

Accident and Incident Investigation and Reporting

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1.0 Introduction:

All work-related accidents and incidents that result in personal injury, equipment, materials, environment or property damage and incidents that have a high potential for the aforementioned must be reported to the Department of Health & Safety. All accidents and incidents with high potential to result in an accident must be investigated to identify facts, determine the underlying or root cause(s), implement corrective action, and communicate to applicable people “Lessons Learned.”

Part 1.0 defines reporting of accidents/incidents.

Part 2.0 defines investigation of accidents/incidents.

2.0 Purpose

To ensure an adequate reporting system is in place for the reporting, tracking, follow-up, and investigation of injuries and injury statistics for Memorial University. Investigations are completed to describe what happened, determine the real causes, determine associated risk, develop controls to prevent recurrence, define trends, demonstrate concern, and communicate “Lessons Learned.”

3.0 Application

This procedure applies to all faculty and staff. Contractor investigation requirements are outlined in the Contractor Safety Management Procedure S-003.

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4.0 Definitions

4.1 **Accident:** undesired event resulting in death, ill health, injury, damage or other loss.

Occupational Health & Safety (OHS) Regulations definition of an accident:

- a. A willful and intentional act, not being the act of the worker
- b. A chance event occasioned by a physical or natural cause
- c. Disablement arising out of and in the course of employment

4.2 **Incident:** event that has the potential to lead to an accident. (Note: An incident where no ill health, injury, damage, or other loss occurs is also referred to as a “near-miss”. The term “incident” includes “near-miss.” Incidents are warnings that something is wrong in the workplace. If incidents are not addressed, preventable accidents will likely result. Studies show that a high number of incidents frequently precede serious accidents. Thus, there are many opportunities to identify and control potential hazards prior to an accident).

4.3 **Injury:** The result of a chance event occasioned by a physical or natural cause, the result of a willful and intentional act, disablement, industrial disease, or death as a result of an injury, arising out of and in the course of employment. It includes a recurrence of an injury and an aggravation of a pre-existing condition, but does not include stress other than stress that is an acute reaction to a sudden and unexpected traumatic event.

4.4 **Lost-time injury (LTI):** Any work-related injury that occurs where the worker is unavailable, because of the injury, for his/her next scheduled shift.

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- 4.5 **Medical Aid (MA):** Medical, surgical and dental aid; hospital and skilled nursing services; and the use of prosthesis or apparatus and the repairing and replacement of them; and any attention given by a medical professional other than First Aid.
- 4.6 **First Aid case:** Using a nonprescription medication at nonprescription strength; administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment); cleaning, flushing or soaking wounds on the surface of the skin; wound coverings such as bandages, Band-Aids, or gauze pads, etc., (other wound closing devices such as sutures or staples are considered medical treatment); hot or cold therapy; any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.; temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.); drilling of a fingernail or toenail to relieve pressure or draining fluid from a blister; eye patches; 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; finger guards; massages (physical therapy or chiropractic treatment are considered medical treatment); drinking fluids for relief of heat stress; or administration of oxygen to an employee as a precautionary measure when the employee does not exhibit any signs of injury or illness.
- 4.7 **Recordable Frequency (RF)** is calculated on both a monthly and year-to-date basis. The formula being used is: **$RF = LTI + MA \times 200,000 / Hr's \text{ worked}$** . The Recordable Frequency rate will be compared to that of other universities and industry for our benefit.
- 4.8 **Severity Frequency (SF)** is calculated on both a monthly and year-to-date basis.

The formula being used is: **$SF = LTI \times 200,000 / Hr's \text{ worked}$** .

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4.9 **Lost-time Severity = Days Lost x 200,000 / Hrs worked** for each stat. The lost-time severity rate will be compared to that of other universities and industry for our benefit.

4.10 **Restricted work activity:** Occurs if the employee cannot work a full shift and cannot perform all of his or her routine job functions, defined as any duty he or she regularly performs at least once a week.

4.11 **Serious Injury:** Under current legislation, "serious injury" means:

- A fracture of the skull, spine, pelvis, femur, humerus, fibula or tibia, or radius or ulna;
- An amputation of a major part of a hand or foot;
- The loss of sight of an eye;
- A serious internal hemorrhage;
- A burn that requires medical attention;
- An injury caused directly or indirectly by explosives;
- An asphyxiation or poisoning by gas resulting in a partial or total loss of physical control; or
- Another injury likely to endanger life or cause permanent injury,

4.11.1 A serious injury does not include injuries to a worker of a nature that may be treated through first aid or medical treatment and the worker is able to return to his or her work either immediately after the treatment or at his or her next scheduled shift. Where an accident takes place at a workplace that:

- a) Results in serious injury to a person or results in the death of a person; or

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- b) Had, or continues to have, the reasonable potential of causing serious injury to or the death of a person,

The Director of The Department of Health & Safety will immediately notify the Occupational Health & Safety Branch of the accident. Notification shall also be given immediately to the joint OH&S committee.

4.12 Non-occupational Injury: Any non-work related injury requiring assistance from a hospital or from a medical professional. A non-occupational injury is not part of monthly statistics.

4.13 WHSCC: Workplace Health Safety & Compensation Commission of Newfoundland & Labrador.

Part 1.0 - Reporting of Accidents and Incidents

1.1 All accidents and incidents must be reported. It is the responsibility of the supervisor to ensure that this is carried out promptly and properly according to the regulations of the province of Newfoundland and Labrador and according to Memorial University policy (S-6 – Safety Standards & Policy).

1.2 Employer's Report of Injury – WHSCC Form # 7

1.2.1 Within three days after the occurrence of a LTI to a worker in which the worker is disabled from earning full wages or the worker is entitled to medical aid, Memorial University will notify the Workplace Health, Safety and Compensation Commission in writing of:

- The occurrence of the injury and nature of it;
- The time when the injury occurred;

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- The name and address of the worker;
- The place where the injury occurred;
- The name and address of the doctor who looks after the injury; and
- Other particulars required by the Commission as outlined in WHSCC form #7 – Employer’s Report of Injury.

1.3 Worker’s Report of Injury – WHSCC Form # 6

1.3.1 Where a Memorial University employee applies for compensation, they must file with the Commission an application for the compensation on the Worker’s Report of Injury form (WHSCC form # 6), together with the certificate of the attending doctor.

Part 2.0 - **Investigation of Accidents and Incidents**

1.0 Memorial University will conduct investigations using both individual investigators and/or investigation teams, depending on the type of investigation required (determined by the severity of the accident and the potential for recurrence). All those with investigation responsibilities will be trained in Memorial’s accident/incident investigation procedure, legislative requirements, and investigation techniques. The Department of Health & Safety will support and participate in investigations as described in this procedure.

2.0 **Responsibilities**

The responsibilities for investigations are as follows:

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2.1 Department Head, Manager and/or Director Responsibilities

- Ensure that completed Accident/Incident Investigation reports are forwarded to the Director of the Department of Health & Safety within twenty-four hours of the accident and/or incident. In cases where the investigation cannot be concluded within twenty-four hours, a preliminary report can be submitted to the Director of the Department of Health & Safety indicating that a thorough report will follow the preliminary report.
- Critically review all Accident/Incident Investigation reports for his/her department.
- Shall ensure that immediate and underlying causes are found, recommendations are pertinent to the accident/incident seriousness, the supervisor has signed off the investigation, and prompt reporting of the accident/incident is made to the Director of the Department of Health & Safety. The Department Head, Director, or Manager shall ensure that corrective measures are taken to prevent recurrence.
- Assist or work in cooperation with the Department of Health & Safety and/or the local health and safety committee as needed to implement the investigation's recommended actions to prevent recurrence of similar incident.

2.2 Supervisor Responsibilities:

- The supervisor's first priority is to ensure the well-being of his/her employees. Upon first becoming aware of the accident, evaluate the

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seriousness and nature of the accident. Where circumstances warrant an urgent response, cancel other activities and proceed to the accident scene. Note: an excessive delay in following up an apparent minor incident will reduce the effectiveness of the overall investigation and findings.

- Ensure that medical attention is provided to the injured employee.
- Where circumstances and severity warrant, secure equipment to prevent further injury or damage and secure the area to ensure that evidence is not disturbed before an investigation is completed.
- Provide first aid and medical care to injured person(s).
- Determine the severity of any personal injury and immediately, by phone, report those injuries that result in critical injury or death to the Director of the Department of Health & Safety 864-3779. During non-business hours, the supervisor calls Campus Enforcement & Patrol at 737-4100 for the St. John's campus or 637-6210 at Sir Wilfred Grenfell College. If the injury is not critical and does not require emergency care yet requires medical attention, the supervisor must recommend to the employee that she/he go to the nearest medical treatment facility. The supervisor should also advise the Human Resources Department/Early and Safe Return to Work Coordinator that the employee visited a family physician or the emergency department.
- When an injury is reported to Campus Enforcement & Patrol (CEP) for after hours reporting, CEP must give notification to the Department of Health & Safety as soon as possible during the next day of normal business hours.

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2.3 Employee Responsibilities

- Immediately reports to his/her supervisor any work-related injury/illness. This includes immediate incidents (acute injuries) such as cuts, puncture wounds, needle stick injuries, sprains and burns as well as those that are of a gradual onset (chronic) i.e., back pain, repetitive strain.
- Complete and submit a WHSCC Form 6
- Immediately reports to his/her supervisor any “near-miss” events and/or unsafe work situations and provide necessary details to the supervisor.
- Employees must assist with the investigation and completion of the Accident/Incident Investigation Report by his/her supervisor when requested.

2.4 Department of Health & Safety

- Reviews all Accident/Incident Investigation Reports to ensure information is complete, understandable, and based on factual evidence.
- Maintains a database of satisfactorily completed Accident/Incident Investigation Reports for each accident/incident. Enters the details of accidents/incidents into a database as reports are received.
- Distributes reports to all areas requiring information for subsequent follow-up of additional corrective action.
- If an accident results in death or a “serious injury”, the Director of the Department of Health & Safety will immediately notify the following by telephone or other direct means:

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- 1) The Occupational Health and Safety Branch Industrial Accident hotline (24 hours: 729-4444);
 - 2) Dean, Director or Department Head.
- In the absence of the Director of the Department of Health & Safety, the Dean, Director or Department Head shall carry out the reporting duties as described above.
 - Prepares quarterly reports of accident/incident information for the Occupational Health and Safety Committee meetings and provides summary reports to Senior Administration.
 - Ensures that recommendations are appropriate and that the preventive and corrective actions have been taken.
 - Assists or provide direction as needed for the implementation of corrective measures.

2.5 Occupational Health & Safety Committee(s)

- Reviews and analyzes accident/incident “Lessons Learned” details identifying areas of concern and makes recommendations to administration as necessary.
- The committee co-chairs may participate in the investigation of all “serious injury” accidents when available.
- Assist as required in the implementation of corrective measures.

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3.0 Investigation Type

The severity of the accident and potential for recurrence determines the level of investigation to be undertaken. The following guide gives a description of the investigation type and severity:

3.1 Type “A” investigation (Extreme Risk Category): Required when there is a fatality, serious injury, damage to equipment, materials, environment or property greater than \$100,000, or the potential exists for the aforementioned. The following team members will conduct all Type “A” investigations:

- Director or Manager of department in which the accident occurred
- Director of Facilities Management
- Director of the Department of Health & Safety

3.2 Type “B” investigation (High Risk Category) – Required when there is a lost-time injury requiring medical aid treatment, damage to equipment, materials, environment or property greater than \$10,000 but less than \$100,000, or the potential exists for the aforementioned. The following team members will conduct all Type “B” investigations:

- Manager and/or Supervisor of department in which injury occurred
- Director of the Department of Health & Safety

3.3 Type “C” Investigation (Medium Risk Category) – Medical treatment injuries not resulting in lost time, damage to equipment, materials, environment or property greater than \$1,000.00 but less than \$10,000.00, or the potential exists for the aforementioned. The supervisor and/or manager responsible for the department in which the injury occurred will conduct all Type “C” investigations.

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3.4 Type D investigation (Low Risk Category) - First aid cases where the incident did not cause a more serious injury or accident and there was limited probability of the aforementioned requires Type D investigations. No detailed investigation is required; however, documentation is to be made in the First Aid Register and will include:

- The full name, age and occupation of the worker;
- The nature of the injury or illness;
- A short description of the cause of the injury or illness;
- The nature of the work in which the worker was engaged at the time of sustaining the injury or becoming ill, with date and time;
- The treatment given, with date and time;
- The disposition of the case stating whether the worker returned to work, was sent home or to a physician or hospital, and means of transportation where applicable;
- The signature of the person making the entry; and
- For later completion, if necessary, total time lost, time on restricted work activity, and whether or not a Workers' Compensation Commission claim was filed.

3.4.1 First aid registers shall be available for inspection by the Occupational Health and Safety committee and will be retained by Memorial University for a period of at least five years from the date of the last entry.

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4.0 Investigation Steps

4.1 Using the approved Memorial University accident investigation form as a guideline and applying the principles learned in Memorial University's accident/incident investigation training course, the Supervisor or investigation team will ensure the following investigation requirements are completed:

- Interview witnesses;
- Gather and analyze the evidence;
- Identify the causes based on documented factual evidence;
- Report the findings;
- Develop a plan for corrective action;
- Implement the plan;
- Evaluate the effectiveness of the corrective action; and
- Make changes for continuous improvement.

5.0 Initial Investigative Actions

5.1 To preserve the integrity of the accident scene and obtain the various types of evidence that will be required to determine what caused the accident and what steps may be required to prevent further recurrences. Investigators and the investigation team will:

- Preserve the integrity of the accident scene and various types of evidence;
- Administer first aid and CPR if required and if trained to do so;
- Take measures to prevent secondary accidents;
- Notify emergency agencies if required;
- Initiate data collection activities and collect and control evidence;
- Obtain witness statements and interviews; and

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- Document the accident scene through photographs, video or drawings.

6.0 Immediate Causes

Causes fall into two general categories: (1) Substandard Actions and (2) Substandard Conditions. Samples of each follow:

Substandard Actions:

- Operating equipment without authority
- Failure to warn
- Failure to secure
- Operating at improper speed
- Making safety devices inoperable
- Removing safety devices
- Using defective equipment
- Using equipment improperly
- Failing to use personal protective equipment properly
- Improper loading
- Improper lifting
- Improper position for task
- Servicing equipment in operation
- Horseplay
- Under influence of alcohol and/or other drugs
- Other, please specify

Substandard Conditions

- Inadequate or improper protective equipment
- Defective tools, equipment or materials
- Congestion or restricted action
- Inadequate warning system
- Fire and explosion hazards
- Poor housekeeping/disorder
- Hazardous environmental conditions: gases, dusts, smoke, fumes, vapours
- Noise exposure

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- High or low temperature exposure
- Inadequate or excess illumination
- Inadequate ventilation
- Other, please specify

7.0 Root Cause Analysis

Root causes will be determined by performing the following analysis:

- a. Record any unsafe acts that may have affected the incident. An unsafe act is any hazard created because of human error or behavior.
- b. Record any unsafe conditions that may have contributed to the incident. An unsafe condition is any physical hazard related to equipment, materials, structures or other physical elements of the workplace.
- c. Thoroughly investigate the following four areas and make note of any needed improvements:
 - People/Behavior – proper training, selection and leadership;
 - Equipment - proper use, selection and maintenance;
 - Material - proper selection, handling and processing;
 - Environment – air quality, poor weather, windy conditions, hot/cold, etc.

Determine the root causes by determining why improper actions were taken and/or why conditions existed that resulted in the incident and/or why a lack of management control existed. Common examples of “root causes” are: Personal Factors and Job System Factors (inadequate worker training, poor maintenance, inadequate policies and procedures, ineffective employee motivation, lack of accountability, improper selection of material or equipment).

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Personal Factors

- Inadequate capability
- Lack of knowledge
- Lack of skill
- Stress
- Improper motivation

Job Factors

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ Inadequate leadership/supervision ▪ Inadequate engineering ▪ Inadequate purchasing ▪ Inadequate maintenance | <ul style="list-style-type: none"> ▪ Inadequate tools/equipment/materials ▪ Inadequate work standards ▪ Wear & tear ▪ Abuse or misuse |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Lack of Control (OHS Regulatory Program Requirements)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ Leadership & Administration ▪ OH&S Committees ▪ Education & Training ▪ Communications ▪ Safe Work Practices & Procedures | <ul style="list-style-type: none"> ▪ Hazard Recognition & Control ▪ Workplace Inspections ▪ Accident/Incident Investigation ▪ Emergency Preparedness ▪ Disability Management ▪ Other, please specif |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

8.0 Investigation Forms and Reporting Format

The standard Memorial University Accident/Incident Form must accompany each report of an accident/incident. Completion of this form may not be adequate for thorough investigation of the accident/incident. The accident/incident investigation thoroughness will depend on the severity and inherent risk of the accident/incidents.

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9.0 Corrective Action

A critical part of the investigation process will be taking action to mitigate any consequences arising from accidents, incidents or non-conformances and the initiation and completion of corrective and preventive actions, including confirmation of the effectiveness of corrective and preventive actions taken.

10.0 Lessons Learned

A critical part of the investigation process is to learn from our past mistakes to prevent recurrence of similar unintended events. Following the lead of Memorial's "Tool Box Talks" procedure, findings of investigations will be treated and communicated as if it were a "Tool Box Talk". The purpose of the communication is to describe an incident and communicate the recommendations to personnel and students to prevent recurrence; names and/or particulars of the incident are not included.

The Department of Health & Safety is available to help supervisors and managers prepare and distribute Lessons Learned reports.

Legislative reference: OH&S Act Section 54, OH&S Regulations Part III 12 (1) (g) (iii), (iv), (v), and (vi); section 56 of the WHSCC Act

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