Told Employee to Pay Attention – How's Your Incident Investigation Process Performing?

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Abstract

Injury prevention process improvement is an on-going challenge, and when combined with limited resources, safety professionals should be continually exploring ways to improve existing processes. A key process to consider is incident investigation. For purposes of this paper, incident investigation is defined as the systematic course of action to help determine causation of workplace events leading to worker injuries or the circumstances that could have the potential to cause injury (near-miss). This paper will focus on the steps of investigating workplace events rather than the various techniques used to determine contributing or root causes. An overview of the workers' compensation claim reporting task will also be presented. Although occupational injury reporting and incident investigation have different objectives, both processes, when deployed effectively, can supplement the quality and outcome of each task.

Introduction

"Workplace safety is our primary concern." "Safety will not be compromised." "Our firm places safety above all else." These are common messages included in many safety policy statements, yet phrases like, "told employee to pay attention," and "there was nothing that could be done to prevent the injury" are acceptable responses often written on safety investigation forms. One outcome of tolerating less than desirable safety investigation report quality is, of course, continued workplace injuries. When statements like "told employee to be more careful" appear on the investigation as a corrective action, many safety professionals will respond with continued coaching on the techniques related to root cause analysis, when in fact the investigation forms may be poorly designed, language and literacy could be an issue, initial training ineffective or not completed, oversight by management or safety committee does not exist or substandard performance is accepted.

Workers' Compensation Claim Reporting

A review of the occupational injury or near miss investigation process should not overlook the importance of the workers' compensation (WC) claim reporting component. When an employee reports a workplace injury two things take place: one is a safety related incident investigation and the other is a claim investigation. The claim investigation seeks to determine validity and

compensability. The objective of WC claim investigation is to determine whether the claim should be paid or denied. This task is the responsibility of the insurance claim handler, unless a self-insured, self-administrated program is in place. Additionally, the claim handler is focused on ensuring the injured employee promptly receives the benefits they are entitled to under the WC statutes.

When a claim is filed with the insurance company or third-party administrator (TPA), the claim adjustor has a state mandated timeframe to determine compensability. Delayed reporting compresses the timeline available to the claim professional making this crucial determination. The employee's statement of events contained on the claim report and safety investigation documents are critical since it can be used to validate the sequence of events leading up to and just after the event, as well as initial injury related details and witnesses, all of which help the claim handler determine compensability. Prompt reporting is just as vital for the claims investigation as it is for safety investigations.

The duration between the date of injury (DOI) and the date the insurance carrier/TPA receives notice of the claim is called lag time. Lag time is commonly tracked to show claim reporting promptness. Lag time has three elements. The first element or measure is from the DOI to employer notice. In other words, how long does it take for an employee to report injuries to their employer? The second breakdown is the time it takes the employer to report the claim the carrier / TPA. The third element is the duration from the DOI to carrier / TPA notice which is the longest time period. A best practice measure is that 85% of all WC claims should be reported to the carrier / TPA in three days or less. Another best practice measure is that 100% of injuries are reported to the employer in one day or less.

What is special about three days or less? In a 2007 Liberty Mutual study, the effects of delayed reporting and claim costs were positively correlated – the longer the delay, the greater the cost of the claim. The research indicated claims reported in less than three days did not have an impact on claim costs. However, claims reported in four to seven days cost 3% more on average than those reported in less than three days. Claims reported between one and two weeks from DOI cost 6% more on average than those reported in three days or less, and claims reported 30 days or more cost 40% more on average than those reported in three days or less.

Comparing lag time metrics is a good place to start an investigation process review. However, it should be noted if a firm uses on site occupational health professionals to conservatively treat or manage claims prior to reporting, the actual lag time results may be deceiving. Companies aggressively using occupational health services could have what appears to be poor lag time performance (date of injury to carrier / TPA notice), when in fact the measure is not indicative to the process deployed. A better measure would be the lag time between the DOI to employer notice.

Again, a best practice is that all injuries should be reported on the same day. This is important since workers are often told to report all injuries no matter how small, yet there is no actionable time constraint. Revising the general statement to say "report all injuries, no matter how small by the end of your shift" would be an easy process improvement point that can be tracked and monitored through the use of employee reporting lag time.

Evaluate Current Safety Investigation Practices

The first step in judging whether a process is effective is to define the components of the process. Much study has been devoted to determining what constitutes a "good" investigation. In the opinion of the authors, "root cause analysis" and "incident investigation" are terms that are erroneously used interchangeably. These terms have very different meanings. The authors define incident investigation as the systematic course of action to help determine causation of workplace events leading to worker injuries or the circumstances that could have the potential to cause injury. Root cause analysis is a set of problem solving techniques and is a component of the investigation process.

How can the safety professional go about evaluating an investigation process? What standards should be used to measure investigation processes?

To answer these questions, we should start by reviewing the major steps of an investigation. As depicted in the flow chart below, the first step is to have the incident reported. Generally speaking, once an event is reported the investigation process (red color) can be divided into the following categories 1) Documentation completion (blue color), 2) Solution development and implementation (yellow color) and 3) Confirmation the chosen solution(s) mitigates the cause of the injury (green color).

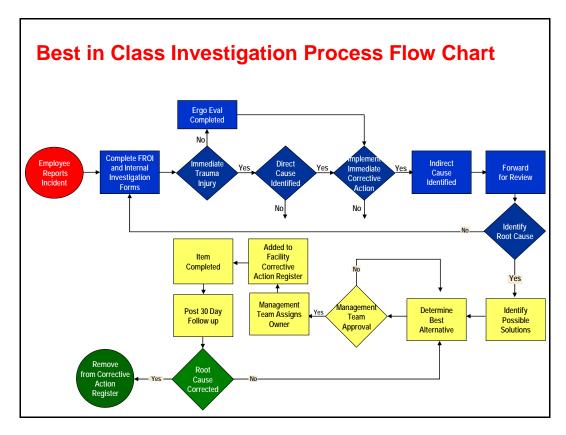


Exhibit 1 – Best in Class Investigation Process Flow Chart.

Incident Investigation Policy

We will discuss the categories mentioned above, but first we should review the importance of having a written incident investigation policy statement. After all, this is a basic element of any safety program. Prior to any type of audit, performance standards must be established so comparisons can be made. Using an incident investigation policy is a logical starting point. A sample policy statement should include the following elements:

- 1. Expectation of timely reporting of workplace injuries Best practice is that employees report occupational injuries by the end of the shift to their management team representative (supervisor, lead, occupational health nurse, safety manager, human resources manager, etc.).
- 2. Explanation statement regarding the objective of the investigation (prevent reoccurrence) – Include how interviews will be conducted (in private and confidential), the expectation that the injured employee will be consulted regarding potential solution development, and that all ideas are acceptable to remediate further risk.
- 3. Defined roles and responsibilities of key team members Positions noted in the policy should include (at a minimum): the injured employee, their direct supervisor, safety personnel, plant management team (plant manager, maintenance, human resources, trainers, etc.), and insurance carrier / TPA. Firms operating with corporate staff may have corporate roles included in the policy.
- 4. Designated staff member to report event to carrier/TPA (assigned backup is also suggested) Common practice is that this task is completed within three days of the date of injury.
- 5. Employees' and employer's WC rights and obligations Include a statement that tells workers they will be expected to participate in return to work assignments, follow all medical restrictions (on and off the job), and to provide medical treatment and prognosis updates to designated company staff regarding workability. The employer expectation statement should include that employers will provide the best medical treatment feasible, indemnity (wage loss) payments will be made promptly, how employees can find information about WC regulations, and who is the employer's WC contact. Appendix A contains a sample employee handout that can be given to the injured worker at the time of the injury report.
- 6. Process accountability reference How the process will be reviewed and against what performance standards will key players be measured in other words a statement explaining the incident investigation process audit. Appendix B contains a dual-purpose scorecard. The primary use of the scorecard is to gauge the investigation process performance and the secondary use is to monitor a supervisor's (or person completing the investigation form) report quality. The items on the scorecard are grouped by 1) lag time measures, 2) information quality, and 3) solution identification. This tool can be used as a starting point to monitor the investigation process, as well as an individual performance. The individual results tracked on the scorecard can, in turn, be applied during the performance appraisal.

Documentation – Easy to Use Form (Appendix C)

Once an occupational related injury is reported, a First Report of Injury (FROI) is required to be filed by the employer in order to trigger WC benefits. In most cases, companies will use the state FROI form as the notice to their insurance carrier / TPA. The carrier / TPA will submit the documentation to the state on behalf of their client. The more complete the FROI, the better. Remember the FROI document is used by the claim handler to determine compensability. Each company should create their own safety investigation document.

The perfect safety investigation form has yet to be developed. Each company has varied skills, abilities, and competencies of team members involved with the investigation process, as well as risk factors and potential exposures. However, there are types of information needed to promote a solid safety investigation form. Information such as:

- 1. Demographic information: Name of injured worker(s), date of event, approximate time, location (production line, product cell, machine number, parking lot, etc.), potential witnesses, date the injury was reported to management, and who from management received the injury notice.
- 2. Injury description: A suggested concept promoted by the authors is called the four-word story. The four-word story uses four-words or phrases to describe the event. The four-words or phrases must identify 1) Nature of injury, 2) Body party affected, 3) Agent or object involved, and 4) Immediate cause of the incident. Some examples are below in Exhibit 2.

Injury	Body Part	Agent / Object	Immediate Cause
Strain/sprain	Arm- upper (includes shoulder)	Product, inventory, boxes, cartons	Over exertion: push/pull
Strain/sprain	Ankle	Substance on walking surface	Slip, trip, fall: indoors
Fracture	Finger	Racking/shelving	Struck by or against
Amputation	Toes	Production equipment/machinery	Caught in or between
Burn	Wrist / hand	Chemical compounds	Contact: chemical
Laceration	Head	Racking/shelving	Struck by or against
Fracture	Face	Vehicles (auto, golf cart)	Motor vehicle crash: roadway

Exhibit 2 – 4-Word Story Examples.

The four-word story technique will quickly identify pieces of information about the event which can be further investigated. The four-word story concept supports accurate claim reporting and also helps the front line supervisor / lead identify corrective actions that can be immediately taken that are within their span of control. A best practice application of the four-word story is to use the same words or phrases available by the carrier / TPA for claim reporting.

An employee's description of the events leading up to and at the time of the injury, along with the injured body part are vital to proper claim handling and safety investigations. Every safety investigation form should have an area where the employee can write his or her own account of the event. This part of the form should be signed and forwarded to the claim handler. Unfortunately, there are some WC claimants that will exaggerate or change the nature of injury, body part and recollection of events as the claim progresses. The signature on the safety investigation form is one way to reduce the likelihood of this occurring and will help contain WC related claim costs only to the compensable injury.

Narrative (white) space, short answer or check box format – which is better? Again, the perfect form has not been drafted. However, the better forms have a combination of both. Some information like the four-word story is easily formatted to check boxes while other information needs a narrative type of response. The employee's account of the incident should be narrative. Short answer responses are appropriate for location of the event, potential solutions and corrective actions. Unsafe acts and conditions, along with potential root causes, can be identified with the use of check boxes. Essentially any data that an employer wants to collect related to their investigation should be a check box format. This will promote data integrity and consistency. Refer to Appendix D for more details about unsafe acts, unsafe conditions and management systems related causes.

To get the most from the narrative responses, those required to complete the investigation documents should be shown examples of acceptable and undesirable commentary so they can begin to calibrate their statements accordingly. (Tracking the quality of the narrative responses can also be added to the scorecard mentioned previously.) Feedback can be provided during an investigation workshop or continually through individual performance reminders. The best examples to share come from actual reports (injured employee related information de-identified). Exhibit 3 contains some examples collected by the authors.

Un	acceptable	Ac	ceptable
1.	Using scissors, right wrist	1.	Employee was holding bearing in left
2.	Employee went to change reel and hit		hand and while pounding bearing shaft
	head		with his right hand, the bearing slipped
3.	Barrel too full when lifting		and he hit his left thumb with the
4.	Bump at base of thumb, possibly		hammer. This occurred in the
	trigger finger		maintenance shop.
5.	Employee slipped and fell on floor	2.	Worker was clearing jam on line and
6.	Stack of product just fell over		cut thumb while reaching into exit
7.	Employee stated she was returning to		chute. Employee reports that other
	desk and just fell down		workers clear the jams by reaching into
			exit chute.
		3.	Employee inserted shaft into reel to
			remove obstruction. The shaft stopped
			moving and when employee applied
			more pressure, the shaft broke through
			the obstruction and smashed other hand
			between the machine and shaft.
		4.	Worker was lifting one side of a tent
			frame over his head to place the

support legs and felt a pull in back.
Tent frame weighs about 80 pounds
and is about 10 feet by 15 feet.
Employee was near Main Gate 1 when
this happened.

Exhibit 3 – Incident Description Listing.

The primary difference between the unacceptable and acceptable statements is that the acceptable statements offer more details for the investigation team members to validate or confirm. For example, item 2 in the acceptable column would lead the investigators to review the machine guarding features, production demands and equipment capacities, on-thejob training, and work practices /standards. Items in the unacceptable column do not include the basic four-word story elements.

Solution Development and Implementation

An emerging trend in the field of safety is to apply quality related problem solving methods to safety issues. A technique often used is called the Five Whys. The Five Whys approach is regularly used by investigation teams since the technique is applicable in a variety of circumstances and does not require an advanced understanding of engineering, production methods, or human psychology.

To use the Five Whys to get to the root cause of an event, define your problem statement, and ask why at least five times. Here is an example problem statement: "Employees continue to get injured when slipping on nails in the company garage."

- 1. WHY do employees slip and fall? Nails on floor
- 2. WHY are there nails on the floor? Box split open
- 3. WHY did the box split open? Box got wet causing the seam to split
- 4. **WHY** did the box get wet? Garage roof leaked
- 5. **WHY** did it rain? Since rain cannot be controlled, look for other causes of roof leaks: 5a. WHY did the rook leak?
 - Hole in roof
- 6. **WHY** is there a hole in the roof?

Did not know there was a hole in the roof

7. **WHY** didn't anyone notice there was a hole in the roof? No preventive maintenance or inspection program

Root Cause: Ineffective building maintenance program

There are other items to explore related to this scenario, such as, why didn't anyone see or clean up the nails? Could that be related to poor lighting? If lighting is poor, what caused the inadequate lighting? Could it be that the bulbs were missing or damaged? If so, why were the bulbs not repaired?

Long term or permanent corrective actions should be the goal of hazard abatement. Asking front line supervisors / leads to develop and implement permanent solutions on their own is a disservice since their access to resources and authority levels is limited. Front line supervisors should be part of the team charged with the development of permanent solutions to eliminate the hazards uncovered during the investigation. The investigation form can promote immediate corrective actions within the supervisor / lead span of control, and at the same time encourage them to think more broadly. Once the ideas are collected on the investigation form, the investigation team can evaluate the feasibility of each idea.

To assist supervisor / lead staff with solution development, consider using a standard requiring all corrective actions to have at least one engineering control for each administrative control listed as a solution. For example, an employee reaches into a machine and amputates their finger tip. Best practice would dictate a review of the equipment guarding features to determine if there was an equipment malfunction or if the guard was missing, etc. However a supervisor / lead staff member may not have the authority or knowledge to complete the guarding review. So a common corrective action noted on the investigation form is to coach the injured worker on proper guard placement and the dangers of working on unguarded equipment – that's the extent of the corrective action since this is within the realm of control of the supervisor / lead and work with the employees and supervisors / lead to refine and implement the solution.

Applying the suggested standard, the acceptable corrective action would be to retrain the worker (proper guard placement, machine guarding hazards, equipment guarding features) and to have someone else complete a machine guarding inventory (placement, presence, condition, function, etc.). Unless both corrective action items were noted the report would be substandard. Again, this approach can be applied to the scorecard mentioned before and that is contained in Appendix B.

Solution Validation

Ensure solutions identified during the investigation process are checked to validate the completion or to determine that the solution remedied the situations. David J. Evans, in his article published in *Safely Made*, states that "The root cause analysis process is a complete system that begins with the event and ends with effective corrective actions." A closed loop model for incident investigation would include a solution confirmation step. Without this step, investigation teams would have no way to know if the solution chosen was effective. Refer to Exhibit 1 for an example.

Recap

The incident investigation process has many stages – incident reporting, documentation, solution development and implementation, and solution confirmation. Each stage has a set of best practices that, if applied, will improve a business's investigation process. Also, there are benchmarks available for internal and external comparisons of performance. Exhibit 4 below contains a metric or best practice summary.

Metric / Best Practice	Application		
Lag Time – 85% of claims reported to carrier	Liberty Mutual found a direct correlation		
in less than 3 days from the date of injury	between the time it takes to report a claim and		
Lag Time can be refined to review DOI to	the average claim cost.		
Employer Notice, Lag Time Employer Notice	If occupational health services are used to		
to Carrier / TPA Notice, and DOI to carrier /	conservatively treat potential occupational		
TPA notice	injuries, then the lag time metric of employee		
	notice to employer may be a better indicator		

	to follow.
Policy Statement – Is one present with assigned responsibilities, stated expectations regarding injury reporting and explanation of WC rights? Investigation Scorecard – Use as an audit to measure the quality level of individual	Prepare an audit tool to measure if company is following stated policy. If deficiencies are noted, the policy should be changed to reflect current practices or best practices as needed. Scorecard values can be reported by individual and by process stages. The
investigation reports, as well as a way to capture the current state of an investigation process	scorecard becomes a simple way to provide feedback to those actively involved with investigations.
Solution and Control Standards – Use of administrative controls used as the sole solution is unacceptable; Supervisor / lead staff members are encouraged to review engineering related controls as they implement the administrative controls within their control.	Ensures solutions are balanced and not solely focused on employee behavior to mitigate or minimize risk faced.
Solution Validation – Team member assigned to confirm solution chosen to eliminate / mitigate risk identified in the investigation is implemented and does indeed remedy the situation.	Ensures solutions selected are implemented as intended and prevents similar occurrences.

Exhibit 4 – A Metric or Best Practice Application Summary.

Company Background

Over the past 10 years, Snap-on Incorporated has been diligently working on injury prevention and claim mitigation tasks. Since 1999, Snap-on has reduced several injury-related and risk management metrics by as much as 50% across the company. Even though the results have been sustained, a review of the investigation process revealed opportunities for improvement in preventing recurrence of injuries. In many cases, the investigation processes deployed at Snap-on sites overlooked the use of engineering controls or administrative policy and practice reviews and focused employee coaching (i.e. retraining as the solution to prevent reoccurrence).

Safety and Health Program Overview

In 1999, Snap-on formally launched what was referred to as Workers' Compensation Management System or WCMS. The risk management department was the corporate champion of this process since WC claims were under the risk manager's authority. At that time Snap-on had a corporate department called Safety, Environment and Quality (SEQ) that performed internal compliance audits throughout the world. The risk management department would provide resources to the sites for claim management activities and on a limited scale injury prevention tasks.

In 2005, the company reorganized. The SEQ department was disbanded and Snap-on integrated WC claims management and safety activities into a framework they called Project Action. Project Action was comprised of 29 items that each site was to implement with the help of a corporate action team.

The themes of the 29 items are:

- 1. Candidate hiring, associate safety training, and specific safety performance appraisal items.
- 2. Hazard identification and control, workplace design and development,
- 3. Local claim management, incident investigation, corrective action, and corporate incident review program.
- 4. Local organization of resources to execute site plan.
- 5. Streamlined process for funding related to safety improvements.

Point 3 above contains the items falling within the responsibility of the risk management department. The items were initially launched as part of the original WCMS.



Exhibit 5 – The Snap-on Mission Statement.

Project Action Evolution

The first act of the Project Action team was the approval of a corporate safety statement. At Snap-on, workplace safety is non-negotiable – this is a core belief. The safety statement further defines the pillars of expected safety behaviors. The policy reads as follows:

"The Snap-on Incorporated Safety Philosophy is based on the belief that each associate must:

- Work safely as a condition of hire and continued employment,
- Accept personal responsibility for every associate's safety,

- Successfully complete mandatory safety training,
- Be certain all unsafe acts and conditions are eliminated or safeguarded, and
- Believe that work-related injuries are preventable and therefore unacceptable.

Management is responsible for ensuring that all associates work in a safe company."

As Snap-on monitored the results from the 29 Action Items project, it was determined the existing safety program needed to align with the quest for improvement. Prior to 2005, the safety programs were compliance-based and audit driven. The safety program, as in other companies, reflected OSHA compliance status as a performance goal. Snap-on realized regulatory standards were minimum performance levels. As a corporation, Snap-on needed to raise the internal expectations about associate behavior regarding safety. The implementation of the 29 Action Items gave Snap-on the necessary roadmap for continuous improvement for injury prevention elements, WC claim management and mitigation.

Jack Michaels, the CEO during this time, provided the necessary force to drive the culture change needed throughout the organization. Mr. Michaels said, "Associate safety, in many ways, is more important to our longer term success than any of the financial metrics that people tend to focus on, because it reflects upon the general quality and attitude of our associates which is so important and which they take to their whole job each day."

The outcome of this drive is a collaborative effort among all associates, from associates on the floor to the most senior management team members. Statements heard from top leaders like "If you're not a safe place to work, you're not a great place to work," helped reinforce the commitment of the management team to the floor associates and demonstrated that safety was important.

Common Challenges and Keys to Success

Continuous improvement plays an active role in all Snap-on business units. The administrative function of risk management is expected to use this approach to improve their department's performance. With that in mind, the risk management department launched a root cause process. Aon Risk Solutions was asked to assist with this task by completing a review of the practices used at several Snap-on sites. There were nineteen recommendations generated from the assessment. The recommendations included drafting a written investigation policy to establish a more robust investigation process for Snap-on's loss leaders. In other words, the more frequent loss types experienced by Snap-on sites were not investigated differently or more rigorously, therefore the probability of incident recurrence was not reduced.

Workers' compensation claim management is supported at the corporate level by the risk management department, yet safety investigations are the sole responsibility of the sites. This has created challenges in terms of available site resources, site level skills and abilities, investigation team training, and data collection. In 2010, risk management and corporate safety formed a partnership to work on improving the quality of safety investigations and data collection.

Year end 2010 statistics indicate Snap-on experienced 130 WC claims in the United States, of which 30 were lost time events and on a monthly basis, the leadership team at Snap-on receives a safety summary containing OSHA statistics and commentary for the more serious injuries. Risk management also prepares a summary of WC claims for the leadership team as well. Two computer applications are used to generate the data contained in the reports. The quality of the root cause information (narrative) varies too, which begs the question – if you only

have 130 claims per year, why isn't the quality of the investigation stellar? The variance of each site's investigation process and lack of actionable data are contributing causes to the less than optimal investigation quality.

Site Process Variance

A quick review of the sites' investigation processes revealed several interesting items. There was variability in the triggers that cause an investigation to be completed. A single form was used that did not completely reflect the activities or risks faced by the various sites. For example, the distribution centers were expected to record the incident details on a form that is geared toward manufacturing environments. Practices across sites are dissimilar in the application of associate discipline, communication of findings, and claim data input.

Eliminating variance is one way to improve process outcomes. A formal incident investigation standard operating procedure was drafted setting the minimum requirements that trigger an investigation. An excerpt from the SOP is below.

Procedure Objective

To decrease claim frequency and improve incident and OSHA recordable rates by completing the incident reports timely and thoroughly with focus on root cause analysis and workplace improvement implementation (i.e. corrective actions).

Procedure Trigger

Procedure will be followed when:

- A. A workplace injury or symptom causes an associate to miss time from work (does not include day of original event), or
- B. The workplace injury or symptom may be caused by over exertion events (i.e. upper extremity strain/sprain, cumulative trauma disorder (CTD), low back strain/sprain, carpal tunnel syndrome, etc.).

The site safety manager has the discretion of applying this procedure to situations where an associate may not have a physical injury, however the circumstances warrant a complete analysis. This is also referred to as a "near miss" investigation.

Exhibit 6 – A Standard Operating Procedure Excerpt.

Other elements worked on in 2010 included an enhancement of the Citrix® reporting system. Prior to 2010, Citrix® data input was required for OSHA recordable events only. This changed in 2011. Citrix® data points were enhanced to include WCMS elements, the four-word story, unsafe acts, unsafe conditions, and identification of management system contributing factors. This is presented to the user in a drop down menu, select and click approach. As data is added to the application, the sites, corporate risk management and corporate safety staff will be able to complete performance audits (spot checks) and devise targeted improvement strategies by site. The monthly leadership team reports will now be able to use graphical displays of information instead of an all narrative format.

To address the different work environments at Snap-on, the drop down choices for unsafe acts, conditions, and management systems contributing factors mirror the language used within

Snap-on and their claim administrator. During this task, representatives from two operational teams met to gain a consensus for the drop down items to be added to Citrix®.

Remaining Action Items

Rolling this out to the US sites is the next step. A workshop has been developed for the site staff responsible for claim reporting and safety investigations. The workshop will cover the SOP, Citrix® reporting enhancements, and preview a site level safety investigation team training module. (The investigation module is designed to be delivered by the site safety leader; however corporate risk management and corporate safety will be available to assist with the training.) Spot checks of the data contained in the Citrix® database has started and the risk management staff have offered individual coaching as warranted. The first quarter senior leadership report is currently being developed and is anticipated to be delivered during the second quarter.

Once the trends develop from the enhanced data collection and spot checks, another round of process improvements can be expected. After all, Snap-on truly believes in continuous improvement.

Conclusion

Reviewing current incident investigation processes will more than likely identify opportunities for improvement. In Snap-on's case, the review identified process variance among the sites. The evaluation also uncovered redundant reporting systems used by corporate staff and lack of an audit approach to confirm activities were being done with an acceptable level of quality. Once noted, Snap-on selected the elements of their investigation process that would yield the greatest benefit for their operation.

Snap-on chose to enhance their investigation report quality by customizing the data fields used for injury reporting, which will improve the quality of leadership reporting and eliminate duplicative work. They also updated their investigation team training workshop materials to include information about the enhanced data fields and how the sites can provide local leadership reports and perform compliance spot-checks which support the WCMS elements of their safety program. If a company with 130 claims per year (U.S. employee count equals 5,600) can refine their investigation process, the authors believe that any company will be able to benefit by a systematic review of their current investigation practices.

Appendix A: Workers' Compensation Employee Handout

What is Workers' Compensation Insurance?

Our compensation insurance program is designed to provide medical treatment and income protection to employees injured on the job, regardless of how the injury happened or who was at fault. It is entirely funded by our company, not an outside insurance company. The system can seem complicated, and an injured employee may become confused and frustrated. This is unfortunate and unnecessary. The purpose of this document is to help you understand the basics of our program so you can concentrate on recovering from your injury and returning to work.

Returning to Work

The primary goal of our workers' compensation program is to provide necessary medical treatment for your injury so you can return to work as soon as possible. In the event you are not able to return to your regular job, we will make every effort to provide you with temporary alternate duty within your medical restrictions as determined by a physician.

Who to Contact While You're Recovering

The workers' compensation program began working for you when you reported your injury. The company will file your claim and any related paperwork on your behalf. You have the responsibility to report any changes in your medical condition, as well as provide any documentation necessary to support your workers' compensation claim.

During your recovery you are likely to have many questions about your workers' compensation benefits. Your first source should always be your workers' compensation coordinator, _____. You may also contact the claims adjuster assigned to your case.

Workers' Compensation Benefits

Once it has determined you're eligible for workers' compensation benefits, you are entitled to receive the following benefits.

Medical Care

Quality medical care to treat your injury will be provided at not cost to you. There are no deductibles or co-pays under our workers' compensation program.

Temporary Disability Benefits

You will be compensated for any loss of wages if it is determined you are unable to earn your full pay due to your injury. The amount you receive is based on your average weekly wage. The workers' compensation program generally replaces two-thirds of your average weekly wage, but the weekly payment cannot exceed a maximum amount set by the individual state. If you incur a wage loss and have not been provided information regarding wage loss benefits, contact your workers' compensation coordinator immediately.

Permanent Disability Benefits

Many states allow benefits for injured employees who have permanent impairments as a result of their injuries. If you are in a state that allows these benefits, and if you have permanent impairments which affect your ability to work, you will be compensated. This determination cannot be made until after treatment for your injury has been completed.

Your Responsibilities Under the Workers' Compensation Program

- Promptly report all injuries to your supervisor
- Help in the investigation of your injury or illness
- Promptly report any change in your medical status
- Follow the medical treatment plan provided by your doctor
- Return to work in your regular job or at a temporary alternate job as soon as you are medically able
- Follow the leave-of-absence procedures for our company

Your Rights Under Workers' Compensation Program

- Receive all reasonable and necessary quality medical care at no cost to you
- Have all medical bills and wage-loss benefits paid promptly
- Have your questions on eligibility for any benefit quickly resolved
- Receive copies of any medical reports you request.
- Return to work when you recover if a job is available based on your skills, seniority and physical abilities (We will make every effort to help you return to the job you held prior to your injury)
- Have reasonable accommodations made if you are permanently disabled and cannot return to your regular job or a temporary alternate job
- Receive vocational assistance if needed to enable you to return to work
- Receive compensation if you have a permanent loss of earning capacity

Mgr, Sup or Rpt No.	Rpt Lag Time	Sup Investigation Rpt Lag Time	4 word story	Immediate Cause	Solution Analysis & Root Cause	Corrective Action Follow Up	Temper Points	Total	Percent
	DOI to EE signature	Record Date	4 of 4 = 10 pts	Unsafe act & cond =10 pts	2 causes = 10 pts	Contain, immed & perm =		$Max = 60 \ pts$	
	0-1 day = 10 pts	0-1 day = 10 pts	3 of 4 = 6 pts	Unsafe act or cond = 6 pts	1 identified = 6 pts	Contain & immed only = 7	Ex: retrain EE		
	2-3 days = 8 pts	2-3 days = 8 pts	2 of 4 = 4 pts	not mentioned = 0 pts	nothing = 0 pts	nothing = 0 pts	Ex: told EE not to repeat		
	4-5 days = 6 pts	4-5 days = 6 pts	1 of 4 = 1 pt				Ex: nothing to prevent		
	6-10 days = 3 pts	6-10 days = 3 pts							
	11-30 days=1 pt	11-30 days = 1 pt							
	over 30 days = 0 pts	over 30 days = 0 pts							
Jane Doe	10	10	10	10	6	7	0	53	88%
John Smith	10	8	10	10	8	0	0	46	77%
Sue Z Cue	10	0	10	6	4	0	0	30	50%
Jane Doe	10	10	10	0	0	0	-2	28	47%
Jane Doe	10	10	10	1	1	0	-2	30	50%
John Smith	10	6	10	6	10	5	-1	46	77%
Sue Z Cue	10	8	10	10	6	5	-1	48	80%
Sue Z Cue	10	10	6	0	0	0	-2	24	40%
John Smith	10	10	6	10	10	7	0	53	88%
Avg Score	10.0	8.0	9.1	5.9	5.0	2.7		39.8	66%
g	9 reports reviewed								
4 word story:	agent/object, injury, b Less than 60%	ody part, immediate ca	ause						
YELLOW	Between 60% to 79	%							
GREEN	Greater than 80%								

Appendix B: Investigation Scorecard Sample

Appendix C: Sample Safety Investigation Form

INCIDENT REPORT FORM

Health Services Only
Who sent to TPA:
Date sent:

Employee complete top section – PLEASE PRINT

Nature of Incident	Date of Hire			Employee's phone number
Personal Injury Property	Damage			
Employee full name				Date of birth
Employee address	City	State	ZIP	Date of last tetanus
Injury date & time Symptoms first appeared	Task being performed	Departme	ent & shift	Witness name
Exact location of incident	Type of injury (i.e., laceration)		Body	v part(s) affected (i.e., left ring finger)
Describe how incident happened				
What caused the incident?				
What could have prevented this in	ncident?			
If this form was filled out by anyor employee, please sign and date.	ne other than the above named	Emp	bloyee signatur	e & date
SUPERVISOR INCIDENT INV	/ESTIGATION			
Incident Description				
Body Part (Check as appropriate) DArm (shoulder)	elbow wrist) Left or Right	t Hand (includes fingers) Left or Right

Body Part (Check as appropriate)		
☐Head, skull, face ☐Torso or trunk ☐Foot (includes toes) Left or Right	Arm (shoulder, elbow, wrist) Left or Right Back Other (please identify):	☐Hand (includes fingers) Left or Right ☐Leg, knee, ankle Left or Right
Injury Type		
☐Strain or sprain ☐Cuts ☐Ergonomic (if checked, please review EJMS with employee and attach signed copy of the EJMS report)	□Crush □Puncture □Other (please describe):	Burn (temp, chemical, electrical, etc.) Skin irritation
Direct Cause		
Struck by or against Contact with fumes, dust, noise caustic Motor vehicle crash	Caught In, between, under Cumulative trauma disorder Overexertion a. Push, pull b. Carry, hold c. Lift, lower d. Bend, twist	Fall same level Fall from height Other
Objects/Items Involved		
Ladder, tools Carts Vehides Other (please describe):	Hand tools Power tools Knife	Stairs, steps. ramps Chemicals Keyboard, computer

Incident Narrative - Describe the events leading to the incident (if additional pages used, please note):

Unsate Acts	Unsafe Conditions
Improper work technique	Poor workstation design
Safety rule violation	Unsafe operation method
Improper PPE or PPE not used	Improper maintenance
Operating without authority	Lack of direct supervision
Failure to warn or secure	Insufficient training
Operating at improper speeds	Lack of experience
Bypassing safety devices	Insufficient knowledge of job
Protective equipment not in use	Slippery conditions
Improper loading or placement	Excessive noise
Improper lifting	Inadequate guarding of hazards
Servicing machinery in motion	Defective tools or equipment
Horseplay	Poor housekeeping
Drug or alcohol use	Insufficient lighting
Other	Other

UNSAFE ACTS required a written warning and retraining before the employee resumes work.

FOLLOW UP SOLUTION TO PREVENT REOCCURANCE

Describe short term or long term solution ideas

ACTION TAKEN					
D	ate By Wh	om			Date
Retraining assigned			Unsafe condition	n guarded	
Retraining completed			Unsafe condition	n corrected	
Communicated to shift/crews			Solution comple	eted	
INCIDENT REPORT REVIEW					
Supervisor		Date		Was this form completed within 24	hours of
Manager		Date		supervisor's notification of the incid	
Safety Manager		Date		Yes No	
HEALTH SERVICE					
Medical Response Information		Se	e Daily Log and/o	or Medical File for Health Services In	formation
Injury assessment					
Treatment given					
5					
Allergies ⊡Yes ⊡No If yes, list:	Follow up with Health	Services:		Signature	Date/ & Time

RETURN COMPLETED FORM TO HEALTH SERVICES

Appendix D: Sample Contributing Injury Causes

Potential Contributing Factors: Check all that apply (number equals TPA Causes)				
Unsafe Acts		Uı	Unsafe Conditions	
0	Improper use of equipment / tools	0	Unguarded equipment (2)	
0	Violation of established practice (8)	0	Unguarded / inadequately guarded hazard	
0	Bypassing safety devices	0	Unsafe design	
0	Operating without authority (1)	0	Work surface slippery, uneven or	
0	Operating/working at an unsafe speed		unprotected	
0	Working on energized equipment	0	Poor display controls / panels	
0	Not reporting defective conditions	0	Defective (broken) / equipment, materials,	
0	Using defective equipment		tools	
0	Failure to use available PPE	0	Blocked egress / exits	
0	Inattention to footing or surroundings	0	Inadequate / insufficient aisle or workspace	
0	Rushing / shortcuts / horseplay	0	Inadequate identification / warning systems	
0	Driving errors	0	Inadequate lighting or ventilation	
0	Unsafe Position (4)	0	Uncontrolled / unprotected heat sources	
0	Driving errors	0	Chemical exposures; physical or airborne	
0	Not reporting discomfort / pain	0	Excessive noise level	
	immediately	0	Poor housekeeping (7)	
0	Unnecessary use of equipment / tools	0	Fire / explosion hazards	
0	Other:	0	Other:	
Management Systems Related Causes				
0	Job placement process /hiring /selection	0	Inconsistent organizational enforcement of	
0	Workstation design review process		work standards, conduct or policies	
0	Workstation design guidelines not	0	Unclear / misapplied performance priorities	
	followed	0	Unclear policies, procedures, or effective	
0	Compliance to or lack of standards		work practices	

0

0

- Compliance to or lack of standards 0
- Tool or equipment purchasing process 0
- Job training process inadequate 0
- Improper / inadequate training (9) 0
- Inadequate post training evaluation / 0 checklist / testing
- PPE not available (3) 0
- Disregard for employee limitations / 0 problems
- Improper / inadequate employee 0 accountability
- Lack of or inadequate supervisor / manager 0 accountability
- Inadequate discipline 0
- Inadequate employee evaluation / 0 observation
 - Other:

0

- Reported defective conditions not 0 addressed timely
- Lack of / inadequate inspections / audits 0
- Lack of visible management or supervision 0

Formal operating procedures conflict with

Organization-wide rewarding of 0 inappropriate behavior

Plant process layout

line practices

- Programs expected practices not 0 communicated
- Unclear / inadequate standards of work 0
- Inadequate tools or equipment purchased 0
- Inadequate / inappropriate staffing or 0 assignment of personnel
- Inadequate preventative maintenance 0

Bibliography

Bohn, Roger, Stop Fighting Fires. Harvard Business Review, July-August 2000.

- Boraiko, Carol, Beardsley, Tom, and Wright, Eva. Accident Investigations One element of an effective safety culture. Professional Safety, September 2008.
- Challburg, Dave, Brown, Scott. Systemic Incident Analysis: The Four Phase Process. ASSE Professional Development Conference, Session 511, 2008.
- Dip, D.A. Stewart and Townsend, *There is More to "Health and Safety is Good Business" than Avoiding Unplanned Costs? A Study into the Link Between Safety Performance and Business Performance.* http://behavioral-safety.com/articles, October 4, 2002.
- Evans, David, J. Root Cause Analysis. Safely Made, Volume 2, Number 2, ASSE.
- Haight, Joel, M. 2008. *The Safety Professionals Handbook*. American Society of Safety Engineers.
- Harvard Management Update. Is this Process Performing Well? October 2000.
- Hilgemann, Rene, Bergman, Christina. *Workers' Compensation The Basics*. American Society of Safety Engineers, HR Solutions, Volume 2, Issue 2.
- Hilgemann, Rene, Tesch, Joanne. National Underwriters Award for Excellence in Workers' Compensation Risk Management nomination essay. 2009.
- Manuele, Fred, A. Accident Costs Rethinking ratios of indirect to direct costs. Professional Safety, January 2011.
- Metzger, Carl. *Classic Feynman: All the Adventures of a Curious Character*, Worth Reading, Professional Safety, January 2011.
- Liberty Mutual Group, Risk Management Solutions. *The Perils of Late Reporting A Study on the Impact of Claims Reporting Patterns*. July, 6, 2007.
- Roth and Strong. Six Sigma Pocket Guide, pages 95 150. Massachusetts, 2000.
- Swartz, George. Safety Culture and Effective Safety Management. National Safety Council, 2000.