

Conduct Incident Investigations: Improve Your Incident Investigation Process

Ready for Level 2?

	YES (✓)	NO (X)
You have developed a plan for investigating all incidents	<input type="checkbox"/>	Visit Conduct Incident Investigations (1HI_3)
You are investigating all incidents as soon as possible	<input type="checkbox"/>	Visit Conduct Incident Investigations (1HI_3)
You are involving workers in investigating incidents	<input type="checkbox"/>	Visit Conduct Incident Investigations (1HI_3)
You find and correct the root causes of incidents to prevent them from causing future incidents	<input type="checkbox"/>	Visit Conduct Incident Investigations (1HI_3)

To-Do

- Look for and act on opportunities to improve your incident investigation process.
- Consider your organization's assumptions about how and why incidents happen.

Improve your incident investigation process

You're now experienced with investigating and preventing incidents (injuries, illnesses, and near misses). It's time to find ways to improve this process. Start by using the activity below to explore what people in your organization assume about how and why incidents happen. These unspoken and unproven beliefs affect how you investigate incidents and how you implement improvements to the safety and health program.

Consider drawing on the "human and organizational performance" approach (HOP). HOP challenges common assumptions about why incidents in the workplace happen and how to prevent them. It can help you make

sure hazards are identified, evaluated, and properly abated before you introduce new materials, processes, and procedures into the workplace.

A key HOP principle is that **learning is key**. Incidents and failures can teach you a lot—but remember that most work is successful. That may be because the workplace design, methods, training, supervision, culture, and performance are effective; it may be because the organization is lucky. Find ways to learn from successful, incident-free work rather than waiting for an incident or failure.

It is important to think about why incidents happen, and HOP can help provide you with a deeper understanding. It's also important to think about the mechanics of your incident investigation process and ask whether or not it's effective in identifying root causes and corrective actions. Be sure to review your process and ask:

- Were the right people with sufficient training involved in the investigation, including affected workers?
- Was there sufficient access to information (e.g., procedures, manuals) and insight into contributing factors such as lack of resources, maintenance, work pressures, and worker span of control?
- Was diagnostic equipment such as chemical monitors available and working properly to assess leaks and other failures?
- Was the incident reported and the investigation performed in a timely manner so that information regarding the incident was not lost or compromised?
- Was a report generated with corrective actions based on root causes to prevent a recurrence?

Activity: Self-assessment survey

Instructions

1. Choose a small group to lead this activity. The group should gather responses throughout the organization to the items in the short survey below. Ask everyone to indicate whether they agree or disagree with each statement or aren't sure.
2. The small group should evaluate the responses based on HOP principles. (See the section that follows the table for more on those.)
3. The small group should then share their results with the larger group—for example, all hands, a department. They should lead a conversation, still keeping HOP principles in mind. Ask whether those principles suggest any changes in how you investigate incidents. If so, record changes you might make under “Comments and action items” and share them with leadership.

In this activity, try not to be judgmental. The important thing is to share assumptions, then collectively think about their impact on incident investigations.

Survey: Why incidents happen

Statement	Agree Disagree Not sure	Comments and action items
1. Most injuries are caused by human error.		

Statement	Agree Disagree Not sure	Comments and action items
2. If workers would follow the procedures, most accidents would be prevented.		
3. Most injuries and illnesses have multiple causes.		
4. Some workers are accident-prone or careless.		
5. The best way to prevent future incidents is to retrain those involved in incidents.		

HOP principles

Assumption 1: **Many safety incidents are the result of human error.**

HOP principle: **Mistakes are normal.**

Making mistakes is part of the human condition. It's impossible to make people perfect and prevent human error. Studies show that a well-trained worker who performs a routine, simple task with clear work procedures will miss a key step at least one time in a thousand. This rate increases quickly as the task gets more complex or unclear or if there are distractions in the work environment.¹ Design systems to reduce errors and the risk when those errors (inevitably) happen. Plan for failure and build in the ability to fail safely.

What do responses to statement 1 in the survey show about assumptions in your organization?

What feedback can you give about the responses?

Assumption 2: **We can achieve safety if everyone follows the rules and procedures.**

HOP principle: **Rules and procedures are important but may not be enough.**

¹ Center for Chemical Process Safety, 2015. *Guidelines for Initiating Events and Independent Protection Layers in Layer of Protection Analysis.*

A rule to keep hands out of a machine's danger zone is good. A guard on the machine is better. Also remember that workers constantly make decisions based on changing working conditions. Even the best procedures can never cover everything that happens in the workplace.

What do responses to statement 2 in the survey show about assumptions in your organization?

What feedback can you give about the responses?

Assumption 3: **Each safety incident has one identifiable cause. We can fix that problem to prevent future incidents.**

HOP principle: **Context drives worker actions and behaviors.**

In looking for one simple cause, you might miss several other things that led to the incident. Look for factors such as:

- A high workload that causes workers to rush
- Staffing issues
- Controls that are inconvenient to use and make the job harder
- Lack of proper equipment
- Equipment design
- Work methods and procedures

Organizational factors are just as important to address as the obvious physical factors.

What do responses to statement 3 in the survey show about assumptions in your organization?

What feedback can you give about the responses?

Assumption 4: **If an incident occurs, we need to hold the workers involved accountable. That will prevent future incidents.**

HOP principle: **Blame tends to backfire.**

Focusing on someone's failure will not help you understand what went wrong in your safety and health program. In fact, blaming workers tends to backfire. It shuts down communication that could help prevent future incidents. Look at systemic issues like:

- Lack of resources devoted to safety
- Inadequate training
- Production demands
- Rules and procedures that get in workers' way, leading them to invent workarounds

What do responses to statement 4 in the survey show about assumptions in your organization?

What feedback can you give about the responses?

Assumption 5: **An incident investigation should uncover why the incident happened. It should then discipline or retrain those involved.**

HOP principle: **Leadership's response to failure matters.**

The aim of a response should be to learn and improve—not blame, shame, and retrain. A blame-oriented approach discourages workers from reporting future incidents. You can either blame and punish or learn and improve. You can't do both. Consider asking **how** something happened rather than **why**. **How** encourages looking at context. **Why** can lead to focusing on single causes or individual behaviors.

What do responses to statement 5 in the survey show about assumptions in your organization?

What feedback can you give about the responses?

Pro Tip: Beware of “Hindsight Bias”

When responding to an event, the investigator already knows about the outcome. This is vital information. But the workers didn't have it before the event.

Investigators have to put themselves in the place of those involved:

- What they knew (and no more)
- What they were seeing
- What they were focusing on
- What they were expecting to happen
- What they were trying to do

It's critical to listen to the workers' perspectives to learn from the event.

DRAFT - UNDER DEVELOPMENT