

2.1

Hazard Assessments Why It Matters



Best Practice Guidelines:
Effective Worker Participation in Hazard Assessments
Alberta Workers' Health Centre, December 2015

About the Alberta Workers' Health Centre:

The Alberta Workers' Health Centre is a registered charitable, non-profit organization that supports all workers, unionized and non-unionized, who need assistance to help make their workplaces healthier and safer. Since 1983 it has done this through programs of education and training; research and information; assessment and support for workers across Alberta.

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Assessments are all about prevention -- stopping people from being hurt, getting ill, or dying because of their work. You can't have a healthy and safe job, work site or workplace without knowing what hazards are there. Finding hazards should lead to fixing them.

Just as important, it's part of an ethical approach to occupational health and safety (OHS), and good health and safety programs.

Health and safety professionals or specialists are taught to:

- assess hazards (look for them),
- evaluate (take measurements) if necessary, and
- make recommendations to fix the problem(s).

They are expected to put workers' health and safety first, with the understanding that health is a holistic approach to well-being, and not just a disease, illness or injury not being there (i.e., the "absence of").

Health and safety programs are the overall systems that deal with health and safety in a workplace. Like assessments, their goal is to prevent work- or job-related injuries, illnesses, diseases and deaths. Programs go by different names, including occupational health and safety management systems (OHSMS) and health and safety plans.

The authors of "Occupational Health & Safety Management Systems - When are they good for your Health?" cast a critical eye on these systems. The authors "stress that the type of management system is less important than how it is interpreted and put into practice in workplaces." They also criticize systems that seem to look more for safety hazards, rather than the hazards that lead to long-term illnesses or diseases, and systems that are separate from the overall management of an organization. They call for integrating OHS programs into all aspects of what an organization does.

In Alberta, some employers must have what the Alberta government calls a Health and Safety Management System. It is part of the Partnerships in Injury Reduction program. The Alberta Jobs, Skills, Training and Labour department issues Certificates of Recognition (COR) to organizations that participate and have what they consider to be a good OHS management system.

Hazard assessments are a crucial part of these systems or programs. The principles involved include:

- the goal is to find and fix hazards,
- ensure management's commitment to doing them, paying attention to the results, and fixing the hazards found,

Effective prevention requires a good hazard assessment

... it is the key to prevention policy. Prevention means anticipating and analysing the various aspects of work to identify short and long-term hazards. Without a systematic assessment of the hazards involved, it would only be possible to apply a reactive, after-the-event policy to correct particular aspects of the organisation of work.

Hazard assessment has to be much more than a simple exercise in common sense if it is to become an effective instrument for prevention. In occupational health, society makes many hazards invisible. Most long-term hazards are under-estimated. Sometimes they are denied. Hazard assessment is an exercise to remove this invisibility.

Prevention is only effective if we can understand hazards through their relationships to one another and trace them back to determining factors such as the organisation of work and social relations in the workplace.

Adapted from materials from the European Trade Union Institute

- use a systematic, organised approach,
- start with workers' experiences (see the five-step spiral) as part of effective worker participation in the full "find and fix it" process,
- cover all hazards, in a **root cause analysis** framework that complements workers' experiences,
- account for the integrated way in which people experience these hazards (e.g., the mental and physical work load of doing concentrated work in a noisy and hot environment, with little attention paid to ergonomic hazards), and
- therefore, make it more than checking off a list of hazards.

The practices must ensure that assessments:

- involve workers and their representatives at all steps,
- are done regularly and when work changes in any way,
- develop the "big picture" about the current situation and what needs to be fixed,
- are integrated into the larger health and safety prevention programme and management systems,
- set time limits and responsibilities for short-term, medium-term and long-term actions,
- lead to preventive changes or reduced harm/effects,
- are followed by **evaluations** of the changes, as part of the cyclical and on-going assessment activities, and further action as needed, and
- include documenting all that is done, who is involved, and follow-up required and carried out.



Hazard assessment and worker participation are not technical topics.

To get a handle on them, we need to have goals based on principles and key concepts. They help us see the possibilities for better jobs and workplaces. They give us a base from which to develop strategies and tactics to get real worker participation in job-related hazard assessments in Alberta and to do other health and safety work.

The fundamental principles and key concepts are universal, and generally agreed upon -- at least in writing -- by all involved.

Why are goals, principles and key concepts important?

Goals help you figure out where you are going, whether it's next week, next month or next year, or way down the road. We need goals for short-term victories and long-term solutions that really work.

Principles help you reach those goals. They provide a framework and common ground for discussions, activities and decisions. They guide you in deciding how to tackle hazards, whether it's looking for them or fixing them.

Key concepts are important ideas and approaches based on principles.

For example, the prevention triangle used in these materials is based on the precautionary principle and the idea that materials matter. We use the word "prevention" to emphasize that is the goal, as opposed to "controls" that don't get rid of hazards.

It's important to use all three in health and safety activities, and to be clear about what they are -- in effect, making them visible.

What are the goals of occupational health and safety?

The Alberta Occupational Health and Safety Act does not set out any goals or purposes for the law (unlike Manitoba's). Without saying so directly, the Alberta law does have goals for employers and others. (See the section on "players" at the end of this module.) Most are consistent with long-time international goals.

You can set your own goals for health and safety activities, including hazard assessments. Consider these important ones as a starting point:

- healthy and happy workers who feel respected and valued
- workers who report injuries, illnesses or hazards without any fears of retaliation or losing their job



Rules for occupational health specialists to practice:
 The aim of occupational health practice is to protect and promote workers' health, to sustain and improve their working capacity and ability, to contribute to the establishment and maintenance of a safe and healthy working environment for all, as well as to promote the adaptation of work to the capabilities of workers, taking into account their state of health.

From: International Code of Ethics for Occupational Health Professionals (2002)



- management that is serious about preventing injuries, illnesses and diseases, making sure that health and safety principles and practices are integrated into everything the organization does
- all planning discussions and decisions include designs to avoid and prevent hazards
- few, if any, hazards -- especially serious ones
- a prevention program (see below) with clear policies, procedures and responsibilities
- competent managers, supervisors and workers
- promotion of health and safety in general and specific efforts in particular (e.g., violence at work, mental health issues)
- training of supervisors, lead hands and workers to identify and remove barriers to effective participation

A health and safety prevention program -- sometimes called a health and safety management system -- also is important. Effective programs:

- name the organization's health and safety principles and goals
- recognize the employer is responsible for fixing hazards, or making sure they are fixed
- have practical objectives and ways to reach them in the short-, medium- and long-term
- recognize that workers may face barriers to their effective participation
- identify those barriers and develop strategies to eliminate or reduce those barriers
- include hazard assessments linked to solutions that are effective (aim to prevent people from getting hurt, getting sick, or dying)
- require reporting and dealing with all types of hazards and injuries, rather than "behaviour-based safety"
- ban reprisals or discrimination ("disciplinary action") against anyone who reports hazards or work-related injuries or illnesses

"It is so much easier (and wrong) to point to worker behavior as the 'cause' of an injury, such as a cut hand, instead of pointing to a hazard that is designed into the workplace, such as the speed of an assembly line (which contribute to repetitive strain injuries)."

Worker interview

What principles and key concepts guide health and safety at work?

The following key principles and concepts are used in these guidelines:

1. prevention
2. workers have rights because employers have duties
3. the employer is responsible for fixing hazards
4. it's the hazards, not the behaviour
5. workers' experiences and knowledge matter
6. make things visible



7. five steps to a healthy and safe workplace

1. Prevention

Injuries and illnesses are not normal or inevitable. They are the result of how work is designed, organized and carried out. They are the result of decisions made by people. They are not “accidents” despite what many people believe.

Study after study shows this. And they show that the consequences of workplace injuries and illnesses are mind-boggling.

Hundreds of thousands of Canadians get hurt or sick at work each year. At least 1,000 die each year because of their job. Workers and their families bear much more of the costs (especially indirect ones) than employers do. Since they don’t pay the full costs of work-related injuries, illnesses and deaths, it is fairly easy for employers to say that prevention is too expensive for their budgets and balance sheets.

Prevention is crucial for the protection of workers. The best way to prevent injuries, illnesses, diseases and deaths is to get rid of hazards. Go to the source of the problem and eliminate it. Address the root cause.

These kinds of solutions can be easy to do.

Unfortunately, many hazards are designed into systems, tools and equipment. In these cases, it can take time and money to get the best solution. It requires long-term goals with several steps along the way. It also means more people often are involved and someone has to have authority to spend money.

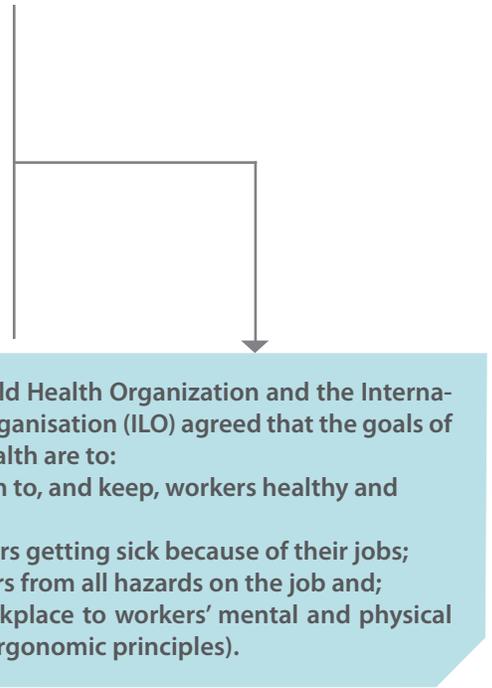
When it is difficult to get rid of a hazard (at least quickly), other kinds of solutions must be used to reduce the seriousness of a hazard and/or limit its effects. These controls do not get rid of the hazard; they only reduce or limit its harm. It is best to think of controls as short- and medium-term fixes.

These principles come together in the prevention triangle.

The Prevention Triangle

The most effective solutions prevent hazards (shown at the bottom of the triangle), while the least effective ones only limit the harm to workers (shown at the top of the triangle).

The triangle also sums up the law in Alberta. Part 2, Section 9 of the Alberta Occupational Health and Safety Code is called “hazard elimination and control”. It says employers who find hazards in an assessment must get rid of them or “control” them. (It must be “reasonably practicable” to get rid of the hazard.)





2. Workers' rights and employers' duties

Canadian health and safety laws give workers rights or protections. These come from duties their employer has under the law (whether it's the Act, regulation or codes) -- things they must do.

All these rights and duties are important in hazard assessments:

- The assessments are based on employers' duties to find and fix hazards, and to tell workers about the hazards they find and how they will be fixed or dealt with.
- Workers have a right to know about some specific hazards too (e.g., workplace violence).
- If a worker finds a hazard that the Alberta law considers "imminent", they must refuse to do that work.
- It is illegal for the employer to discipline:
 - workers who are obeying the law (e.g., refusing to work with an imminent hazard, reporting hazards in a hazards assessment), or
 - joint health and safety committee members who participate in hazard assessments or do other things related to that role.

3. Employers are responsible for fixing hazards

The law in Alberta and elsewhere says employers are in charge of health and safety (because they have control of the workplace and decisions made within it under "management rights"). Therefore, they have the most responsibility for



what happens about health and safety and must fix hazards or make sure they are fixed.

The law in Alberta also says that workers must follow safety rules and work safely. Nowhere in the law does it say workers must fix hazards. In fact, Alberta workers are told they must not do a job if it is dangerous and they must report the hazard to their supervisor.

Workers' Rights

Employers' Duties

<ul style="list-style-type: none"> • A healthy and safe workplace 	<ul style="list-style-type: none"> • Ensure the health and safety of employees and others working around them. Find and fix hazards in general and specific hazards
<ul style="list-style-type: none"> • Know about the hazards of their jobs 	<ul style="list-style-type: none"> • Provide information about hazards found in assessments and how they will be fixed; provide information about specific hazards (e.g., a controlled product, a “harmful substance”, specific hazards); train workers when required; provide information about health effects of harmful substances; make sure workers are competent
<ul style="list-style-type: none"> • Participate 	<ul style="list-style-type: none"> • Involve workers in hazard assessments; set up a joint health and safety committee (when required); have workers report hazards
<ul style="list-style-type: none"> • Refuse 	<ul style="list-style-type: none"> • Provide a healthy and safe workplace; respond to reason(s) for workers' refusal by fixing hazards and not letting anyone else face the same “imminent danger”
<ul style="list-style-type: none"> • No discrimination for health and safety activities 	<ul style="list-style-type: none"> • Not discipline or discriminate against someone who reports hazards, injuries or illnesses, asks questions about health and safety, or refuses to do work that has an “imminent danger”



To fix work-related hazards, employers must make sure that the dangers are found or identified; this must happen before work starts and when things change. They also must involve workers in finding and fixing hazards that affect them; the law says there is no choice about doing this.

4. It's the hazards - not the behaviour - that matter

What do you call someone who is hurt at work? What does your employer call them or say about them?

Careless? Accident-prone? They have a poor attitude? They did something stupid? It's their fault?

All those ideas are behind "behaviour-based safety" (BBS) programs. Examples are the Dupont STOP programme, safety bingo, and other activities that focus on what workers do. Some also talk about "safety climate" or "safety culture". Some talk about "worker attitudes."

These programs assume that most work-related injuries, incidents, etc. are the workers' fault -- it was something they did or didn't do. Every incident is seen as an "unsafe act".

This thinking ignores the fact that the design of the workplace, the tools and processes used, the pace of the work and the environment in which the work is done are not

within the control of the worker, yet contribute to the health and safety of that workplace.

Despite the popularity of BBS programs, studies show that the architects of BBS were wrong. So does common sense - asking "Why?" - and going beyond first impressions. Another way to put it is: fix the hazard, not the worker.

Root Analysis or Systems Thinking

It takes hazards to have injuries, illnesses or deaths on a job. It takes asking "Why?" several times to figure out the real reasons behind near-misses and devastating injuries.

This approach can be called root analysis or systems thinking. Whatever the name, it's about analysing the whole picture to figure out what went wrong and why. It's about looking for the invisible hazards and the expectations behind the way things are done.

This also means that there are very few "accidents" at work. Real accidents have no apparent cause. They cannot be predicted because they happen by chance. They are not the result of something that is done on purpose. That's what the word means. There are few, if any, "accidents" at work. (Some people use the word "incident" instead.)

No accident (sic) is ever caused by one thing. It's always a series of things.

Wendy Tadros
Canadian Transportation Board chair
Montreal Gazette, July 12, 2013

Referring to the train derailment, fire and explosion in Lac-Mégantic, Quebec



Therefore:

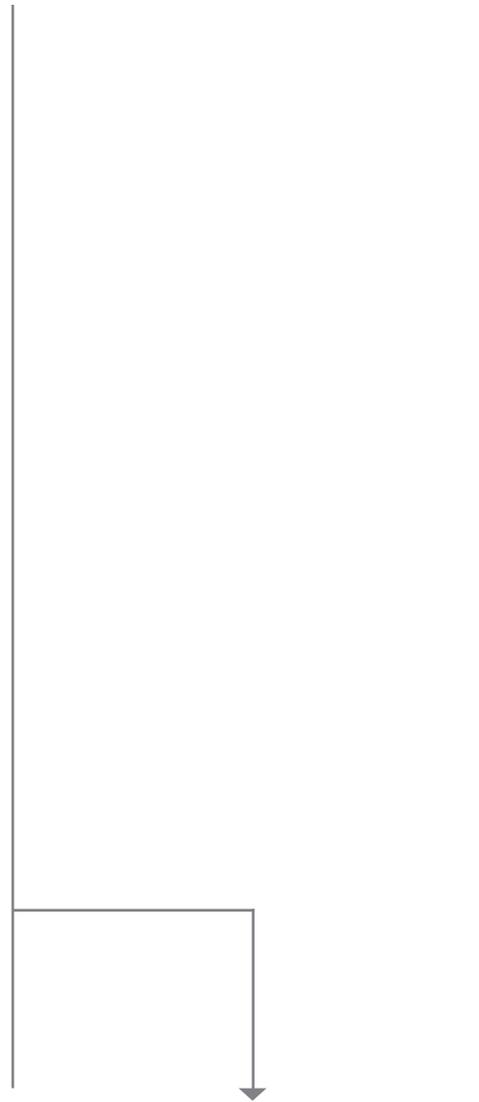
- hazards lead to people getting sick, hurt, or dying because of their job(s)
- these are not accidents because they can be prevented
- effective hazard assessments are an important prevention tool
- hazards need to be fixed too (and the sooner the better)
- the Alberta Code says both assessments and solutions must be done, and workers must be involved in both steps

What kinds of hazards are we talking about?

Anyone doing a proper hazard assessment needs to look for, and see, six categories. They are:

- **Safety/mechanical hazards** - including incidents involving vehicles, trips or falls, housekeeping, moving machinery parts or equipment that is broken or not working properly.
- **Physical hazards** - from energy sources, such as noise, temperature, humidity, electricity, vibration, radiation.
- **Chemical/mineral hazards** - gases, liquids, solids, dust, fumes, vapours.
- **Communicable/biological hazards** - moulds, bacteria, viruses, blood-borne pathogens, needle sticks.
- **Ergonomic design hazards** - including repetition, force, awkward and static posture and the work environment (including the physical hazards above).
- **Work organization hazards/Psychological stressors** - how work is designed and organized, including workload or other demands, control/say, support, respect, possibilities for violence and the flexibility for dealing with non-work responsibilities.

These hazard categories are connected; some overlap with one another (e.g., safety and ergonomics) while all can have connections to work organization hazards, sometimes called stressors or psychosocial hazards. All need to be assessed and fixed when they are found.



| Trust your instincts. If it doesn't feel right, it probably isn't.
Worker representative

5. Workers' experiences and knowledge matter

Workers as well as occupational health and safety specialists can identify hazards and their effects. It all depends on some training to “see” the hazards and the opportunity to talk with co-workers and others about what’s happening and why.

Know What Can Hurt You: Information about health hazards -- especially what might happen further down the road -- is a key part of that training. Whatever the official job training, we learn about hazards by doing a particular job or working in a place. And we assess them every day.

Use All Your Senses: Our senses are important for hazard assessment. You see something wrong and don't trust its safety. Something else smells and makes your nose drip. Something else stings your skin or gives you a rash. Your eyes



Researchers say that a workers' set of eyes or viewpoint leads to better results when assessing health and safety issues. For example, a University of Toronto professor says:

It is important to understand the standpoints of the different players in the OSH system because people act on the basis of how they see the world, how they understand the situation they are in and the stakes at play, and how they conceive others in the system and their relationship to them.⁽¹⁾ ("Standpoint" is standing in someone else's shoes, figuratively, to see things from their perspective. When the employer's or manager's viewpoints dominate workplaces, the worker's "standpoint" on things is invisible, and it's hard to get effective action to fix hazards.)

Economists who look at health and safety fixes (often called "interventions" in studies) agree. They found that unless workers' voices are included with management's in deciding what is to be done to deal with health and safety hazards, the results are ineffective action that wastes money.⁽²⁾

1. Joan Eakin, (2010) "Towards a 'standpoint' perspective: health and safety in small workplaces from the perspective of workers", Policy and Practice in Health and Safety, Vol. 8, No. 2, pgs 113 - 126.
2. Anthony Culyer, Benjamin C. Amick III, and Audrey Laporte, (2008) What is a little more health and safety worth? in Economic Evaluation of Interventions in Health and Safety: Developing Good Practice, Oxford University Press.

water when you spray something else. Some work leaves your wrist or shoulder sore or limits how much you can move it afterwards.

Listen to Others: It is also important to pay attention to what others say is happening to them. Some people are canaries -- they get symptoms before most others do. For example, some people working with cleaning products can react to them right away, especially if they already have asthma. Those same products can cause asthma and other problems for other people further down the road.

Engage Workers in Fixing the Problem: Workers also know how to fix hazards Unlike engineers or outsiders, workers know what it really takes to get the job done -- how things work or don't, the little fixes that make a difference, etc. Since a lot of work is about small pieces of making or doing something, they usually need to work with others to understand the big(ger) picture.

Understand the Principles of Prevention: It also helps to know and understand the principles of prevention (e.g., the prevention triangle). Guided by the principles and a big picture understanding, workers make important contributions to possible short-term and long-term fixes. They can work with supervisors, engineers, ergonomists and others to make small or big changes, and to come up with specifications for new equipment, tools and working methods.

6. Make things visible

Think about it. Can you see:

- chemical vapours that make your eyes water?
- longer-term effects from various hazards (e.g., cancer or something that affects your ability to have healthy children)?
- blood-borne pathogens (diseases in blood)?
- bullying in your workplace? other forms of violence?
- the root causes of "poor posture" (e.g., a chair back that doesn't fit)?



- workload?

Lots of workplace hazards are really hard to see. And that makes them hard to find and fix. It's one reason why safety hazards get fixed more often than health hazards. And it's easier to watch a worker do something (behaviour) than it is to figure out why they are doing it (the hazard, the training or lack of it, etc.).

How can you make hazards visible? These guidelines provides some tools that should help:

- the six categories of hazards
- body and workplace mapping
- health and hazard surveys
- "interviews" and other ways of talking to people
- inspection materials based on the six hazard categories

The resource guide also takes you to other places where you can find other tools.

7. Take five steps to a healthy and safe workplace

How do you get from where you are now to where you want to be -- that healthy and safe workplace? And how do you know when you've reached any of your goals?

This guideline recommends a five-step approach that is easy to follow, logical and practical.

Step 1 -- Where does it hurt? Describe different types of symptoms and important concepts related to them. Start with people's experiences. How are workers affected by their jobs? What are their symptoms -- those aches, pains, cuts, rashes, injuries, illnesses and diseases?

What job-related hazards are causing those symptoms?

Step 2 -- What makes it hurt? Identify hazards found in workplaces, looking for all six categories.

Step 3 -- How do you find symptoms and hazards? A variety of tools exist for doing the detective work at your workplace, linking symptoms and hazards. We emphasize getting the full picture,

Our bodies are the best instruments for determining the health and safety of workplaces – our ears, nose, our skin for thermal conditions, our eyes for dust and so on. We are the best instrument.

Bob Sass, former Director for Occupational Health and Safety for Saskatchewan and the "father" of workers' rights in Canadian health and safety laws.

Five Steps - to a healthy and safe workplace

EVALUATE THE SOLUTIONS

HOW DO WE GET THE SOLUTIONS WE NEED?
(Making the case)

WHAT FIXES THE HAZARD?
(Prevention at different levels)

HOW DO YOU FIND THE HAZARDS?
(Surveillance, reporting, maps)

WHAT MAKES IT HURT?
(What are the hazards?)

WHERE DOES IT HURT?
(What are the symptoms?)



looking for the root cause(s), and practical approaches to dealing with them.

Step 4 -- What fixes the hazards? Once the hazards are identified or assessed, the law expects workers and employers to figure out how to prevent or deal with them. Set out principles to get to the best fixes, including the prevention triangle.

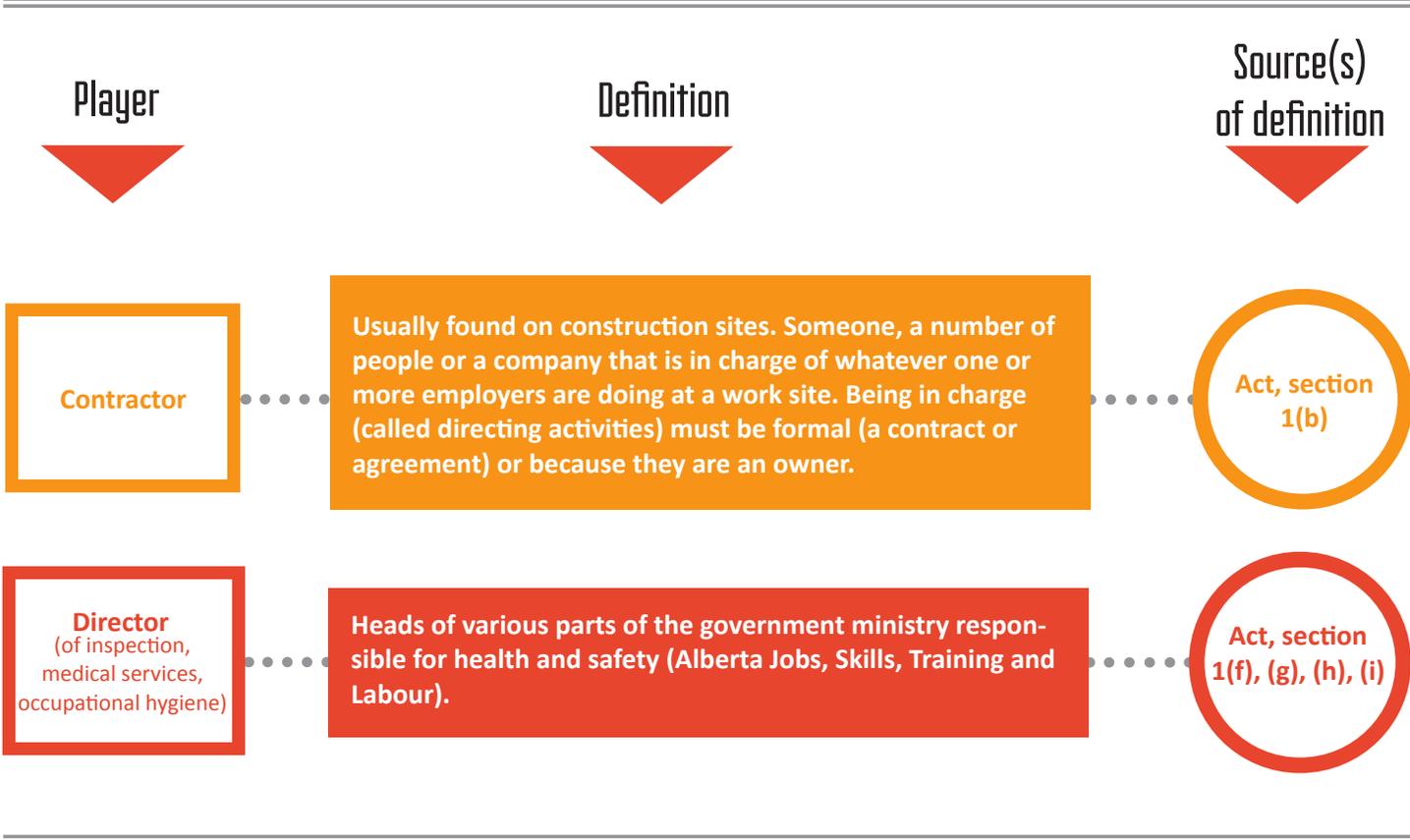
Step 5 -- How do you get the “fixes” you need? Make the case for short and long-term solutions. What are the strategies, tactics and methods do you need to get the best solutions possible?

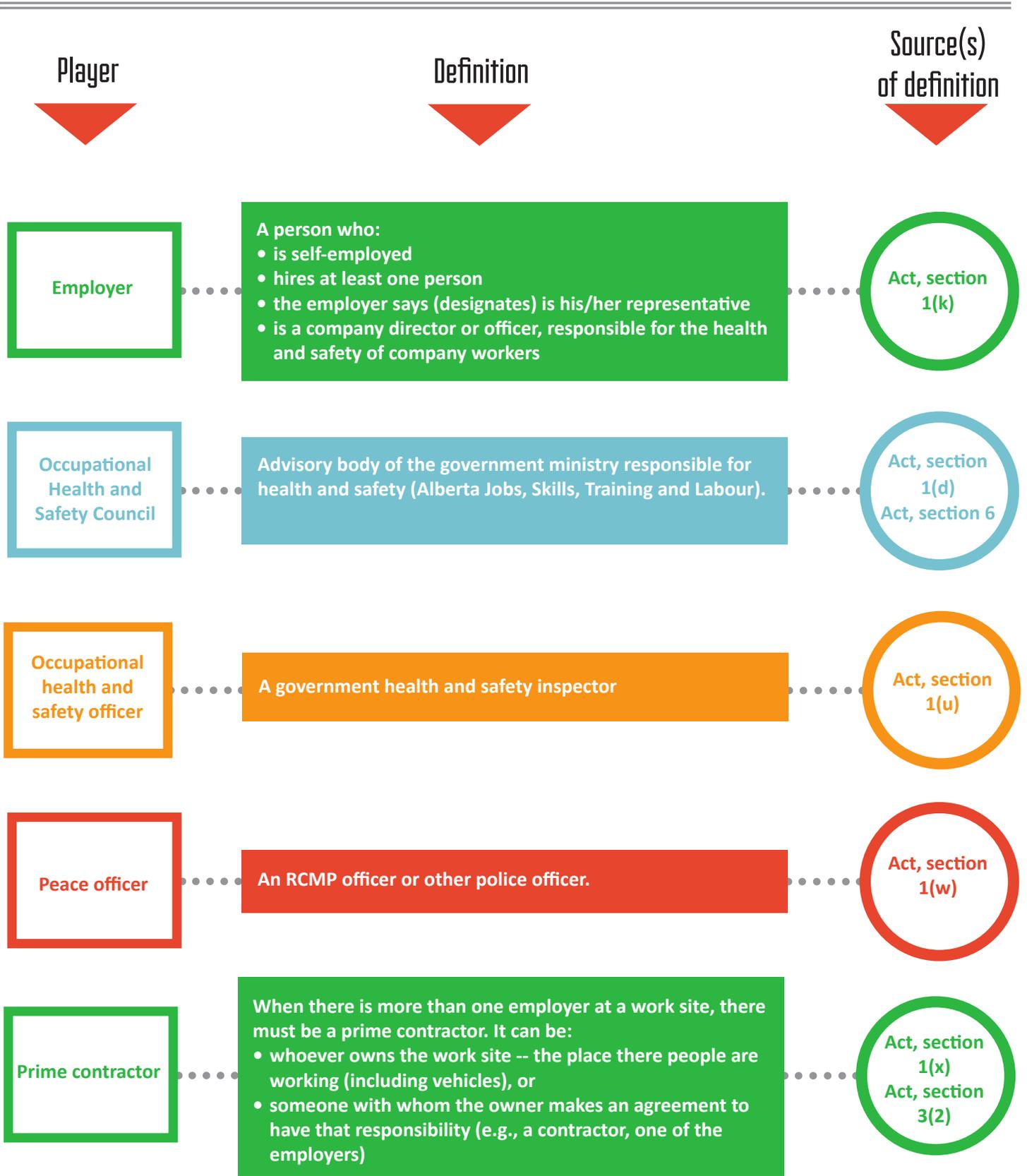
Evaluate and Repeat the Steps. Finally, evaluate how well those fixes are working. What else may be causing symptoms? What new processes, materials, tools or chemicals are being used? What could they do to workers?

Who are the players? What are they supposed to do?

Whatever positions are called in your workplace or on your job, it’s important to know what words the health and safety law uses. Then you can figure out what those people are supposed to do when it comes to health and safety.

In Alberta, most “players” (and their legal definitions) are in section 1 of the *Occupational Health and Safety Act*.







The roles (What are the players supposed to do?)

Employer:

- provide a healthy and safe workplace
- set up programmes and procedures that meet and use requirements from the law
- provide all employees with information, instruction, training and competent supervision when it comes to health and safety
- assign responsibilities for OHS to supervisors and others (preferably in their job descriptions)



- fix problems/hazards that are found or reported
- pay attention to what the law says about protective equipment and clothing being the last resort for fixing hazards and that the best method is to get rid of the hazard (i.e., the most effective prevention)

Worker:

- look after your health and safety and that of other workers nearby
- follow established procedures
- report problems (hazards and symptoms) to supervisors and union representatives
- use your rights
- take action individually or collectively when necessary to get problems fixed

Union:

- defend workers' rights, fight for fairness at work and other changes, including better health and safety conditions.
- uphold the contract and law
- push for improvements to the law and enforcement of what exists

Government:

- enforce the law
- back workers exercising their legal rights
- prepare and implement new laws, in consultation with the "stakeholders"
- fine or take those disobeying the law to court

Outsiders (consultants, suppliers/manufacturers):**Suppliers/manufacturers should:**

- provide safe and healthy products
- provide information about the hazards of their products and how to prevent injury, illness or disease
- respond to questions about hazards associated with their product(s) and how to prevent or reduce them

The role of consultants is to:

- provide fair and honest advice and information
- adhere to the code of ethics for their profession

Endnotes

1. European Trade Union Institute. (2011). Retrieved from: <http://www.etui.org/Publications2/Reports/Occupational-Health-Safety-Management-Systems-When-are-they-good-for-your-health>, para. 3

