
- Medical treatment beyond first aid.
- Includes work-related injuries and illnesses that are significant such as cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum.

OSHA recordable: An injury or illness meets the general recording criteria, and therefore to be recordable, if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must also consider a case to meet the general recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. *Occupational Safety and Health Administration (OSHA) 1904.7(a) United States Department of Labor.*

Restricted work: Restricted work activity occurs when, as the result of a work-related injury or illness, an employer or health-care professional keeps, or recommends keeping, employees from doing the routine functions of their jobs or from working the full work day that they would have been scheduled to work before the injury or illness occurred.

Risk: The probability that during a given period of activity, a hazard could result in an accident with definable consequences

> A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to a person or object

Root cause: Root cause often explains why substandard acts and conditions were allowed to exist. They are fundamental flaws such as lack of employer's health and safety management system. Examples would be lack of supervision, no training plan, lack of a preventative maintenance plan, no inspection plan, etc.

Safety performance indicator (SPI): A set of parameters that are easy to follow up and which give a sufficiently clear picture of the safety status of the operation, and which at an early stage will give the operation management an indicator that some aspect of the operation is about to deteriorate so that corrective action can be initiated before the situation creates an unacceptable risk.

Safety program: A program of administrative and procedural plans for hazard identification, hazard control and loss prevention; the process of putting them into place, and a method for maintaining their effectiveness; the combined and interrelated processes for the control of avoidable loss.

Severity: A measure of the seriousness of the negative consequences of an accident (actual or potential). Severity is often expressed as a measure of the lost time work day rate: Number of Days Lost x 200,000 Hours/Total Hours Worked.

Statistics: Dealing with the collection, analysis, interpretation and presentation of masses of numerical data; *Implementing an Occupational Health and Safety (OHS) Program Canadian Centre for Occupational Health and Safety (CCOHS).*

Temporary disability: Any disability from which an injured worker is expected to recover to his/her pre-injury level.

Total recordable injuries: The sum of fatalities, lost work day cases, restricted work cases, and medical treatment cases; *Canadian Association of Petroleum Products (CAPP) Reporting of Occupational Injuries June 2008.*

Waiver of Act prohibited: Every agreement between a worker and his or her employer to waive or forego any of the compensation to which the worker or the worker's dependents are or may become entitled pursuant to this Act is void. (2) No employer or person acting on behalf of an employer shall compel, induce or attempt to compel or induce a worker by intimidation, coercion, promise, the imposition of a pecuniary or other penalty, threat, including a threat of dismissal, or any other means: (a) not to apply for or pursue an application that has been made for compensation; or (b)

not to receive compensation.(3) No employer or person acting on behalf of an employer shall take or threaten to take discriminatory action against a person for reporting or attempting to report an alleged contravention of this section to the board. (4) Every person who contravenes subsection (2) or (3): (a) is guilty of an offence and liable on summary conviction to a fine of not more than $1,000; and (b) if the board so orders, shall pay to the board the amount of any compensation that the worker is entitled to, whether or not the employer has been convicted of an offence. The Worker's Compensation Act, 163.

When compensation payable: If a worker is not disabled beyond the day on which the worker is injured, no compensation, other than medical aid, is to be paid. (2) If the worker is disabled for longer than the day on which the worker is injured, compensation must be paid on and from the day of the commencement of the worker's loss of earnings resulting from the injury, excluding the day on which the worker is injured. The Worker's Compensation Act, 31.

Work injury: A work injury is an injury that: Happens at work, on company property or on company business. Needs medical treatment. May or may not need time away from work. WCB Employer Responsibilities Duty to Report Injuries: www.wcbsask.com/employers/employer-responsibilities/.

Introduction

Saskatchewan legislation is based on the philosophy that responsibility for occupational health and safety is shared in the workplace through the workplace responsibility system (WRS). The WRS places requirements on all employees in the workplace to the degree of authority and control they have. This means that the employer, supervisors, committee, representative, employees, and in fact all who enter the workplace must work together cooperatively to ensure a safe workplace.

The employer has a great deal of responsibility as they have the most control and authority. The general duty clauses in the Act and Regulations cover the responsibilities of all parties in the workplace. OHCs and representatives are the primary mechanisms for employers and workers to work together to identify and resolve health and safety concerns. Experience with OHCs has proven they reduce workplace injuries and illnesses.

To reduce injuries and illnesses employers must provide an effective safety system. As part of the effective safety system employers must set specific and measurable objectives for safety, review the safety objectives and processes performance at least annually, and identify leading and lagging indicators appropriate to the workplace to track safety performance. Safety statistics are used as health and safety performance measures. The principle being, "you can't improve what you don't measure." At a minimum, legislative compliance for injury and compensation reporting is mandatory.

Measurement is the starting point for improvement for safety and gives a basis to establish targets, just as monitoring and targets are important for production, quality and customer service — the same principles apply for safety performance. The ultimate goal of understanding safety statistics is to provide a healthy and safe workplace by identifying hazards, assessing the risk, controlling then reviewing to ensure the corrective measures taken are effective.

Relevant information can be found in The Saskatchewan Employment Act (SEA), Part III, Occupational Health and Safety (SEA) and The Occupational Health and Safety Regulations, 1996 (regulations), The Mines Regulations, 2003; The Workers' Compensation Act, 2013; and the Saskatchewan Workers' Compensation Board Policy Manual.

What is in this guide

The course is intended to assist employers in understanding the benefits of keeping safety statistics — the why, what and where to find the information, the applicable legislation, data management, training, communication, and continuous improvement.

Legal requirements are listed in Chapter 1: Measurement — Why? to comply with the Legislation. The course will provide basic tools and recommendations on minimum tracking. Participants will be given a link to a website where they can download all tools which are customizable to their workplace and result in transferable skills.

The course materials will encourage employers to grow through continuous improvement.

Chapter 1: Measurement — Why?

This chapter covers the regulatory requirements for reporting and the benefits of keeping safety statistics. The human element; the impact of injuries and illnesses on the injured worker and the employer are discussed. Learn the business case for safety, what do incidents cost, the importance of safety leadership and responsibilities of management and leadership.

Chapter 2: Measurement — What?

This chapter defines measurements and the considerations in establishing key safety performance indicators (SPI). Learn the basics of safety objectives, safety performance indicators, qualitative/quantitative, leading/lagging indicators, validity of the data, and suppression of workplace injury or illness claims. An assessment tool to evaluate reporting and analysis in the workplace is introduced and discussion on the basis of the data and the importance of incident classification is covered.

Chapter 3: Measurement — Where?

The employer must decide what information to track and determine reliable and timely sources of the data. Review this chapter for information on examples of where to find the data required.

Chapter 4: Data Management — Collecting

This chapter includes information on selecting and creating the data collection system.

Chapter 5: Data Management — Building

This chapter reviews the Excel spreadsheet that has been developed to collect the data. Explanation is given of the Excel worksheet developed to collect, store and produce basic safety data. Participants will be given a link to download the tools, such as the Excel spreadsheet, the incident investigation form, and the first aid register.

Chapter 6: Data Management — Products

The data captured in the spreadsheet will be used to produce products that will be of value in the workplace. This chapter includes minimum information to track as well as the concepts of more advanced products of the data. Definitions and calculations for generally accepted industry standards such as Total Recordable Injury Frequency (TRIF), Severity Rate (SR), Lost Time Case Rate (LTC), Lost Time Work Day Rate (LTW), and Days Away/Restricted or Job Transfer Rate (DART) are included in this chapter. Review this chapter for information on visual safety (charts and graphs).

Chapter 7: Data Management — Reporting

This chapter includes guidelines on reporting and distribution.

Chapter 8: Training

Review this chapter for information on training requirements and documentation.

Chapter 9: Communication

This chapter includes information on communication methods, improving safety communication and communication benefits.

Chapter 10: Continuous Improvement

Continuous improvement is an integral part of the workplace health and safety program. Objectives set must be reviewed at planned intervals to assess whether the place of employment has met them relative to suitability, adequacy and effectiveness. Review this section for information on continuous improvement.

Appendices

Appendix 1: Cause of Injury Reference Sheets
Appendix 2: Factors Reference Guide – Indirect and Root Cause Examples
Appendix 3: First Aid Register
Appendix 4: Incident Investigation Form
Appendix 5: Medical Aid/Treatment versus First Aid Decision Chart
Appendix 6: Medical Restrictions Form
Appendix 7: Safety Incident Log Sheet
Appendix 8: Leading and Lagging Indicator Examples

Notes

Chapter 1: Measurement — Why?

- Benefits of keeping safety statistics
- Regulatory Requirements
- The Human Element — the injured worker, the employer
- Business Case for Safety — What do incidents cost?
- Management and Leadership

Introduction

Why measure, compile, analyze and communicate safety statistics? This chapter outlines the requirements, benefits and business case for keeping safety statistics.

Fundamentals

There is a saying "You can't improve what you don't measure." Measurement is the starting point for improvement for health and safety and gives a basis from which to establish targets. Just as monitoring and targets are important for production, quality and customer service, the same principles apply for safety performance.

Employers must comply with legislation and to ensure the health, safety and welfare at work of all the employer's workers. The employer measures safety to comply with the legislation, to eliminate injuries and health issues related to the workplace, to reduce human suffering, reduce costs, improve morale and productivity, and attract and retain employees. The ultimate goal of understanding safety statistics is to provide a healthy and safe workplace.

Keeping safety statistics provides a measurement of the progress and effectiveness of the occupational health and safety program.

What is occupational health and safety?

The human suffering and financial loss caused by work injuries and illnesses each year is tremendous. Incident statistics and their financial costs are set out in the Saskatchewan Workers' Compensation Board (WCB) figures. Every statistic represents incalculable human suffering. The suffering of the injured often is intensified by the knowledge that all incidents are predictable and, as such, preventable. Effective occupational health and safety programs prevent incidents and reduce suffering.

Occupational health and safety involves more than correcting unsafe actions and conditions. Under SEA 3-1(1)(o), it includes:

- The promotion and maintenance of the highest degree of physical, mental and social well- being of workers;
- The prevention among workers of ill health caused by working conditions;
- The protection of workers from factors adverse to their health;
- The placing and maintenance of workers in working environments that are adapted to their individual physiological and psychological conditions; and
- The promotion and maintenance of a workplace free of harassment.

Let's start with some definitions

What are records?

Definition: "something that recalls or relates past events, a body of known or recorded facts regarding something or someone".

Records must be retained as per legislation and your company policy. Examples include workers training records, health and safety orientation forms, health and safety committee minutes, hazards assessments, workplace inspection reports, incident investigation reports, first aid and other medical treatment reports, statistical summaries of health and safety activities.

What are statistics?

Definition: "dealing with the collection, analysis, interpretation and presentation of masses of numerical data".

The above two definitions, provided by the Canadian Centre for Occupational Health and Safety (CCOHS), are found in the document *Implementing an Occupational Health and Safety (OH&S) Program.*

The workplace must set objectives for health and safety that are appropriate and meaningful for the workplace. Statistics are used to measure and evaluate the effectiveness of the health and safety system. Examples of tracking of safety statistics include the number of near misses, first aids, lost times, lost work days, restricted work days, property/equipment damage.

What are the benefits of keeping records and safety statistics?

The benefits of keeping accurate records and safety statistics:

- To ensure compliance to legislative requirements.
- Accurate records are essential in the search for the cause of an illness or an incident and can aid in finding the means to prevent future similar incidents.
- Safety statistics are a performance measure of the health and safety program.

- Statistics provide an objective evaluation of the magnitude of occupational illness and injuries.
- Statistics enable the identification of high-hazard tasks, facilities, and problem areas so that extra effort can be made in those areas.
- Safety statistics generate interest and awareness in safety and health amongst employees.
- Safety statistics helps establish the need for, and the content of, employee and management training programs.
- The overall benefit of keeping safety statistics is to reduce human suffering, costs, losses and improve morale.

Regulatory Requirements

The Saskatchewan legislation covers the minimum legal requirements. Relevant information is found in *The Saskatchewan Employment Act (SEA), 2013; The Occupational Health and Safety Regulations, 1996; The Mines Regulations, 2003; and The Worker's Compensation Act, 2013.*

The Workplace Responsibility System (WRS) places requirements on all employees in the workplace to the degree of authority and control they have. This means that the employer, supervisors, committee, representative and employees must work cooperatively to ensure a safe workplace. Everyone must follow the safety rules and the legislation.

The employer has a great deal of responsibility as they have the most control and authority. SEA 3-8 General Duties of Employer states that "Every employer shall: a) ensure, insofar as it is reasonably practicable, the health, safety and welfare at work of all the employer's workers…"

Important legislation relevant to safety statistics and reporting is listed below; however the list is not meant to be all inclusive list. There is a requirement to review the legislation and be knowledgeable as to what is applicable to your workplace.

SEA 3-64 Obtaining Information includes the requirements for the employer to compile occupationally related injury and illness statistics for the place of employment as directed by the Director of Occupational Health and Safety. This includes any information in any form and manner in prescribed circumstances, within the time frame specified. The employer shall compile the statistics in a manner that protects the confidentiality of workers, post the information and provide the statistics to the Occupational Health Committee, the representative or the workers.

SEA 3-16 Duty to Provide Information speaks to "required information" and is necessary to identify and control any existing or potential hazards with respect to a place of employment. As the compilation of safety statistics are used to determine where incidents are occurring they are paramount in determining trends and existing and potential hazards that need to be addressed. By looking at first aid registries, incident investigations, inspections, etc., hazards can be identified, risk assessed and control measures implemented.

Relevant *Occupational Health and Safety Regulations, 1996* include:

Regulation 11 Reporting re injuries — The employer can be required to provide details of person-hours worked and work-related injuries during the preceding year to the minister or any other agency the minister designates.

Regulation 32 Injuries requiring medical treatment — Lost time injuries requiring medical treatment must be reported to the co-chairpersons, the representative or their designate and allow a reasonable opportunity to review the lost-time injury during normal working hours and without loss of pay or other benefits.

Regulation 56 First Aid Station — An employer or contractor shall provide and maintain for every worksite a readily accessible first aid station that contains: (a) a first aid box containing the supplies and equipment set out in Table 10 of the Appendix; (b) a suitable first aid manual; and (c) any other supplies and equipment required by these regulations.

Regulation 57 First Aid Register — An employer or contractor shall ensure that: (a) each first aid station is provided with a first aid register; (b) all particulars of the following are recorded in the first aid register: (i) each first aid treatment administered to a worker while at work; (ii) each case referred to medical attention; (c) a first aid register is readily available for inspection by the committee or representative; and (d) a first aid register no longer in use is retained at the place of employment for a period of not less than five years from the day on which the register ceased to be used.

Table 9 Summary of First Aid Requirements — Minimum: Every place of employment requires a first aid box containing standard supplies (see Table 10), a manual, a register and emergency information. Table 9 lists the additional requirements based on the proximity to a medical facility and classification of the activities regarding high hazard work (Table 8) or low hazard work as defined in Table 9.

Table 8 Activities That Constitute High Work — Table 8 includes a list of activities that constitute high hazard work. Examples are: building construction, drilling for gas, oil and minerals, service for gas and oil wells, logging, sawmilling, iron and steel processing and fabrication, road construction, earthwork, tunneling and trenching, local and provincial hauling and trucking, mining and smelting, exploration drilling, shaft sinking, quarrying and crushing of rocks, manufacturing of concrete block, brick, artificial stone and other clay and cement products, power line construction and maintenance.

Regulation 48 Opportunity for necessary activities — Members of a committee or a representative are allowed to examine records, reports and logbook that an employer or contractor is required to keep at the place of employer pursuant to the Act or regulations.

Regulation 8 Accidents causing serious bodily injury — An employer or contractor shall give notice to the division as soon as is reasonably possible of every incident that (a) causes, or may cause, the death of a worker; or (b) will require a worker to be admitted to a hospital as an in-patient for a period of 72 hours or more. Regulation 8 deals with incidents that cause injury.

The OHS Division requires employers, contractors and owners to report any incident requiring a worker to receive emergency medical attention in a hospital if the employer:

- Knows or believes that the incident will cause the worker to be hospitalized for 72 hours or more; or
- Is not notified the day after the incident that the worker will be discharged from hospital before the 72 hour period is up

Regulation 9 Dangerous occurrences — means any occurrence that does not result in, but could have resulted in, a condition or circumstance set out in subsection 8(1). Regulation 9 discusses

incidents that could have hurt someone, but did not (near misses). Regulation 9(1)(a-h) does not list every dangerous occurrence that must be reported; it only provides examples.

In the investigation of Regulation 29 Investigation of certain accidents and Regulation 31 Investigation of dangerous occurrences that the employer ensures that the co-chairpersons or designates, the employer and the representative or where there is no committee or representative, the employer is involved.

The Mines Regulations, Regulation 10 Monthly Statistics "Not later than 14 days after the end of each calendar month, an employer or contractor must provide the division and the co-chairpersons of the committee with employment and accident statistics for the previous calendar month in a form satisfactory to the chief mines inspector."

The Workers Compensation Act 140 Forwarding information re injury records — "The board may forward to the Occupational Health and Safety Division any information respecting the injury record of an employer or any class or subclass of industries that the board considers appropriate for the purpose of improving occupational health and safety."

The Human Element

Injured Worker

In the previous section, we reviewed the legislative requirements. Employers have a legal and moral responsibility for health and safety in the workplace. The WRS also places responsibility on all employees in the workplace to the degree of authority and control they have.

A personal injury can be physical, a work-related disease, an illness, psychological or emotional conditions that may be related to stressful work, discrimination, harassment, a hostile work environment, violence or a fatal injury.

Money cannot measure all the harm done by accidents and illnesses. Being injured at work has serious and sometimes permanent and irreversible effects on its victims and their families as well as first responders and co-workers.

There are varied ranges of social and economic consequences for the injured that are caused by a number of factors. Injury or illness put a strain on relationships in a number of ways, through emotional stress, financial pressures and isolation.

Workers die, lose their health, income, careers, dreams and futures. Eliminating and reducing the impact of work-related injuries and illnesses is a moral and legal responsibility of all those in the workplace.

Employer

Employers are required to provide a healthy and safe workplace, to identify, assess and control hazards. Employers are required to train and inform employees on the hazards in their workplace and the controls in place.

Employers and supervisors must be duly diligent or can face prosecution, fines, contraventions, stop work orders or summary offence tickets.

Employers are also impacted by the human side of safety and their employees' injuries and illnesses. They must face the employee and the employee's family and often live with guilt of the workplace injury — what they did or what they didn't do that may have contributed to the incident. Those employers who have experienced a serious injury, illness or fatality understand that "safety is personal". In the video "Safety is Personal: An Employer's Story" produced by WorkSafeBC, Mike Honeyman has a message for employers sharing the hard lesson he learned as a business owner after one of his workers was seriously injured on the job.

The cost of risk can be calculated from reactive events such as time spent on insurance issues, time spent on managing claims, fees for consultants and attorneys, regulatory fines. A more effective way to spend money on risk activities is on the proactive side in activities such as hazard identification, cost of personal safety, safety equipment and training time.

The Business Case for Safety

Lack of an effective health & safety program can lead to incidents and a demotivated workforce. The costs associated with incidents can spiral from lost production of the worker, insurance claims, increased insurance premiums, accident investigation time and resources.

Costs associated with accidents and illness in the workplace can be divided into two categories: insured (direct) and uninsured (indirect or hidden) costs.

Insured costs include the benefits paid by Saskatchewan Workers' Compensation, medical costs (fees paid to health care professionals), earning replacement costs and vocational rehabilitation costs.

Uninsured costs are often hidden costs that the employer may not consider and are more difficult to determine and tally. The uninsured costs are the out of pocket expenses that the employer must bear. Examples of uninsured costs include:

- Injured worker time — loss of productive time, experience and graduated return to work
- Co-worker time — at the scene, assisting in rescue, sympathy, curiosity, work interruption at the time of injury and discussion afterward, cost of overtime, investigation time, morale
- Loss of efficiency — due to break-up of crew
- Leader time — investigation, rescheduling, selecting and training replacement workers, preparing incident reports
- Training cost — for new/replacement workers
- Damage — to tools and equipment and cost of repairs
- Time — damaged equipment is out of service
- Loss of production — for the remainder of the day or days, slowdown
- Damage from incident — fire, water, chemical, explosions, etc.

- Failure to fill orders or meet deadlines
- Loss of quality and production reduction — adverse publicity, and problems in hiring new workers
- Overhead costs — while work was disrupted
- Loss of business and goodwill

The type and degree of loss depend partly on the circumstances and partly on the controls in place or actions taken to minimize loss. Actions taken to minimize loss include prompt and proper first aid and medical care, fast and effective firefighting, prompt repair of damaged equipment and facilities, and efficient implementation of the emergency action plans.

Whether or not people are hurt, incidents do cost money. The injury or illness costs are a relatively small part of the total costs.

To understand the difference in insured versus uninsured costs, a pioneer in safety named Frank E. Bird, Jr. developed a diagram of an iceberg showing the relationship between insured costs which are the small part of the iceberg above the waterline and can be seen and calculated. The uninsured costs are indicated by the massive part of the iceberg below the waterline that is difficult to see and calculate.

Research estimating the uninsured costs are available from various sources. In November 2015 Safe Saskatchewan stated “It is estimated that for every $1 in direct costs, there are between $4 and $11 in indirect costs.” In the following graphic, the uninsured costs are conservatively estimated to be anywhere from 2 to 6x the insured costs.

What do incidents cost you?

Insured Costs (Direct)

- Medical costs
- Earnings replacement costs
- Vocational rehabilitation costs

Uninsured (Indirect or hidden costs. Estimated to be 2-6x the insured cost.)

- Injured worker time
- Co-worker and leader time
- General and property losses
- Loss of business and goodwill
- Other losses

The Iceberg Theory of Costs of Injuries

The uninsured costs — the math

The iceberg graphic illustrated the many other costs that are not insured. The following example is a calculation of the amount of revenue the company would have to generate to cover the uninsured or hidden costs of incidents paid by the employer.

A. Insured cost of the incident (costs paid by the WCB)
B. Uninsured costs (from 2 - 6x the insured costs)
C. Profit margin of the company
D. Revenue needed to cover the cost of the incident

The uninsured costs — Example

A. Insured cost = 2015 average cost of a lost time WCB claim in Saskatchewan was $12,000
B. Uninsured cost assumed to be 4x the insured cost
C. Company profit margin is 10%
D. Revenue required = (A x B)/(C/100)

= ($12,000 x 4)/.10
= $48,000/.10
= $480,000

In this example, the company with a profit margin of 10% has to generate $480,000 in revenue to cover the average cost of one lost time claim.

Profit Margin Definition: Net profit after taxes divided by sales for a given 12-month period expressed as a percentage.

Incident Cost Calculators

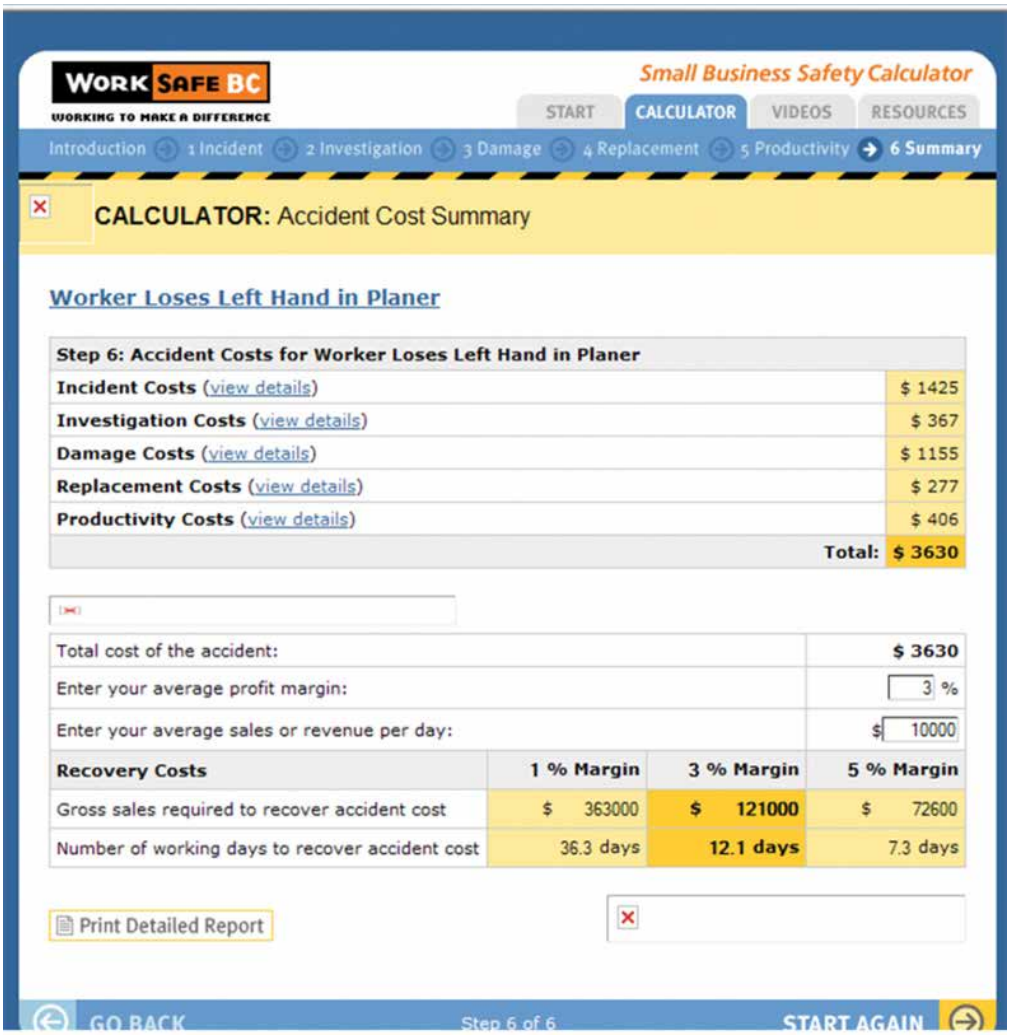
There are a number of Canadian jurisdictions that provide incident cost calculators to help estimate the cost of uninsured costs. These cost calculators are customizable for the incident and workplace. Following is a link to one site:

WorkSafeBC — Workplace Incident Cost Calculator

http://worksafebcmedia.com/media/calculators_html5/wicc/index.html

Note: WorkSafeBC also provides a free app.

The WorkSafeBC Small Business Accident Cost Calculator has example for trucking, retail, landscaping, hospitality, construction and sawmills but is also customizable allowing the entry of specific injury costs. WorkSafeBC also offers a free app and a video is available to instruct the user on how to use the online calculator or the free app.



In this example, the total cost of the incident was estimated to be $3,630, the average profit margin was 3% and the average revenue per day was $10,000. The recovery costs would require $121,000 in gross sales/12.1 days.

Management and Leadership

Leadership is important in the creation of a culture that supports and promotes strong health and safety performance of an organization. Management and leadership have responsibilities in creating a good safety culture in the workplace by establishing and improving the health and safety program, establishing safety objectives, and encouraging and supporting worker participation.

The persons with the greatest degree of control over the situation have the greatest responsibility. Employers exercise the greatest degree of control over the organization of work, the design of the work process and the manner and conditions under which work is performed. The employer has the greatest degree of moral and legal responsibility for providing a health and safe workplace. Supervisors, workers, the committee and representatives must help the employer maintain that health and safe workplace.

Creating a good safety culture requires a common vision and effort from everyone in the organization. Organizations with the lowest injury rates have the highest level of management commitment and employee involvement. Effective leaders recognize the connection between good safety and good business practices.

The manager and/or the team leader are vital in inspiring employees to a higher level of safety and productivity, which means they must apply good leadership attributes on a daily basis. Employers should ask their managers, supervisors and team leads if they consistently:

- Communicate safety standards to their teams
- Involve workers in hazard identification in the workplace
- Prevent unsafe acts
- Motivate staff to be safer
- Monitor safety standards on a daily basis

The goal is to reduce and eliminate work-related injuries and illness and to guide and focus the prevention efforts in the correct areas.

General Duties are set out in the SEA and the regulations and include the general duties of employers, workers, contractors, owners, suppliers, supervisors, directors and officers.

The General Duties of employers include, but are not limited to:

- Providing a safe and healthy workplace (SEA 3-8 General duties of employers)
- Consulting and cooperating with the OHC or OHS Rep (SEA 3-8 General duties of employers)
- Providing appropriate information (3-16 Duty to Provide Information, Regulation 18 Duty to Inform Workers)
- Training workers (Regulation 19 Training of Workers)
- Ensuring supervisors are competent (Regulation 17 Supervision of Work)

- Providing safety program and services where required (SEA 3-19, 3-20 Duty to provide occupational health and safety service and safety programs, Regulation 22 Occupational Health and Safety Program)
- Ensuring equipment, materials and protective devices are provided, used and maintained as required (Regulation 25 Maintenance and Repair of Equipment and Regulation 86, 87 Use of equipment required and General Responsibilities)

Effective Leadership

Clear safety leadership is one of the top priorities in establishing a positive safety culture. What are the leadership principles that promote a positive safety culture?

- **Safety as a top priority** — In making business decisions there are a number of competing priorities such as cost, quality, yield and customer satisfaction. It is imperative that senior management should give safety a high status in the business objectives, and safety should be prioritized in all situations.
- **Leading by Example** — It is important that senior management demonstrate visibility and reiterate their commitment to safety throughout all areas of the organization. For example, if senior management fails to challenge unsafe behaviours they unwittingly reinforce the notion that this behaviour is acceptable to the organization. Senior management decisions and actions must match their words — this creates a shared vision of the importance of safety to the organization.
- **Increasing Visibility around Safety** — It is good to develop a habit of personally conducting safety walkabouts. This demonstrates commitment and managers will become personally aware of the real safety conditions in their area. These walkabouts will also provide an opportunity for managers to meet their teams in their work areas and to have proactive discussions regarding safety.
- **Safety Reporting** — A positive safety culture requires effective reporting from staff of front line safety issues and problems e.g. incidents, near misses and safety concerns. Communicating a problem or concern is only one step on the route towards a good safety culture. It is important that feedback mechanisms should be in place to respond to the reporting regarding any actions taken. Effective safety leaders should respond to all incidents in a positive, learning way. They lead teams to prompt and thorough investigation of all reports identifying root causes and implementing corrective actions. This sends a strong message that knowing about anything that goes wrong is vital to creating the conditions necessary to eliminating the next injury. It also sends a clear message that management views safety performance as important as other business objectives.
- **Employee Involvement** — Active employee participation is a positive step towards preventing and controlling hazards. Ownership for safety can be improved by providing forums for employees who assist in getting them to be personally responsible for areas of safety. It should be easy for staff to report concerns about decisions that are likely to affect them and feedback mechanisms should be established.

- **Creating a Learning Culture** — All employees should be involved in learning by contributing ideas for improvement, and should be encouraged to become aware of what good safety performance actually means in terms of their own jobs. The existence of a learning culture enables the organization to identify, learn and change unsafe conditions and behaviour.
- **Provide Recognition** — A safety leader will give recognition to the delivery of good safety performance. Recognize the achievements of employees who improve safety in the organization, including those who voluntarily contribute to safety.
- **A Reporting Culture** — Employees should feel that they are able to report issues or concerns without fear that they will be personally blamed or disciplined as a result. Leaders should demonstrate care and concern towards employees and should have an open door policy in place to demonstrate this.
- **Effective Communication** — Effective communication from management to staff is vital for the success of safety leadership. This can be achieved by:
    - A visible safety policy
    - Emphasis on safety related issues and policies via staff communication systems, memos, newsletters, messages from top management, quarterly reports, annual reports, safety sheets, the organization's safety objectives/goals and performance against the goals, and the communication of major accidents.
    - Communication systems should be in place within the organization for the effective transfer of safety and health information between individuals, departments, work groups and teams
- **Safety Management System** — Organizations should have effective systems in place for the management and co-ordination of safety. This should be led by the most senior person in the organization, with the support of the senior management team. Objectives should be set to monitor the performance of the system. Outcomes should be communicated to all staff within the organization at regular intervals.

The Saskatchewan Employment Act (SEA) requires an employer at a prescribed place of employment (Table 7 Prescribed Places of Employment Occupational Health and Safety Regulations) to provide an Occupational Health and Safety Program. The requirements of the program are described in Regulation 22 of the Occupational Health and Safety Regulations. The Safety Program must be reviewed at specified intervals that are not greater than three years.

The employer must include a statement of their policy with respect to the protection and maintenance of the health and safety in the workplace. Policies may vary, but most state:

- The commitment of the employer
- The objectives of the Safety Management Program
- The general responsibilities of management and employees
- The role of the occupational health committee/safety representative
- How the program works and is enforced
- The organization's health and safety philosophy. For example:
    - That Health and Safety will not be sacrificed
    - That employees are accountable for their performance
    - That unacceptable performance will be not be tolerated

Verification of meeting the requirements regarding the policy statement includes such questions as:

- Is there a written corporate safety policy?
- Is the safety policy signed by current senior management (highest level of management for the employer)?
- Is the policy current?
- Does the policy include the employer's commitment to safety?
- Does the policy include the employer's safety philosophy?
- Does the policy include the goals of the safety management system?
- Does the policy include employee responsibilities?
- Does the policy address accountability?
- Is the policy posted in highly visible areas?
- Is the policy communicated to all employees?
- Do employees understand the safety policy?

Example Health and Safety Policy

New Company Inc. has a fierce determination to prevent and eliminate workplace injuries and illnesses. We believe that all workplace injuries are predictable and preventable.

We will conduct business in a manner that protects the health and safety of our employees. Health and Safety are core values at **New Company Inc.** based on a philosophy of sincerely caring for the health and well-being of ALL who enter our facility and those in the community in which we live.

We will not put improvements in production, cost reductions, or quality ahead of protecting the health and safety of people.

We will promote employee involvement and accountability in identifying, preventing, and eliminating hazards and the risk of injury and illness.

We are committed to:

Incorporating OHS considerations into all aspects of our management practices;

Managing operations to meet all applicable OHS laws and regulations and company policies;

Identifying hazards, assessing potential risks, and implementing appropriate measures to eliminate or control those hazards;

Establishing an atmosphere of collaboration, communicating and enforcing, through employee involvement, work site-specific rules and safe work methods;

Promoting and developing safe behaviours, awareness, leadership and accountability of our employees in health and safety through their involvement in continual improvement processes;

Measuring our health and safety performance in accordance with established standards, and communicating the results to our employees;

Conducting OHS audits to confirm that our management practices meet policy objectives, legislation, and the principles of sound management; and reporting to the Vice President on the OHS status of our operations.

The Company is responsible for providing and maintaining a safe and healthy workplace.

Leadership is responsible for ensuring that all mill and contractor employees follow safety and health policies, practices, and procedures.

Employees, Contractors, and Visitors are expected to support and participate in the Health and Safety Program and are responsible for following all safety and health policies, practices, and procedures established to protect themselves, their co-workers, contractors, and our visitors.

The Occupational Health and Safety Committee assists the workplace by working with the employer in identifying, assessing and controlling hazards, providing regular inspections, talking with workers about their health and safety concerns, and performing all other legislated duties of committee.

Substandard health and safety performance will not be accepted. Working in a safe and healthy way is a condition of employment.

It is our commitment that all work will be performed in an environment created by a healthy and safe workforce.

Signed by: Vice President of Operations _____ Date Signed:_____

The workplace organizational and management measures can be evaluated using surveys. One such survey was developed by the Institute for Work & Health (IWH) as follows:

Institute for Work & Health Organizational Performance Metric (OPM)

In 2011 and 2012 The Institute for Work & Health Organization (IWH) conducted a study where organizations in Ontario took part in the Ontario Leading Indicators Project (OLIP), formerly known as the 5,000 Firms Study. The study was conducted by the Institute for Work & Health (IWH) in partnership with Ontario's health and safety associations (HSAs) The aim of the Ontario Leading Indicators Project (OLIP) is to identify organizational and management measures that can be used by workplaces and system partners to improve health and safety performance before injuries and illnesses occur.

In the first phases of the project Ontario organizations were randomly selected by IWH to participate. Organizations completed a 20-minute online survey, which asks about workplace health and safety policies and procedures. In return, organizations received an individual benchmarking report.

In 2014, IWH opened up the survey to all organizations. By doing so everyone has the opportunity to help build the benchmarking knowledge base in occupational health and safety research. Participants complete a 20-minute survey and get their results directly. The survey is known as the IWH Organizational Performance Metric (IWH-OPM) and the link to the survey and relevant information is as follows:

www.iwh.on.ca/iwh-opm-questionnaire

The OPM Survey is eight questions regarding health and safety practices. The participant is asked to answer the questions in regards to the percent of time that each practice takes place. The scores are interpreted using the logic of green — performing well in health and safety practices, yellow — needs some improvement, and red — the health and safety likely needs attention and improvement.

Health and Safety Practices	80% - 100% (4)	60% - 80% (3)	40% - 60% (2)	20% - 40% (1)	0% - 20% (0)
1. Formal safety audits at regular intervals are a normal part of our business.	☐	☐	☐	☐	☐
2. Everyone at this organization values ongoing safety improvement in this organization.	☐	☐	☐	☐	☐
3. This organization considers safety at least as important as production and quality in the way work is done.	☐	☐	☐	☐	☐
4. Workers and supervisors have the information they need to work safely.	☐	☐	☐	☐	☐
5. Employees are always involved in decisions affecting their health and safety.	☐	☐	☐	☐	☐
6. Those in charge of safety have the authority to make the changes they have identified as necessary.	☐	☐	☐	☐	☐
7. Those who act safely receive positive recognition.	☐	☐	☐	☐	☐
8. Everyone has the tools and/or equipment they need to complete their work safely.	☐	☐	☐	☐	☐

For the purposes of this survey an audit means a formal process of evaluating and reporting on how the organization manages health and safety in accordance with a recognized standard (ie: CSA Z1000 OHSAS 18001 or a Health and Safety Association audit). Regular means that an audit is repeated at regular intervals. For example, once every year or once every 2 years.

The results of the OPM survey can help in selecting leading indicators that might best suit the specific activities based on the maturity of the OHS system.

Choosing a Leading Indicator

With a good sense of where your organization is at in terms of its OHS performance level, you can start thinking about specific activities that drive your organization's desired OHS outcomes. If those activities can be measured, they are leading indicators and can be used as a performance metric for your OHS management system.

Examples of Leading Indicators based on OHS Performance

Focus of Compliance:

- Are action items being completed within defined timelines?
- Are workers assessed for knowledge of hazards specific to their job task?
- What percentage of the workforce has completed organization-specific health and safety training?

Focus on Improvement:

- Percentage of leadership that is meeting job observation targets
- Percentage of job descriptions with specific health and safety accountabilities
- Number of near misses reported compared with the total number of recorded incidents
- Number of equipment inspections (including vehicles) completed versus targeted

Focus of continuous learning:

- Percentage of action items from health and safety perception surveys (e.g. safety culture or hazard surveys) that are completed
- Percentage of workers meeting peer-to–peer observation targets per month per 100 workers
- Number (or percent) of near-miss findings communicated to the organization
- Percentage of health and safety meetings led by management compared to target
- Percentage of near misses that have been scheduled for follow-up and responsibility assigned

Source: Choosing a leading indicator visual shown above is from Leading Indicators for Workplace Health and Safety: A user guide – Government of Alberta, Jobs, Skills, Training and Labour

Notes

Chapter 2: Measurement — What?

- Measurement defined
- Safety objectives or safety performance indicators (SPI)
- Qualitative versus quantitative
- Leading and lagging Indicators
- Validity of data — Behaviour based safety principles, maturity path for reporting incidents and assessment tool to evaluate reporting and analysis
- Suppression of workplace injury or illness claims
- Basis of data

Introduction

Measurement can be defined as to qualify, order, and quantify certain events and use the results as a basis for the control and prediction of performance. Multiple words can be used for measurement such as metrics, analytics and dash boarding — it is important to use the term most understood by your organization.

Fundamentals

Measurement is the key to problem definition and solution and without it the state of the operation is unknown. Sound measurement is a prerequisite to control and accountability. People will expend effort in those areas in which they are being measured. Without it safety is something that will get done when time permits. Remember you can't improve what you don't measure.

Safety Objectives and Performance Indicators (SPI)

As part of a safety management system an employer is required to set specific and measureable objectives or safety performance indicators (SPI). A safety performance indicator is a set of parameters that are easy to follow up on and that give a clear picture of the safety status of the operation. The Safety Performance indicators will give the workplace an indicator that an aspect of the operation is deteriorating so that corrective action can be initiated before the situation creates an unacceptable risk.

In setting the safety objectives and safety performance indicators consideration should be given to:

- Consider if there are problems to be solved, or an important area where improvement is needed
- Consult workers, the committee and representatives
- Ensure compliance with legal requirements

- Determine SPIs with consideration of the organization's operational and business requirements
- Make sure the indicators selected have direct ties to the outcomes you are trying to achieve and that the SPIs are within your sphere of influence
- Include leading and lagging indicators to establish and monitor the objectives
- Designate responsibility for achieving objectives and targets
- Determine the means and time frame within the objectives to be met
- Communicate the objectives to all employees
- Hold employees accountable for their safety related actions, employee accountability must be consistently enforced
- Safety should be included in performance evaluations
- There must be an element of continuous improvement
- The safety objectives must be discussed and evaluated at a regular and planned intervals by management (at least once per year)

Leading Indicators measure the volume of safety activities such as number of safety/toolbox meetings held, the number of job hazards completed and or reviewed, the number of hazards reported, the number and type of inspections completed, the number of employees trained to lift safely.

Lagging indicators measure historical data such as number of incidents, lost time claims, medical aids, first aids.

Qualitative and Quantitative

Qualitative is a subjective measure of how well safety activities are going, such as the effectiveness of safety meetings, how well the hazard assessments were carried out, completeness of safety activity reports and perception surveys. Sources of qualitative data can be focus group discussions, in-depth interviews, direct observations, written documents and rating scales such as strongly disagree, disagree, neither agree nor disagree, agree, strongly agree. Usually because of its subjective nature, qualitative data is less reliable in research compared to quantitative data.

Quantitative is an objective measure; the result or outcome, such as WCB costs, number of incidents, number of work related illnesses, the cost of property damage, number of emergency simulations carried out, and the number of safety meetings held.

So what's the bottom line?

Qualitative is a good first step at providing perceptions of how well the safety system is working or information about the safety culture, but qualitative should not be the only method of data collection. The data is not measureable, but rather illustrative in nature.

Quantitative data provides quantifiable and easy to understand results. The data is clearer, simpler and provides objectivity and improved accuracy. There is no bias and is not personality based.

Lagging and Leading Indicators

Safety Performance Indicators (SPIs) are notorious for focusing on lagging indicators — the negative things that have happened in the workplace, with indicators such as lost time injuries (LTIs). Lagging indicators record outcome only (they are reactive) and provide little or no insight into underlying trends and indicators of potential major incidents. The aim is to develop performance indicators that help workers see how well they are managing their major incident risks using leading indicators such as the completion of equipment checks, inspections, maintenance and personnel training within specified time frames.

Both leading and lagging indicators have value and can work together when developing your SPIs.

Lagging Indicators

Definition: A measure of past performance and trends, after the fact

Examples: Lost time injuries, medical aids, first aids, lost work days, number of serious injuries, property damage, etc.

Pros:

- Normally easy to measure and capture
- Important as increasing workplace injuries or illness signal where improvements are needed in the workplace safety system

Cons:

- Focus on negative things that have already happened in the workplace
- Record outcomes only
- Are reactive
- Poor indicators of major accidents
- Many workplaces have too few injuries to be able to distinguish real trends from random occurrences
- Rely on injuries being reported — it is possible that not all injuries are being reported.

Leading Indicators

Definition: A measure of future performance, management commitment or systems to drive performance change

Examples: Inspections and observations compared to plan, percentage of corrective actions completed, training completed, safety meetings completed versus planned, percentage of maintenance work orders completed on time, equipment checks completed, emergency exercises planned and carried out, near-miss reports, etc.

Pros:

- Associated with positive things that happen in the workplace — they measure the presence of safety rather than the absence
- Help employees see how well they are managing their major incident risks
- Valuable to employers for benchmarking OHS practices against their industry peers, and to regulatory authorities for targeting resources to interventions likely to have the most impact
- Are a measure of the inputs that people are making to the OHS management process
- Leading indicators are proactive and precede occupational health and safety outcomes; they are relevant to prevention of work injury and illness and the prevention and management of work disability

Cons:

- Difficult to identify and capture; often new measures with no history within the organization, therefore lack of quality data
- Challenge may exist in how to interpret changes in scores, how to use indicators to improve prevention and how much to tailor indicators to the specific workplaces

Leading indicators are an organization's indicators that predict a higher risk of work injuries before they occur so that preventive steps can be taken to avert harm.

The aim is to develop performance indicators that help employees see how well they are managing their major incident risks.

When establishing leading indicators that are of value for the organization it can be helpful to examine the three broad categories:

Systems Based Indicators that relate to the management of the Employer's Health and Safety System, facility level, region/business unit or corporate level, such as:

- Pre-job planning (task analysis)
- Completion of preventative/corrective action
- Near-miss reporting

- Learning system
- Management system component evaluation, recognition/disciplinary/reinforcement program, dashboard for leading indicators: training, stoplight, safety perception survey
- Top 10 risk assessments by area, incident investigation
- Auditing (worksite), orientation training, drug and alcohol screening, permit-to-work system, pre-job hazard assessments, pre-planning, data use plan (how, when and to whom you communicate information)

Operations Based are relevant site specific infrastructure such as machinery and operations, such as:

- Risk Assessment — JSA
- Management of Change Process
- Outstanding (or completed) corrective actions, operating discipline
- Equipment and maintenance (calibration) preventative maintenance, training
- Compliance, prevention through design
- Management system review, safe work orders, process safety information validation

Behaviour Based Indicators measure the behaviour or actions of individuals or groups in the workplace and the people-to-people interactions related to supervision and management such as:

- Leadership and employee engagement
- Near-miss reporting
- At-risk behaviours
- Area observations, number of walk arounds/field walks
- Safe behaviours, participation rate — observations, close — out of open issues from observations
- Number and quality of comments
- Safety violations, percent of coached observations (expert/leader involvement)
- Distraction in the work environment, community, off-the-job
- Number of new-to-site/job turnover
- Culture assessment
- Procedure versus policy

Source: The transformative force in EHS — Practical guide to leading indicators NSC 2013: Transforming EHS Performance Measurement through Leading Indicators by the Campbell Institute — Sandy Smith

Leading Indicators best measurement characteristics to be considered when selecting indicators are as follows:

- Actionable — measure what there is control over
- Meaningful — accurate, accepted as true indicators
- Transparent — get attention and drive the desired behaviour
- Easy to communicate — should show when something is wrong or enable one to make decisions
- Valid — measure what you intended to measure
- Useful — the presence of safety activity (not absence) or emphasize achievement versus substandard performance
- Timely — give swift and constant feedback

Leading and lagging indicators working together

Professor James Reason's Swiss cheese model of accident causation says major accidents result when a series of failings in risk control systems occur at the same time — the holes in the Swiss cheese slices line up.

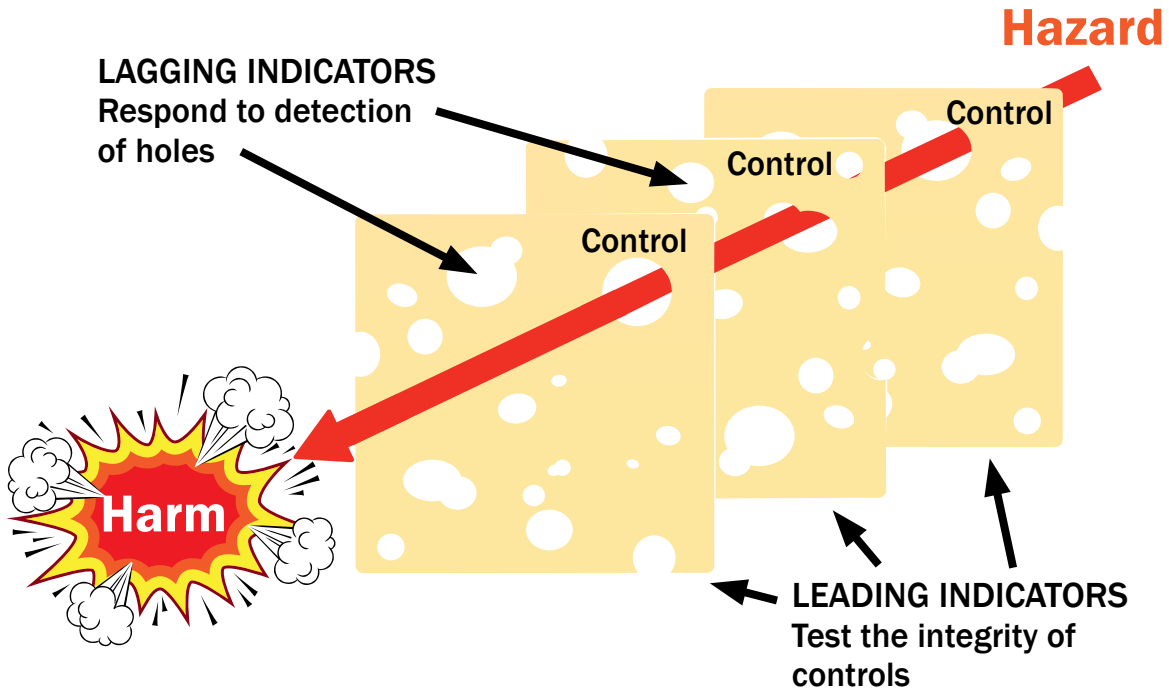


Figure 1 — Safety Performance Indicators and the Swiss cheese model

See Appendix 8: Leading and Lagging Indicator Examples on page 106.

The leading indicators are there to identify the failing through routine checking, to plug the holes before an incident occurs.

The lagging indicators reveal the holes through the occurrence of incidents or defects at which point action can be taken to prevent recurrence.

Together leading and lagging indicators provide a solid, bigger picture perspective on what is and is not working in your OHS management program.

In summary, the steps to establish effective SPIs:

1. Establish the organizational structure and leadership commitment.
2. Identify the risk control in place and set lagging indicators that indicate failure.
3. Identify critical elements of the risk control system; actions or processes which must function correctly and set associated leading indicators.
4. Prepare and implement the Safety Performance Indicators (SPIs).
5. Establish a data collection and reporting system.
6. Review the data and take action.
7. Review the effectiveness of the tracking system — continuous improvement.

Validity of the data, behaviour-based safety principles, and maturity path for reporting incidents, and assessment tool to evaluate reporting and analysis

Validity of the data

Determining the key SPIs and setting the targets is critical to an organization's success in reducing safety and health related injuries and illnesses. It is important to recognize that SPIs will only be effective if complete and valid data is collected.

Incomplete information or missing information can skew results and lead to inaccurate conclusions. There is a saying **"Garbage in, Garbage out" or "GIGO."** GIGO is also commonly used to describe failures in human decision-making due to faulty, incomplete or imprecise data. It is crucial that the employer establish an effective incident reporting policy, time lines, and responsibilities.

Finding fact and prevention — not fault — must be the basis of reporting incidents and near misses. Discipline should be used in cases of non-reporting and reward given for reporting of all near misses, injuries, environmental and property damage. Providing excessive rewards for a good safety record may actually encourage workers to avoid reporting injuries or near misses. It is better to reward employees for completing safety training or participating in safety-related committees that meet regularly to identify workplace hazards or investigate incidents that could have resulted in injury. The goal is to create an effective incident prevention program rather than reward the lack of incidents and injuries.

How does human behaviour affect data collection?

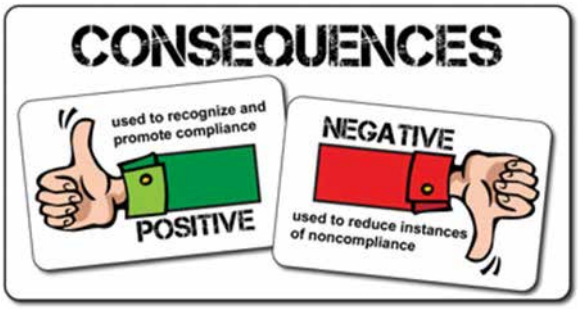
Individual behaviour is governed by the consequences.

We do what we do to:

- Enjoy a positive consequence
- Avoid a negative consequence

We stop doing what we are doing when:

- Our behaviour results in immediate negative consequences
- The removal of positive consequences



The most powerful consequences are certain, soon and significant; however positive consequences are preferred because of how negative consequences make people feel.

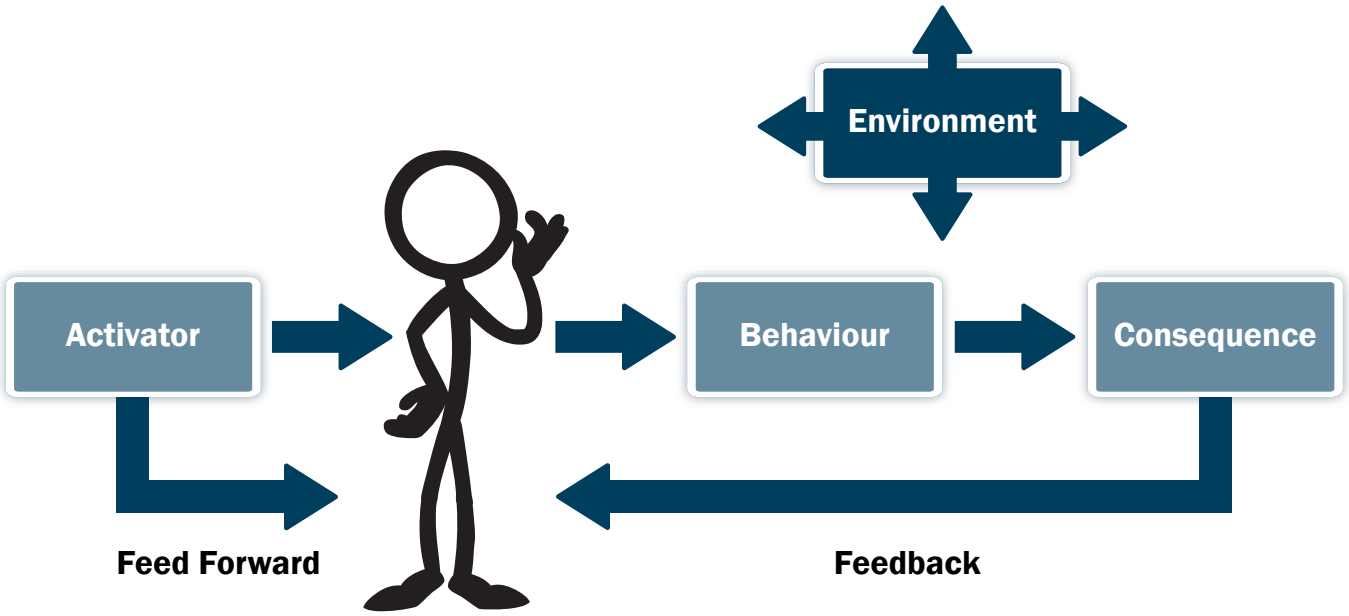
To sustain employee safety improvement employees must feel the effort is worthwhile, recognized and appreciated. Formal and informal efforts must be made to support active engagement in safety improvement efforts.

Think about how a reward, personal recognition, or a group celebration makes you feel compared to a reprimand or criticism. Both are consequences that are significant with regard to behavioural impact. The difference is in the accompanying attitude or feeling. When feelings or attitudes are considered, people-based safety is implicated. The principle is important when applied to reporting of safety incidents and near misses. It is important to reward and encourage reporting so that the conclusions drawn from the safety statistics collected are valid and therefore will result in proactive measures that will reduce injuries. If non-reporting has negative consequences this will motivate reporting. Reward for reporting, do not place blame.

The organization could offer rewards for spotting dangerous situations, broken machinery or health hazards. Present employees with recognition and gift cards if they become certified by taking and passing a certain number of safety courses. Give recognition to employees who use proper safety equipment or demonstrate safe workplace behaviour. If there is an incident, react positively, commend the person who reports the incident or takes other immediate proper actions. Proper

handling of injury reports removes the fear and stigma employees normally associate with reporting work related injuries and illness.

Shown following and adapted from Geller,2005; Creating a Culture Where Employees Own Safety by Anne R, French, PhD. and E. Scott Geller, PhD., the ABC Model is a basic principle of understanding the behaviour-based and people-based approach to safety.



In the ABC Model above:

Activator = a condition or event that directs the behaviour

Behavior = the actions or reactions of a person in response to external or internal activator

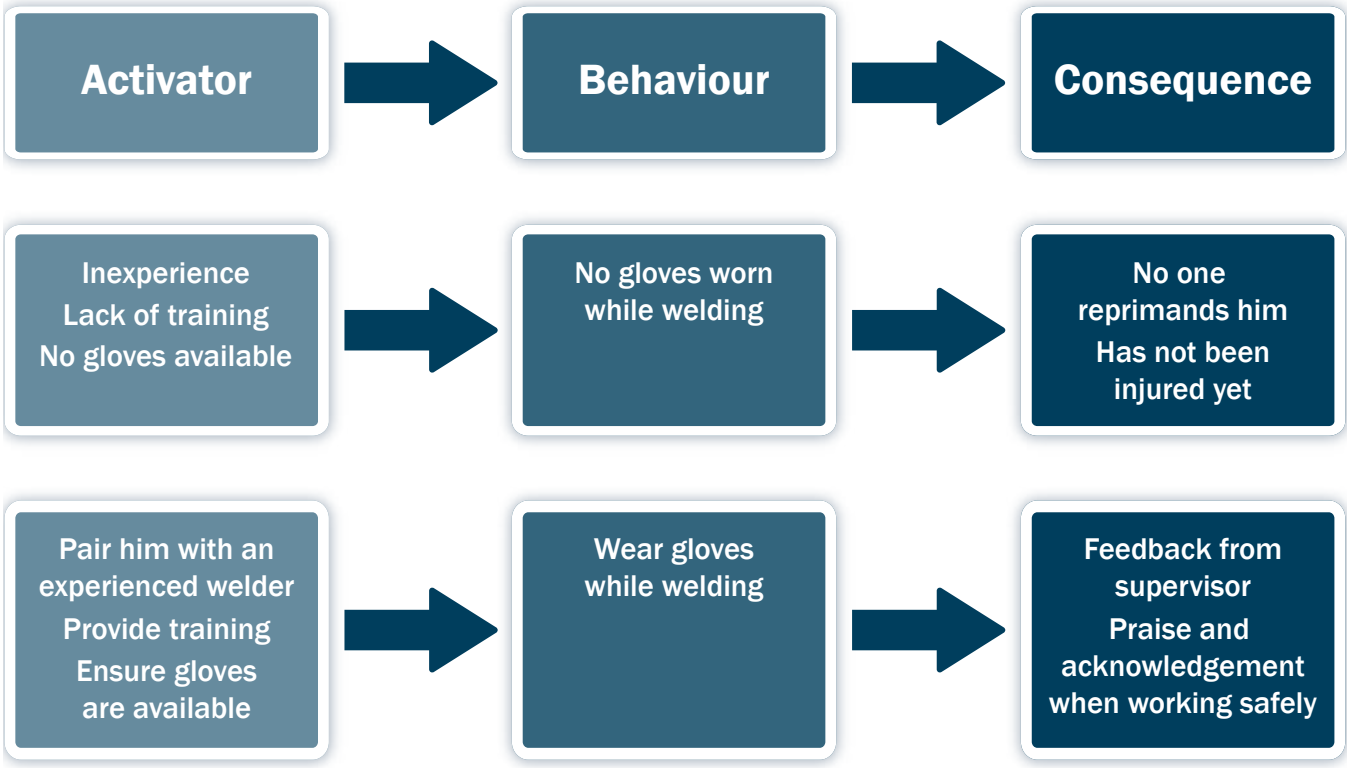
Consequence = something that results from our behaviour and motivates us

Everyone realizes that injuries will be reduced substantially if people are motivated to work more safely over the long term. However, asking people to actively care for their health and safety means they give up a very powerful immediate positive consequence — the ease, speed, or comfort that often comes from taking risks. In return for this extra effort, safety leaders promise a bigger reward of no personal injury and lessen the chances of a co-worker getting hurt. Unfortunately, this delayed reward might not seem credible because who knows when or if the payoff might occur.

Most employees don't expect to get hurt on the job and many don't see how their behaviour can put others at risk. Our past experience tells us we can do the risky behaviour and get away with it. So employees need to develop an internal script (or belief system) to keep them doing the desirable behaviours or keeping the faith. Safety leaders need to understand how positive recognition not only increases the frequency of the behaviour it follows, it also increases the likelihood other safe

behaviours will occur because a positive attitude toward safety is developed. So, recognizing people's involvement in safety will facilitate more learning and positive motivation than criticizing people's risky behaviours and/or lack of involvement in safety.

Organizations need to use behaviour-based principles appropriately to build internal feeling states like self-efficacy, personal control, optimism, self-esteem, and belonging which relates to people-based safety. To get employee involvement, organizations must understand the interdependency between behaviour-based and person-based approaches to behaviour management.



For improved safety performance, an organization's safety culture must promote a sense of shared responsibility for safety through genuine empowerment. When people feel as though they have influence, are important and are part of something larger they are more likely to put forth the "discretionary effort" needed for the success of any safety improvement initiative.

Maturity path for incident reporting and analysis and assessment tool

Maturity path is a concept that can be used to evaluate your reporting and analysis system. Questions are answered using a four-point scale;

- Beginning
- Improving
- Achieving
- Leading

Beginning indicates the component is nonexistent or poorly designed. Leading indicates the component is "cutting edge." An employer can adapt the tool to fit their workplace. Answering a few simple questions can help show the gaps in your reporting and analysis system and help the employer to assess and redesign their existing safety management system for reporting.

	Beginning (1)		Leading (4)
1.	All but the most serious incidents go unreported	1 2 3 4	All incident (e.g. near misses, property damage , injuries) are reported in a timely fashion
2.	Analyses are conducted by safety professionals and/or supervisors only	1 2 3 4	An incident analysis team is composed of members representing a cross-section of the organization such as the OHC and includes individuals involved in the event
3.	No Training is provided for incident reporting and analysis	1 2 3 4	All employees receive training in the philosophy and process of investigation incidents. Investigation team leaders receive detailed training investigation skills such as interviewing and root cause analysis
4.	Analyses often result in identifying "who's to blame". Corrective measures such as discipline or "counseling" are common.	1 2 3 4	Incident analyses focus on determining system-level root causes and minimizing or eliminating them. Individuals are not assumed to be at fault. Appropriate behavior-based corrective actions are introduced where warranted.
5.	Corrective actions and follow-up activities are handled by the safety department only	1 2 3 4	Corrective actions and follow-up activities are handled by appropriate personnel (e.g. safety department, safety committee, area personnel
6.	Feedback concerning investigation results and correction action implementation is haphazard	1 2 3 4	Feedback concerning investigation results and corrective action implementation occurs without fail with all stakeholders
7.	Employees characterize the incident reporting and analysis systems as unsystematic, fault-finding, and/or ineffective	1 2 3 4	Employees have confidence in the incident reporting and analysis systems to reduce the chance of future incidents

Source: Beyond Observation and Feedback; Integrating Behavioral Safety Principles into Other Safety Management Systems by Sherry R. Perdue

The score of the Analysis can be interpreted as follows:

> < 14 — The reporting and analysis system is in the beginning stages only and needs improvement. Training is lacking, incidents are going unreported, corrective action is haphazard and there is often blame attached to investigations.
>
> 14-21 — The reporting and analysis system is operating as developed and operating at a basic level. By evaluating where there are gaps, further benefits can be accomplished.
>
> >21 – The reporting and analysis system is at a best practices level

Suppression of workplace injury or illness claims

In Canada, research indicates that approximately 20 per cent of compensable work-related injuries and illnesses are not claimed by workers. The source of this information is an Issue Briefing published by the Institute for Work and Health (IWH) which is an independent, not-for-profit organization whose mission is to promote, protect and improve the safety and health of working people by conducting actionable research. The issue briefing highlights findings from two recent reports by Prism Economics. The first report was prepared for Ontario's Workplace Safety and Insurance Board (WSIB) and the second was commissioned by the Workers' Compensation Board (WCB) of Manitoba.

Demographic risk factors exist for non-claiming include:

- Younger workers
- Education attainment at the high school level or lower
- Smaller workplaces
- Immigrant workers and agricultural workers; lack of knowledge of rights and how to claim benefits

Regarding employer under-reporting surveys support an estimate of 7-8 per cent as the rate of employer non-reporting. In addition to non-reporting, the issue of employer misreporting of injuries is also recognized as a problem. The research suggests the following demographic risk factors exist for employer claim suppression:

- Higher among workers under the age of 35
- Higher in manufacturing
- Higher in workplaces with 10-24 workers

As defined by the IWH: "claim suppression can be defined as actions undertaken by an employer that hinder the appropriate reporting of a worker's injury or illness resulting from work." This includes:

- Instances where the employer induced the worker not to report the occurrence to a provincial workers' compensation authority."
- Situations where the employer's actions lead to under-reporting of the severity of the worker's condition or, the amount of time that the worker was off work due to his or her injury or illness.
- Claim suppression can be the result of coercive and overt actions by the employer, such as intimidating the worker with threats of repercussions. Claim suppression can also be more subtle, such as the employer wrongly offering an injured worker continued wages in lieu of the worker submitting a claim for workers' compensation.

Claim suppression is distinct from employer under-reporting and worker under-claiming. Although claim suppression may involve employer under-reporting and worker under-claiming, without inducement by the employer, these events alone do not constitute claim suppression.

Fines and penalties

The Saskatchewan Workers' Compensation Act, 2013 gives the WCB the authority to levy additional fines and penalties on employers for contraventions of the Act. There are now three types of fines and penalties:

1. Convictions and fines, pursued by the Crown Prosecutor, on referral from one of the Workers' Compensation Board business units and legal services.
2. Discretionary penalties, imposed by one of the business units.
3. Administrative penalties imposed by the Board. These are seen as an escalation of a discretionary penalty.

Procedures and policies are in place that provide criteria that will be followed when penalties or convictions are pursued for:

- Late and non-reporting of injuries
- Failure to register
- Payroll reporting and assessment compliance
- Return to work

The violations and penalties available under *The Saskatchewan Workers' Compensation Act, 2013* are as follows:

Violation	Section of the Act	Description	Summary Conviction	Discretionary Penalty	Administrative Penalty
Late or not reporting an injury	Section 52 Section 54	Employer fails to report an injury or fails to provide information about the injury.	Fine of not more than $1,000 on summary conviction.	Any part of the amount of compensation and medical aid paid for that injury.	Amount not exceeding $10,000.
Does not cooperate with return to work	Section 53 Section 54	Employer does not cooperate with the injured worker's early and safe return to work.	Fine of not more than $1,000 on summary conviction.	Any part of the amount of compensation and medical aid paid for that injury.	Not applicable.
Charges worker for medical aid costs	Section 105	Employer deducts or requires the worker to contribute towards medical aid costs.	Fine of not more than $1,000 on summary conviction.	Three times the amount collected, received or withheld by the employer.	Amount not exceeding $10,000.
Failure to register a business	Section 123 (Gen reg 4)	Employer fails to register a business in a mandatory industry.	Fine of not more than $1,000 on summary conviction.	An additional percentage of the assessment made.	Amount not exceeding $10,000.

Basis of data — Classifying incidents

The previous section discussed how critical it is for employees to report near misses, incidents and injuries so that the data is reliable and therefore the effort, money and energy is directed to fixing the root cause issues based on valid data. Also reviewed were motivating factors for safety behaviour, barriers to reporting and claim suppression.

Consideration must also be given to the importance of definitions, procedures and guidelines on classification of injuries. Categorization of injuries is needed to ensure consistency and therefore valid numbers to base conclusions upon. Without standard definitions individuals can misinterpret or misreport the event if left to a judgement call.

Each department, division and place of work within the organization must be consistent and employees must be able to understand the reporting system so they have confidence in reporting.

It is critical that the definitions are developed and documented for the classification of incidents tracked in the workplace. The guidelines must be aligned with legislation and provide consistent application for reporting within the workplace. Employers and workers are required to understand and comply with the regulatory reporting requirements of The Saskatchewan Workers' Compensation Board (WCB) and Labour Relations and Workplace Safety (LRWS).

The following terminology refer to choosing your workplace definitions for the purpose of your worksite's internal data collection. Examples of common terms tracked include:

- Near miss
- First aid
- Medical treatment
- Recordable incident (as defined by Canadian Association of Petroleum Products (CAPP) or Occupational Safety and Health Administration (OSHA))
- Reportable incident (reportable to WCB, 52 Duty of employer to notify board of injury, *The Saskatchewan Workers' Compensation Act, 2013* and/or Labour Relations and Workplace Safety (LRWS) Regulation 8 & 9, *The Occupational Health and Safety Regulations, 1996.*
- Lost time
- Lost work days
- Fatality
- Restricted work
- Environmental
- Property/equipment damage

It is up to the workplace to define these. Often there can be discussions as to when an injury or illness is work-related and how you decide if the case involved restricted work. The WCB policies and procedures provide guidance on these topics. Following is information from a legislative and best practice approach as examples.

Arising out of employment means the injury is the result of an activity that has a link to, originates from, or is the result of a worker's employment and would not have happened if not for their employment. (WCB Policy Manual 3.1.1 Arising Out of and In the Course of Employment (POL 03/2017).

In the course of employment means the injury must:

a) Happen in a time and place linked to employment, and
b) Be the direct result of a worker performing a task which is part of their obligations and purpose of employment.

(WCB Policy Manual 3.1.1 Arising Out of and In the Course of Employment (POL 03/2017).

Injury presumed out of and in course of employment

Unless the contrary is proven, Section 27 of the Act directs the WCB to presume the following:

a) If an injury arises out of a worker's employment, it is presumed that it occurred in the course of employment.
b) If an injury occurs in the course of a worker's employment, it is presumed that it arose out of employment.

How do you decide if the case involved restricted work?

Restricted work activity occurs when, as the result of a work-related injury or illness, an employer or health-care professional keeps, or recommends keeping, employees from doing the routine functions of their jobs or from working the full work day that they would have been scheduled to work before the injury or illness occurred.

There can be discussion as to when an injury or illness is work-related and/or how do you decide if the case involves restricted work. The WCB policies and procedures provide guidance on these topics and information can be found at:
http://www.wcbsask.com/wp-content/uploads/2016/02/Policy-Manual.pdf

3.1.1 Arising Out of and In the Course of Employment (POL 03/2017)
Document Date: 20 June 2017
Purpose: To clarify when an injury arises out of or in the course of employment

3.1.2 Pre-Existing Conditions — Aggravation or Acceleration (POL 12/2017)
Document Date: 30 August 2017
Purpose: To establish the process for adjudicating claims when pre-existing conditions exist.

7.1.4 Continuum of Care (POL 08/2014)
Document Date: 24 June 2014
Purpose: To establish the guiding principles of the Continuum of Care Model.

For additional examples on how employers may define establishing work relationships see CAPP Guidelines — Health & Safety Performance Metrics Reporting — November 2013 — www.capp.ca/~/media/capp/customer-portal/publications/234735.pdf

When compensation payable (Lost time) — (1) If a worker is not disabled beyond the day on which the worker is injured, no compensation, other than medical aid, is to be paid. (2) If the worker is disabled for longer than the day on which the worker is injured, compensation must be paid on and from the day of the commencement of the worker's loss of earnings resulting from the injury, excluding the day on which the worker is injured. The Worker's Compensation Act, Section 31

It is important to remember that any time an employee sees a doctor for a work-related injury or illness there must be a report to the WCB by the employer (E1) and the worker (W1) whether or not the employee misses work. These are considered "reportable" to the WCB.

In addition, accidents causing serious injury must be reported to Labour Relations and Workplace Safety (LRWS); Occupational Health and Safety Regulation 8 and Dangerous Occurrences Regulation 9.

If an employer is just establishing their Safety Performance Indicators they may want to start with a simple approach of classification such as; first aid, no time lost, time lost. A more comprehensive approach would be to include; first aid, medical aid/treatment, restricted work, lost time, fatalities. It is important for the employer to choose the appropriate level of detail they want to track. There is no "one size fits all."

Establishing clear guidelines between the classification of a first aid versus a medical aid is important and normally an area where consistency in application can break down. Defining what is a first aid and what is a medical aid allows the workplace to understand the severity and therefore the ability to quantify the risk.

Employers need to understand their legal requirements regarding privacy and to respect employee's privacy as it pertains to diagnosis and treatment. Canada does not have a mandatory reporting system such as the United States Occupational Safety and Health Administration (OSHA) and therefore health care professionals and employees are not mandatorily required to share this information with the employer.

Consideration should be given to employers who have dedicated paramedics, nurses, or occupational therapists on site to handle more advanced treatment of injuries and illnesses versus an employer who has first aid attendants. The employer with first aid attendants only would likely send employees to a health care professional for anything that requires further investigation or a second opinion. Without good definitions in the workplace on what is a first aid and what is a medical aid; one employer would rarely have medical aids/treatment while the other employer would have numerous for the same type of incidents.

Some injury definitions are included in Saskatchewan Legislation and/or are generally accepted terms that are used in Saskatchewan workplaces.

Near miss — an unwanted, unplanned event that didn't but could have resulted in a loss (production, property or human)

Work injury — a work injury is an injury that: Happens at work, on company property or on company business. Needs medical treatment. May or may not need time away from work. WCB Employer Responsibilities Duty to Report Injuries: www.wcbsask.com/employers/employer-responsibilities/

By definition any time an employee sees a Health Care Professional for a work related injury or illness it is considered to be reportable to the WCB whether or not there is time lost. The WCB pays the fees of Health Care Professionals for work-related injury and illnesses. The employer report (E1) and the worker report (W1) need to be completed for all of these cases.

Injury — means all or any of the following arising out of and in the course of employment:
The Worker's Compensation Act (Preliminary Matters 2(1) (r))

i. The results of a willful and intentional act, not being the act of the worker
ii. The results of a chance event occasioned by a physical or natural cause
iii. A disabling or potentially disabling condition caused by an occupational disease
iv. Any disablement

Occupational disease — means a disease or disorder that arises out of and in the course of employment and that results from causes or conditions that are: *The Worker's Compensation Act* (Preliminary Matters 2(1) (aa))

(i) peculiar to or characteristic of a particular trade, occupation or industry; or

(ii) peculiar to a particular employment;

Restricted work — restricted work activity occurs when, as the result of a work-related injury or illness, an employer or health-care professional keeps, or recommends keeping, employees from doing the routine functions of their jobs or from working the full work day that they would have been scheduled to work before the injury or illness occurred.

First aid — means immediate assistance given in case of injury until medical aid has been obtained; Occupational Health and Safety Regulations Interpretation 2(1)(y)

In the context of safety statistics a "first aid" includes any one-time treatment, and any follow-up visit for the purpose of observation of minor scratches, cuts, burns, splinters, or other minor industrial injuries, which do not ordinarily require medical care. This one-time treatment, and follow-up visit for the purpose of observation, is considered first aid even though provided by a physician or registered professional personnel; Occupational Health and Safety Administration (OSHA). First Aid include visits to a doctor or health care professional solely for observation or counseling, diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and any procedure that can be labeled first aid. Canadian organizations have adopted similar definitions to an OSHA first aid. As an example the Canadian Association of Petroleum Producers (CAPP) published a "Guide for Health & Safety Performance Metrics Reporting November 2013" in which first aids are defined.

Medical aid — means the provision of medical and surgical aid, of hospital and professional nursing services, of chiropractic and other treatment and of prosthetics or apparatus; *The Worker's Compensation Act* (Preliminary Matters 2(1)(v))

Medical treatment — in the context of safety statistics , sometimes referred to as a medical aid being medical treatment beyond first aid. Involves a significant injury or illness diagnosed by a physician or Health Care Professional. (CAPP)

Recordable or recordable incident — In the context of safety statistics a "medical aid" is sometimes referred to as a recordable or a recordable incident. A recordable definition could include those work-related injuries and illnesses that result in:

- Death;
- Loss of consciousness;
- Days away from work;
- Restricted work activity or job transfer; or
- Medical treatment beyond first aid.

Including work-related injuries and illnesses that are significant such as cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum.

The term recordable tends to be associated with the Occupational Health and Safety Administration (OSHA), however this has been adapted/adopted by Canadian organizations such as The Canadian International Development Agency (CIDA) and the Environmental Services Association of Alberta — Incident Classifications (Authors: Jim Swiss, Cari Chernichen, Rafael Gay-de-Montella), Canadian Association of Petroleum Producers, and Co-op Refinery Complex (CRC).

OSHA recordable — An injury or illness meets the general recording criteria, and therefore to be recordable, if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must also consider a case to meet the general recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. Occupational Safety and Health Administration (OSHA)

Total recordable injuries — the sum of fatalities, lost work day cases, restricted work cases, and medical treatment cases (CAPP)

The term “recordable” is often associated with the United States Occupational Health and Safety Administration (OSHA) mandatory reporting requirements. However many Canadian industries have adopted this term and provided definitions that are the same or very similar to an OSHA recordable definitions.

Remember that some employers may benefit from starting with the simpler approach, tracking only first aids, no time lost and lost times.

The following Medical Aid/Medical Treatment Chart is an example of a chart that can be developed at the workplace to help guide decision making between First Aids (non-recordable) and Recordables (Medical Aid /Medical Treatment).

Example of a Medical Aid versus a First Aid Decision Chart

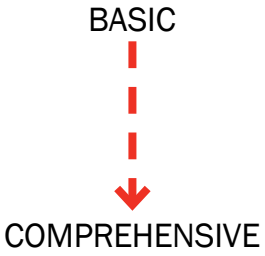
	Medical Aid	First Aid
Visits to Health Care Professionals	• Any condition that is treated, or that should have been treated, with a treatment not on the first aid list	• Visits solely for observation, testing, or to evaluate diagnostic decisions • Visits solely for counselling • Diagnostic procedures, including prescribing or administering of prescription medications used solely for diagnostic purposes
Cuts, Lacerations, Punctures, and Abrasions	• Sutures (stitches) • Staples • Surgical glue • Treatment of infection with prescription meds on any visit • Application of prescription antiseptic or non-prescription antiseptic at prescription strength • Surgical debridement (butting away dead skin)	• Any wound coverings or bandaging by any medical personnel • Liquid bandage • Cleaning, flushing or soaking wounds on the surface of the skin • Using wound coverings such as bandages, Band-AidsTM, gauze pads, etc; or using butterfly bandaged or Stiri-StripsTM
Inoculations	• Inoculations such as gamma globulin, rabies, etc. given to treat a specific injury or illness, or in response to workplace exposure	• Tetanus immunizations • Immunizations and inoculations that are provided for public health or other purposes, where there is no work-related injury or illness
Splinters	• Foreign bodies which require more than simple means to remove because of their location, depth of penetration, size or shape, surgical removal of foreign bodies in the eye	• Removing foreign bodies from the eye using only irrigation or a cotton swab • Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means (needles, pins or small tools)
Strains, Sprains, and Dislocations	• Casts or immobilization with rigid stays • Chiropractic manipulation • Exercises recommended by a health care professional who trains the worker in the proper frequency, duration and intensity of the exercise • Physical therapy	• Hot or cold therapy • Any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. • Finder guards • Temporary immobilizations devices while transporting an incident victim (splints, slings, neck collars, back boards, etc.)
Burns, Skin rashes, and Blisters	• Any condition that result in days away from work, restricted work, transfer to another mob, or medical treatment beyond first aid	• Draining fluid from a blister
Bruises/contusions	• Draining of bruises by needle	• Soaking therapy • Hot or cold therapy
Medications	• Prescription medication, whether given once or over a longer period of time • Prescription medication, whether that prescription if filled or take or not • Non-prescription medication administered or prescribed a prescription strength	• Non-prescription medicines at non-prescription strength, whether in ointment, cream, pill , liquid, spray, or any other form
Oxygen	• Oxygen administered to an employee exposed to a substance who exhibits symptoms of an injury or illness	• Oxygen administered purely as a precautionary measure to an employee who does not exhibit any symptoms of an injury or illness

	Medical Aid	First Aid
Physical Therapy	• Exercises recommended by a health care professional who trains the worker in proper frequency, duration and intensity of the exercise • Physical therapy	
Loss of Consciousness	• Loss of consciousness which results from a workplace event or exposure (chemicals, heat, an oxygen deficient environment, a blow to the head)	• Loss of consciousness due solely to epilepsy, diabetes, narcolepsy, or other personal health condition • Due to voluntary participation in a wellness or similar program (company sponsored blood donation)
Work Restrictions	• Restricted Work Activity • Modified Work Duties • Transfer due to work restrictions • Days away – Lost Time	
Needle Stick/Sharps	• Needle Stick injury or cut from a sharp object that is contaminated with a person's blood or other potentially infectious material	
Hearing Loss	• Work related noise induced hearing loss with a hearing test (audiogram) showing a compensable shift	
Tuberculosis	• Tuberculosis infection as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional after work related exposure to a known case of active tuberculosis	

Source: https://www.jjkeller.com/learn/guide-to-OSHA-recordable-injuries-and-illnesses

In summary, employers must decide what depth of incident classification is the best for their workplace. Starting at a basic level may benefit some workplaces.

1. First Aid, No Lost Time, Lost Time
2. First Aid (defined by Health and Safety Regulations), Medical Aid (defined by the Worker's Compensation Act), Lost Time (defined by The Worker's Compensation Act)
3. First Aid), Medical Aid/Treatment, Lost Time, Loss Work Days, Restricted work, Fatality



Chapter 2 covered determining what to measure. This requires the workplace to establish the policies and definitions for classifying incidents at the workplace (first aids, medical aid, lost time). Ensuring the data is valid means that the employer has established effective incident reporting policies, time lines and responsibilities and has determined what Safety Performance Indicators (SPI) will provide value at the workplace, and ensures that both leading and lagging indicators have been selected. The next step is to determine the sources of where to collect the safety data.

Notes

Chapter 3: Measurement — Where?

Introduction

To calculate safety statistics the workplace will need to gather the correct data on a consistent basis.

Fundamentals

Employers can obtain historical data from the Workers' Compensation Board however workplaces are encouraged to maintain their own statistics. It is strongly recommended that the employer establish a routine method to collect the safety data. This will provide accurate and timely information in terms the employer and employees understand.

Where to find the data

The employer must decide what information to track and determine a reliable and timely source of the data. The following chart outlines the information and sources where this information is normally available.

Data	Source	Considerations
Hours Worked/ Exposure Hours	Payroll or Human Resources	Include all employees (including management), training & overtime hours worked. Exclude leave, sickness and other absences. At month end — average person hours can be used and then validate with actual hours when available.
First Aids	First Aid Register	OHS Regulation 57 — Each first aid station must have a first aid register and the particulars of each first aid treatment administered to a worker at work must be recorded.
Medical Aids	First Aid Register, Incident Reports, WCB E1	OHS Regulation 57 — Requires documentation of each case referred for medical attention (records retained min 5 years). You are required by law to report workplace injuries within five days of being made aware of them (WCB E1 - Employer's Initial Report of Injury). See definition for Medical Aid. OHS Regulation 8 Notice Requirements — Accidents causing serious bodily injury must be reported.
Lost Time	Incident Reports, WCB E1	Employers are required by law to report workplace injuries within five days of being made aware of them. (WCB E1 - Employers Initial Report of Injury). See definition of Work Injury.

Data	Source	Considerations
Lagging Indicator Reports	WCB — Online Services Account	C16 Reports: C1 — Experience Summary — 5 year history employer experience summary (costs) C2 — Annual Costs per Claim — individual claims C3 — Total Costs per Claim (entire lifetime)
Near Miss	Incident Reports	See OHS Regulation 9 Notice Requirements — Dangerous occurrences must be reported.
Property/ Equipment Damage	Incident Reports	Employers can include property/equipment damage as part of their Incident Investigations.
Restricted Work	Human Resources	Employer may have a Return to Work Program (RTW) and RTW Coordinator.
Work Refusals	Investigations	Employers can include Work Refusals as part of Incident Investigations, Committee Minutes.
Environmental Spills, etc.	Regulatory Reporting & Emergency Response	Employers must follow regulatory requirements for reporting. Employers can include Environmental spills as part of Incident Investigations.

Chapter 4: Data Management — Collecting

Introduction

There are a number of ways to store safety information from very basic to very sophisticated or complex.

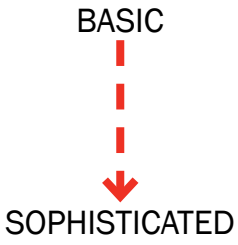
Fundamentals

When it comes to data management, usually the more sophisticated a data collection system is, the more cost associated with the purchase and maintenance of the system. Employers have options and should choose the best solution for their workplace.

Collection of the Basic Data

There are a number of ways to store safety information from very basic to very sophisticated or complex. There are some very good data Management Software solutions available. Employers will need to consider the costs (purchase, licensing fees, user fees) and complexity that is needed for their size of business and its needs. Small to mid-sized companies may wish to choose a standard software solution that is in use and already available within the organization.

- Paper/manual entries
- Word documents
- Spreadsheets (such as Excel)
- Databases
- EHS Management Software Solutions



The example given in the Appendices section of this guide includes an Excel spreadsheet (Safety Incident Log sheet) for logging the safety data and production of the visual safety products (graphs).

Notes

Chapter 5: Data Management — Building

Introduction

Once a data collection tool has been selected (spreadsheet, data base, EHS Management Software) then it is time to determine what data to track. The terminology used will provide data that is meaningful and clear to your workplace.

Fundamentals

Customization in terms of what your workplace tracks may depend on the maturity of your current tracking system. The employer should decide what is important and can choose to grow as they are ready. For some employers starting with basic data may be the correct approach. Showing the merits and values of data collection to the workplace will gain acceptance and support.

Building the Data

The recommended data collection items are listed below, those that are highlighted in blue represent the minimum basic data collection. Employers may decide to also track other claims-related information such as number of lost work days, cost of claims, duration of claims, number of days on restricted duty.

- **Date of Incident**
- Date Reported
- **Injury**
- No Injury
- **Description of Incident**
- **Part of Body Injured**
- **Cause of Injury**
- **Department/Cost Centre**
- Reported By
- Supervisor
- Employee
- Job Family/Class
- Years Job Experience
- Employment Status (Temp, Full Time, Casual, Contractor)
- Primary Factor
- Corrective Action
- Corrective Action Target Completion Date
- Corrective Action Completion Date
- Follow-up on High Risk (Target within 120 days)
- Comments

To assist with selection of the data, an explanation and the benefits of building specific data is described as follows:

Date of the incident — Date of injury, incident, near miss, etc.

Date reported — By documenting date of the incident and the date the incident is reported the employer has a proactive measure of whether the reporting/investigating policies and procedures are being followed. The spreadsheet provides factual data on where improvements can be made and who to follow-up with. For instance, if the employer establishes that all incidents must be investigated within 24 hours and the investigations are lagging by several days or even weeks then there is objective evidence that investigations are not completed as per the employer's policies.

Injury or no injury — Initially employers may want to record and track basic information. The basic criteria would be First Aids, Medical Aids, Lost Time but these will be based on the standard definition decisions made by the employer as discussed in Chapter 2 Basis of the Data. Restricted Work may or may not be an area that employers choose to record. A column is also provided for recording of "No Injury" events such as Near Miss, Property Damage, and Environmental Damage. Reporting and investigating "near misses" are working on the proactive side of safety, controlling an identified risk before someone gets hurt.

Description of incident — This should be a very brief description of the incident. If this information is already entered in the Incident Investigation the employer will decide how much, if any of this information you want to capture in the Safety Incident Log sheet.

Part of the body injured — The Part of the Body Injured categories aligns with the WCB method of classification of reporting injuries which can be found on the WCB website; www.wcbsask.com/about-wcb/statistics/ in the Statistical Supplements. These are; Head, Eyes, Neck, Shoulder, Chest, Back, Abdomen, Arms, Hands, Legs, Feet, Body System, Pelvic Region, Multiple, other. This is an area where customization for the workplace may be of benefit.

Causes of the injury — Categories are based on the WCB Statistical Supplement and include broad categories. The workplace may want to customize or add to the Data Validation choices to be more specific and meaningful to their workplace as the general areas may not apply or give enough information for the users of the data. The categories used in the example spreadsheet are: Assaults & Violent Acts, Bodily Reaction & Exertion, Contacts with Objects and Equipment, Exposure to Harmful Substances or Environments, Falls, Fires & Explosions, Transportation Accidents, Other events or exposures. Reference Material has been provided in the Appendices in the "Cause of Injury Reference Sheets" which lists all the line items that make up the broad categories as a "cheat sheet" for employers when deciding which category to select.

Department/cost centre — Should be customized for the workplace. It can reflect cost centre numbers or the departments in the organization. It is recommended to keep this at a manageable level.

Reported by, supervisor, employee — Input into the data collection tool must be consistent for sorting purposes. Example: Michael or Mike — must be always consistently entered.

Job family/class — Should be customized for the workplace. It can reflect positions, job family, and class. Example: Maintenance may be set up as a department or cost centre but within maintenance there may be pipefitters, welders, millwrights, electricians, carpenters. You may want to subdivide maintenance into job classes to better track where injuries are occurring.

Years job experience — Can be customized for the workplace such as categories of; < 6months, < 2years, 2-10 years, >10 years.

Employment status — Categories such as Temporary, Full Time, Casual, Summer Student, Contractor. This should be customized.

Primary factors — A simple but effective way of determining the causes for an incident is to keep asking who, what, where, when and how for every essential event until satisfied you know why the incident happened. Consider each event before, during and immediately after the incident and evaluate the role of every factor, including; People, Material, Environment, System, Work Process. When determining root or underlying cause for any of the factors determined to relate to the incident it is important to ask the question "why were the factors allowed to exist or go uncorrected." Often this requires using the principle of "5 whys" which will be discussed later in this guide. Reference Material titled "Factors Reference Guide" has been provided in the Appendices which lists all the line items that make up the broad categories as a "cheat sheet" for employers when deciding which category to select. Customization to fit the workplace is recommended.

Corrective action (short & long term) — This should be a very brief list of corrective action. This information is contained in the incident investigation and therefore may not need to be repeated in the spreadsheet, the employer should review if these columns have value to them. If the employer feels this is a duplication of work, the columns can be deleted.

Corrective action target completion date, corrective action actual completion dates (short and long term) — The employer should customize the inputs to suit what is meaningful for them to report. Tracking completion against target is a measure of a leading indicator.

Follow-up (high risk) — Using risk assessment the employer establishes which hazards are priorities. Those with highest risk based on frequency, severity, probability must be addressed. The employer is required to monitor the effectiveness of the corrective action. This column provides a means of due diligence around tracking to be sure that high risk/priority items are follow-up on to ensure effectiveness of controls and documentation of the same. The employer must decide if this is something they wish to track and establish policies regarding the follow-up.

Comments — Text field for entry of any additional information the employer wishes to document.

Samples of the reference materials are shown below. For the complete references materials see the appendices section of this guide. The tools are also available on the WorkSafe website.

Cause of injury reference sheets — Aligned with WCB classification of injuries.

Claim Type by Cause of Injury

Assaults and Violent Acts

Assaults and violent acts by person(s), uns
Assaults and violent acts, uns
Assaults by animals, n.e.c.
Assaults by animals, uns
Assaults, violent acts or harassment, n.e.c.
Biting
Exposure to work or job-related stress, n.e.c.
Exposure to work or job-related stress, unspecified
Heavy work loads
Hitting, kicking, beating
Nonvenomous bites
Self-inflicted injury, uns
Sexual assault
Sexual assault, verbal sexual assault or harassment, n.e.c.
Squeezing, pinching, scratching, twisting
Threats or verbal assaults

Bodily Reaction & Exertion

Bending, climbing, crawling, reaching, twisting
Bodily conditions, n.e.c.
Bodily reaction & exertion, uns
Bodily reaction, n.e.c.
Bodily reaction, uns
Bodily reactions and exertion, n.e.c.
Overexertion in carrying, turning or welding objects
Overexertion in lifting
Overexertion in lifting (object) and turning (body)
Overexertion in lifting and turning (object)
Overexertion in pulling or pushing objects
Overexertion in throwing objects
Overexertion, n.e.c.
Overexertion, uns
Repetitive motion, n.e.c.
Repetitive motion, uns
Repetitive placing/grasping/moving objects, except tools
Repetitive use of tools
Running – without other incident
Sitting
Slip, trip, loss of balance – without fall
Slip, trip, loss of balance – without fall, uns
Slipping on something – without fall
Standing
Static posture without application of force to an object
Stepping in a hole – without fall
Sudden reaction when surprised, ..., startled
Tripping over something – without fall
Typing or key entry
Walking – without other incident

Factors Reference Guide — Incident Indirect and Root Cause Reference Sheet Examples

Factors - Indirect Cause Reference Sheet Examples

Those substandard acts, procedures and conditions that set the stage for the incident.

People	Material	Environment	System	Work Process
Failure to follow procedure	Inadequate guards or barriers	Noise	Policies/Procedures	Work Flow Design
Training/Experience	Labelling	Visibility/Illumination	Plans/Written Instructions	Worker selection, work procedures
Failure to Lockout/Tag out	Inadequate PPE	Toxic Gases, fumes, dusts	Legislation/Best Practices	Production pressure
Removing Safety Devices	Substandard Materials	Weather	Standards and Specifications	Lack of control over work pace
Using defective equipment	Defective Tools/Equipment	Temperature	Notices of Contravention	Controls and safety devices on equipment
Supervision/Leadership	Equipment Failure	Chemical/Biological	Lack of Inspections	Improper/No Lockout
Unsafe Work Practices	Engineering, Design, Purchasing	Awareness of surroundings/ changing conditions	Inadequate resources allocated to health and safety	Availability of appropriate tools and materials
Failure to use PPE	Machine Design	Workplace overcrowded, awkward/static postures	Safety precautions	Maintenance
Authority to operate equipment	Right tool for task	Normally safe work procedure unsafe	Inadequate Training	New/Modified Procedures
Failure to warn/secure	Hazardous substance	Time of day/shift/week	Inadequate Orientation	Housekeeping
Rushing	Not used according to operating instructions	Walking Surfaces	Inadequate Supervisor	Work Area
Improper lifting	Wrong vehicle, machinery, equipment, material used	Ventilation	Abuse/misuse	Ergonomics
Mental/Physical stress or fatigue /Risk Taking		Radiation Exposure	Inadequate Maintenance	Servicing Equipment in Operation

Factors - Root Cause Reference Sheet Examples

Root cause are fundamental flaws in the Employer's Health and Safety Management System. Root cause often explain why indirect causes (substandard acts and conditions were allowed to exist).

People	Material	Environment	System	Work Process
Lack of a Health and Safety Program	Lack of and/or Inadequate Workplace Inspections	Lack of Emergency Response Program and Procedures	Lack of hazard and risk identification process	Inadequate or lack of safe operating procedures, practices, guidelines, safety policy
Inadequate Leadership and/or supervision	Lack of Purchasing Controls	Lack of a Personal Protective Equipment Program	Lack of and/or inadequate Incident reporting and investigations	Lack of a Preventative Maintenance Program
Lack of a Training and/or Orientation Program for all Employees	Lack of Material Management	Lack of a Hazardous Substance Program - Chemical and Biological	Lack of a properly functioning Legislated Occupational Health Committee or Representative	Lack of Service Management
Lack of Group and Personal Communication	Inadequate Engineering	Lack of Health and Hygiene Control	Lack of Engineering and Change Management	Inadequate Work Standards
Lack of Tool Box/Safety Meetings			Lack of Job Hazard Analysis	Lack of System Evaluation and Continuous Improvement
Lack of Functioning Accountability Process for Safety/Allowing unsafe Behaviors			Lack of control measure implementation	Lack of employee involvement
Lack of Hiring and Placement Criteria				

First Aid Register — Referenced in the Incident Investigation Form — legislative requirement for every first aid station.

First Aid Register

First Aid Register
Page 1 of 1

All injuries, no matter how minor, must be reported to your supervisor. As per The Occupational Health and Safety Regulations, 1996, Regulation 57 – An employer must ensure that a First Aid station is provided with a first aid register and that the following are recorded:

1. Each First Aid Treatment administered to a worker while at work
2. Each case referred for medical attention

ANY INJURY IS REFERRED FOR FURTHER MEDICAL TREATMENT:

1. **NOTIFICATION MUST BE MADE TO _____.**
2. **A MEDICAL RESTRICTIONS FORM MUST BE FILLED IN PRIOR TO THE EMPLOYEE RETURNING TO WORK.**

Date & Time	Employee Name (Print Legibly)	Company Name (Print Legibly)	Name of Supervisor Reported To	Nature of Illness (Left/right, index finger, hand, foot, cut, sprain, etc)	Brief Description of where/what caused the injury	First Aid Administered	Name of First Aid Attendant	Was the Employee referred for medical treatment? Where?

Note: The first aid register must be readily available for inspection by the committee or representative and records must be retained for a period of not less than five years from the day on which the register ceased to be used.

Rev 000 Last Update: October 10, 2017

Incident Investigation Form — Example Incident Investigation Form. The full Incident Investigation Form is listed in the Appendices.

Incident Investigation Form

The purpose of incident investigation is to find facts and not to fix blame. The investigation is to determine what happened, why and to recommend corrective action so it does not happen again. Use this form to investigate all near misses, workplace incidents, property damage, fire and environmental spills. See *Incident Investigation Procedure*.

A. Event information		
Date investigation started:	**Investigation type: - Select -** Reportable under regulation 8 or 9 in the OH&S Regulations is defined as a "serious bodily injury" and/or "dangerous occurrence". These require immediate investigation by the employer and the OHC co-chairs or representative (regulations 29 and 31). Notification must be provided as soon as reasonably possible to OH&S Division at 1.800.667.5023 (Saskatoon) or 1.800.567.7233 (Regina) Regulation 30 – Prohibition re scene of accident. Unless authorized and except for the purposes of saving life, the scene must be preserved and nothing can be altered or removed.	
Risk level: - Select - See *Incident Investigation Procedure* for the Risk Matrix and the required notifications.		
☐ Employee Employment status: - Select - ESL: - Select - ☐ Contractor Company name:		
Injury/illness: (Complete WCB forms E1 and W1 when treatment of injuries requires medical aid administered by a physician or registered health care professional) ☐ No injury ☐ First aid ☐ Medical aid ☐ Restricted workday ☐ Lost workday ☐ Fatality		
Worksite location: - Select -	**Department/cost centre where incident happened:** - Select -	
Date of incident:	**Time:**	
Facility condition: ☐ Normal ☐ Project work ☐ Routine maintenance ☐ Shutdown maintenance ☐ Upset conditions		
Exact location of incident (floor no., closest door no., column no., east/west/north/south, equipment no., etc.):		
Description of incident: (Sequence of events - describe in detail what happened before, during and after the incident. Include where the incident occurred, what the employee was doing at the time, weather conditions, size type and weight of the equipment or materials involved. Be concise. Bullet format is acceptable. Attach additional pages, diagrams and photos as necessary.)		
Has this incident/hazard been previously discussed and/or reported? - Select - Previous date of hazard report/incident:		
Immediate response to eliminate/reduce hazard: (Describe short-term actions taken to protect the workers.)		
Names of all witnesses:	**Did you get witness statements?** - Select -	**Pictures/diagrams attached?** - Select -

Medical Restrictions Form — referenced in the Incident Investigation Form — as per employers program required by employees when seeking medical attention on first visit to assist employer in providing modified or alternate work.

MEDICAL RESTRICTIONS FORM – *Enter Employer Here*

Early and Safe Return to Work

The purpose of this form is to; provide restrictions to the employer to enable the worker to return to alternate or modified work as soon as possible, to identify suitable work that is both productive and safe, and to provide work assignments that honour the outlined restrictions. If the employer is unable to offer work that is appropriate to the outlined restrictions the worker will be off work.

Section A: Employee Information *(to be completed by Employee)*

_____ _____ _____

Print Employee Name *Department* *Occupation/Duties*

I, _____(Employee Signature), authorize the release of the following information to my employer to assist in an early and safe Return-to Work. Dated (dd/mm/yy) _____

Section B: Restrictions, Limitations & Precautions *(to be completed by Health Care Professional).*

Please take the time to consider the following so we may ensure the duties offered meet the needs of the employee.

Strength
lifting, carrying, pulling or pushing objects to a maximum of:
☐ 5 Kilograms ☐ 10 Kilograms ☐ 20 Kilograms
☐ avoid firm or repetitive right-hand grip
☐ avoid firm or repetitive left-hand grip
☐ no strength restrictions

Safety and Balancing
☐ avoid work on slippery or uneven surfaces
☐ avoid the operation of vehicles or equipment
☐ avoid work at heights
☐ avoid stairs
☐ avoid work in areas requiring full peripheral vision
☐ no balancing or safety restrictions

Postures and Tasks
☐ avoid prolonged bending and/or twisting of the torso
☐ avoid prolonged kneeling, squatting, or crawling
☐ avoid overhead or above shoulder work
☐ restrict standing/walking to _____ hrs. per shift
☐ provide changes between standing, sitting and walking
☐ no posture or task restrictions

Environmental Factors
☐ avoid work in extreme temperatures
☐ avoid work in dust, chemical vapors, etc.
☐ avoid work with vibrating hand tools
☐ restrictions on PPE – respirator, hard hat, safety glasses fall protection, etc.
☐ no environmental concerns

Work Hours
☐ restrict work hours to _____ hrs. per shift/week
☐ no restrictions - full time hours

Medical Treatment
☐ Employee required to wear assistive devices or braces
☐ Employee involved with treatment and/or medications that may affect his/her ability to work?

Can this employee safely return to work if the restrictions are accommodated ☐ Yes ☐ No

Expected date for return to full duties _____

Other Medical Restrictions/or Comments:

_____

_____

Signature of Health Care Professional: _____ Date: _____

Name, Address and Telephone *(please print)*

_____

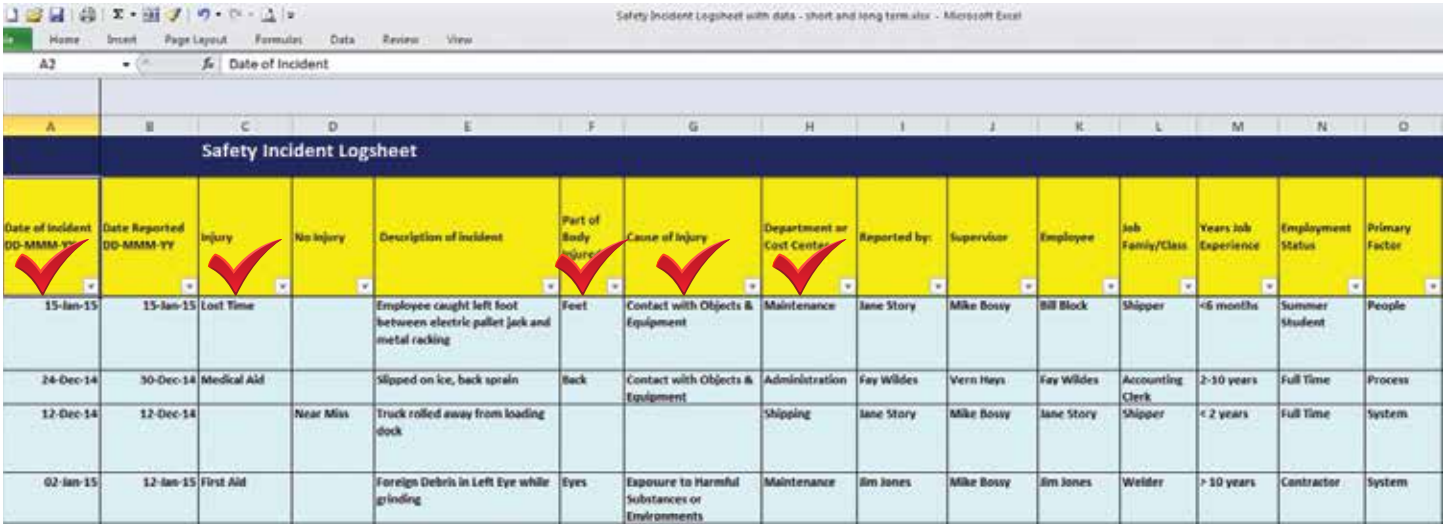
_____

_____

Note: A fee of *enter amount here* will be provided for completion of this form please invoice to the attention of the Human Resources Department at: *P.O. BOX XXXX Saskatoon, Saskatchewan, enter Postal Code (306) XXX-XXXX Fax (306) XXX-XXXX* Attention Safety Department/Human Resources Department

Revision Date: 23-Oct-17

Safety Incident Logsheet — Example of the use of an Excel spreadsheet sheet for building the data.



Safety Incident Logsheet with data - short and long term.xlsx - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View

A2 — Date of Incident

Safety Incident Logsheet

Date of Incident DD-MMM-YY	Date Reported DD-MMM-YY	Injury	No Injury	Description of Incident	Part of Body Injured	Cause of Injury	Department or Cost Center	Reported by:	Supervisor	Employee	Job Family/Class	Years Job Experience	Employment Status	Primary Factor
15-Jan-15	15-Jan-15	Lost Time		Employee caught left foot between electric pallet jack and metal racking	Feet	Contact with Objects & Equipment	Maintenance	Jane Story	Mike Bossy	Bill Block	Shipper	<6 months	Summer Student	People
24-Dec-14	30-Dec-14	Medical Aid		Slipped on ice, back sprain	Back	Contact with Objects & Equipment	Administration	Fay Wildes	Vern Hays	Fay Wildes	Accounting Clerk	2-10 years	Full Time	Process
12-Dec-14	12-Dec-14		Near Miss	Truck rolled away from loading dock			Shipping	Jane Story	Mike Bossy	Jane Story	Shipper	< 2 years	Full Time	System
02-Jan-15	12-Jan-15	First Aid		Foreign Debris in Left Eye while grinding	Eyes	Exposure to Harmful Substances or Environments	Maintenance	Jim Jones	Mike Bossy	Jim Jones	Welder	> 10 years	Contractor	System

Risk Analysis

Risk Estimation

Identified hazards that cannot be eliminated immediately must be effectively controlled to eliminate or reduce the risk. Risk estimation is used to prioritize hazards by the degree of risk they pose and to evaluate the effectiveness of implemented controls.

Risk Matrix

Saskatchewan's occupational health and safety legislation does not require that workplaces use a tool, such as the risk matrix on the next page, to estimate and assign a value to the risk a hazard poses. However, it is recommended that workplaces select a risk matrix and use it consistently.

When assessing the risk of a hazard, you must first decide how likely it is that the hazard will cause harm. Think about how often the task is completed and the number of people completing the task at any one time. Once likelihood has been determined, the next step is to consider what the potential consequences would be. The final step is to use a tool, such as the risk matrix on the next page, to get a risk rating.

For example, a veterinary clinic has identified that lifting large dogs onto exam, treatment and surgery tables is a hazard that the clinic cannot eliminate.

When determining the likelihood that the hazard could cause harm, the clinic would look at how many employees are lifting large dogs and the number of large dogs lifted in a typical day. Using the risk matrix below, the likelihood would be estimated at five (almost certain).

Next, the clinic would decide what injuries could result from lifting large dogs. Such injuries might include back, shoulder or arm muscle strains. Using the risk matrix, the consequences would be estimated at three (serious injury). With a likelihood of five and consequences at three, the risk rating would be 15 (medium).

RISK ASSESSMENT MATRIX

LIKELIHOOD	1	2	3	4	5
5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5

CONSEQUENCES

RISK RATING	
High	Stop work until risk is addressed
Medium	Implement temporary precautions until risk is addressed
Low	Address risk as soon as reasonably practicable

LIKELIHOOD (probability/frequency)

5. Almost certain
Expected to occur regularly under normal circumstances

4. Likely
Expected to occur at some time under normal circumstances

3. Possible
May occur at some time under normal circumstances

2. Unlikely
Not likely to occur under normal circumstances

1. Rare
Could happen, but probably never will under normal circumstances

CONSEQUENCES

5. Fatality

4. Major injury (permanent disability)

3. Serious injury (time loss incident)

2. Medical aid incident (health care facility treatment)

1. Minor injury (first aid at worksite)

Remember when considering risk, it is important to consider the "potential for harm," not just what had happened. Consider the "high potential" near misses where the organization should spend prevention energy. Establish leading indicators to identify the holes and plug them before injury occurs.

Determining Root/Underlying Cause — "5 Whys"

Sakichi Toyoda was born in Japan in 1865 and he is considered the founder of Japan's industrial revolution. He invented the Toyoda loom, sold it to an English mill for 1 million Yen and used the money to start a new company named Toyota.

Toyoda once stated: "When you have a problem you should ask WHY 5 times to find the source of the problem and also prevent the problem from recurring".

To try and solve a problem, sometimes by asking a simple "why" might not be enough, as it would not lead you to the bottom of the problem.

Most times one has to ask more than one "why", in order to get a clearer understanding of the problem and move from the surface all the way to the bottom of the problem.

Always ask the question, "Why was this condition allowed to exist?" Remember that root/underlying causes are often fundamental problems in the health and safety system.

Example of 5 Whys

	Why?	Because...
1	Why is Tom injured?	... he had a fall
2	Why did he fall?	... the floor was wet
3	Why was the floor wet?	... there was a leaking valve
4	Why was the valve leaking?	... there was a seal failure
5	Why did the seal fail?	... it was not maintained

Chapter 6: Data Management — Products

Introduction

By capturing the data on a consistent basis the employer will be able to produce basic information of value for their workplace.

Fundamentals

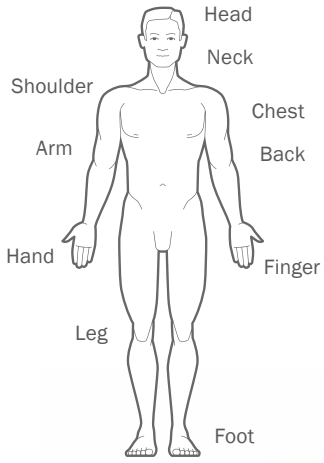
A decision of what to track will need to be decided by the workplace. Either initially (such as number of first aids, number of medical aids, number of lost times) or as confidence and skills develop in the tracking safety statistics consideration should be given to tracking indicators such as Total Recordable Incident Rate (TRIF), Severity Rate, Lost Work Day Rate, and DART Rate. Having insight into how these statistics are calculated can be helpful for employers to ensure they choose the calculations that are best suited to their workplace.

Building the Data

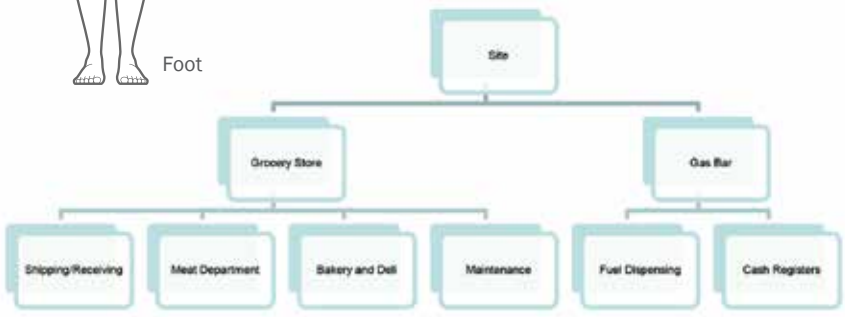
As a minimum, it is recommended that the employer track:

# of first aids
# of medical aids
# of lost times

And associated:
Part of the body injured
Cause of injury



For the:
Site
Division
Department



Following are explanations and examples of safety statistics that can be used in the workplace to track safety.

Incident Rates are examples of lagging indicators because they describe past history. Incident rates can be helpful when compared to other companies in similar fields that are a similar size. They tend to be most useful when you compare them over several periods, so you can identify trends. Most medium or larger companies would benefit from computing these rates each month, and tracking the trends from month to month.

Smaller companies that experience recordable incidents will most likely have high incident rates, or the incident rates will fluctuate significantly from year to year. This is because of the small number of employees and lower number of labour hours worked at the company.

With incident rates if you notice that your rates are climbing you need to investigate to determine what is happening. If they are declining, it's a sign that your workers are following safe practices and that your injury rates are reducing, but vigilance and continuous improvement by looking at the leading indicators remains very important to evaluate the safety program.

Remember leading indicators measure future performance; work on the proactive side, filling the holes in the safety system before someone gets hurt. Major incidents result when a series of failings in risk control systems occur at the same time, or in other words the holes in the Swiss cheese line up.

Total Recordable Injury Frequency (TRIF)

Definition:

Total Recordable Injury Frequency (**TRIF**) — Total recordable injuries are the sum of fatalities, lost work day cases, restricted work cases, and medical treatment cases per 100 workers. (Source Canadian Association of Petroleum Producers (CAPP) — Guide Reporting of Occupational Injuries June 2008)

Intent of the Measure:

TRIF measures the number of recordable injuries in the exposure period as a percentage of the workforce. A mathematical calculation that describes the number of employees per 100 full-time employees that have been involved in a recordable injury or illness defined as fatalities, lost work day cases, restricted work cases and medical treatment.

How to Calculate TRIF:

TRIF = Total Recordable Injuries x 200,000/Exposure hours

Total Recordable Injuries = Sum of fatalities, lost day cases, restricted work cases, and medical treatment cases

Example:

A company has 45 full-time employees (FTE) (each works 40 hours a week) and 3 part-time employees (PT) that each work 20 hours per week. This equates to 91,140 exposure hours each year. (Every employee has 3 weeks vacation):

(45 FTE x 40 hr/week x 49 weeks) + (3 PT x 20 hr/week x 49 weeks) = 91,140 Exposure Hours

If the company experienced **3 medical aid injuries, 1 lost day case, and 1 restricted work case** then the formula works like this:

3 medical aids
+
1 lost day
+
1 restricted work
5 recordable injuries

$$\text{TRIF} = \frac{5 \times 200{,}000}{91{,}140}$$

TRIF = 10.97

What is known now is that for every 100 employees, 11 employees have been involved in a work-related recordable injury or illness.

Why 200,000? This was to develop a standardized way to measure rates, so that companies of different sizes could be compared fairly. They chose 200,000, because it represents the number of hours that 100 employees working 40 hours a week for 50 weeks would accumulate.

Note in Saskatchewan, by legislation we get three weeks of vacation. Therefore the calculation would actually be 100 employees working 40 hours a week for 49 weeks, which is 196,000 hours — the fact is that there is many different work schedules and hours so the 200,000 hours chosen is an approximation of 100 employees in a year.

When calculating the hours worked each year, month, etc. consider:

- The total number of hours worked by employees should not include any time that was not worked, such as vacation or sick time, even if it was paid.
- Should include overtime hours worked
- Should include all employees including managers, supervisors, etc.
- Can usually be supplied by payroll or human resources

Injury Frequency

Source: Canadian Centre for Occupational Health and Safety (CCOHS)

Definition:

Injury frequency — Number of new lost-time claims for assessable employers per 100 workers of assessable employers

Intent of the Measure:

To measure the risk of workplace injury to workers in each jurisdiction in terms of the proportion of workers who suffer a lost-time work injury

How to Calculate Injury Frequency:

Injury frequency = N/C1 x 100

N = total number of new lost-time claims for assessable employers
C1 = number of workers of assessable employers or self-employed working opting for coverage

Recordable Incident Rate (RIR)

Source: Occupational Safety and Health Administration U.S. Department of Labor (OSHA)

Medical Incidents are sometimes referred to as Recordable Incidents, which is a term that comes from OHSA mandatory reporting in the United States. Instead of using the term recordable the employer could substitute Medical Aid Incident Rate and use the same calculation or create the workplace definition for what a "recordable" is. The OSHA definitions are available online.

Definitions:

Recordable incident — In the context of safety statistics a medical aid is sometimes referred to as a recordable or a recordable incident. A recordable definition include those work-related injuries and illnesses that result in:

- Death;
- Loss of consciousness;
- Days away from work;
- Restricted work activity or job transfer; or
- Medical treatment beyond first aid.
- Includes work-related injuries and illnesses that are significant such as cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum.

- Recordable incident rate — A mathematical calculation that describes the number of employees per 100 full-time employees that have been involved in a recordable injury or illness.

Recordable Incident Rate

Definition:

Recordable incident rate — A mathematical calculation that describes the number of employees per 100 full-time employees that have been involved in a recordable injury or illness.

How to Calculate Recordable Incident Rate:

$$RIR = \frac{\text{Number of Recordable Cases x 200,000}}{\text{Exposure Hours}}$$

Severity Rate (SR)

The severity rate looks at incidents in terms of the actual number of days that were lost on average. To calculate the Severity Rate, you divide the number of lost work days by the number of recordable incidents. If your employees lost a total of 24 work days and there had been a total of four incidents, then on average each incident caused a loss of 6 work days.

The severity rate is a lagging indicator. It is not used widely by companies as a calculation because it only provides an average, however it is useful to determine if the severity of injuries are increasing.

Definition:

A mathematical calculation that describes the number of lost days experienced as compared to the number of incidents experienced.

How to Calculate the Severity Rate (SR):

$$SR = \frac{\text{Total number lost work days}}{\text{Total number of recordable incidents}}$$

Example: Assume there were 5 lost work days and two recordable incidents.

$$SR = \frac{5}{2} \quad SR = 2.5$$

What is known is that for every recordable incident, an average of 2.5 days will be lost due to those work related injuries and illnesses.

Lost Time Case Rate (LTC)

The Lost Time Case rate considers only incidents in which work days were lost. LTC is a lagging indicator and is useful to track if the number of lost times is increasing based on 100 employees.

Definition:

A mathematical calculation that describes the number of lost cases per 100 full-time employees in any given time frame.

How to Calculate the Lost Time Case Rate (LTC):

$$LTC = \frac{\text{Number of Lost Time } \mathbf{Cases} \times 200{,}000}{\text{Exposure Hours}}$$

Example: Assume two recordable cases had lost work days associated with the incident.

$$LTC\ Rate = \frac{2 \times 200{,}000}{91{,}140} \qquad LTC = \frac{400{,}000}{91{,}140} \qquad LTC\ Rate = 4.39$$

What is known is that for every 100 employees, 4.39 have suffered lost time because of a work related injury or illness.

Lost Time Work Day Rate (LTW)

Lost Time Work Day Rate (LTW) is a lagging indicator which describes past performance. It is useful to track if the number of lost days as a result of lost times is increasing based on 100 employees.

Definition:

A mathematical calculation that describes the number of lost work days per 100 full-time employees in any given time frame.

How to Calculate the Lost Time Work Day Rate (LTW):

$$LTW = \frac{\text{Number of Lost Time } \mathbf{Days} \times 200{,}000}{\text{Exposure Hours}}$$

Example: Assume there were 14 lost days due to the one recordable case that had lost work days associated with the incident.

$$LTW\ Rate = \frac{14 \times 200{,}000}{91{,}140} \qquad LTW = \frac{2{,}800{,}000}{91{,}140} \qquad LTW\ Rate = 30.72$$

What is known is that for every 100 employees, there was 30.72 days lost because of a work-related lost time injury or illness.

Days Away /Restricted or Job Transfer Rate (DART)

The Days Away/Restricted or Job Transfer Rate (DART) is a lagging indicator. It is relatively new to industry. It adds the number of incidents that had one or more lost days, one or more restricted days or that resulted in an employee transferring to a different job within the company due to a work related injury or illness. It is based only on those injuries and illnesses severe enough to warrant "Days Away, Restrictions and Transfers." As a general rule of thumb you want to have a lower DART rate than Incident Rate.

Definition:

A mathematical calculation that describes the number of recordable incidents per 100 full time employees that resulted in lost or restricted days or job transfer due to work-related injuries or illnesses.

How to Calculate the Days Away/Restricted or Job Transfer Rate (DART):

$$\text{DART} = \frac{\text{Total Number of DART Incidents} \times 200{,}000}{\text{Exposure Hours}}$$

Example: Assume that of the 5 recordable incidents one resulted in limited or restricted work activity, one necessitated a job transfer to a different position in the company. The third was a broken leg that only had lost time associated with it (no restriction or transfer).

$$\text{DART Rate} = \frac{3 \times 200{,}000}{91{,}140} \qquad \text{DART} = \frac{600{,}000}{91{,}140} \qquad \text{DART Rate} = 6.58$$

What is known is that for every 100 employees, there were 6.58 incidents that resulted in lost or restricted days or job transfers due to work-related injuries or illnesses.

Charts and Visual Safety

"A picture is worth a thousand words." This is certainly true when presenting and explaining data. Graphs and charts help people to understand data quickly. While safety meetings and verbal communications are central to business life, the reality is that in 48 hours we forget 75 per cent of what is said. However, 85 per cent of what we do retain comes to us visually, so employers can really improve message retention by using visual communication. Visual Safety can be used to show and compare changes, show and compare relationships and bring the facts to life.

Source: http://westsidetoastmasters.com/resources/master_presenters/lib0043.html

Graphs and charts are part of visual safety. Graphs are processed by the brain faster than text.

Advantages:

1. Quick way for the audience to visualize what you are saying — trends up or down
2. Forceful — emphasizes main points
3. Convincing — proves a point — see and hear
4. Compact way to convey information
5. More interesting than just talk or print

Disadvantages:

1. Time commitment — decision must be made in advance for layout, etc.
2. Some technical competence required — must have some skills to create and knowledge of what you want to present

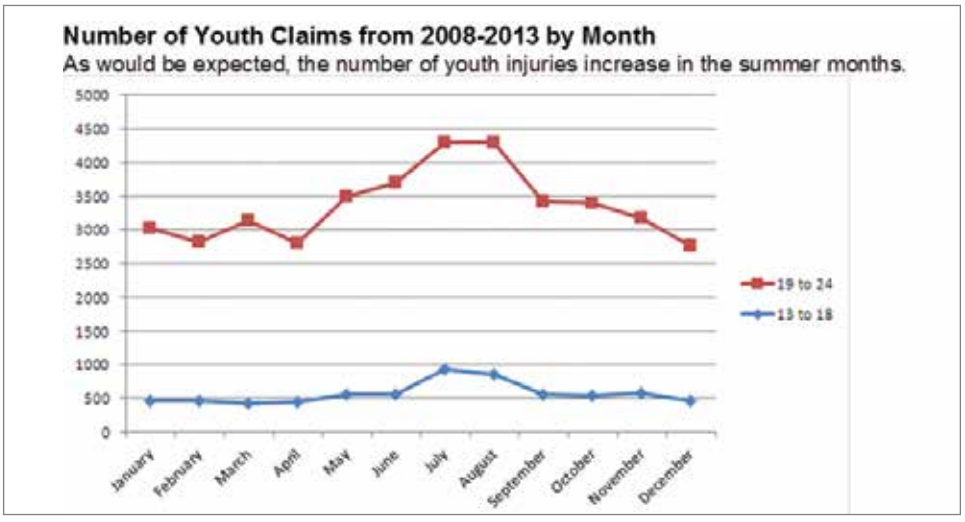
Common Types of Graphs

Line Graphs:

Line graphs are the most common graph type. They are used to connect the data points that are plotted. Line graphs are must useful for showing trends and identifying whether two variables relate to each other. They work well for continuous variation such as complete range of measurements from one extreme to the other. Height is a good example of continuous variation. Individuals can have a complete range of heights, for example; 1.6, 1.61, 1.62, 1.625 meters high.

Examples:

- First aids per month: How do first aids vary from month to month?
- Medical aids per month or year
- Graph shown below: Number of Youth Claims per month from 2008-2013 (Saskatchewan WCB)



Bar Graphs:

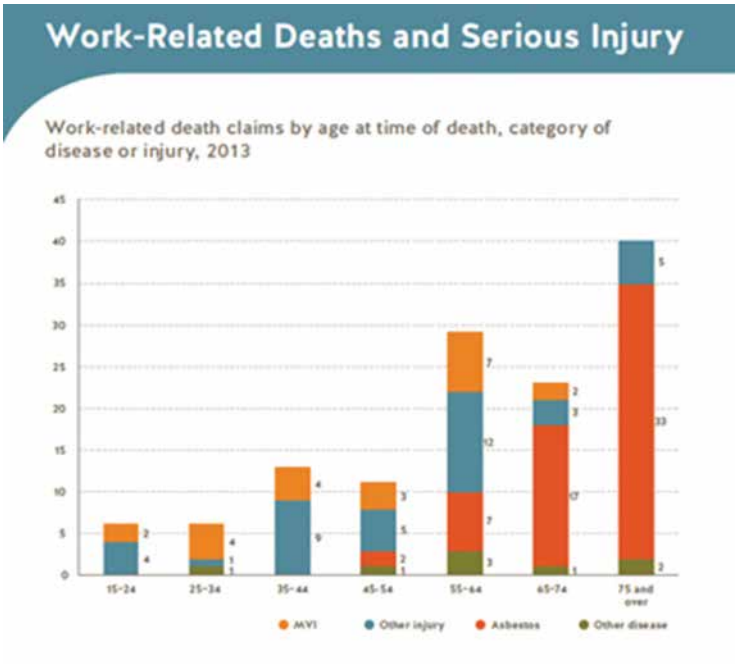
Often the choice of graph depends on how easy the trend is to spot. If a line graph can be used for the data, then often a bar graph can be used just as well. However, the opposite is not always true. When your x axis variable represents discontinuous data (such as male/female) than a bar graph can only be used.

Discontinuous variation — This is where individuals fall into a number of distinct classes or categories, and is based on features that cannot be measured across a complete range. You either have the characteristic or you don't. Blood groups are a good example: you are either one blood group or another — you can't be in between. Such data is called discrete (or categorical) data.

Bar graphs show relationships between different data series. The height of the bar represents the measured value or frequency. The higher or longer the bar — the greater the value.

Examples:

- First aids per department over three years
- Work-related death claims by age at time of death and category of disease (WorksafeBC 2013 Data)



Pie Charts

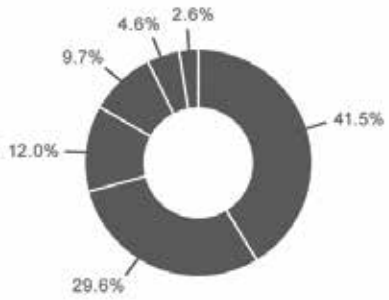
Pie charts compare parts to a whole and show percentage distribution. The entire pie represents the total data set. Each segment of the pie is a particular category of the whole. Pie charts must use the same unit of measure within a pie chart or the data will be meaningless. One of the drawbacks of a pie chart is that sometimes percentages are difficult to discern.

Hints when using pie charts:

- Be careful not to use too many segments.
- Using more than six segments makes the chart too crowded.
- For more than six segments it is better to use a bar chart.
- To emphasize segments, detach each a bit from the main pie. The visual separation makes it stand out.

Examples:

- Cause of injury
- Part of the body injured
- Chart shown – Benefits Liabilities (Saskatchewan WCB, 2013 Annual Report)

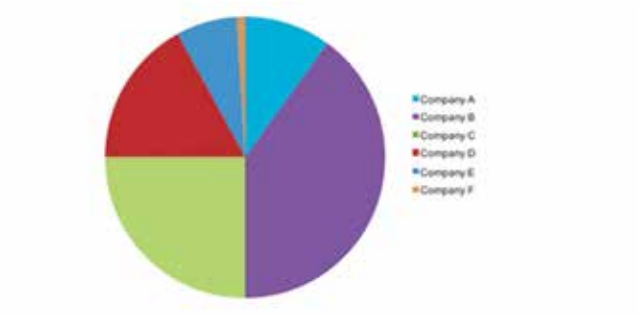


BENEFITS LIABILITIES

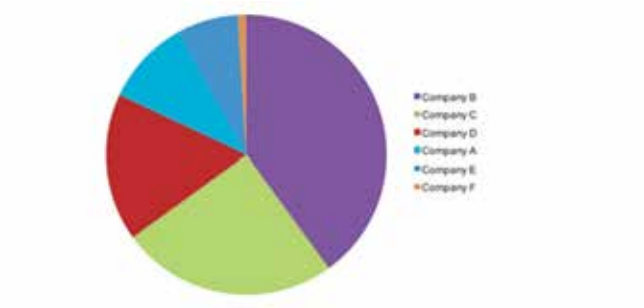
41.5%	Long-Term Disability	$ 450,307,000
29.6%	Health Care	$ 321,230,000
12.0%	Short-Term Wage Loss	$ 130,566,000
9.7%	Survivor Benefits	$ 104,702,000
4.6%	Future Benefits Administration	$ 50,029,000
2.6%	Vocational Rehabilitation	$ 28,698,000
100%	Total	$1,085,532,000

Despite the obvious nature of a pie charts message, bar graphs provide a much better means to compare the magnitudes of each part. Pie charts only make it easy to judge the magnitude of a slice when it is close to 0%, 25%, 50%, 75%,or 100%. Any percentages other than these are difficult to discern in a pie chart, but can be accurately discerned in a bar graph, thanks to the quantitative scale. If using a pie chart, adding data labels that indicate percentage can be helpful.

Below is a pie chart with six slices. Notice how easy it is to determine the value of Company C (the green slice) is 25%, one quarter of the pie.



Now notice how that even the green slice, which was easy to read as 25 % above, is no longer as easy to recognize as 25% in the chart below.



None of the values have changed; the slices were simply sorted by size.

Analysis… So much data …

The beginnings of analysis can involve some simple questions, including:

- Is the data trending up? Down?
- Since when?

Then the questions start getting tougher:

- Is the variable that's trending up or down made up of more than one component
- Is the one trending up while another is static or trending down?

And then the really important questions:

- Why?
- What can be done about it?

Notes

Chapter 7: Data Management – Reporting

Introduction

The employer will need to determine how often the Safety Statistics are compiled and the information distributed.

Fundamentals

In Chapter 1, we discussed the benefits of keeping safety statistics. Reporting facilitates the sharing of the knowledge gained. The benefits include providing an objective evaluation of the magnitude of occupational illness and injuries, providing a measurement of the progress and effectiveness of the health and safety program, enabling the identification of high-hazard tasks, facilities and problem areas so that extra effort can be made in those areas, creating an interest and awareness in safety and health amongst the employees, helping establish the need for and content of training programs and ultimately reducing human suffering, costs and improve morale.

Reporting

Timeliness for reporting can depend on the size of the workforce or the maturity of the Safety Statistics Measurement System. A large workforce may want to report daily, smaller workforces may choose to report weekly or monthly. Consider the best reporting frequency for the workplace:

- Daily
- Weekly
- Monthly
- Quarterly
- Annually
- Trends over 5 years, etc.

When considering distribution of the safety statistics consider:

- Management — minimum of monthly reporting
- Occupational Health Committee — minimum of quarterly
- Health and Safety Bulletin Boards — minimum of quarterly

Departments, managers and supervisors should be aware of their safety performance relative to

their departments and the organization as a whole. They should be held accountable for their safety objectives and this requires measurement. “You can’t improve what you don’t measure.”

The Occupational Health Committee should review the safety statistics at every meeting looking for trends and identifying hazards — identify, assess and control. A summary of the safety statistics should be a part of the agenda issued for each committee meeting.

Health and Safety Bulletin Boards should have regular updates to the safety performance. Post graphs and summaries. Some employers may choose to have a special board or electronic posting boards to provide safety statistics information.

Chapter 8: Training

Introduction

There are many training requirements in the workplace.

Fundamentals

The employer must provide workers with a comprehensive health and safety orientation and workplace-specific training. It is important that all employees receive training so they understand their responsibilities and procedures relevant to reporting. Meaningful statistics cannot be collected if there is non-existent reporting or properly conducted investigations. Remember the principle of GIGO — garbage in, garbage out.

Training

It is always important to understand what the legislation says. The employer must provide workers with a comprehensive health and safety orientation and workplace-specific training. Supervisors have a general duty to protect workers under regulation 17(2) that includes orientation and training. The supervisor is expected by the employer to ensure the work is being done in a competent manner. Orientation and training are the responsibility of the supervisor.

Train: SEA 3-1(1)(ff) Definition

To give information and explanation to a worker with respect to a particular subject-matter and to require a practical demonstration that the worker has acquired knowledge or skill related to the subject-matter.

General duties of employer SEA 3.8(f) "ensure that: (i) the employer's workers are trained in all matters that are necessary to protect their health, safety and welfare"

Training of Workers The Occupational Health and Safety Regulations, 1996 Regulation 19
"An employer shall ensure that a worker is trained in all matters that are necessary to protect the health and safety of the worker…"

Resources:

CSA Z1001-13 Occupational health and safety training — This standard addresses the organization's need to be able to select and provide appropriate occupational health and safety training to ensure workers are suitably trained to perform their work.

Training must include information about the employer's health and safety system and details about safety policies, rules and especially safe operating procedures or guidelines. Training should include how to report hazards, concerns, accidents, incidents and dangerous occurrences. Training

should include any specific policies that the employer deems necessary to protect the health and safety of workers. Workers need to know their rights for safety under the OHS legislation. Important information to cover is the worker's health and safety responsibilities.

Examples of training and those that are directly relevant to safety statistics are shown in blue text:

- Orientations — induction or transfer
- First aid facilities' location and first aid register
- Safety policies, rules & procedures
- Reporting unsafe conditions and hazards
- Reporting and investigating incidents
- Inspections
- Return to work procedures and responsibilities
- Hazards & controls
- Precautions for the protection from physical, chemical or biological hazards
- Fire and emergency procedures
- OHS responsibilities
- Any other matters that are necessary to ensure the health and safety of the worker while at work

It is important to keep a record of the orientation and training as well as written work procedures.

Remember to document and keep:

- A record of the orientation and training provided.
- A record of follow-up instruction.
- A copy of any associated written work procedures & policies.

Act Section 3-81 — Onus on accused re Training of Workers: "In any proceedings for an offence pursuant to this Act or the regulations consisting of a failure to comply with a duty or requirement related to the training of workers, the onus is on the accused to prove that the training provided met the requirements of this Act and the regulations."

Induction training should be taken seriously as every place of employment has hazards. Induction training should include fire escape routes and exits, alarms, fire extinguishers, how to contact a first aider, PPE, reporting and investigations.

Chapter 9: Communications

Introduction

Communication is what we do to inform, get information from or influence others. It includes what we say or write, gestures, body language, tone of voice and expression and actions or lack of action. Everything in the workplace involves communication.

Fundamentals

An effective training and communications program will significantly reduce the risk of personal injury, reduce damages to property, produce a quality product, increase production, improve employee morale, and improve employee loyalty and retention.

Communication

Research suggests 70 per cent of workplace mistakes are caused by poor communication. How we start our message often determines the result. People quickly determine the meaning of our message and whether they will be receptive at the beginning. We only have a short time to get our messages across.

- 2 minutes when we are face to face
- 30 seconds on the telephone
- 10-15 seconds by voice mail

Communication methods include:

- Induction training
- Formal training
- Tool Box talks, safety meetings
- Occupational Health Committee
- Signs
- Notices and posters
- Face-to-face communication
- Emails, text messages, safety flash, and handouts
- Company newsletter
- Intranet
- Videos

Communication methods should always provide an opportunity for discussion, questions and feedback.

Four principles of health and safety communication

1. **Effective communication increases motivation**
   People are likely to support an idea if they understand the reasoning behind it. Example: Workers are likely to follow a safe work procedure if they understand how the procedure controls the hazards involved in the work. Likewise, people who are kept informed feel involved and believe their opinions are important.
2. **The more people a communication goes through, the more distorted it becomes**
   The more people there are in a line of communication, the more distorted the message may become. Each person who passes on information is likely to change it. Try to communicate information directly and provide copies in writing.
3. **Effective communication reaches the heart as well as the mind**
   Communication aimed at feelings and attitudes is usually more effective than communication directed only at the mind. People will listen intently if you bring them into a message. Example: Workers may be willing to use change and shower facilities if they understand how this can prevent contaminants from reaching their families.
4. **Use it or lose it**
   The sooner information and skills are put to work, the more likely they will be learned and remembered. Help people apply what they are learning as soon as possible.

To improve safety communications, consider:

1. Explain the current safety status — this is best done using visuals
2. Customize safety information — talk about individual safety records not the company as a whole
3. Explain the benefits — how it will affect employees, their family and the company
4. Get people involved — ask employees for input
5. Repeat your message via different communication methods over a period of time — put together a schedule of communication events that constantly drip feed the message
6. Tell stories — the right brain prefers stories. Use real-life stories that show the importance of safety.
7. Reward in public, condemn in private. Recognize high performing safety leaders publicly to encourage others to work more safely. For those who are not doing the right thing, this needs to be done privately.

8. Use positive language. Avoid words like don't and can't. Focus on the behaviour you want, rather than talking about what you don't want.
9. Expectation clarity. Let everyone know what is expected of them and how you will be measuring it. Clearly set goals and targets.
10. Follow-up with action. While workers might accept your words, they will want to see action that you believe what you say. "Actions speak louder than words."

(Sources: Communication of health and safety in the workplace (Future Engineering Talent) and 10 ways to Improve your Workplace Safety Communication – Digicast.com)

Hints:

- Polish dull safety statistics into shining examples of effective communication.
- **Convert numbers and percentages into dollars and human beings.** Relate to flesh and blood, to fathers, mothers, sons, daughters, brothers, sisters, grandparents and grandchildren.
- Discuss specific incidents behind the figures.
- Ask people to think and talk about what effects a given case may have had upon the family.
- Use visuals to create clear mental pictures of what the losses mean in terms of people, property, production and profits.

Notes

Chapter 10: Continuous Improvement

Introduction

Continuous improvement, sometimes called continual improvement, is the ongoing improvement of products, services or processes through incremental and breakthrough improvements.

Fundamentals

Continuous improvement occurs when the amendments are acted upon and improvements are made so that the value of the Health and Safety Management System is enhanced.

Continuous Improvement

Continuous improvement requires that set objectives are measured at planned intervals and the organization is prepared to assess whether or not they have met them relative to suitability, adequacy and effectiveness.

It is important to make all employees part of the continuous improvement team and encourage them to act. Regularly assess engagement levels and ask employees whether the organization has communicated its strategy well.

Evaluate changing circumstances, including legal and other requirements related to applicable OHS in the workplace.

Identify resource deficiencies. Improvements should continue uninterrupted, reflecting a culture that values the safety of people, products and processes.

Regulation 22 states that an Employer's Health and Safety Program must be reviewed at intervals not greater than 3 years and whenever there is a change in circumstance that may affect the health and safety of workers.

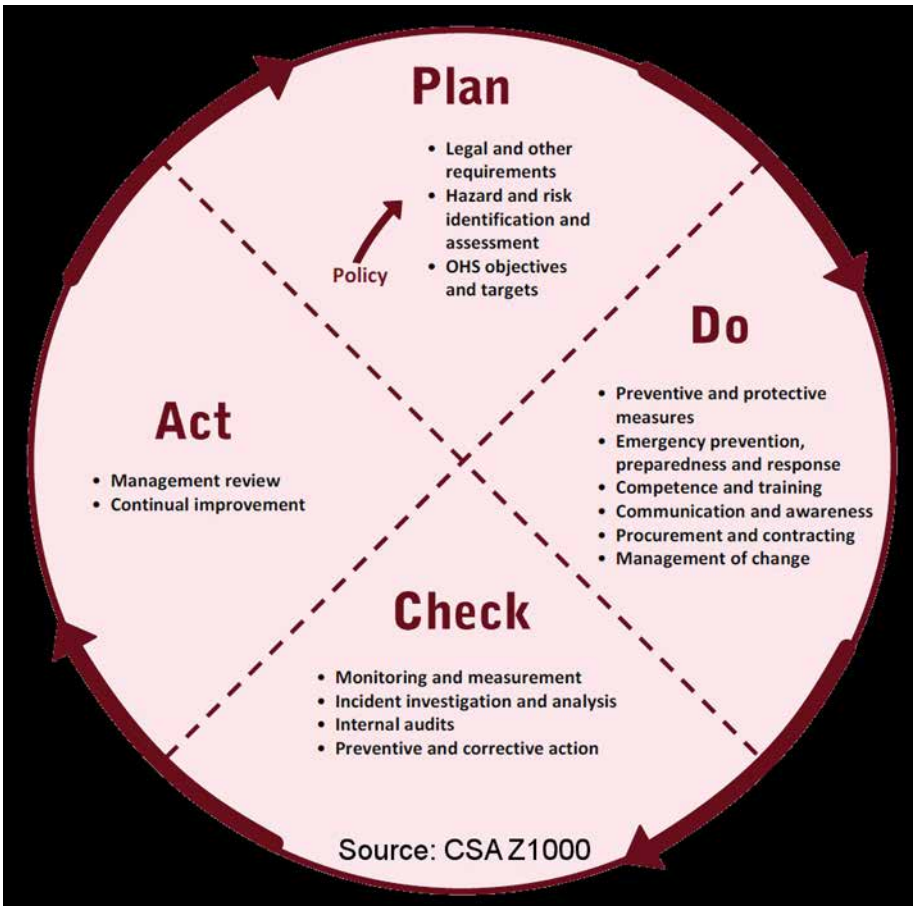
CCOHS — Continuous Improvement — Section 21 — Implementing an Occupational Health and Safety (OHS) Program

- Has management commitment and leadership been demonstrated and is it effective?
- Are OHS policy and objectives being achieved?
- Do policies and procedures meet legal and other requirements?
- Have hazard and risk controls been implemented and are they effective?
- Is worker participation in OHS activities effective?
- Has the OHS Program been evaluated and areas for improvement identified and implemented?

- Have incidents, illnesses and near misses been investigated and root causes identified and remedied?
- Are training programs for employees effective?
- Are communication programs for employees and external interested parties effective?
- Is information being produced, reviewed and used for the continual improvement of the OHS Program?

The four phases in the Plan-Do-Check-Act Cycle for continuous improvement involve:

- **Plan:** Identifying and analyzing the problem.
- **Do:** Developing and testing a potential solution.
- **Check:** Measuring how effective the test solution was, and analyzing whether it could be improved in any way.
- **Act:** Implementing the improved solution fully.



Source: CSA Z1000-14 – Occupational Health and Safety Management

Assess opportunities for continual improvement and the need for changes to the organization's OHS policy and objectives.

Ensure the Safety Performance Indicators (SPIs) (leading and lagging indicators) selected to monitor are providing the information that was intended and are providing benefit in safety improvement efforts.

In Chapter 2 Measurement — What? — We discussed selection of the safety objectives and safety performance indicators to:

- Consider if there are problems to be solved, or an important area where improvement is needed
- Consult workers, the committee and representatives
- Ensure compliance with legal requirements
- Determine SPIs with consideration of the organization's operational and business requirements
- Make sure the indicators selected have direct ties to the outcomes you are trying to achieve and that the SPIs are within your sphere of influence
- Include leading and lagging indicators to establish and monitor the objectives
- Designate responsibility for achieving objectives and targets
- Determine the means and time frame within the objectives to be met
- Communicate the objectives to all employees
- Hold employees accountable for their safety related actions, employee accountability must be consistently enforced
- Include safety in performance evaluations
- Maintain an element of continuous improvement
- Discuss and evaluate safety objectives at regular and planned intervals by management (at least once per year)

The continuous improvement efforts should include a review of whether the employer is meeting its objectives and if the correct SPI were selected.

Notes

Chapter 11: Quick Start Process Map

Introduction

This guide has covered the why, what and where of measuring safety statistics. Data management considerations such as collection, building, products and reporting were discussed. Finally a section of training, communication and continuous improvement was included to help workplaces ensure their efforts in developing Safety Performance Indicators (SPIs) were being communicated and evaluated for effectiveness.

Fundamentals

The intent of this guide is to provide work places with information and tools needed to set safety objectives, select Safety Performance Indicators (SPI), track and communicate performance to reduce and eliminate work related injuries and illnesses.

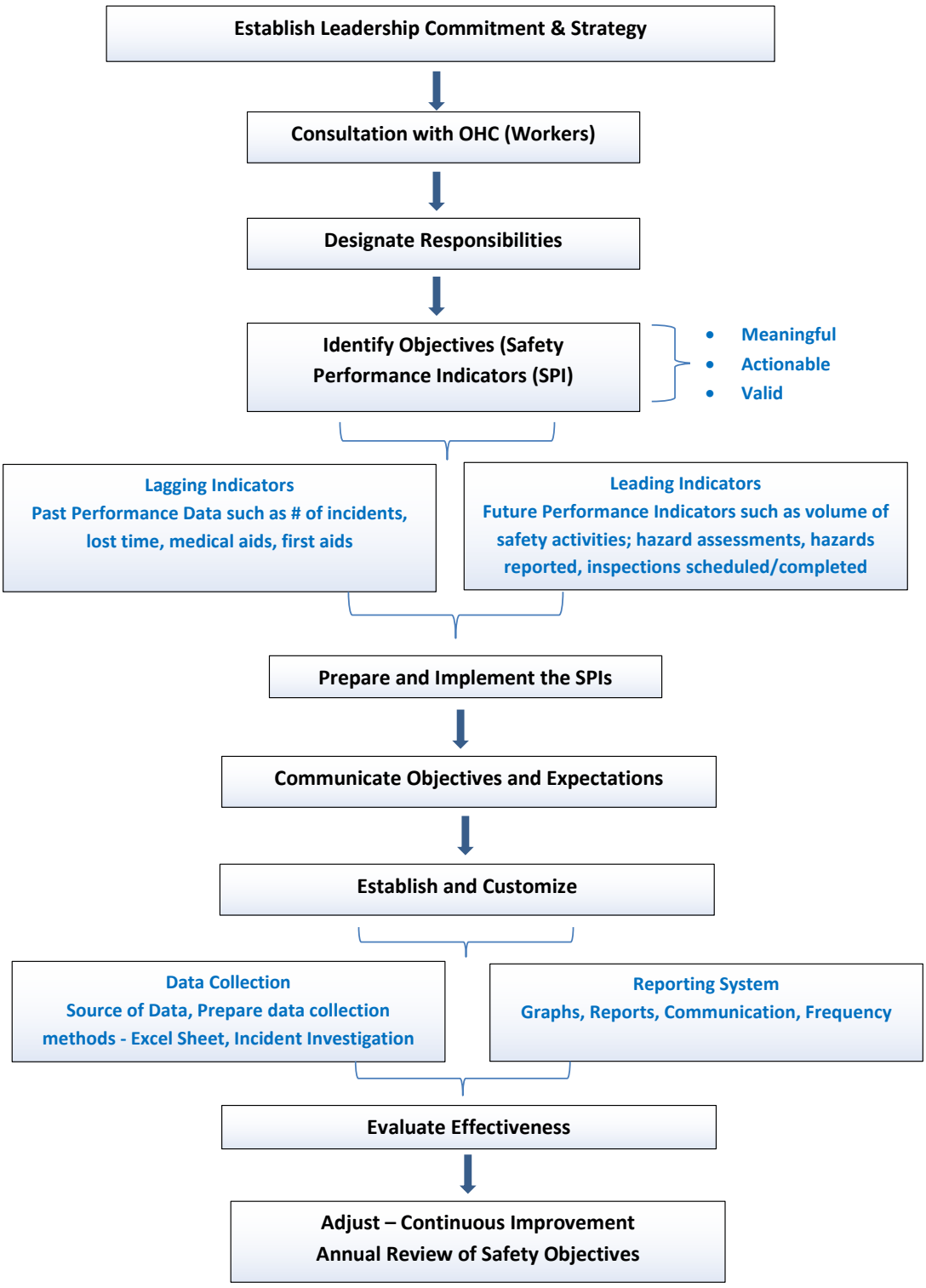
Quick Start Process Map

To reduce injuries and illnesses employers must provide an effective safety system. As part of the effective safety system employers must set specific and measurable objectives for safety, review the safety objectives and processes performance at least annually, and identify leading and lagging indicators appropriate to the workplace track safety performance. Safety statistics are used as health and safety performance measures. The principle is, “You can’t improve what you don’t measure.” At a minimum, legislative compliance for injury and compensation reporting is mandatory.

Measurement is the starting point for improvement for safety and gives a basis to establish targets, just as monitoring and targets are important for production, quality and customer service — the same principles apply for safety performance. The ultimate goal of understanding safety statistics is to provide a healthy and safe workplace by identifying hazards, assessing the risk, controlling then reviewing to ensure the corrective measures taken are effective.

The following quick process map is an easy to follow flow chart to allow workplaces to kick start implementation of effective safety statistics.

Process Map for Implementing Effective Safety Statistics



Important Websites

Source	Website
American National Standards Institute (ANSI)	www.ansi.org
Canadian Association of Oilwell Drilling Contractors (CAODC)	www.caodc.ca
Canadian Centre for Occupational Health and Safety (CCOHS)	www.ccohs.ca
Canadian Manufacturers and Exporters (formerly the Canadian Manufacturers Association)	www.cme-mec.ca
CSA Group (formerly the Canadian Standards Association)	www.csagroup.org
Energy Safety Canada	www.energysafetycanada.com
Heavy Construction Safety Association of Saskatchewan (HCSAS)	www.hcsas.sk.ca
International Organization for Standardization (ISO)	www.iso.org
LRWS Occupational Health and Safety Division	www.saskatchewan.ca
Motor Safety Association (MSA)	www.motorsafety.ca
National Fire Protection Association (NFPA)	www.nfpa.org
National Institute for Occupational Safety and Health (NIOSH)	www.cdc.gov/niosh
National Safety Council (US)	www.nsc.org
Public Health Agency of Canada	www.phac-aspc.gc.ca
Publications Saskatchewan	www.saskatchewan.ca
Safe Manitoba	www.safemanitoba.com
Safe Saskatchewan	www.safesask.com
Safety Association of Saskatchewan Manufacturers (SASM)	www.sasm.ca
Saskatchewan Association for Safe Workplaces in Health (SASWH)	www.saswh.ca
Saskatchewan Construction Safety Association (SCSA)	www.scsaonline.ca
Saskatchewan Safety Council	www.sasksafety.org
Saskatchewan Workers' Compensation Board	www.wcbsask.com
Service and Hospitality Safety Association (SHSA)	www.servicehospitality.com
US Department of Labour, Occupational Safety and Health Administration (OHSA)	www.osha.gov
WorkSafe Saskatchewan	www.worksafesask.ca
WorkSafeBC	www.worksafebc.com

Notes

Appendix 1: Cause of Injury Reference Sheets

Claim Type by Cause of Injury

Assaults and Violent Acts

Assaults and violent acts by person(s), uns
Assaults and violent acts, uns
Assaults by animals, n.e.c.
Assaults by animals, uns
Assaults, Violent Acts or Harassment, n.e.c.
Biting
Exposure to Work or Job Related Stress, n.e.c.
Exposure to work or job-related stress, unspecified
Heavy Work Loads
Hitting, kicking, beating
Nonvenomous bites
Self-inflicted injury, uns
Sexual Assault
Sexual Assault, Verbal Sexual Assault or Harassment, n.e.c.
Squeezing, pinching, scratching, twisting
Threats or verbal assaults

Bodily Reaction & Exertion

Bending, climbing, crawling, reaching, twisting
Bodily conditions, n.e.c.
Bodily reaction & exertion, uns
Bodily reaction, n.e.c.
Bodily reaction, uns
Bodily reactions & exertion, n.e.c.
Overexertion in carrying, turning or welding objects
Overexertion in lifting
Overexertion in lifting (object) and turning (body)
Overexertion in Lifting and Turning (Object)
Overexertion in pulling or pushing objects
Overexertion in throwing objects
Overexertion, n.e.c.
Overexertion, uns
Repetitive motion, n.e.c.
Repetitive motion, uns
Repetitive placing/grasping/moving objects, except tools
Repetitive use of tools
Running--without other incident
Sitting
Slip, trip, loss of balance--without fall
Slip, trip, loss of balance--without fall, uns
Slipping on something--without fall
Standing
Static posture without application of force to an object
Stepping in a hole--without fall
Sudden reaction when surprised, ..., startled
Tripping over something--without fall
Typing or key entry
Walking--without other incident

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Contacts with Objects & Equipment

Caught in or compressed by equip./objects, uns
Caught in or crushed in collapsing structure
Caught in running equipment or machinery
Caught in/compressed by equip./obj., n.e.c.
Caught in/crushed in collapsing materials, n.e.c.
Caught in/crushed in collapsing materials, uns
Compressed/pinched by rolling, sliding/shifting obj.
Contact with obj. & equipment, uns
Contact with objects and equipment, n.e.c.
Excavation or trenching cave-in
Rubbed or abraded by foreign matter in eye
Rubbed or abraded by friction or pressure, n.e.c.
Rubbed or abraded by kneeling on surface
Rubbed or abraded by objects being handled
Rubbed, ..., or jarred by vehicle/mobile equip. vibration
Rubbed, abraded, or jarred by vibration, n.e.c.
Stepped on object
Struck against moving object
Struck against object, n.e.c.
Struck against object, uns
Struck against stationary object
Struck by discharged object or substance
Struck by dislodged flying object, particle
Struck by falling object
Struck by flying object, n.e.c.
Struck by flying object, uns
Struck by object, n.e.c.
Struck by object, uns
Struck by or slammed in swinging door or gate
Struck by rolling/sliding/falling obj. on floor/ground level
Struck by slipping handheld object
Struck by swinging or slipping object, n.e.c.
Struck by swinging or slipping object, uns
Struck/Pierced by needle (not transmitting disease)
Exposure to Harmful Substances or Environments

Exposure to Harmful Substances or Environments

Bee, wasp, hornet sting
Choking on object or substance
Contact with cold objects or substances
Contact with electric current of machine/tool/…light fixture
Contact with electric current, n.e.c.
Contact with electric current, uns
Contact with hot objects or substances
Contact with overhead power lines
Contact with skin or other exposed tissue
Contact with temperature extremes, uns
Contact with wiring, transformers, or other electrical components
Expos. to harmful subs./environments, n.e.c.
Expos. to harmful subs./environments, uns
Expos. to traumatic/stressful event, n.e.c.
Exposure to caustic, noxious, or allergenic subs. Uns
Exposure to caustic, noxious, or allergenic subs., n.e.c.
Exposure to environmental cold
Exposure to environmental heat
Exposure to noise in single incident

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Exposure to noise over time
Exposure to noise, uns
Exposure to radiation, n.e.c.
Exposure to sun
Exposure to welding light
Ingestion of substance
Inhalation in enclosed, restricted, or confined space
Inhalation in open or nonconfined space
Inhalation of substance, n.e.c.
Inhalation of substance, uns
Injections, stings, venomous bites, n.e.c.
Injections, stings, venomous bites, uns
Other stings or venomous bites
Pressure changes underwater

Falls

Fall down stairs or steps
Fall from floor, dock, or ground level, n.e.c.
Fall from ground level to lower level
Fall from ladder
Fall from loading dock
Fall from nonmoving vehicle
Fall from piled or stacked material
Fall from roof edge
Fall from roof, n.e.c.
Fall from roof, uns
Fall from scaffold, staging, platform
Fall on same level, n.e.c.
Fall on same level, uns
Fall onto or against objects
Fall through existing floor opening
Fall through existing roof opening
Fall through floor surface
Fall through roof surface
Fall to floor, walkway, or other surface
Fall to lower level, n.e.c.
Fall to lower level, uns
Fall, n.e.c.(Includes: Jumps on Same Level)
Fall, uns
Jump from nonmoving vehicle
Jump from scaffold, platform, loading dock
Jump from structure, structural element, n.e.c.
Jump to lower level, n.e.c.
Jump to lower level, uns

Fires & Explosions

Explosion of battery
Explosion of pressure vessel or piping
Explosion, n.e.c.
Fire in residence, building, or other structure
Fire or explosion, n.e.c.
Fire or explosion, uns
Fire, n.e.c.
Fire, uns
Forest, brush, or other outdoor fire
Ignition of clothing from controlled heat source

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Transportation Accidents

Aircraft accident during takeoff or Landing
Aircraft accident, n.e.c.
Aircraft accident, uns
Collision between railway vehicle and other vehicle
Collision between vehicles or mobile equip.
Collision between vehicles, mobile equipment, n.e.c.
Collision between vehicles, mobile equipment, uns
Derailment
Fall from moving vehicle, mobile equipment-nonhighway
Fall from ship, boat, n.e.c.
Fall on ship, boat
Fell from and struck by vehicle, mobile equipment
Highway accident, n.e.c.
Highway accident, uns
Jack-knifed or overturned--no collision
Loss of control-nonhighway accident
Moving and standing vehicle, mobile equip.--in roadway
Moving in intersection
Moving in opposite directions, oncoming
Moving in same direction
Moving/standing vehicle/mobile equipment--side of road
Noncollision accident, n.e.c.
Noncollision accident, n.e.c.-nonhighway accident
Noncollision accident, uns
Nonhighway accident, n.e.c.
Overturned-nonhighway accident
Pedest. struck by veh., mobile equip on side of road
Pedest. struck by veh., mobile equip. in parking lot
Pedestrian struck by veh., mobile equip. in roadway
Pedestrian struck by vehicle, mobile equip., uns
Pedestrian struck by vehicle, mobile equipment, n.e.c.
Railway accident, n.e.c.
Ran off highway--no collision
Re-entrant collision
Struck by shifting load
Sudden start of stop, n.e.c.-nonhighway accident
Sudden start or stop, n.e.c.
Transportation accident, n.e.c.
Transportation accident, uns
Vehicle struck stationary obj.,equip. on side of road
Vehicle struck stationary obj./equip. in roadway
Vehicle, mobile equip. struck stationary object

Other

Other events or exposures, n.e.c.
Other events or exposures, uns
Unknown

NEC = not elsewhere coded
Uns = unspecified

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Appendix 2: Factors Reference Guide

Factors - Indirect Cause Reference Sheet Examples

Those substandard acts, procedures and conditions that set the stage for the incident.

People	Material	Environment	System	Work Process
Failure to follow procedure	Inadequate guards or barriers	Noise	Policies/Procedures	Work Flow Design
Training/Experience	Labelling	Visibility/Illumination	Plans/Written Instructions	Worker selection, work procedures
Failure to Lockout/Tag out	Inadequate PPE	Toxic Gases, fumes, dusts	Legislation/Best Practices	Production pressure
Removing Safety Devices	Substandard Materials	Weather	Standards and Specifications	Lack of control over work pace
Using defective equipment	Defective Tools/Equipment	Temperature	Notices of Contravention	Controls and safety devices on equipment
Supervision/Leadership	Equipment Failure	Chemical/Biological	Lack of Inspections	Improper/No Lockout
Unsafe Work Practices	Engineering, Design, Purchasing	Awareness of surroundings/ changing conditions	Inadequate resources allocated to health and safety	Availability of appropriate tools and materials
Failure to use PPE	Machine Design	Workplace overcrowded, awkward/static postures	Safety precautions	Maintenance
Authority to operate equipment	Right tool for task	Normally safe work procedure unsafe	Inadequate Training	New/Modified Procedures
Failure to warn/secure	Hazardous substance	Time of day/shift/week	Inadequate Orientation	Housekeeping
Rushing	Not used according to operating instructions	Walking Surfaces	Inadequate Supervisor	Work Area
Improper lifting	Wrong vehicle, machinery, equipment, material used	Ventilation	Abuse/misuse	Ergonomics
Mental/Physical stress or fatigue /Risk Taking		Radiation Exposure	Inadequate Maintenance	Servicing Equipment in Operation

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Factors - Root Cause Reference Sheet Examples

Root cause are fundamental flaws in the Employer's Health and Safety Management System. Root cause often explain why indirect causes (substandard acts and conditions were allowed to exist).

People	Material	Environment	System	Work Process
Lack of a Health and Safety Program	Lack of and/or Inadequate Workplace Inspections	Lack of Emergency Response Program and Procedures	Lack of hazard and risk identification process	Inadequate or lack of safe operating procedures, practices, guidelines, safety policy
Inadequate Leadership and/or supervision	Lack of Purchasing Controls	Lack of a Personal Protective Equipment Program	Lack of and/or inadequate Incident reporting and investigations	Lack of a Preventative Maintenance Program
Lack of a Training and/or Orientation Program for all Employees	Lack of Material Management	Lack of a Hazardous Substance Program - Chemical and Biological	Lack of a properly functioning Legislated Occupational Health Committee or Representative	Lack of Service Management
Lack of Group and Personal Communication	Inadequate Engineering	Lack of Health and Hygiene Control	Lack of Engineering and Change Management	Inadequate Work Standards
Lack of Tool Box/Safety Meetings			Lack of Job Hazard Analysis	Lack of System Evaluation and Continuous Improvement
Lack of Functioning Accountability Process for Safety/Allowing unsafe Behaviors			Lack of control measure implementation	Lack of employee involvement
Lack of Hiring and Placement Criteria				

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Appendix 3: First Aid Register

First Aid Register	First Aid Register Page 1 of 1

All injuries, no matter how minor, must be reported to your supervisor. As per The Occupational Health and Safety Regulations, 1996, Regulation 57 – An employer must ensure that a First Aid station is provided with a first aid register and that the following are recorded:

1. Each First Aid Treatment administered to a worker while at work
2. Each case referred for medical attention

ANY INJURY IS REFERRED FOR FURTHER MEDICAL TREATMENT:

1. **NOTIFICATION MUST BE MADE TO _____.**
2. **A MEDICAL RESTRICTIONS FORM MUST BE FILLED IN PRIOR TO THE EMPLOYEE RETURNING TO WORK.**

Date & Time	Employee Name (Print Legibly)	Company Name (Print Legibly)	Name of Supervisor Reported To	Nature of Illness (Left/right, index finger, hand, foot, cut, sprain, etc)	Brief Description of where/what caused the injury	First Aid Administered	Name of First Aid Attendant	Was the Employee referred for medical treatment? Where?

Note: The first aid register must be readily available for inspection by the committee or representative and records must be retained for a period of not less than five years from the day on which the register ceased to be used.

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Appendix 4: Incident Investigation Form

Incident Investigation Form

The purpose of incident investigation is to find facts and not to fix blame. The investigation is to determine what happened, why and to recommend corrective action so it does not happen again. Use this form to investigate all near misses, workplace incidents, property damage, fire and environmental spills. See *Incident Investigation Procedure*.

A. Event information		
Date investigation started:	**Investigation type: - Select -** Reportable under regulation 8 or 9 in the OH&S Regulations is defined as a "serious bodily injury" and/or "dangerous occurrence". These require immediate investigation by the employer and the OHC co-chairs or representative (regulations 29 and 31). Notification must be provided as soon as reasonably possible to OH&S Division at 1.800.667.5023 (Saskatoon) or 1.800.567.7233 (Regina) Regulation 30 – Prohibition re scene of accident. Unless authorized and except for the purposes of saving life, the scene must be preserved and nothing can be altered or removed.	
Risk level: - Select - See *Incident Investigation Procedure* for the Risk Matrix and the required notifications.		
☐ Employee Employment status: - Select - ESL: - Select - ☐ Contractor Company name:		
Injury/illness: (Complete WCB forms E1 and W1 when treatment of injuries requires medical aid administered by a physician or registered health care professional) ☐ No injury ☐ First aid ☐ Medical aid ☐ Restricted workday ☐ Lost workday ☐ Fatality		
Worksite location: - Select -	**Department/cost centre where incident happened:** - Select -	
Date of incident:	**Time:**	
Facility condition: ☐ Normal ☐ Project work ☐ Routine maintenance ☐ Shutdown maintenance ☐ Upset conditions		
Exact location of incident (floor no., closest door no., column no., east/west/north/south, equipment no., etc.):		
Description of incident: (Sequence of events - describe in detail what happened before, during and after the incident. Include where the incident occurred, what the employee was doing at the time, weather conditions, size type and weight of the equipment or materials involved. Be concise. Bullet format is acceptable. Attach additional pages, diagrams and photos as necessary.)		
Has this incident/hazard been previously discussed and/or reported? - Select - Previous date of hazard report/incident:		
Immediate response to eliminate/reduce hazard: (Describe short-term actions taken to protect the workers.)		
Names of all witnesses:	**Did you get witness statements?** - Select -	**Pictures/diagrams attached?** - Select -

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B. Medical treatment information

First-aid response/treatment:

Injury recorded in first-aid register: - Select -	**If attending offsite medical treatment, record the medical facility:**

C. Person directly involved/injured or ill person

Last name:	**First name:**	**Occupation/title:**

Years' service:	**Injured worker's experience in present job:** - Select -	**Time worked since start of shift:** Hours Minutes

Reported to (name):	**Reported to (position):** - Select -	**Date reported:** **Time reported:**

Cause of injury: (Include detail to further define, ex. "Falls" – enter details such as "Fall from ladder, Fall on same level, Fall down stairs," etc.) - Select -	**Part of body injured:** (Include left/right, both, etc.) -Select -

Was a medical restrictions form completed and returned? (If no, describe reason why and follow up.) - Select -

Will this employee be on modified duty? - Select -	**Modified duties offered to employee?** - Select -	**Modified duty description:** (Include any capabilities evaluation.)

D. Property damage/loss/fire (if applicable)

List all property damage:	**Estimated cost:**

Was there loss of production? - Select -	**Downtime:** hrs

E. Environmental/spill information (if applicable)

What product(s) were involved?	**How much was spilled?** ☐ Litres ☐ Gal.	**SDS attached?** - Select -	**Did anything leak to soil, water or sewer?** - Select -

Spill kit used: - Select -	**Spill kit refilled:** - Select -	**Disposal method:** - Select -	**Date disposed:**	**Reported to:** - Select - **Incident/spill report filed?** - Select -

Special waste disposal details (if applicable):

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F. Direct cause (what led directly to the incident described by struck, fall, trip, caught in or between, contact with, exposure to, etc.)

G. Indirect (those substandard acts, procedures and conditions that set the stage for the incident) and **root causes** (root cause often explains why substandard acts and conditions were allowed to exist) **(include applicable causes – check only those that apply)**

People

- ☐ Failure to follow procedure
- ☐ Failure to warn/secure
- ☐ Using defective equipment
- ☐ Rushing
- ☐ Operating without authority
- ☐ Removing safety devices
- ☐ Improper lifting
- ☐ Failure to use PPE
- ☐ Failure to lockout/tag out
- ☐ Other (explain):
- ☐ Unsafe work practices
- ☐ Training/experience
- ☐ Mental/physical stress or fatigue
- ☐ Supervision/leadership

Material

- ☐ Inadequate guarding
- ☐ Hazardous substances
- ☐ Substandard materials
- ☐ Equipment failure
- ☐ Inadequate PPE
- ☐ Machine design
- ☐ Labeling
- ☐ Other (explain):
- ☐ Defective tools/equipment
- ☐ Incorrect tool for task
- ☐ Engineering/design/purchasing

Environment

- ☐ Noise
- ☐ Chemical/biological
- ☐ Time of day/shift/week
- ☐ Workspace overcrowded/awkward/static
- ☐ Other (explain):
- ☐ Visibility/illumination
- ☐ Weather
- ☐ Vibration
- ☐ Temperature
- ☐ Ventilation
- ☐ Awareness of surroundings/changing conditions
- ☐ Conditions changed to make normally safe work unsafe
- ☐ Toxic gases/fumes/dusts
- ☐ Walking surface

System

- ☐ Policies/procedures/plans/written instructions
- ☐ Legislation & best practices
- ☐ Resources allocated to health & safety
- ☐ Standards & specifications
- ☐ Training/orientation
- ☐ Other (explain):
- ☐ Inspections
- ☐ Notices of contravention

Work process

- ☐ Work flow design
- ☐ Work area/housekeeping
- ☐ Maintenance
- ☐ Other (explain):
- ☐ Controls and safety devices on equipment
- ☐ Worker selection/work procedures/ergonomics
- ☐ Lack of control over work pace
- ☐ New/modified procedures
- ☐ Appropriate tools and materials available

Root cause(s)

Identify all root causes that contributed to the incident. Describe how or why the above causes were allowed to go uncorrected. Root causes are *fundamental flaws,* such as lack of employer's health and safety management system (e.g., hazard identification, management commitment and administration, leadership training, planned inspections, preventative maintenance, safe work practices and procedures, inadequate previous incident investigation, purchasing controls, emergency preparedness and response, company safety rules and work permitting, worker knowledge and skill training, PPE, communications, hygiene and sanitation, hiring and placement standards, etc).

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H. Hazard evaluation			
Describe current countermeasures (what is currently in place to prevent/control):			
Suggested countermeasures (changes to current or additional):			
I. Corrective action			
Actions taken/required to eliminate the ROOT CAUSE(s) in section G: **Corrective action (short, intermediate and long term)**	**By when**	**By whom**	**Complete?** - Select -
			- Select -
			- Select -
			- Select -
			- Select -
J. Investigator information			
Name of Supervisor investigating:	**Name of Safety Manager investigating (if applicable):**	**OHC member investigating (if applicable):**	
K. Occupational health committee (OHC)/representative review			
Copy sent to OHC co-chairs or representative (if no OHC): - Select - **Date sent:**			
L. Management review and routing			

Title:	Team Leader/ Lead Hand	Supervisor	Department Manager	Safety Manager	General Manager
Date:					
Signatures:					

M. Photos/Drawings (paste below)

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Appendix 5: Medical Aid/Treatment Versus First Aid Decision Chart

Example of a Medical Aid versus a First Aid Decision Chart

	Medical Aid	First Aid
Visits to Health Care Professionals	• Any condition that is treated, or that should have been treated, with a treatment not on the first aid list	• Visits solely for observation, testing, or to evaluate diagnostic decisions • Visits solely for counselling • Diagnostic procedures, including prescribing or administering of prescription medications used solely for diagnostic purposes
Cuts, Lacerations, Punctures, and Abrasions	• Sutures (stitches) • Staples • Surgical glue • Treatment of infection with prescription meds on any visit • Application of prescription antiseptic or non-prescription antiseptic at prescription strength • Surgical debridement (butting away dead skin)	• Any wound coverings or bandaging by any medical personnel • Liquid bandage • Cleaning, flushing or soaking wounds on the surface of the skin • Using wound coverings such as bandages, Band-AidsTM, gauze pads, etc; or using butterfly bandaged or Stiri-StripsTM
Inoculations	• Inoculations such as gamma globulin, rabies, etc. given to treat a specific injury or illness, or in response to workplace exposure	• Tetanus immunizations • Immunizations and inoculations that are provided for public health or other purposes, where there is no work-related injury or illness
Splinters	• Foreign bodies which require more than simple means to remove because of their location, depth of penetration, size or shape, surgical removal of foreign bodies in the eye	• Removing foreign bodies from the eye using only irrigation or a cotton swab • Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means (needles, pins or small tools)

	Medical Aid	First Aid
Strains, Sprains, and Dislocations	• Casts or immobilization with rigid stays • Chiropractic manipulation • Exercises recommended by a health care professional who trains the worker in the proper frequency, duration and intensity of the exercise • Physical therapy	• Hot or cold therapy • Any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. • Finder guards • Temporary immobilizations devices while transporting an incident victim (splints, slings, neck collars, back boards, etc.)
Burns, Skin rashes, and Blisters	• Any condition that result in days away from work, restricted work, transfer to another mob, or medical treatment beyond first aid	• Draining fluid from a blister
Bruises/contusions	• Draining of bruises by needle	• Soaking therapy • Hot or cold therapy
Medications	• Prescription medication, whether given once or over a longer period of time • Prescription medication, whether that prescription if filled or take or not • Non-prescription medication administered or prescribed a prescription strength	• Non-prescription medicines at non-prescription strength, whether in ointment, cream, pill , liquid, spray, or any other form
Oxygen	• Oxygen administered to an employee exposed to a substance who exhibits symptoms of an injury or illness	• Oxygen administered purely as a precautionary measure to an employee who does not exhibit any symptoms of an injury or illness

	Medical Aid	First Aid
Physical Therapy	• Exercises recommended by a health care professional who trains the worker in proper frequency, duration and intensity of the exercise • Physical therapy	
Loss of Consciousness	• Loss of consciousness which results from a workplace event or exposure (chemicals, heat, an oxygen deficient environment, a blow to the head)	• Loss of consciousness due solely to epilepsy, diabetes, narcolepsy, or other personal health condition • Due to voluntary participation in a wellness or similar program (company sponsored blood donation)
Work Restrictions	• Restricted Work Activity • Modified Work Duties • Transfer due to work restrictions • Days away – Lost Time	
Needle Stick/Sharps	• Needle Stick injury or cut from a sharp object that is contaminated with a person's blood or other potentially infectious material	
Hearing Loss	• Work related noise induced hearing loss with a hearing test (audiogram) showing a compensable shift	
Tuberculosis	• Tuberculosis infection as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional after work related exposure to a known case of active tuberculosis	

Appendix 6: Medical Restrictions Form

MEDICAL RESTRICTIONS FORM – *Enter Employer Here*

Early and Safe Return to Work

The purpose of this form is to; provide restrictions to the employer to enable the worker to return to alternate or modified work as soon as possible, to identify suitable work that is both productive and safe, and to provide work assignments that honour the outlined restrictions. If the employer is unable to offer work that is appropriate to the outlined restrictions the worker will be off work.

Section A: Employee Information *(to be completed by Employee)*

_____ _____ _____

Print Employee Name *Department* *Occupation/Duties*

I, _____(Employee Signature), authorize the release of the following information to my employer to assist in an early and safe Return-to Work. Dated (dd/mm/yy) _____

Section B: Restrictions, Limitations & Precautions *(to be completed by Health Care Professional).*

Please take the time to consider the following so we may ensure the duties offered meet the needs of the employee.

Strength

lifting, carrying, pulling or pushing objects to a maximum of:

☐ 5 Kilograms ☐ 10 Kilograms ☐ 20 Kilograms
☐ avoid firm or repetitive right-hand grip
☐ avoid firm or repetitive left-hand grip
☐ no strength restrictions

Postures and Tasks

☐ avoid prolonged bending and/or twisting of the torso
☐ avoid prolonged kneeling, squatting, or crawling
☐ avoid overhead or above shoulder work
☐ restrict standing/walking to _____ hrs. per shift
☐ provide changes between standing, sitting and walking
☐ no posture or task restrictions

Work Hours

☐ restrict work hours to _____ hrs. per shift/week
☐ no restrictions - full time hours

Safety and Balancing

☐ avoid work on slippery or uneven surfaces
☐ avoid the operation of vehicles or equipment
☐ avoid work at heights
☐ avoid stairs
☐ avoid work in areas requiring full peripheral vision
☐ no balancing or safety restrictions

Environmental Factors

☐ avoid work in extreme temperatures
☐ avoid work in dust, chemical vapors, etc.
☐ avoid work with vibrating hand tools
☐ restrictions on PPE – respirator, hard hat, safety glasses fall protection, etc.
☐ no environmental concerns

Medical Treatment

☐ Employee required to wear assistive devices or braces
☐ Employee involved with treatment and/or medications that may affect his/her ability to work?

Can this employee safely return to work if the restrictions are accommodated ☐ Yes ☐ No

Expected date for return to full duties _____

Other Medical Restrictions/or Comments:

_____

_____

Signature of Health Care Professional: _____ Date: _____

Name, Address and Telephone *(please print)*

_____

_____

_____

Note: A fee of *enter amount here* will be provided for completion of this form please invoice to the attention of the Human Resources Department at: *P.O. BOX XXXX Saskatoon, Saskatchewan, enter Postal Code (306) XXX-XXXX Fax (306) XXX-XXXX* Attention Safety Department/Human Resources Department

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Appendix 7: Safety Incident Logsheet

Safety Incident Logsheet											
Date of Incident DD-MMM-YY	Date Reported DD-MMM-YY	Injury	No Injury	Description of incident	Part of Body Injured	Cause of Injury	Department or Cost Center	Reported by:	Supervisor	Employee	Job Famiy/Class
15-Jan-15	15-Jan-15	Lost Time		Employee caught left foot between electric pallet jack and metal racking	Feet	Contact with Objects & Equipment	Maintenance	Jane Story	Mike Bossy	Bill Block	Shipper
24-Dec-14	30-Dec-14	Medical Aid		Slipped on ice, back sprain	Back	Contact with Objects & Equipment	Administration	Fay Wildes	Vern Hays	Fay Wildes	Accounting Clerk
12-Dec-14	12-Dec-14		Near Miss	Truck rolled away from loading dock			Shipping	Jane Story	Mike Bossy	Jane Story	Shipper
02-Jan-15	12-Jan-15	First Aid		Foreign Debris in Left Eye while grinding	Eyes	Exposure to Harmful Substances or Environments	Maintenance	Jim Jones	Mike Bossy	Jim Jones	Welder

Logsheet continued on next page.

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Years Job Experience	Employment Status	Primary Factor	**SHORT Term** Corrective Action (Immediate Steps taken to protect the health and safety)	Short Corrective Action Target Date DD-MMM-YY	Short Term Corrective Action Completion Date DD-MMM-YY	**LONG Term** Corrective Action (Actions taken to address root cause - why substandard acts & conditions were allowed to exist)	Long Term Corrective Action Target Date DD-MMM-YY	Long Term Corrective Action Completion Date DD-MMM-YY	Follow-up - High Risk (target within 120 days of Incident Date)	Comments
<6 months	Summer Student	People		30-Jan-15			30-Jan-15			
2-10 years	Full Time	Process	Publish safety flash on slip hazards, awareness, and reporting	31-Dec-14	05-Jan-15	Set up plan for snow/ice removal to occur automatically Publish safety flash on slip hazards, awareness, and reporting	20-Jan-15	05-Jan-15	03-Feb-15	
< 2 years	Full Time	System	Post signage "wheels must be chocked" Review at Morning Tool Box Meetings	17-Dec-14	16-Dec-14	Create and review unloading procedure with shippers and truckers: -Truckers use of wheel chocks is mandatory. -Shippers must check chocks are place prior to unloading.	14-Jan-15	10-Jan-15	20-Jun-15	Copies of Tool Box Meetings are on file - all employees and truck drivers have signed off
> 10 years	Contractor	System		06-Jan-15	05-Jan-15		06-Jan-15	05-Jan-15	15-Mar-15	

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Appendix 8: Leading and Lagging Indicator Examples

Leading and Lagging Indicator Examples

Leading Indicators	Lagging Indicators
Number of inspections and observations compared to plan	Number of Time Loss injuries/illnesses
Percent of corrective actions completed	Number of medical aids
Training completed against plan	Number of first aids
Safety meetings completed against plan	Total Recordable Injuries Frequency (TRIF)
Percent of maintenance work orders completed on time	Percent or dollar value of property damage
Equipment checks completed	Number of serious injuries
Emergency exercises planned and carried out	Number of lost work days
Near miss reporting	Severity Rate (SR)
Hazards assessed specific to job tasks	Fatalities
Percent of workforce completed organization specific health and safety training	
Percent of job descriptions with specific health and safety accountabilities	
Percent of near misses that have been scheduled for follow-up and responsibility assigned	
Percent of leadership that is meeting job observation targets	
Communication forums – tool box meetings	
Hazard identification processes	
Field level hazard assessments	
Employee perception surveys	
Health programs – ergonomics, respiratory protection, proactive injury prevention	

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Labour Relations and Workplace Safety
Occupational Health and Safety Division
300 - 1870 Albert St.
Regina SK S4P 4W1
Toll free 1.800.567.SAFE (7233)
Fax 306.787.2208

Online www.saskatchewan.ca

WorkSafe Saskatchewan
200 - 1881 Scarth St.
Regina SK S4P 4L1

Phone 306.787.4370
Toll free 1.800.667.7590
Fax 306.787.4311
Toll-free fax 1.888.844.7773
Online www.worksafesask.ca

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