Effective Measurement for Safety

MISSION: ZERO

Workbook

WorkSafe™ SASKATCHEWAN

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www.worksafesask.ca

Please note

The information/training provided is not a substitute for nor does it take precedence over The Workers' Compensation Act. This material does not take the place of or take precedence over OH&S legislation. This material may be used to complement or supplement your OH&S obligations but in no way replaces any obligations that exist under OH&S legislation. Should you choose to use this material, WorkSafe Saskatchewan assumes no responsibility or liability for any outcomes that may arise from its use. All employers and workers should be familiar with The Workers' Compensation Act, The Saskatchewan Employment Act and The Occupational Health and Safety Regulations. This material should be adapted to meet the particular requirements of your workplace.

To purchase copies of The Saskatchewan Employment Act or The Occupational Health and Safety Regulations, 1996, contact:

Publications Saskatchewan
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Phone: 306.787.6894
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Online: www.saskatchewan.ca

You can also download copies for free.

Industries under federal jurisdiction, such as transportation, broadcasting and telecommunications, are governed by The Canada Labour Code. If you work in a federally regulated industry, please contact Employment and Social Development Canada at www.esdc.gc.ca.

Administration

- Fire exits
- Washrooms
- No smoking policy
- Cell phones
- Breaks

Course Materials

1. Workbook
2. Evaluation
3. Effective Measurement for Safety Guide
4. Legislation
   - *The Saskatchewan Employment Act, 2013* (SEA)
   - *The Occupational Health and Safety Regulations, 1996*
   - *The Workers' Compensation Act, 2013*
   - *The Workers' Compensation General Regulations, 1985*
5. Flash drive

Introduce Yourself

Please introduce yourself to the group:

- Your name
- Position title
- Employer - What industry you work in
- Approximately how many employees
- Does your employer currently compile and use safety statistics?
- What role do you currently have in the measurement of safety at your workplace?

Learning Objectives

Objective 1 - Measurement (Statistics)

- Why
- What
- Where

Objective 2 - Data Management

- Collecting
- Building
- Products
- Reporting

Objective 3 - Training and Communication

- Training
- Communication
- Continuous Improvement

Objective 1 – Measurement – Why?

We will discuss why to establish and measure safety statistics:

1. Benefits of keeping safety statistics
2. Regulatory Requirements
3. The Human Element – the injured worker, the employer
4. Business Case for Safety – What do incidents cost?
5. Management and Leadership

Notes

"Without numbers, there are no odds and no probabilities; without odds and probabilities, the only way to deal with risk is to appeal to the gods and the fates. Without numbers, risk is wholly a matter of gut."

Peter L. Bernstein, Against the Gods: The remarkable story of risk.

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Notes

Group Discussion

Safety Statistic Benefits

Instructions:

- In your groups, discuss the following questions and record your answers in the workbook.
- Select a spokesperson to share your group's discussion.

Discuss:

1. What are the benefits of collecting and communicating safety statistics?
2. What are the barriers to collecting safety statistics in your organization?

Notes

Benefits of Keeping Safety Statistics?

- Provides an objective evaluation of the magnitude of occupational illness and injuries.
- Provides a measurement of the progress and effectiveness of the health and safety program.
- Enables the identification of high-hazard tasks, facilities, and problem areas so that extra effort can be made in those areas.
- Creates an interest and awareness in safety and health amongst employees.
- Helps establish the need for, and the content of, employee and management training programs.
- **Reduces human suffering, costs and improves morale.**

Measurement (Statistics)

Let's Continue to Examine

Notes

Definitions

Record – something that recall or relates past events, a body of known or recorded facts regarding something or someone

Statistics – dealing with the collection, analysis, interpretation and presentation of masses of numerical data

From: Implementing an Occupational Health and Safety (OH&S) Program Canadian Centre for Occupational Health and Safety (CCOHS).

Legislation – The Legal Side of Safety

***Saskatchewan Employment Act, 2013* (SEA)**

General duties of employer 3-8

Every employer shall:

a) Ensure, insofar as is reasonably practicable, the health, safety and welfare at work of all the employer's workers

Notes

Legislation (cont'd)

Obtaining Information 3-64 (1-5)

1) …The director of occupational health and safety may direct any person to provide the director with any information in any form and manner and within any time that the director may specify.
2) In the prescribed circumstances, an employer shall compile occupationally related injury and illness statistics for the place of employment.

(3-5) **The employer shall:**

- Compile statistics in the prescribed manner including the prescribed matters
- Protect the confidentiality of workers
- Post statistics for the information of workers
- Provide statistics to the Occupational Health Committee, the safety representative or if there is no committee or representative, the workers.

Legislation (cont'd.)

Duty to Provide Information 3-16

(1) In this section, "required information":

(a) means any information that an employer, contractor, owner or supplier knows or may reasonably be expected to know and that:

(i) may affect the health or safety of any person who works at a place of employment; or

(ii) is necessary to identify and control any existing or potential hazards with respect to any plant or any process, procedure, biological substance or chemical substance used at a place of employment; and

(b) includes any prescribed information.

Notes

Legislation (cont'd.)

The Occupational Health and Safety Regulations

Regulation 11 - Report re injuries

On the minister's request, an **employer shall provide** to the division, or to any other agency that may be designated by the minister, **a report** setting out details of **all person-hours worked and all work-related injuries during the preceding year.**

Regulation 32 - Injuries requiring medical treatment

An employer or contractor shall report to the co-chairpersons, the representative or their designates any lost-time injury at the place of employment that results in a worker receiving medical treatment and allow the co-chairpersons, the representative or their designates a reasonable opportunity to review the lost-time injury during normal working hours and without loss of pay or other benefits.

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Legislation (cont'd.)

The Occupational Health and Safety Regulations

Regulation 56 – First Aid Station

(1) 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.

The employer or contractor must ensure the location of the first aid station is clearly and conspicuously identified, and the appropriate emergency procedure is prominently displayed that includes; emergency telephone list and other instructions for reaching the nearest fire, police, ambulance, physician, hospital or other appropriate service, any written rescue procedure required by subclause 52)(d)(i).

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Notes

Legislation (cont'd.)

The Occupational Health and Safety 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.

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Legislation (cont'd.)

The Occupational Health and Safety Regulations

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 Hazard 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.

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Notes

Legislation (cont'd.)

The Occupational Health and Safety Regulations

Regulation 48 - Opportunity for necessary activities

An employer or contractor shall ensure that:

(a) The members of the committee or a representative are allowed to examine any logbook, inspection report or other record that the employer or contractor is required to keep at the place of employment pursuant to the Act or any regulations made pursuant to the Act.

Legislation (cont'd.)

The Occupational Health and Safety Regulations

Regulation 8 - Accidents causing serious bodily injury

8(1) An employer or contractor shall give notice to the division as soon as is reasonably possible of every accident at a place of employment 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.

(2) The notice required by subsection (1) must include:

(a) the name of each injured or deceased worker;
(b) the name of the employer of each injured or deceased worker;
(c) the date, time and location of the accident;
(d) the circumstances related to the accident;
(e) the apparent injuries; and
(f) the name, telephone number and fax number of the employer or contractor or a person designated by the employer or contractor to be contacted for additional information.

(3) An employer or contractor shall provide each co-chairperson or the representative with a copy of the notice required by subsection (1).

Notes

Legislation (cont'd.)

The Occupational Health and Safety Regulations

Dangerous occurrences – Regulation 9

9(1) In this section, "dangerous occurrence" means any occurrence that does not result in, but could have resulted in, a condition or circumstance set out in subsection 8(1), and includes:

(a) the structural failure or collapse of:
  (i) a structure, scaffold, temporary falsework or concrete formwork; or
  (ii) all or any part of an excavated shaft, tunnel, caisson, coffer dam, trench or excavation;
(b) the failure of a crane or hoist or the overturning of a crane or unit of powered mobile equipment;
(c) an accidental contact with an energized electrical conductor;
(d) the bursting of a grinding wheel;
(e) an uncontrolled spill or escape of a toxic, corrosive or explosive substance;
(f) a premature detonation or accidental detonation of explosives;
(g) the failure of an elevated or suspended platform; and
(h) the failure of an atmosphere-supplying respirator.

(2) An employer, contractor or owner shall give notice to the division as soon as is reasonably possible of any dangerous occurrence that takes place at a place of employment, whether or not a worker sustains injury.

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Legislation (cont'd.)

Dangerous occurrences – Regulation 9 (cont'd)

(3) A notice required by subsection (2) must include:
(a) the name of each employer, contractor and owner at the place of employment;
(b) the date, time and location of the dangerous occurrence;
(c) the circumstances related to the dangerous occurrence; and
(d) the name, telephone number and fax number of the employer, contractor or owner or a person designated by the employer, contractor or owner to be contacted for additional information.

(4) An employer, contractor or owner shall provide each co-chairperson or the representative with a copy of the notice required by subsection (2).

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Notes

Legislation (cont'd.)

The Mines Regulations

Monthly statistics Regulation 10

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

Forwarding information re injury records (Section 140)

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

- Money can't measure all the harm done by accidents and illnesses.
- Workers die, lose their health, income, careers, dreams and futures.
- The families of injured workers are also deeply hurt, economically and emotionally.
- Work injuries can have serious and permanent effects on the injured person, the families, co-workers and first responders.
- There can be varied ranges of social and economic consequences.
- Pain and suffering is not usually covered in worker compensation plans.

Notes

The Human Element

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.
- The employer can be impacted from a financial standpoint.
- Employers must be duly diligent or can face prosecution, fines, contraventions, stop work orders or summary offence tickets.
- The employer can suffer loss of reputation and loss of business.

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The Human Element

Employer

- Employers are impacted by the human side of their employees' injuries.
- 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 accident.

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Notes

The Human Element

Employer

The Moral Side of Safety

Mike Honeyman has a message for employers: **"Safety is personal."**

In this video, he shares the hard lessons he learned as a business owner after one of his workers was seriously injured on the job.

Safety is Personal: An Employer's Story

Notes

Business Case for Safety

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 time
- Leader time
- General losses
- Property losses
- Loss of business and goodwill
- Other losses

Costs – The Iceberg Theory of Costs of Injuries

Notes

The Uninsured Costs - The Math…

A. Insured cost of the incident (insured costs paid by the WCB; wages, health care costs, etc.)
B. Uninsured costs = range 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 $12,000
B. Uninsured cost assumed to be 4x the insured cost
C. Profit margin of company is 10%
D. Revenue required = (A x B)/(C/100)
= ($ 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.

Notes

Incident Cost Calculators

Many Canadian jurisdictions provide incident cost calculators to help estimate the cost of uninsured costs that are borne by the employer. Following is a link to one site:

- WorkSafeBC – Workplace Incident Cost Calculator

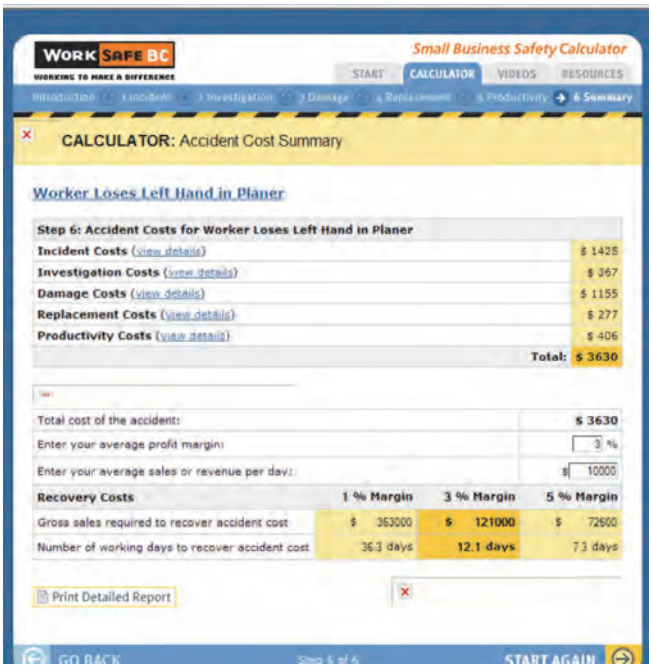
http://worksafebcmedia.com/media/calculators_html5/wicc/index.html

Note: WorkSafeBC provides a free app.

Notes

WorkSafeBC Workplace Cost Calculator Summary

Worker Loses Left Hand in Planer



MISSION: ZERO

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Notes

Management and Leadership

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 OH&S Rep** (SEA 3-8 General duties of employers)
- **Providing appropriate information** (3-16 Duty to Provide Information, Regulation 18 Duty to Inform Workers).

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Management and Leadership

General duties cont'd

- **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).

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Notes

The Importance of Safety Leadership

- The management philosophy of an organization is the most important factor determining its safety performance.
- Creating a good safety culture requires a common vision and effort from everyone in the an 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 Importance of Safety Leadership

- Leadership must factor Health and Safety into all major business decisions, such as new product development, mergers, acquisitions and contractor relations.
- Managers and/or the team leaders are vital in inspiring employees to a higher level of safety and productivity.
- Leaders must possess up-to-date Health and Safety knowledge and apply good leadership consistently on a daily basis.
- Remember that the Workplace Responsibility System (WRS) places rights and responsibilities on everyone in the workplace.

Notes

Effective Leadership

What are the leadership principles that promote a positive safety culture?

- Safety as a top priority
- Leading by example
- Increasing visibility around safety
- Safety reporting
- Employee involvement
- Create a learning culture
- Provide recognition
- A reporting culture
- Effective communication
- Safety Management System

Clear leadership is one of the top priorities in establishing a positive safety culture.

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Leadership & the Safety Program

- The Saskatchewan Employment Act 3-20 requires an employer at a prescribed place of employment to provide an Occupational Health and Safety Program.
- The requirements of the program are described in Regulation 22.
- The employer must include a statement of their policy with respect to the protection and maintenance of the health and safety in the workplace.

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Notes

The Safety Policy

Policies 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

The Safety Policy must be reviewed at required intervals (3 years) and signed by the highest level of management for the employer.

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New Company 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 OH&S considerations into all aspects of our management practices;

Managing operations to meet all applicable OH&S 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 OH&S 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 OH&S 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: _____

Notes

Individual Project – Institute for Work & Health Organizational Performance Metric (OPM)

Instructions:

- Answer the questions in regards to the percentage of time that each practice takes place.
- Please answer the following questions based on your organization's health and safety practices. If your organization has many locations, base your answer on the site you work from regularly.

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Organizational Performance Metric (OPM) – Individual Project

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 purpose 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 (i.e.: 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 two years.

Notes

Scoring the OPM

- For each item in the OPM, you could have responded in one of five categories representing the percent of time each practice occurs in your organization: 0-20%, 20-40%, 40-60%, 60-80%, or 80-100%.
- Each option corresponds to a score from 0 to 4 (0 = 0-20%, 1= 20-40%, 2= 40-60%, 3= 60-80%, 4 = 80-100%). Your total score is the sum of each question divided by the number of questions.

  Example - if your scores looked like this:

Item 1: 3	Item 5: 2
Item 2: 3	Item 6: 2
Item 3: 2	Item 7: 4
Item 4: 3	Item 8: 3

Your total final score would be 3 + 3 + 2 + 3 + 2 + 2 + 4 + 3 = 22/8 items = 2.75

Interpreting your Score

We use 'red,' 'yellow,' 'green' to guide you in interpreting your final OPM score on a 0-4 point scale.

- **Green** (OPM final score is equal to or greater than 3): You are performing well overall. Keep doing what you are doing and strive for excellence.
- **Yellow** (OPM final score is equal to or greater than 2 but less than 3): Specific health and safety practices in your organization may need some improvement. Consider if the lower scored items in your survey should be a focus area for your company. Review your practices and policies.
- **Red** (OPM final score is less than 2): Your work in health and safety likely needs attention and improvement. Review your practices and policies and identify the prevention system partner most appropriate for your organization.

Notes

Optional Individual Project – Health and Safety Leadership Quiz

Instructions:

- Complete the Safety and Health Leadership Quiz developed by OSHA (Occupational Safety & Health Administration).
- There are 25 questions for which you will answer “agree,” “disagree,” “strongly agree” or “strongly disagree.”
- If you are a employer, supervisor, leader or manager, answer based on your current role.
- If you are an employee, answer based on your current work experience and the culture of your workplace.
- Once everyone has completed the quiz, we will score it.

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Notes

Safety and Health Leadership Quiz
(Occupational Safety & Health Administration (OSHA))

1.	I like it when my people are able to identify job hazards on their own and have immediately reported them for prompt evaluation and correction	o Agree o Disagree	o Strongly Agree o Strongly Disagree
2.	I have a clear vision of an incident-free workplace	o Agree o Disagree	o Strongly Agree o Strongly Disagree
3.	When an incident occurs, I try to understand how my actions might have contributed to it	o Agree o Disagree	o Strongly Agree o Strongly Disagree
4.	I make it a point to be on the floor every day observing safety with those workers I oversee and direct	o Agree o Disagree	o Strongly Agree o Strongly Disagree
5.	I know and follow all of the safety rules I expect workers to follow	o Agree o Disagree	o Strongly Agree o Strongly Disagree
6.	When I really need to understand a safety issue, I talk with some of the line workers about it	o Agree o Disagree	o Strongly Agree o Strongly Disagree
7.	I recognize good safety practice when I see it and I always let the person involved know I like what I see	o Agree o Disagree	o Strongly Agree o Strongly Disagree
8.	My direct reports have full and open access to all the tools and equipment they need to do their jobs safely	o Agree o Disagree	o Strongly Agree o Strongly Disagree
9.	I've learned that the person who know the job best is nearly always the person doing it	o Agree o Disagree	o Strongly Agree o Strongly Disagree
10.	I always know the status of safety and safety projects in my organization and those involved know how I feel about that status	o Agree o Disagree	o Strongly Agree o Strongly Disagree
11.	We consistently get a positive return on our investment in safety	o Agree o Disagree	o Strongly Agree o Strongly Disagree
12.	I enjoy attending safety meetings and feel good about the results	o Agree o Disagree	o Strongly Agree o Strongly Disagree
13.	I know whenever an incident occurs and consider it my role to get involved in addressing the issues it raises	o Agree o Disagree	o Strongly Agree o Strongly Disagree

Notes

14.	I know enough about the safety process to be able to speak about it to employees, groups and training sessions	o Agree o Disagree	o Strongly Agree o Strongly Disagree
15.	I am always look for the good things people do so I can recognize them for their efforts	o Agree o Disagree	o Strongly Agree o Strongly Disagree
16.	I know everyone makes mistakes and I see this as an opportunity to learn and grow	o Agree o Disagree	o Strongly Agree o Strongly Disagree
17.	Some of my greatest satisfaction comes from walking the floor and learning from employees	o Agree o Disagree	o Strongly Agree o Strongly Disagree
18.	I worry more about having the right safety values than about having safety rules	o Agree o Disagree	o Strongly Agree o Strongly Disagree
19.	I see teamwork everywhere I go in my organization	o Agree o Disagree	o Strongly Agree o Strongly Disagree
20.	If employees know what to do for safety, I reinforce them; if they don't know, I train them	o Agree o Disagree	o Strongly Agree o Strongly Disagree
21.	There are really good safety conscious people in my organization	o Agree o Disagree	o Strongly Agree o Strongly Disagree
22.	My direct reports helped form my vision of safety which they now share and support	o Agree o Disagree	o Strongly Agree o Strongly Disagree
23.	I know that my actions say more than my words about safety, so I always act out my belief that safety is a key organizational value	o Agree o Disagree	o Strongly Agree o Strongly Disagree
24.	Before I send employees to training, I go to the program so that I can reinforce and support their post-training efforts	o Agree o Disagree	o Strongly Agree o Strongly Disagree
25.	I know that employees hold safety as a key company value, so they know they don't need my permission to take safety action	o Agree o Disagree	o Strongly Agree o Strongly Disagree

Notes

Scoring and Results of the Leadership Quiz

Scoring:

Answer	Points
Strongly Disagree	1
Disagree	2
Agree	3
Strongly Agree	4

Score	What it means
75-100	If your score is 75 or higher, you are probably operating in a fairly positive, empowered environment and are viewed as a leader by your people. To improve, look at areas where you scored less than strongly agree and understand why. Get your people involved in helping you improve. They are probably already interested and supportive and will welcome the opportunity to enhance your effectiveness and that of the organization.
51-74	If your score is between 51 and 74, you're probably in the transition zone to a new style of management. To improve, spend some more time learning safety and health leadership skills. Try to understand why you act or feel that way and work on changing your approach. As you make some progress, find other areas where you disagreed or strongly disagreed and work on those. Be patient and be sure to get feedback from your people on how you are doing.
< 51	If your score is less than 51, you are probably fairly traditional in your approach to management and probably tend to hold a fairly tight rein on your control of operations. To improve your score, consider reading one or two of the recent crop of books on leadership. Ask a friend at a progressive company or employer's associations to recommend one. Spend some time in the plant asking people how they feel about you and the culture of the organizational. Be patient, listen without being defensive, select two or three approaches suggested by the quiz and try them for a while. If you see results, select some more and try them, also. This will be hard work, but the more time you spend with your people during this process, the more they will reinforce and encourage you.

Notes

Objective 1 – Measurement – What?

Let's discuss what to establish and measure:

- Measurement defined
- Safety Objectives or Safety Performance Indicators (SPI)
- Qualitative/Quantitative
- Leading/Lagging indicators
- Validity of data – behavior based safety principles & maturity path for reporting incident.
- Suppression of workplace injury or illness claims
- Assessment tool to evaluate reporting and analysis
- Basis of data

Objective 1 – Measurement – What?

Definition:

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

- It's the key to a problem definition and solution.
- 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.
- You can't improve what you don't measure.

Multiple words can be used for measurement such as metrics, analytics and dash boarding. Use the term most understood by your organization.

Notes

Safety Objectives/Performance Indicators (SPI)

The employer is required to set specific and measureable objectives or **Safety Performance Indicators (SPI)** for its safety system, which include:

- Collecting the appropriate data to measure and track progress against the established safety objectives.
- Starting with a problem to be solved, or an important area where improvement is needed.
- Consulting workers and workers' representatives.
- Ensuring compliance with legal requirements.
- Determining SPIs with consideration of the organization's operational and business requirements.
- Making 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.
- **Including leading** and **lagging** indicators to establish and monitor the objectives.

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Safety Objectives/Performance Indicators (SPI)

- Designate responsibility for achieving objectives and targets.
- Determine the means and timeframe within the objectives and targets 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 regular and planned intervals by management (at least once per year).

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Notes

Qualitative and Quantitative

Qualitative – subjective measure of how well the safety system is working, such as:

- Effectiveness of safety meetings
- How well the hazard assessments are carried out
- Completeness of safety activity reports
- Perception surveys

Quantitative – objective measure – the result or outcome

- WCB costs
- Number of incidents, work related illness, property damage
- Emergency simulations carried out
- Number of safety meetings held

Qualitative versus Quantitative

What's the bottom line?

Qualitative:

- Good *first step* at perceptions of the how well the safety system is working or information about the safety culture
- Data is not measurable, but rather illustrative in nature
- Qualitative data is less reliable

Quantitative:

- Provides quantifiable and easy to understand results
- Data is clearer
- Analysis simpler
- Provides objectivity and improved accuracy
- Non-biased personality based

Notes

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, incident reports, 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 incidents
- 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

Notes

Leading Indicators

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

Pros

- Associated with positive things that happen in the workplace - they measure the presence of safety rather than the absence (lagging indicators)
- 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

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Leading Indicators – Cont'd

Cons

- Difficult to identify and capture; often new measures with no history within the organization – 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 workplace

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

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Notes

What are the best characteristics of Leading Indicators?

What are the common characteristics of the best measurement criteria:

1. Actionable
2. Achievable
3. Meaningful
4. Transparent
5. Easy to communicate
6. Valid
7. Useful
8. Timely

Both Leading and Lagging Indicators have value and can work together. The use of leading and lagging indicators give a balanced approach when developing your Safety Performance Indicators.

Choosing a Leading Indicator

- The OHS performance level is an important consideration.
- Leading indicators are most effective when aligned with the organization's specific OHS objectives.
- The results of the Organizational Performance Metric Survey can help in selecting leading indicators that might best suit the specific activities based on the maturity of the OHS system.

Notes

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.

Notes

Choosing a Leading Indicator

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 per cent of the workforce has completed organization-specific health and safety training?

Focus of Improvement:

- Per cent of leadership that is meeting job observation targets.
- Per cent 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.

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Notes

Choosing a Leading Indicator – Cont'd

Focus of Continuous Learning:

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

Leading and Lagging Indicators Working Together

The **leading indicators** are there to identify the failings 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.

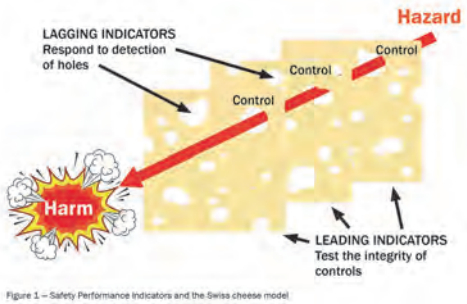

Figure 1 – Safety Performance Indicators and the Swiss cheese model

Notes

Leading and Lagging Indicator Examples

Leading Indicators	Lagging Indicators
Number of inspections and observations compared to plan	Number of lost time injuries/illnesses
% 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)
% maintenance work orders completed on time	# 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
% of workforce completed organization specific health and safety training	
% of job descriptions with specific health and safety accountabilities	
% of near misses that have been scheduled for follow-up and responsibility assigned	
% 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	

MISSION: ZERO

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Group Discussion: How would you measure?

Instructions:

1. Review the questions in your group.
2. Record how you would measure (where would you find the information)?
3. Is the indicator leading or lagging (best fit)?
4. Is the indicator qualitative or quantitative (best fit)?
5. Record your answers in the workbook.

MISSION: ZERO

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Notes

Group Project – Measurement

Question	Measure(s)	Leading	Lagging	Quantitative	Qualitative
1. How well the Hazard Assessments are carried out?					
2. WCB Costs?					
3. Effectiveness of Safety Meetings?					
4. Supervisors conducting all of their emergency exercises?					
5. Completed Occupational Health Committee Inspections against plan?					
6. Percent of Maintenance Work orders completed on time?					
7. Ensure employees are competent (possess knowledge, experience and training) with respect to the legislated and corporate training requirements?					
8. Thoroughness of an incident investigation?					
9. Perception Survey					
10. Completion of high risk corrective actions against target dates?					
11. Measurement of Lost Times and medical aid Incidents?					
12. The cost of property damage?					

Notes

Group Project – Answer Key

Question	Measure(s)	Leading	Lagging	Quantitative	Qualitative
1. How well the Hazard Assessments are carried out?	Completed Hazard Assessments	✓			✓
2. WCB costs?	WCB Cost Reports, Premium Costs		✓	✓	
3. Effectiveness of safety meetings?	Safety Meeting Minutes	✓			✓
4. Supervisors conducting all of their emergency exercises?	Emergency Exercise Schedule and compliance to the plan	✓		✓	
5. Completed Occupational Health Committee Inspections against plan?	OHC Inspection Schedule and compliance to the plan	✓		✓	
6. Per cent of Maintenance Work orders completed on time?	Maintenance Schedule, Past Due Reports	✓		✓	
7. Ensure employees are competent (possess knowledge, experience and training) with respect to the legislated and corporate training requirements?	Training records which include evidence of practical demonstration that the worker has acquired the knowledge or skill related to the subject matter	✓		✓	
8. Thoroughness of an incident investigation?	Incident Investigations		✓		✓
9. Perception Survey?	Safety Culture Surveys such as the OPM (Organizational Performance Metric)	✓			✓
10. Completion of high-risk corrective actions against target dates?	Incident Reports, Corrective Action Log, OHC Minutes	✓		✓	
11. Measurement of lost time and medical aid incidents?	Safety Performance Indicators such as # of lost times, # of medical aid incidents		✓	✓	
12. The cost of property damage?	Incident Reports, Property damage reports		✓	✓	

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Notes

In Summary

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 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.

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Is the data valid?

- 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, timelines and responsibilities.
- Finding fact and prevention, **not fault** must be the basis of reporting incidents and near misses.

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Notes

An Illustrative Case Study

A mid-sized chemical manufacturing plant was concerned that investigations were not very effective. As part of an overall effort to improve the company's investigation process, an attempt was made to explore employees' perceptions of the current investigation process.

First, a series of questions addressed the individual's history of reporting near misses, minor incidents and serious incidents. For those that had elected to not to report an incident, they were asked their reasons why.

Next, the questionnaire asked of their experience in participating in an investigation.

Finally, they were asked their opinion of the investigation process.
The questionnaire was anonymous and was administered and collected in a manner that ensured their confidentiality.

The results revealed some interesting information.

MISSION: ZERO

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An Illustrative Case Study - Results

- 60% of all employees surveyed (both hourly and salaried) would not report an incident if they could avoid doing so.
- 60% said they would not report an incident because "they or someone else would be blamed."
- 40% feared that discipline would result.

MISSION: ZERO

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Notes

An Illustrative Case Study - Results

- The existing investigation process failed to provide information to allow the organization to make true improvements and minimize the possibility for similar events.
- People were hiding incidents whenever they could and were guarded in providing information to the investigation whenever an event was reported and investigated.
- This resulted in poor conclusions and actions and further enhanced the employees' negative perceptions of investigations.

Canadian Literature Summary

In Canada, the research indicates:

- Approximately 20% of all compensable work-related injuries and illnesses are not claimed by workers. Demographic risk factors that 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
- Employer under-reporting - Surveys support an estimate of 7-8% 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

Notes

Suppression of Workplace Injury and Illness Claims

Definition: Claim Suppression

Actions undertaken by an employer that hinder the appropriate reporting of a worker's injury or illness resulting from work.

Examples:

- The employer induces the worker not to report the occurrence to a provincial workers' compensation authority.
- Under-reporting of the severity and the amount of time away from work.
- The employer wrongly offers an injured worker continued wages in lieu of the worker submitting a claim for workers' compensation.

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Notes

Fines and Penalties

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.

***Sections referenced are for *The Workers' Compensation Act, 2013* in Saskatchewan**

MISSION: ZERO

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Notes

Assessment Tool to Evaluate Data & Analysis

Maturity Paths 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.”

Individual Project – Maturity Path

Considering your workplace, answer the 7 questions by circling the best fit on a scale of 1 to 4:

1 = Beginning

2 = Improving

3 = Achieving

4 = Leading

Once complete, add up your scores.

Notes

Maturity Path for Incident Reporting and Analysis – Individual Project

(Circle the best fit on a scale of 1 to 4)

	Beginning (1)		Leading (4)
1.	All but the most serious incidents go unreported.	1 2 3 4	All incidents (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 investigating 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 behaviour-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.

Notes

Maturity Path – Interpret the Results

An employer can adapt this tool to fit their workplace. Answering a few simple questions can show the gaps in reporting and analysis systems helping the employer assess and redesign their existing safety management system for reporting.

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 developed and is 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.

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Notes

How Does Human Behavior Affect Data Collection?

Behavior Based Safety Principles:

- Individual behavior is governed by the consequences.
- We do what we do to:
  - Enjoy a positive consequence.
  - Avoid a negative consequence.
- We stop doing what we're doing when:
  - Our behavior results in immediate negative consequences.
  - Positive consequences are removed.

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How Does Human Behavior Affect Data Collection?

Behavior Based Safety Principles (cont'd):

- The most powerful consequences are **certain, soon, and significant** – **<u>however, positive consequences are preferred</u>** because of how negative consequences make people feel.
- To sustain employee safety involvement, employees must feel effort is:
  - Worthwhile
  - Recognized
  - Appreciated

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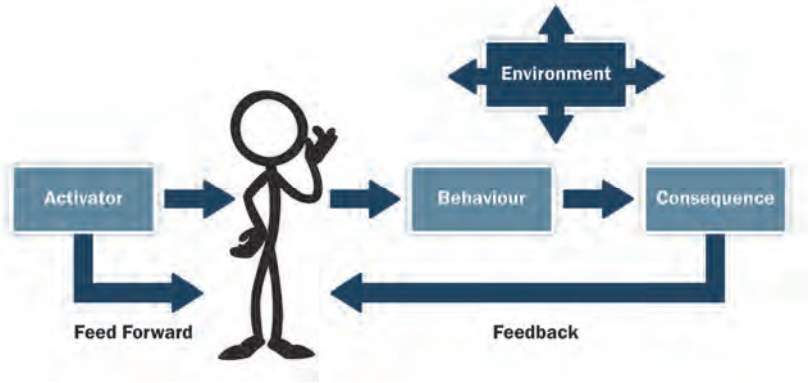
Notes

Activators and Consequences are Filtered Through the Person



* See descriptions on page 32 of the guide.

Activators and Consequences

- Injuries will be reduced if people are motivated to work safer.
- However, asking people to actively care for their health and safety means they give up a very powerful immediate positive consequences such as 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 or co-worker injury.
- This delayed reward might not seem credible because who knows when or if the payoff might occur.

Notes

Activators and Consequences

- Employees don't expect to get hurt on the job and don't see how their behaviour can put others at risk.
- Past experience tells us we can do the risky behaviour and get away with it.
- Employees need to develop an internal script (or belief system) to keep them doing the desirable behaviours or keeping the faith.
- Leaders need to understand how positive recognition increases the frequency of the desirable behaviours and increases the likelihood of other safe behaviours due to the positive attitude toward safety.

Basis of Data - Classifying Incidents

- Employers must establish policies and procedures on how to classify injuries in their workplace.
- The guidelines must be aligned with legislation and provide **consistent** application for reporting within the workplace.

Notes

Classifying Incidents

Employers must decide what depth of incident classification is the best for their workplace. Starting basic may benefit some employers.

1. First Aid, No Lost Time, Lost Time **MINIMUM**
2. First Aid (defined by Health and Safety Regulations), Medical Aid (*The Worker's Compensation Act, 2013*), Lost Time (defined by *The Workers' Compensation Act*)
3. First Aid (CAPP), Medical Aid/Treatment (CAPP), Lost Time, Restricted work, Fatality

BASIC

COMPREHENSIVE

CAPP is The Canadian Association of Petroleum Producers

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Basis of Data - Classifying Incidents

Examples of common terms tracked include:

- Reportable incident
  - Reportable to WCB, 52 Duty of employer to notify board of injury, *The Workers' Compensation Act, 2013* **and/or**
  - Reportable to 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

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Notes

Basis of Data - Classifying Incidents

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).

Basis of Data - Classifying Incidents (cont'd)

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.

Notes

Basis of Data - Classifying Incidents (cont'd)

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

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: http://www.wcbsask.com/employers/employer-responsibilities/

injury – means all or any of the following arising out of and in the course of employment: (*The Workers' 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

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Basis of Data - Classifying Incidents (cont'd)

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 Workers' Compensation Act, 2013* (Preliminary Matters 2(1) (aa))

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

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Notes

Basis of Data - Classifying Incidents (cont'd)

- The spreadsheet example in this course includes "injury" classifications:
  - First aid
  - Medical aid
  - Restricted work
  - Lost time
  - Fatality
- It is important the classification definitions are clear and documented to ensure consistency of application.

Basis of Data - Classifying Incidents (cont'd)

- The spreadsheet example in this course includes the following "no injury" classifications:
  - Near miss
  - Environmental
  - Property damage
  - Work refusal
- It is important to customize the spreadsheet to fit your needs.

Notes

Basis of Data - Classifying Incidents (cont'd)

- A simple approach for some employers may be to start with injury classifications such as:
  - First aid
  - Medical aid
  - Lost time
- 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 slides refer to choosing your workplace definitions for the purpose of your worksite's data collection.

Notes

Choosing the Best Fit

	Simple	Comprehensive
Decision Basis	• Workplaces who want to keep things simple • Do not plan to use the statistics to compare to other organizations	• Workplaces who wish to compare themselves to other workplaces based on a recognized standard • For reporting out safety statistics in bid documents • For workplaces that have advanced medical care at the workplace
First Aid	**Example**: At Work: Attendance by a first aider or self-administered first aid from the first aid kit	**Example**: At work **or** at a health care professional visit for observation or diagnostic purpose where the severity of the injury does not require more advanced medical care (*see Guide Appendix 5 Medical Versus First Aid Decision Chart – following the CAPP Guidelines*)
Medical Aid	**Example**: Any and all off-site treatment by a Health Care Professional	**Example**: At work **or** at a health care professional visit, which includes medical treatment beyond first aid. Involves a significant injury or illness diagnosed by a Health Care Professional *(see Guide Appendix 5 Medical Versus First Aid Decision Chart – following the CAPP Guidelines)*

Notes

Basis of Data - Classifying Incidents (cont'd)

To determine workplace definitions and classification of incidents, the following decision making process can be followed:

- Step 1 – Determine your definition of a first aid

Basis of Data - Classifying Incidents (cont'd)

Choice 1 – Simple Definition

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)*

Notes

Basis of Data - Classifying Incidents (cont'd)

Choice 2 – Comprehensive Definition

first aid – the treatments listed are considered first aid regardless of the professional status of the person providing the treatment. 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 includes visits to a doctor or health care professional solely for observation and counselling, diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and any procedure that can be labeled first aid. (CAPP)

See Appendix 5 for the Medical Aid/First Aid Decision Chart

Basis of Data - Classifying Incidents (cont'd)

- Step 2 – Determine your definition of a medical aid

Notes

Basis of Data - Classifying Incidents (cont'd)

Choice 1 – Simple Definition

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 Workers' Compensation Act, 2013 (Preliminary Matters 2(1)(v))*

Basis of Data - Classifying Incidents (cont'd)

Choice 2 – Comprehensive Definition

medical aid/recordable/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.

See Appendix 5 for the Medical Aid/First Aid Decision Chart

Notes

Medical Aid Versus First Aid Decision Chart Example

	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-Aids.TM, gauze pads, etc.; or using butterfly bandaged or Stiri-Strips TM
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)

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Notes

Medical Aid Versus First Aid Decision Chart Example

	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

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Notes

Medical Aid Versus First Aid Decision Chart Example

	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	

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Basis of Data - Classifying Incidents (cont'd)

- Step 3 – Determine your definition of lost time

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Notes

Basis of Data - Classifying Incidents (cont'd)

When compensation payable (Time Lost) – (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 Workers' Compensation Act, 2013,* Eligibility, 31.

Basis of Data - Classifying Incidents (cont'd)

- Step 4 (optional) – Determine your definition of restricted work.

Notes

Basis of Data - Classifying Incidents (cont'd)

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 workday that they would have been scheduled to work before the injury or illness occurred.

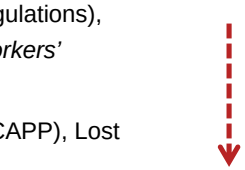
Summary - Classifying Incidents

Employers must decide what depth of incident classification is the best for their workplace. Starting basic may benefit some employers.

1. First Aid, No Lost Time, Lost Time **MINIMUM**
2. First Aid (defined by Health and Safety Regulations), Medical Aid, Lost Time (defined by *The Workers' Compensation Act*)
3. First Aid (CAPP), Medical Aid/Treatment (CAPP), Lost Time, Restricted work, Fatality

CAPP is The Canadian Association of Petroleum Producers

BASIC



COMPREHENSIVE

Remember legislative **reporting** requirements to the WCB and LRWS must be followed.

Notes

Determine What Statistics to Keep

Once the employer:

- Establishes the policies and definitions for classifying incidents at the workplace (first aid, medical aid, lost time, etc.),
- Ensured the data is valid – the employer has checked and established an effective incident reporting policy, timelines and responsibilities, and
- Has determined what Safety Performance Indicators (SPI) will provide value at the workplace – leading and lagging indicators.

It is time to determine the sources of where to collect the safety data.

Objective 1 – Measurement – Where?

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

Where do you collect this data? Consider…..

Notes

Objective 1 – Measurement – Where?

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.
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)

Objective 1 – Measurement – Where?

Data	Source	Considerations
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.

Notes

Objective 2 – Data Management

What we will cover:

1. Collection of the data
2. Building the data
3. Products of the data
   - i. **Number of first aids**
   - ii. **Number of medical aids**
   - iii. **Number of lost times**
   - iv. **Part of the body injured**
   - v. **Cause of the injury**
   - vi. **Site**
   - vii. **Division**
   - viii. **Department**
   - ix. **Total recordable incident frequency (TRIF)**
   - x. **Charts and graphs**
4. Reporting
   - xi. Timelines
   - xii. Distribution

1. Collection of the Basic Data

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

- Paper/manual entries
- Word documents
- Spreadsheet (such as Excel)
- Databases
- EHS Management software solutions (examples – Intelex, iS, EHS Insight, CorePoint)

BASIC

Sophisticated

Notes

2. Building the Data Using a Spreadsheet

- The spreadsheet provided includes the information as a starting point.
- The sheet is completely customizable for your workplace.
- Customization in terms what you choose to track and the terminology used will provide data that is meaningful and clear for your workplace.
  - **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

MISSION: ZERO

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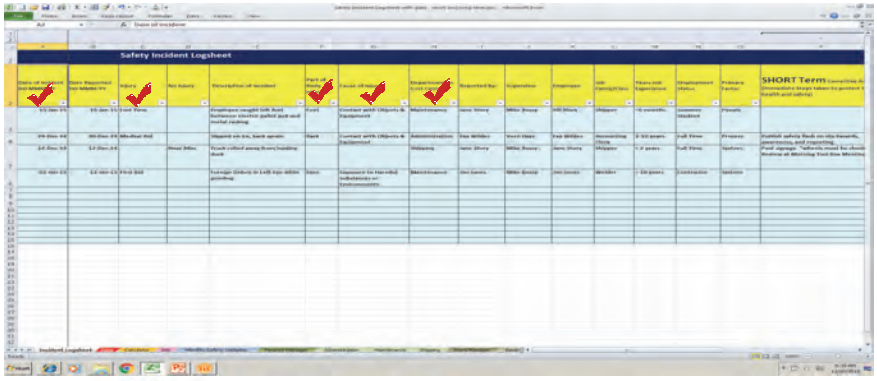
Building the Data Using a Spreadsheet

For consistent and easy entry into the spreadsheet, it is recommended that your Incident Investigation Procedure is aligned with the required information and terminology used in the Safety Incident Log sheet.



MISSION: ZERO

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Notes

Building the Data Using a Spreadsheet

Let's review the example spreadsheet reporting criteria.
Remember this is an example and a good starting point – customization is the key to making it useful in your workplace.

- **Date of incident** *(DD-MMM-YY)*
- **Date reported** *(DD-MMM-YY)*
- **Injury** *(Data validation)*
- **No injury** *(Data validation)*
- **Description of incident** *(Text)*
- **Part of body injured** *(Data validation)*
- **Cause of injury** *(Data validation)*
- **Department/cost Centre** *(Data validation)*
- **Reported by** *(Text – ensure consistency)*
- **Supervisor** *(Text – ensure consistency)*
- **Employee** *(Text – ensure consistency)*
- **Job family/class** *(Data validation)*
- **Years job experience** *(Data validation)*
- **Employment status** *(Data validation)*
- **Primary factor** *(Data validation)*
- **Corrective action (short & long term)** *(Text)*
- **Corrective action target completion date (short & long term)** *(DD-MMM-YY)*
- **Corrective Action Completion Date (short & long term)** *(DD-MMM-YY)*
- **Follow-up (high risk)** *(DD-MMM-YY & conditional formatting)*
- **Comments** *(Text)*

Note: Green text indicates data that are considered leading indicators

Reference Materials and Supporting Forms

The following reference materials and supporting forms have been included in the course materials. All of these can be customized by the employer to suit their line of business:

- Cause of Injury Reference Sheets – aligned with WCB classification of injuries. (See Appendix 1 of the Guide)
- Incident Investigation Form – aligned with the course example Safety Incident Log Sheet.
- Factors - Incident Indirect and Root Cause Reference Sheet – used in the Incident Investigation Form.
- Medical Restrictions Form – referenced in Incident Investigation Form – required by employees when seeking medical attention on first visit to assist employer in providing modified or alternate work.
- First Aid Register – referenced in the Incident Investigation Form – legislative requirement for every first aid station.

Notes

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 representatives (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 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 conditions:
☐ 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. Submit 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 -

MISSION: ZERO

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Factors - Indirect Cause 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	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

MISSION: ZERO

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Notes

Factors – Root Cause 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				

MISSION: ZERO

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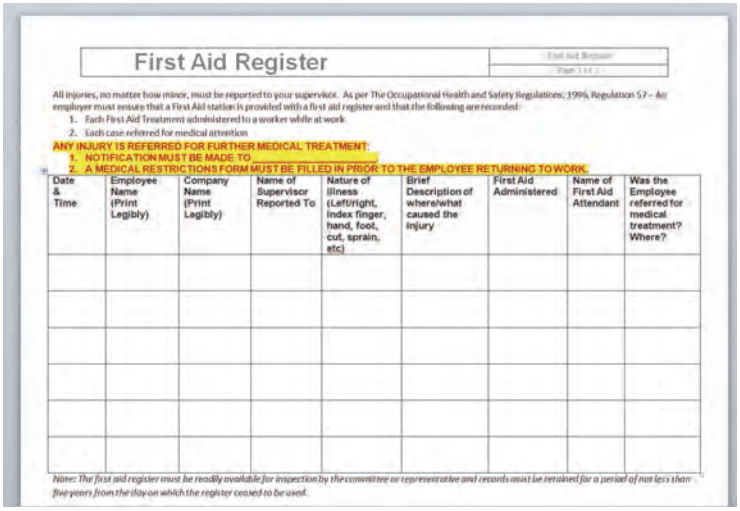
First Aid Register



First Aid Register

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.

MISSION: ZERO

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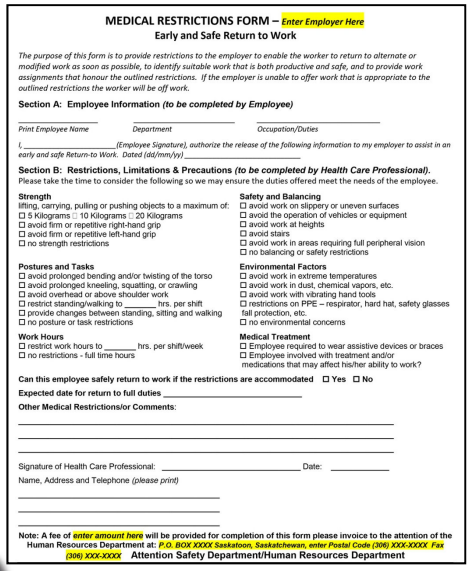
Notes

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

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

MISSION: ZERO

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Risk Assessment

Risk is the chance that a hazard will actually harm a worker.

Risk factors to consider:

Likelihood:

Frequency: How many workers and how often?

Probability: How likely could it happen?

Consequences:

Severity: How serious is the harm?

Use risk to help set priority for controlling hazards.

MISSION: ZERO

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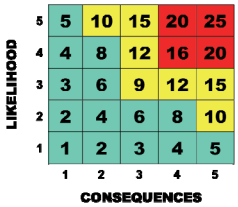
Notes

A Simple Risk Level Estimator

RISK ASSESSMENT MATRIX



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)

MISSION: ZERO

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Serious Injury and Fatality Prevention

- 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.

MISSION: ZERO

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Notes

Potential for Harm Exposure Determination

Near Miss

An object fell out of a lifting basket when it bumped the sides of the floor opening 5 stories in the air. The object fell to the bottom floor but did not hit anyone. The area below the lifting well was not secured and taped off.

Medical Aid

Worker strained his wrist while pulling a 20-pound condenser out of a cardboard box.

Potential for Harm Exposure Determination

Property Damage

A forklift operator was backing up his forklift at approximately 5 MPH. He struck a pedestrian walkway guardrail and damaged it. There were no pedestrians in the walkway.

Near Miss

An maintenance technician was repairing an acid pump line leak. The pump started unexpectedly. He thought the system was de-energized because he left it that way before lunch break.

Notes

Determining Root Cause - 5 whys

- Only when root cause is determined will the controls put in place effectively prevent the reoccurrence of the incident
- "Why" must be asked more than once in order to get a clearer understanding of the problem and move from the surface all the way to the root of the problem

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

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

MISSION: ZERO

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5 Whys Example

A fork lift driver reports to his warehouse manager that his fork lift cannot start despite all his efforts.

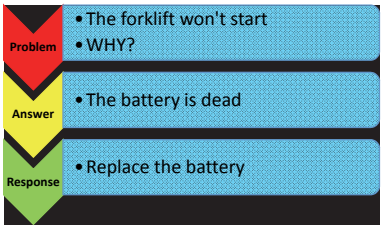
A. SIMPLE ANALYSIS – 1 WHY.

The 1 why application: Problem – Answer – Response.

What if the problem was not the battery but something else? You missed it, didn't you?

B. DETAILED ANALYSIS – 5 WHYS.

Now, let's look at the same problem from a different perspective:



Problem	My forklift won't start.	WHY?
Answer 1	The battery is dead.	**WHY?**
Answer 2	The alternator was not charging the battery when I last drove it.	**WHY?**
Answer 3	The alternator belt was broken.	**WHY?**
Answer 4	Because I failed to maintain the fork lift.	**WHY?**
Answer 5	I was not committed to following the scheduled forklift maintenance program.	**ACTION**

MISSION: ZERO

Let's analyze the situation by applying the 5 whys:

Can you see the different approach?

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Notes

3. Products of the Data

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

- Number of first aids
- Number of medical aids
- Number of lost times

And associated:

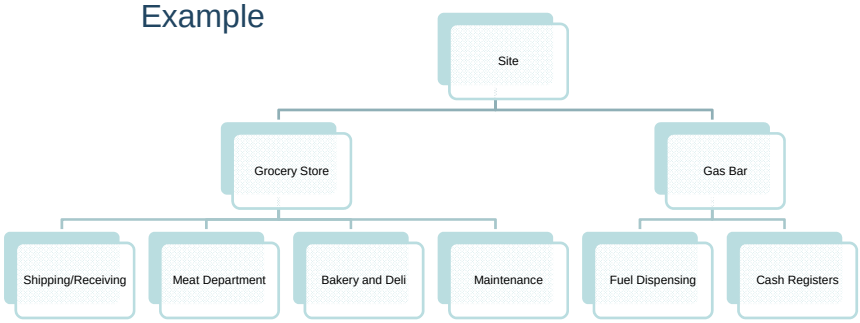
- Part of the body injured
- Cause of injury

For the:

- Site
- Division
- Department

3. Products of the Data

Example



Notes

Additional Indicators to Track

Definition:

Total Recordable Injury Frequency (TRIF) – Total recordable injuries are the sum of fatalities, lost workday cases, restricted work cases, and medical treatment cases per 100 workers.[1]

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.

[1] Source: Canadian Association of Petroleum Producers (CAPP) – Guide Reporting of Occupational Injuries, June 2008

MISSION: ZERO

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Total Recordable Injury Frequency (TRIF)

- Known as "lagging indicators," incident rates describe past history.
- TRIF rates are useful when:
  - Used to benchmark against other companies in similar fields or similar size.
  - When compared over several periods, to identify trends.
  - Medium-sized & larger companies benefit from computing and tracking the trends from month to month.
- Smaller companies:
  - With recordable incidents will most likely have high TRIF.
  - The incident rates may fluctuate significantly from year to year.
  - The higher rates and fluctuation is due to the smaller number of employees therefore lower number of labour hours worked at the company (smaller denominator in the calculation).
  - May choose to track the number of Total Recordable Incidents rather than the Recordable Incident Rate.

MISSION: ZERO

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Notes

Total Recordable Injury Frequency (TRIF)

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

Why 200,000?
This was developed to provide a standardized way to measure rates, so that companies of different sizes could be compared fairly. 200,000 was chosen because it represents the number of hours that 100 employees working 40 hours a week for 50 weeks would accumulate. (Saskatchewan gets 3 weeks vacations = 196,000 hours). There are many different work schedules and hours so the 200,000 is an approximation of 100 employees in a year.

Total Recordable Incident Frequency (TRIF)

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

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

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.

Notes

How to Use TRIF

- TRIF is a lagging indicator.
- If the TRIF is climbing, it is time to investigate to determine what is happening.
- If the TRIF is declining, it's an indication that workers are following safe practices and that the safety plan is working.
- **Even with a declining TRIF, the workplace must continue to be vigilant and track leading indicators.**
- Remember, leading indicators measure future performance – work on the proactive side. Fill 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 - the holes in the Swiss cheese slices line up.

Additional Indicators to Track

There are many other additional safety indicators that can be tracked and are included in the Guide:

- Injury Frequency
- Recordable Incident Rate (RIR)
- Severity Rate (SR)
- Lost Case Rate (LTC)
- Lost Time Workday Rate (LTC)
- Days Away, Restricted or Job Transfer (DART)

Notes

Charts and Graphs – Visual Safety

Purposes:

1. To show and compare changes.
2. To show and compare relationships.
3. To bring facts to life.
4. Graphs are processed by the brain faster than text.

Charts and Graphs (cont'd)

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.

Notes

Charts and Graphs – Line Graphs

- One of the most common graph types.
- Use a line to connect the data points you plot.
- Most useful for showing trends and for identifying whether two variables relate to (correlate) to each other.
- Work well for continuous variation (complete range of measurements such as height).

Examples:

- First aids per month … how do first aids vary from month to month?
- Medical aids per month or year.
- Graph shown: Number of youth claims per month from 2008-2013 *(Saskatchewan WCB)*

MISSION: ZERO

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Charts and Graphs – Bar Graphs

- Show relationships between different data series.
- Height of the bar represents the measured value or frequency.
- The higher or longer the bar – the greater the value.
- Used for discontinuous variation or discrete data (distinct classes or categories – such as blood types – you either have the characteristic or don't).

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)*

MISSION: ZERO

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Notes

Charts and Graphs – Pie Charts

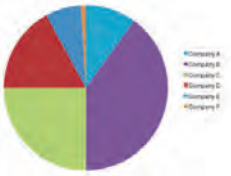
- Compares parts to a whole.
- Shows percentage distribution.
- The entire pie represents the total data set.
- Each segment of the pie is a particular category of the whole.
- Must use the same unit of measure within a pie chart or the data will be meaningless.
- Drawback - percentages are difficult to discern and used only to judge the magnitude of a slice.

Examples:

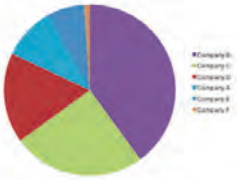
- Cause of Injury.
- Part of the body injured.

Pie Chart Disadvantages

Below is a pie chart with six slices. Notice how easy it is to determine that 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.

Notes

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?

Charts and Graphs

The examples of graphs and charts that are included in this workshop are:

Lagging Indicators

- Lost times
- Medical aid
- First aids

Safety Indicators

- Site
- Divisions
- Departments

By Area

- Part of body injured
- Cause of the injury

Injury Details

Notes

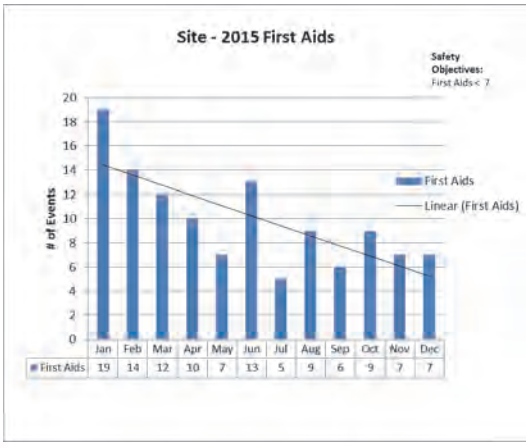
Charts and Graphs

Leading Indicators

- Incidents reported on time.
- Per cent of high risk incidents follow-up completed on time.

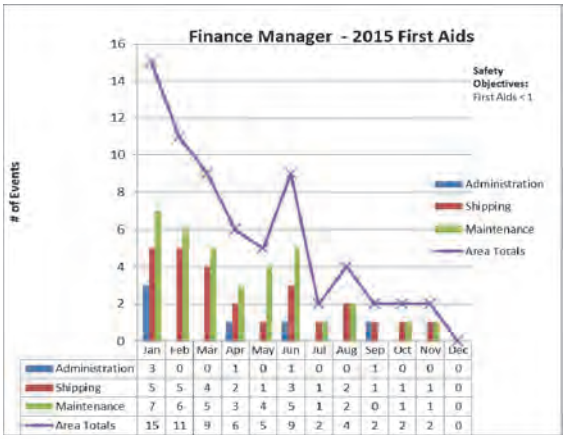
Site Summary of 2015 First Aids

with linear trendline



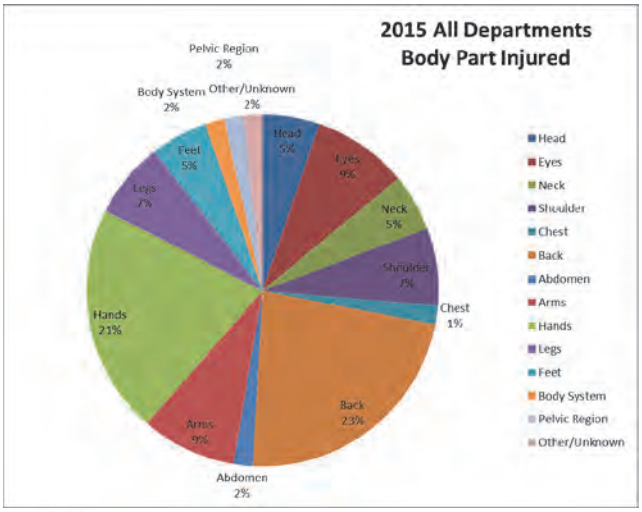
Notes

Division – Finance Manager – 2015 First Aids
with area totals



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Administration	3	0	0	1	0	1	0	0	1	0	0	0
Shipping	5	5	4	2	1	3	1	2	1	1	1	0
Maintenance	7	6	5	3	4	5	1	2	0	1	1	0
Area Totals	15	11	9	6	5	9	2	4	2	2	2	0

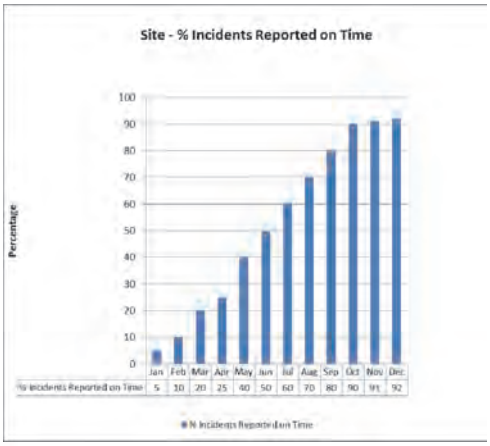
Body Part Injured – All Departments



Notes

Leading Indicators

% Incidents Reported on Time



MISSION: ZERO

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4. Reporting

Timelines

- The employer will need to determine how often the Safety Statistics are compiled and the information distributed.
  - Daily
  - Weekly
  - Monthly
  - Quarterly
  - Annually
  - Trends over 5 years, etc.
- This 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)

MISSION: ZERO

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Notes

4. Reporting

Distribution

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

Objective 3
Training, Communication & Continuous Improvement

Notes

Training

Employers must provide workers with comprehensive health and safety orientations and workplace-specific training.

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

  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 cont'd

- **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:**

  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.

Notes

Training Requirements

There are many training requirements in the workplace. Examples of those relative to Safety Statistics are shown in blue text below.

It is important that all employees receive training so they understand their responsibilities and procedures relevant to reporting. Meaningful safety statistics cannot be collected if there is non-existent reporting or properly conducted investigations.

Remember the principle of GIGO – garbage in, garbage out.

- 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

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Document the Instruction

Remember to keep:

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

Required Information means that any information such as training records, certifications, minutes – shall be readily available under request of an officer.

SEA 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.

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Notes

Communication

Everything in the workplace involves communication. Research studies suggest 70% of workplace mistakes are caused by poor communication.

Communication Methods:

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

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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

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Notes

Improving Safety Communication

1. **Explain the current safety status** – 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

Improving Safety Communication

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 leader publicly to encourage others to work more safely. For those that 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."

Notes

Statistical Reports & Effective Communication

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, grandparent 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.

Training and Communication Benefits

An effective training and communication program will:

- Significantly reduce the risk of personal injury
- Provide a quality product
- Reduce damages to property
- Increase production
- Improve employee morale
- Improve employee loyalty
- Enhance employee retention
- Provide trained replacement employees to cover vacations and absences

Notes

Continuous Improvement

- Measure set objectives at planned intervals – be prepared to assess whether you have met them relative to suitability, adequacy and effectiveness.
- 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 deep-rooted culture that values the safety of people, products and processes.

The Continuous Improvement Cycle

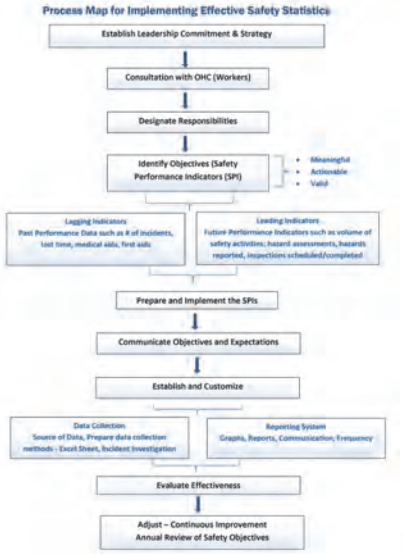
Assess opportunities for continual improvement and the need for changes to the organization's OHS policy and objectives. ***Source: CSA Z1000-14 – Occupational Health and Safety Management***

Notes

Summary

1. **Measurement (Statistics)**
   - Why
   - What
   - Where
2. **Data Management**
   - Collecting
   - Building
   - Products
   - Reporting
3. **Training and Communication**
   - Training
   - Communication
   - Continuous Improvement

Quick Start Process Map



Notes

Additional Education

- OHS Courses
  - Level 1
  - Level 2
- Supervision and Safety
- Computer Workstation Assessment Training
- Effective Return to Work
- Back Care
- Industry Specific Training and Conferences

Important Websites

- www.wcbsask.com
- www.worksafesask.ca
- www.saskatchewan.ca
- www.energysafetycanada.com
- www.hcsas.sk.ca
- www.motorsafety.ca
- www.sasm.ca
- www.saswh.ca
- www.scsaonline.ca
- www.servicehospitality.com
- www.sasksafety.org
- www.safesask.com

Notes


Questions?
MISSION: ZERO
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Thank you!
Please complete and hand in the Course Evaluation.
MISSION: ZERO
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