Hazard Identification & Assessment Game Plan

Identifying and assessing hazards is a core OHS duty and the key to preventing workplace injury

Distilled to their bare essentials, the OHS acts and regulations require you to do 4 basic things to protect workers' health and safety:

- **R**ecognize the hazards lurking in your workplace;
- **A**ssess the hazards you identify to determine how to manage them;
- **C**ontrol the hazards by implementing appropriate measures based on your assessment; and
- **E**valuate the effectiveness of control measures.

In all cases, the starting point is implementing a process known as hazard identification and assessment, the 'R & A' of the RACE formula. Here's how.

Hazard Identification & Assessment

Failure to recognize a hazard is a root cause in many, if not most workplace injuries, illnesses, and incidents. The converse of this principle is that many, if not most injuries, illnesses and incidents can be prevented by identifying hazards before they cause something bad to happen. And that's what hazard identification and assessment (which, for simplicity sake, we'll refer to as 'hazard assessment' is all

about. It’s a proactive, continuing process to anticipate and prevent danger that unfolds in 6 steps.

Gather a Hazard Assessment Team

While it should be led by a competent person with training and experience in identifying and assessing workplace hazards, hazard assessment is a team effort that requires participation of not only OHS coordinators and supervisors but also workers on the front lines who are versed with the work and the hazards it poses. That’s why most jurisdictions require hazard assessment to be carried out in consultation with the workplace joint health and safety committee (JHSC) or workers’ health and safety representative.

Step 1. Gather the Right Information

Analyzing the right data is crucial to effective hazard assessment. You need records and information enabling you to make a site-specific assessment of the hazard experiences at your particular workplace, which should include:

- Records of all incidents, illnesses, injuries and, yes, near misses, that have occurred at your workplace in the past year (consider at least 3 years of data if this is a baseline assessment), including first aid and minor injury records;
- Reports of investigations of each incident, paying particular attention to when, where, how and above all, why, each occurred;
- Workplace inspection reports;
- Worker reports of hazards, incidents or injuries;
- Workers comp claims data;
- JHSC reports and recommendations;

- Experience of other similar workplaces in your particular industry;
- Records generated by fall protection, confined space entry, workplace violence and other safety programs implemented at your workplace;
- Interviews with exposed workers;
- OHS inspection, police or other government reports; and
- Reports and recommendations of any third-party consultants.

Step 2. Identify Injury & Illness Patterns

The next phase is to use the data to identify injury and illness patterns and trends. This is typically easier to do with physical safety hazards than with health hazards. Strategies:

- Review workers' medical records (appropriately redacted to ensure patient/worker privacy);
- Review SDS and WHMIS product labels to identify chemicals in your workplace that have low exposure limits, are highly volatile, or are used in potentially hazardous ways, such as inside confined spaces;
- Review monitoring exposure records to identify noise, heat, radiation and other physical hazards;
- Identify biological hazards like mold and infectious illnesses;
- Identify social hazards, like workplace violence and harassment;
- Look for musculoskeletal disorders (MSD) hazards based on ergonomic risk factors such as the physical demands of work activities, work environment and procedures, organization of the work and the circumstances in which the work activities, including the features of tools and equipment.

Step 3. Assess Each Hazard You Identify

Once you identify a hazard, you must decide how to deal with it based on an assessment of the hazard's urgency and how it compares to other safety priorities. One approach is to assign hazards a number value based on 3 factors:

Factor 1: Frequency

Assign a frequency score on a scale of 1 to 3 based on how often the worker is exposed to the hazard on a regular workday:

- **1: Low:** less than 10% of day;
- **2: Medium:** between 10% to 50% of day;
- **3: High:** more than 50% of day.

Factor 2: Probability

Rate the hazard on a scale of 1 to 5 based on how probable it is to cause an illness, injury or incident:

- **1: Improbable:** unlikely to occur (or recur);
- **2: Remote:** possible but unlikely;
- **3: Occasional:** likely to occur (or recur) once or twice per year;
- **4: Probable:** likely to occur (or recur) 3 to 5 times per year;
- **5: Frequent:** likely to occur (or recur) more than 5 times per year.

Factor 3: Severity

Rate the hazard on a scale of 1 to 5 based on how bad the consequences would likely be if it did cause an injury, illness or incident:

- **1: Minor:** potential to cause injury requiring first aid;
- **2: Moderate:** potential to cause minor injury and/or property damage;
- **3: Serious:** potential to cause lost-time, medical aid and/or recurring injury;
- **4: Critical:** potential to cause serious injury, loss of limb, impairment and/or major property damage;
- **5: Catastrophic:** potential to cause one or more fatalities.

Add up all of the above scores and use the following grading method to assign a risk rating:

- **1 to 4: LOW:** Minor hazard;
- **5 to 8: MEDIUM:** Moderate hazard;
- **9 to 13: HIGH:** Serious/Significant hazard.

Step 4: Select Appropriate Controls for Each Listed Hazard

Use your assessment to decide what, if any, steps to take to control the hazard. The first thing you need to determine is whether there are specific measures you **must** take under OHS regulations. More often than not, though, OHS laws give employers discretion to implement solutions appropriate to their own circumstances based on the so called ‘hierarchy of controls,’ which includes (in order of preference based on what’s ‘practicable’):

- Total elimination;
- Substitution;
- Engineering controls;
- Administrative/Work controls; and
- PPE

Strategic Pointer: In selecting controls, you also need to implement measures called for by the manufacturers of affected machinery or equipment as well as any voluntary standards

you’re trying to comply with such as COR, ISO, NFPA, CSA, etc.

Step 5. Verify Effectiveness of Controls

Moving from the ‘C’ to the ‘E’ part of RACE, go back and observe the incident, injury, illness and near miss trends once the controls are in place. If you can’t verify that they’re actually effective in controlling the identified hazards, you’ll need to implement further corrective actions.

Step 6: Monitor & Re-evaluate

Remember that the assessment, the JHA is just a snapshot in time that must be reviewed after injuries, illnesses, incidents, changes to equipment or procedures and any other developments that the previous assessment may have failed to identify or take into account.