OSHA*cademy*™ Course Study Guide

Introduction to Safety Management

OSHAcademy™ Course 700 Study Guide
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This study guide is designed to be reviewed off-line as a tool for preparation to successfully complete OSHAcademy™ Online Course 700.

Read each module, answer the quiz questions, and return online to submit the quiz. Print the quiz response screen which will contain the correct answers to the questions.

The final exam will contain questions taken from each module quiz. I hope you enjoy the course and if you have any questions, feel free to email or call:

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■ MODULE ONE: TOP MANAGEMENT COMMITMENT

Getting Top Management Commitment
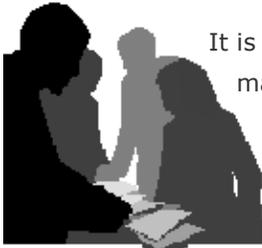
It is essential to the success of your company's safety and health program that top management demonstrates not only an interest, but a long term **serious commitment** to protect every employee from injury and illness on the job. But, if you think you don't have that level of commitment, how do you get it? Real commitment doesn't just appear out of thin air. What is the secret?

Management commitment to safety will occur to the extent each manager clearly understands the positive benefits derived from their effort. Understanding the benefits will create a strong desire to improve the company's safety culture. Managers will invest serious time and money into effective safety management by developing **programs**, **policies**, written **plans** and **procedures**. They will also display leadership through effective accountability and recognition of behaviors and results.

Why do managers make a commitment to safety?

Employers put time and money into employee safety for one or more basic reasons:

To fulfill the social imperative. This strategy is the most effective in the long term. These managers have come to the realization that long-term corporate survival depends on more than maximizing short-term profits. They will value and tap into the incredible creative potential of each employee, from janitor to president. These managers will appreciate the inherent value of each employee, not just as a worker, but as a corporate "family" member. They also value the roles each of their employees fulfills away from work as mothers, fathers, coaches, helpers, etc. Safety is perceived as a core corporate value that does not change when the going gets tough. When managers value safety at this level, they naturally employ the next two strategies.

To fulfill the social obligation
- We must save lives
- Do whatever it takes

This is the most effective strategy!

To fulfill the fiscal obligation
- We must save money
- Do what we have to

This is a better strategy

To fulfill the legal obligation
- We must stay out of trouble
- Do only what we have to

This is the least effective strategy

To fulfill the <u>fiscal imperative</u>. This strategy can be quite effective. Managers who are motivated to invest in safety understand the financial benefits derived from effective application of safety programs. The primary reason for "doing safety" shifts to maximizing profits. The goal is to fulfill the obligation to stakeholders to operate the business in a fiscally prudent manner. These managers will do whatever needs to be done **proactively** or **reactively** to save on direct and indirect **costs** of accidents. Management may display a commitment beyond minimum legal requirements if they see a financial advantage. Safety is most likely a high priority. However, commitment to safety may be subject to rapid change when the going gets tough.

They want to fulfill the <u>legal imperative</u>. This is the least effective strategy. The primary goal for managers is to fulfill the obligation to comply with OSHA rules. Managers want to stay out of trouble, so they do only what has to be done to meet minimum requirements. Safety is not a priority or value, but thought of as a bother more than anything else: just the cost of doing business. Safety strategies are typically reactive because safety is not a problem unless there is an accident. OSHA may be considered the "bad guy" because management doesn't understand how OSHA can offer consultation services as well as enforcement activities. You need to be familiar with how OSHA works so here is a link to the **OSHA Field Operations Manual**. It's the OSHA Bible :-)

It's a question of leadership

Every day, employees, supervisors and managers have many opportunities to communicate and act in ways that demonstrate safety leadership. Unfortunately, these opportunities go unanswered because they are not seen as opportunities. Employers and manager do not understand that the simple expression of tough-caring safety leadership can result in enormous benefits. The inability to perceive leadership opportunities as they arise limits the company's potential to succeed.

It's appropriate to assume that employees at all levels of the organization are good people trying to do the best they can with what they've got. The problem is, they don't always have the physical resources and psychosocial support to achieve the kind of results expected of them. Why? Ultimately, the workplace culture may not support effective safety management and leadership.

Corporate culture...

The way we perceive **"The way things are around here"**...can exert a great influence on leadership styles. We can associate three fundamental leadership styles to the three management imperatives discussed above. Let's take a look at this association.

The tough-coercive leadership model. In this approach, managers are tough on safety to protect themselves: to avoid penalties. The manager's approach to controlling performance may primarily rely on the threat of punishment. The objective is to achieve compliance to fulfill legal or fiscal imperatives. The

culture is fear-driven. Management resorts to an accountability system that emphasizes negative consequences.

By what managers do and say, they may communicate negative messages to employees that establish or reinforce negative relationships. Here are some examples of what a tough-coercive leader might say:

- Punishment - "If I go down...I'm taking you all with me!" (I've heard this myself!)
- Punishment - "If you violate this safety rule, you will be fired."
- Punishment - "If you report hazards, you will be labeled a complainer."
- Negative reinforcement - "If you work accident free, you won't be fired."

As you might guess, fear-driven cultures, by definition cannot be effective in achieving world-class safety because employees work (and don't work) to avoid a negative consequence. Employees and managers all work to avoid punishment. Consequently, fear-driven thoughts, beliefs and decisions may be driving their behaviors. Bottom-line: a fear-driven safety culture will not work. It can not be effective for employees and managers at any level of the organization. It may be successful in achieving compliance, but that's it.

The tough-controlling leadership model. Managers are tough on safety to control losses. They have high standards for behavior and performance, and they control all aspects of work to ensure compliance. This leadership model is most frequently exhibited in the "traditional" management model. As employers gain greater understanding, attitudes and strategies to fulfill their legal and fiscal imperatives improve. They become more effective in designing safety systems that successfully reduce injuries and illnesses, thereby cutting production costs. Tight control is necessary to achieve numerical goals. Communication is typically top-down and information is used to control. A safety "director" is usually appointed to act as a cop: responsible for controlling the safety function.

Tough-controlling leaders move beyond the threat of punishment as the primary strategy to influence behavior. However, they will rely to a somewhat lesser extent on negative reinforcement and punishment to influence behavior. Positive reinforcement may also be used as a controlling strategy. Tough-controlling leadership styles may or may not result in a fear-based culture. Examples of what you might hear from a tough-controlling leader include:

- Negative reinforcement - "If you have an accident, you'll be disciplined."
- Negative reinforcement - "If you don't have an accident, you won't lose your bonus."
- Positive reinforcement - "If you comply with safety rules, you will be recognized."

Extinction, the withholding of positive reinforcement, is common in cultures in which managers employ the tough-controlling leadership style because, once again, the manager is more likely to be concerned with his or her own success than the success of "subordinates". Consequently, production, profitability, morale and all other long term bottom-line results are not as positive as they might otherwise be. Why? Although excellence is requested, the safety management system is designed to produce only compliance behaviors.

The tough-caring leadership model. Managers are tough on safety because they have high expectations and they insist their followers behave, and they care about the success of their employees first. This is a self-less leadership approach.

The tough-caring leadership model represents a <u>major</u> shift in leadership and management thinking from the selfish tough controlling model. Managers understand that complying with the law, controlling losses, and improving production can best be assured if employees are motivated, safe, and able.

Management understands that they can best fulfill their commitment to external customers by fulfilling their obligations to internal customers: their employees.

Communication is typically all-way: information is used to share so that everyone succeeds. A quantum leap in effective safety (and all other functions) occurs when employers adopt a tough-caring approach to leadership. Rather than being the safety cop, the safety manager is responsible to "help" all line managers and supervisors "do" safety. Line managers must be the cops, not the safety department. This results in dramatic positive changes in corporate culture which is success-driven.

Although positive reinforcement is the primary strategy used to influence behaviors, tough-caring leaders are not reluctant in administering discipline when it's justified because they understand it to be a matter of leadership. However, before they discipline, managers will first evaluate the degree to which they, themselves, have fulfilled their obligations to their employees. If they have failed in that effort, they will apologize and correct their own deficiency rather than discipline. What are you likely to hear from a tough-caring leader?

- Positive reinforcement - "If you comply with safety rules, report injuries and hazards, I will personally recognize you."
- Positive reinforcement - "If you get involved in the safety committee, you will be more promotable."
- Positive reinforcement - "If you suggest and help make improvements, I will personally recognize and reward you."

You can imagine that in a tough-caring safety culture, trust between management and labor is promoted through mutual respect, involvement and ownership in all aspects of workplace safety.

So you are committed? Show me the time and money.

Top management may communicate their support for safety, but the real test for commitment is the degree to which management acts on their communication with serious investments in time and money. When management merely communicates their interest in safety, but does not follow through with action, they are expressing moral support, not commitment.

Leaders get what they give!

Real commitment is an expression of tough-caring leadership by example. Integrity, character, and discipline are values that all managers seek in their employees. Employees will demonstrate these important attributes when (and only when) they <u>see</u> management exhibiting these values <u>first</u>. Great leaders truly care about those they lead. What better way to demonstrate leadership than by providing a safe and healthful place of work for all employees.

Just food for thought: If you're a manager or supervisor, ask yourself, "Do I really like my people?" If the answer isn't yes, start now to rethink your opinion because it's almost impossible to demonstrate caring leadership if you don't actually like your people.

Managers get what they design!

They say "perception is reality." If you perceive a lack of top management commitment to safety and health, what can **you** do about it? First of all, think about fixing the system, not the blame. It's all about system design.

If management is not demonstrating commitment through action, you have an opportunity to become a key player to get things moving. With the help of the safety committee you can "educate up" to help management gain the all-important vision and understanding needed to positively affect attitudes and subsequent behaviors that give workplace safety the emphasis it deserves. Now let's take a look at what you can do.

We need to know who we are to be more effective at what we do

Your first step may be quite simple, yet it can have a major long-term impact on safety and health in the workplace. Propose that the company include the concept of safety in their vision statement and mission statement.

The **vision statement** let's the employee and customer know <u>who you are</u> by defining the role your company plays and what its basic values are. The vision statement reflects the corporate culture. One way to understand corporate culture is to think of it as the company's unique "personality" setting it apart from all others.

> **Sample Vision Statement** - XYZ Widgets values its "relationship with customer" above all. To be successful we treat all employees as valued internal customers. We respect their ideas, value their work, and provide whatever is needed so that they may accomplish excellence in a safe-productive manner. Doing this empowers our employees so that they may manifest our values daily with our external customers.

The **mission statement** tells the world <u>what you do</u> -- why your company exists, by stating its intended purpose. The mission statement lets everyone know what your company's product or service is; who its customers are; what its service territory is.

> **Sample Mission Statement** - It is the mission of XYZ Widgets to safely manufacture and deliver the highest quality megalithic cyberwidgets to our valued customers throughout the world.

If your company doesn't have a mission statement, try to develop one and convince management of the benefits that will result from a written mission statement. Now let's take a look at two basic approaches employers may adopt in safety and health program management.

Reactive vs. Proactive Safety Strategies

Don't just react to safety

It's sad but true - some companies have adopted an approach to safety and health that emphasizes a **reactive strategy**. A reactive approach assumes that accidents just happen, and there's not much that can be done about it. Consequently, the company places most of its effort into reacting to accidents after they occur. A reactive response occurs **after** an injury or illness and usually has the purpose of **minimizing the costs** associated with the injury or illness.

Reactive safety programs always cost much more than proactive programs...always...because they aren't implemented until an injury or illness has occurred. When management emphasizes a reactive approach to

safety and health, it sends two negative messages to employees, (1) we don't care about you, and (2) it's all about money, not your safety. Here are some examples of reactive safety programs.

Be business smart...be proactive

A **proactive strategy** emphasizes prevention: doing whatever it takes to make sure accidents never happen in the workplace. There are no excuses for an accident. A proactive response to safety and health in the workplace occurs **before** an accident has occurred. It **anticipates** and tries to prevent accidents.

By emphasizing **accident prevention**, management sends a message of caring to all employees. Proactive strategies are always less expensive than reactive strategies because the company makes **investments** that result in potentially huge returns. Remember, proactive programs are implemented to prevent future injuries and illnesses. Here are some examples of proactive safety and health programs.

Goals and objectives

So now you have a vision and mission statement developed. The next step is to think of some **proactive** goals and objectives to improve your company's safety and health program.

Goals are easy to write. They're nothing more than wishes. For instance, a goal might be to "get everyone trained". However, operational objectives take a little more thought.
Objectives should have the following elements present:

- **Starts with an action verb**. (Decrease, increase, improve, etc.)
- **Specifies a single key result** to be accomplished.
- **Is quantifiable**. Uses numbers to measure a desired change. (i.e., 50% increase)
- **Specifies a target date** for accomplishment.

For example, operational safety objectives might be written like this:

- "Increase the number of safety suggestions to 25 a month by July 31st."
- "Reduce the number of back injuries in the warehouse by 70% by the end of 1997."

Remember to work with the safety committee to share the goals and objectives with everyone in the company. By the end of this course you should be able to think of many more ways to increase management commitment.

Talk money... the bottom line

Have you ever proposed a recommendation to correct a hazard or improve a procedure, only to have it fall on what appears to be deaf ears? Odds are, management cares very much about safety and health in the workplace, but like you, they are very busy. When a busy manager receives a recommendation from the safety committee, and it's merely a vague one-liner like, "We need to install a new guardrail in the warehouse," the likely response might be to put it on the back burner.

Dan Petersen, Author of **Safety Management : A Human Approach**, states that, "Management is first of all interested in how the safety professional's ideas relate to the profits of the organization. That is, what will management get in return for the money it is being asked to spend? Thus, safety people ought to be dollar-oriented when talking to management. Even if management understands the language of frequency and severity rates, dollar indicators ought to be used instead."

Effective recommendations describe costs and benefits

According to the National Safety Council, when considering all industries nationally, the average direct and indirect claim cost for a lost time injury is over $28,000, and a fatality averages $910,000.
Indirect costs, according to the NSC figures above, average 1.6x direct costs. However, it's important to understand that indirect costs may be much higher. Three things to remember in when estimating indirect costs:

- **The lower the direct cost, the higher the ratio between the direct and indirect costs**. For instance, if someone suffers only minor injury requiring a few hundred dollars to close the claim, the indirect/direct costs ratio may be much higher than the NSC average.
- **Capital intensive operations**, where large sums have been invested in facilities, realize higher and average indirect/direct cost ratios. For example, if someone is seriously or fatally injured on an oil-drilling rig, resulting in operations shutting down for a day or so, many thousands of dollars in lost production will result. In high capital intensive work processes, the expected ratio between direct and indirect costs may be 5x to 50x.
- **Labor intensive operations**, where more investment is made in labor than capital assets, realize lower indirect/direct cost ratios. Someone may suffer a serious injury, but operations are not as likely to be significantly impacted. In labor intensive operations the expected ratio between direct and indirect costs may be 2x to 10x.

Take a look and download OSHA's **Safety Pays** software program that can be helpful in determining direct and indirect cost.

You can use these figures to demonstrate the benefits of taking corrective action.

Your supervisor may ask you what the **Return on Investment** (ROI) will be. If the **investment** in corrective actions is $1,000, and the potential accident could cost the company $28,000 sometime in the foreseeable future (let's say five years), just divide $28,000 by $1,000 and you come up with 2800 percent. Divide that total by 5 years and you come up with an annual ROI of over 500 percent a year. Now that's a great return!

Management may want to know how quickly the investment will be paid back: what the **Payback Period** is. Just divide $28,000 by 60 months and you come up with $467 per month in potential accident costs. Since the investment is $1,000, it will be paid back in a little over two months. After that, the corrective action may be considered as actually saving the company some big money. Now that's talking the bottom line!

If you want, take a closer look at some key elements of an effective recommendation.

Plan the work, work the plan

Now you have some ammunition to help increase top management commitment that is so important to workplace safety and health. You'll receive many more tips and ideas about this throughout the course. An important step in making sure the above ideas are effectively applied is to develop an **action plan** to get top management commitment. An action plan is nothing more than a set of long-term strategies and short-term tactics ("how" statements).

Well, it's time to take your first module quiz. Remember, the quiz is for your review.

MODULE 1 QUIZ

1. "Just tell me what I have to do to stay out of trouble" best reflects which safety imperative?

    a. Fiscal imperative

    b. Legal imperative

    c. Moral imperative

    d. Ostrich imperative

2. Management commitment can be obtained most effectively
by:

    a. Complaining about the lack of commitment

    b. Threatening to complain to OSHA

    c. Providing useful information

    d. Inviting management to committee meetings

3. Which service provider(s) might assist in your effort to obtain management commitment.

    a. Your Workers' Compensation insurer

    b. OSHA consultants

    c. Private consultants

    d. Any of the above

4. Safety should be primarily the responsibility of the safety director and/or the safety committee.

    a. True

    b. False

5. Commitment requires investing time and money into what we support.

    a. True

    b. False

MODULE TWO: LABOR AND MANAGEMENT ACCOUNTABILITY

Introduction

Accountability ranks right at the top with management commitment as a critical ingredient in a company's safety and health management system. Why do we behave the way we do in the workplace? Consequences. Why do we take the unsafe shortcut? Consequences. Management may impose all kinds of safety policies, programs, written plans, directives, rules, training...on and on...yet if <u>appropriate application of effective consequences</u> within a culture of accountability does not exist, desired behaviors will not be sustained. If employees do not **believe** they are going to be held accountable for the decisions they make and the actions they take, you can be sure that any safety effort is ultimately doomed to failure.

What is Accountability?

You hear a lot about responsibility and accountability in safety and health, and sometimes people speak as though the two terms have the same meaning. But, as used in OSHA standards and generally in safety and health management, these two terms have very different meanings. Let's find out why.

Take a look at a dictionary. You'll find responsibility and accountability defined something like:

- **Responsible** - expected or obliged to account for or answer to; involving obligation or duties. Responsibility - able to account for or answer to.
- **Accountable** - responsible; liable; legally bound or subject to giving an account (or explanation), answerable. Accountability - able to give account or answer to.

If you examine only these two definitions, it's understandable why we might conclude that these two terms have virtually the same meaning. However, the notion of being "liable or legally bound" sets accountability apart. When applying these two concepts to management in the workplace, they take on very important and distinct differences in meaning and application.

- **Responsibility** may be thought of as simply the "**obligation to fulfill a task.**" To be responsible, you need only be assigned one or more duties.
- **Accountability** may be thought of as establishing the "**obligation to fulfill a task <u>to standard or else</u>.**" When you are held accountable, your <u>performance is measured</u> against some specific <u>criteria or standard</u> and <u>consequences are applied</u> appropriate to the level or quality of performance.

The Six Elements of an Effective Accountability System

Accountability may also be thought of as one of the very important subsystems within the overall safety management system. The safety committee or coordinator may use these guidelines to help develop, monitor and improve workplace accountability for safety.

Six important elements should be present in an employer safety accountability system:

Element 1. Formal Standards of Performance

OSHA has developed rules in occupational safety and health which serve as standards of performance for employers. Similarly, employers are required to establish company policies, procedures, written plans, processes, job descriptions and rules to clearly convey their standards of performance in safety and health to employees.

It is important that safety policies and disciplinary procedures be clearly stated in writing and made available to everyone. In fact, it is necessary to educate all employees on these policies and procedures. Make sure they **certify** that they have read, understood, and will comply with those safety policies and procedures. Do this when they are hired, and annually thereafter.

If standards of acceptable behavior and performance are not established and clearly communicated to employees, an effective accountability system is impossible. Management may not be justified in administering discipline without clearly written and communicated standards.

Element 2. Adequate Resources and Psychosocial Support

Before employers are justified in administering appropriate consequences, they should **first** provide their employees with the means and methods to achieve the standards of performance that have been established. Employers should provide a safe and healthful physical and psychosocial workplace environment.

- **Physical resources**. Ensures safe and healthful conditions. Safe tools, equipment, machinery, materials, workstations, facilities, environment. OSHA emphasizes this category.
- **Psychosocial support**. Ensures safe behaviors. Effective safety education and training, reasonable work schedules and production quotas, human resource programs, safe work procedures, competent management, tough-caring leadership. Through the years, Federal OSHA and professional safety organizations have demonstrated more emphasis in this area as evidenced by increased interest in developing rules requiring a comprehensive safety and health program, and workplace violence standards.

Element 3. A System of Performance Measurement

Once again, when applied to safety behavior and performance, accountability demands more than simply being answerable. In an effective accountability system the quality or level of safety performance is measured regularly and often. Measurement processes include informal/formal observations. Real measurement means more than merely observing behaviors. It also includes quantifying observations...adding up the numbers. Those numbers form the statistics that you can use to improve the safety management system.

Accountability and control

A basic rule of thumb for any accountability system states that, **"a person should be held accountable for a responsibility only if that person is able to control or has the ability to fulfill that responsibility."** If a person is being measured and held accountable for results over which they have no control, that person will attempt to gain control somehow. The attempt to establish control may include inappropriate strategies.

For example, a supervisor who's measured only on department accident rates may threaten to fire anyone who completes an OSHA 101 injury report. Not only is that behavior counterproductive for the company, it is illegal!

The employer ultimately controls all of the many operational variables such as raw materials, equipment, machinery, work schedules, personnel, and policies that make up the day-to-day work environment. Employer performance in providing resources and implementing policies, etc., should be measured.

On the other hand, employees may have very little control over operations in the workplace. They do, however, have control over their own behavior. Employees have the ability to make a choice to comply with safety rules, and they may choose to report injuries and hazards in the workplace. Consequently, we need to measure these personal behaviors.

In the workplace, it's important that supervisors measure their employees' safety behaviors. Managers should measure supervisor activities and behaviors. OSHA doesn't merely observe, they inspect, investigate, and issue citations that may include monetary penalties: Now that's measurement with consequences, isn't it.

Element 4. Application of Effective Consequences

What are "consequences"?

A "consequence" is anything that happens as a result of something that happens. Another way to express it is to think of the initial behavior is the "cause" and the consequence is the "effect" of the cause. For every cause, there is an effect.

For instance, if you hit your thumb with a hammer, the consequence is pain, injury, embarrassment, etc. If you think (initial activity) safety is not important, you are more likely to behave in an unsafe manner (consequence). If a supervisor yells at an employee, the employee may yell back, or go home, or quit (possible consequences).

It's important to understand there is no such thing as "no consequence" for an action. You can not NOT have a consequence for an action. For instance, if a supervisor thanks a worker for making a safety suggestion, that is a consequence (positive). If the supervisor ignores the worker who made the safety suggestion, that is a consequence too (negative).

Effective consequences increase desired behaviors or decrease undesired behaviors. If employee safety performance meets or exceeds the standards set by the employer, some sort of recognition should follow. On the other hand, if the employee makes an informed choice not to comply with the company's safety rules, some sort of appropriate corrective action should follow. There are various strategies for administering positive and negative consequences. Careful planning is critical to ensure consequences are effective. Let's take a look at four approaches to consider.

Two basic categories of consequences

Positive reinforcement - If we do something well, we get rewarded. Important points to remember about positive reinforcement include:

- It must always increase desired behavior;
- The worker performs to receive a positive consequence;
- The worker may perform far beyond minimum standards - discretionary effort;
- The focus is on excellence - it's success-based strategy;
- Examples include:
  - If you report a hazard you'll be recognized in a positive way;
  - If you prevent an injury or save money you will be rewarded.

Negative reinforcement - If we do something well, we don't get punished. Elements of negative reinforcement include:

- The worker performs to avoid the consequence - nothing else;
- The intent is to increase desired behaviors;
- The worker performs to minimum standard - just enough to get by;
- The focus is on compliance - it's a fear-based strategy;
- Examples include:
  - "If you break a safety rule, you'll be fired;"
  - "If you comply with safety rules, you won't be reprimanded."

There's no such thing as a non-consequences

You might think that ignoring behaviors is a way to withhold a consequence. No such luck. Every response, including ignoring, is a consequence. Ignoring is usually the least effective consequence because it leads to extinction of desired behaviors. Think about it. Have you ever been ignored when you thought you should have been recognized? I bet you were upset. And it didn't matter why you were ignored either: you didn't like it. So, let's take a look at some of the characteristics of extinction:

- It is the withdrawal of recognition;
- The worker is ignored and no matter what, desired behavior becomes less frequent. For instance:
  - If the worker misbehaves and is ignored, he may perceive it as positive and the behavior will continue;
  - If the worker behaves and is ignored, he may perceive it as negative and the behavior will discontinue;
- Worker eventually performs without expectation of recognition;
- No relationship with management exists;
- It is the most common form of consequence in the workplace - It's epidemic in organizations
- Examples of the thoughts and beliefs produced when people are ignored include:
  - "It doesn't matter how hard I work around here."
  - "Apathy is rampant, but who cares."

Soon, Certain, Significant, and Sincere

In all instances, to be effective, consequences should be **soon**, **certain**, **significant**, and **sincere**. Accountability is operating effectively only when consequences follow behavior. When consequences are nonexistent or inconsistent, accountability is not functioning properly in your company.

Consequences for safety behaviors that meet or exceed expectations usually include recognition and rewards. However, only appropriate behaviors should be rewarded. The employer should recognize

employees for behaviors and performance over which they have exclusive control. If the person has authority...decision-making control, then the person should be held accountable for the decision and subsequent behaviors and personal outcomes. Managers and supervisors have varying degrees of control over the conditions of their work areas and the behaviors of their employees. For employees, control usually refers only to personal behaviors. Let's look at some examples of activities and behaviors that are typically accountability measures.

Examples of measured safety behaviors and performance at various levels include:

Top/mid-level managers. Unfortunately, measurement at this level usually includes results statistics over which top managers actually have little direct control. These measures include:

- Accident rates.
- Experience modification rate (MOD Rate).
- Workers' compensation costs.

This situation may cause top managers to put pressure on supervisors to hold down the number of accidents in their departments. Consequently, the result may be ineffective measurement at all levels. Appropriate behaviors and activities to measure at top/mid- level management include:

- Involvement in safety management system formulation and implementation;
- Developing effective safety policies, programs, procedures;
- Arranging management/supervisor safety training;
- Providing physical resources and psychosocial support;
- Involvement in safety education/training;
- Supporting involvement in the safety committee.

Supervisors. Supervisors may not be able to completely control the results (such as the accident rate) of their work area. They do, however, have the ability to control their safety management and leadership activities. Therefore, measurement at this level should primarily include personal safety behaviors and activities such as:

- Making sure workers have safe materials, tools, equipment, machinery, etc.
- Ensuring a healthful psychosocial environment
- Following company safety rules
- Conducting safety inspections
- Enforcing safety rules
- Training safe work procedures
- Recognizing employees for safety
- Conducting safety meetings

- **Employees.** Measurement of employees usually includes personal behaviors such as:
- Complying with company safety rules
- Reporting injuries immediately
- Reporting hazards
- Making suggestions
- Involvement in safety activities

After all is said and done, if the behaviors and activities above are expected and recognized, the results that we all worry about will take care of themselves. Improve the process and watch the outcome follow! Is this all "pie in the sky"? It doesn't have to be. Now let's take a look at some real-world problems related to this element.

Good intentions...bad results

Most employers establish safety incentive programs to increase awareness and influence behaviors in a positive direction. However, some of those employers unintentionally reward their employees for **not reporting injuries**. Their intention is to do the right thing, but the problem is that they're not doing the thing right.

Although the company may be able to boast of thousands of production hours without a reported injury, some of their employees may actually be injured or ill. (I call this the "walking wounded" syndrome.) However, negative peer pressure, the desire to "win", or other workplace factors may cause the employee to decide not to report their injury or illness.

What does the OSHA Act say?

Not only is the promotion of employee non-reporting inappropriate, it's not legal! According to the OSHA Act of 1970, each employer must:

- "...furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees, and comply with occupational safety and health standards promulgated under the Act."

The OSHA Act also addresses employee compliance:

- In the Act we read that "Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct."

Since reporting injuries is a mandated employee responsibility, the employer should do what is necessary to promote reporting, and nothing that promotes "non-reporting."

Consequences for below standard safety behavior typically include negative performance appraisals, some form of progressive discipline, or forfeiture or some reward like a bonus.

Performance appraisals should index specific safety behaviors and performance just as other production/service criteria are evaluated.

Remember, for an accountability system to work most effectively, managers, supervisors and employees should be measured only for those behaviors over which they have control.

Element 5. Appropriate Application of Consequences

Without the *expectation* of consequences, accountability has no credibility and will not be effective. No consequences...no accountability. Consequences need to be appropriate as well as effective. This is the element with which everyone is probably most familiar. Unfortunately, in some companies, consequences are either not appropriate, not effective, or both.

What are the criteria for appropriate consequences?

- They are justified.
- They correspond to the degree of positive or negative results of the behavior.
- They are applied consistently throughout the entire organization.

Are consequences justified?

Negative consequences are justified when the person administering discipline has fulfilled their own accountabilities first. Positive consequences are justified any time employees meet or exceed expectations. Here's an important principle (I call it the 4-R principle) : The more **R**egularly you **R**ecognize, the more **R**arely you'll have to **R**eprimand.

It's critical to understand that **before** administering progressive discipline, managers and supervisors make a judgment about how well they have fulfilled their own accountabilities. This is important to make sure they are actually justified in administering corrective actions.

Determining the appropriateness of administering negative consequences does not have to be difficult. You can use the acronym to the left to help remember the five basic safety obligations managers and supervisors have responsibility to fulfill. Let's take a look at each of the five:

1. **Training.** Employees must be provided with the required knowledge and gain the skills to comply with safety requirements. Employees, then, have the necessary knowledge and skills to understand the natural and system consequences of noncompliance. Ask yourself, "Have I provided (or has the employee received) quality safety training?"

2. **Resources.** Do employees have the physical resources and psychosocial support to comply with safety requirements? Supervisors need to provide adequate tools, equipment, materials that make it possible for employees work safely. Supervisors should also manage workloads, schedules, employee relations so that the workplace is as stress-free as possible. When the employee believes working fast is more important than working safe, supervisors are failing in this area. Ask yourself, "Have I provided the employee with a safe and health workplace?"

3. **Enforcement.** Do employees believe they will be disciplined if they're caught violating safety rules? Or, do they know that all you will do is shake your finger and threaten them without following through. If supervisors allow employees to violate safety rules, all justification for discipline disappears. Ask yourself, "Have I applied safety accountability fairly and consistently in the past?"

4. **Supervision.** By definition, adequate supervision means "detecting and correcting hazards or unsafe behavior before they cause an injury or illness." If supervisors are stuck in the office all day it's not possible to oversee the work employees are doing. Lack of supervision is a major reason disciplining employees after an accident is usually inappropriate. Ask yourself, "Did I catch them violating safety rules before they got hurt?"

5. **Leadership.** Supervisors must "walk the talk." That means they need to set the highest examples by following all safety policies and rules, and they need to be fulfilling the other four obligations. Ask yourself, "Am I setting the right example for my employees?"

If a manager or supervisor can honestly answer **yes** to each of the above four questions, it is probably appropriate to administer negative consequences because he or she has fulfilled their own accountabilities first. If a manager cannot honestly answer each question in the affirmative, leadership requires an apology and a commitment to make improvements.

Do consequences correspond with the positive or negative results of the behavior?

▪ **Consequences should increase with the severity of the potential injury or illness that might result from the behavior.** If an employee is performing an unsafe work practice that could result in a fatal injury to himself or another employee, that certainly warrants a severe consequence. On the other hand, an employee who performs a behavior that violates a safety rule, yet will not result in an injury or illness, a less severe consequence is more appropriate.

- **Consequences should increase with the level of responsibility of the person performing the behavior.** If an employee neglects to perform a safe work practice such as wearing ear protection, a safety rule has been violated and discipline may be in order. However, if a supervisor or manager neglects to wear the ear protection, we're not just talking about violating a safety rule. That safety rule has, in effect, been legally **revised**. A mandatory requirement becomes a discretionary guideline and not auditable or enforceable. A more severe level of discipline would be in order because of the position of responsibility they assume. The supervisor or manager, in fact, gives permission for all employees to violate the same safety rule. The negative impact on the safety of employees has the potential to be much greater when the supervisor or manager violates a safety rule.

On the other hand, if a supervisor or manager does something positive, the net impact will likely be greater than that of one of his or her employees. Consequently, more significant positive consequences are certainly in order.

Are consequences applied consistently at all levels of the organization?

To build a high level of trust between management and labor, accountability must be applied consistently at all levels of the organization: up and down, and across functions. Every supervisor and manager must be held accountable in the same fair manner consistent with employees. If labor perceives the accountability system as applying only to them, they will naturally consider it unfair: the primary failure mode for accountability systems.

Element 6. Continuous Evaluation of the Accountability System.

Although as a supervisor you may not be responsible for formally evaluating the accountability system it's good to know that someone is. Usually, the safety coordinator and/or safety committee are involved in this activity. In some "state-plan" states, like Oregon, the safety committee is required by law to conduct an evaluation of the employer's accountability system.

The process usually involves three levels of activity:

- **Identification**. Inspect the accountability system policies, plans, procedures, processes to identify what exists.
- **Analysis**. Dissect and thoroughly study each accountability system policy, plan, procedure, process to understand what they look like. The devil is in the detail.
- **Evaluation.** Compare and contrast each accountability system policy, plan, procedure, process against benchmarks and best practices to judge their effectiveness.

If you believe there are weaknesses in your employer's accountability system, make sure to take notes on the behaviors and conditions you see in the workplace that may be pointing to accountability system policies, plans, processes, and procedures that are inadequate or missing.

Evaluating for Accountability

OSHA looks primarily for two program elements when evaluating an employer for accountability: Policy and consequences. OSHA does not mandate specific recognition/disciplinary procedures: That's the responsibility of the employer. But, an effective procedure that is written and clearly communicated should be in place. Does your company have a written policy that addresses accountability? If it does, are the three key components addressed?

Who's accountable for what?

Employers are held accountable by law for ensuring a safe and healthful workplace, and employees are held accountable by their employers for individual safety behavior. It's important to note that if employees are "empowered" (authorized) to perform certain responsibilities and have control over those responsibilities, they should also be held accountable. For instance, if they are empowered to fix minor hazards in their work area, they should realize that if they don't follow through they should expect some sort of consequences as a result.

When are negative consequences appropriate?

Put yourself into the role of a supervisor. It may not be appropriate to administer disciplinary procedures even if it first appears that an employee is not complying with safety rules. Before disciplining an employee, it is appropriate to first ask some very important questions to determine if you, as a supervisor, have fulfilled your own safety responsibilities adequately.

To think of it another way, you may be pointing the finger of discipline at an employee, but remember, the other fingers are all pointing back at you, as if to ask some very pointed questions about how well you are fulfilling your supervisor accountabilities.

The first supervisor accountability: Providing a safe environment. As stated earlier, one very important supervisor accountability is to provide a safe and healthful work area. This means providing all those resources necessary for employees to complete their tasks safely.

Jump for more information on providing a safe and healthful work area.

The second supervisor accountability: Safety Training. Providing safety training is another extremely important supervisor accountability. Training teaches the skills to apply the knowledge the employee has learned. Demonstration is the key to effective safety training.

Go online and jump for more information on providing safety training.

The third supervisor accountability: Safety Oversight. OSHA attaches a rather narrow definition to the term "supervision," considering it to be primarily a control and monitoring function. OSHA expects someone with authority to oversee work being accomplished to make sure unsafe work conditions do not exist, and that employees use safe work practices. Adequate supervision means detecting and correcting hazards before they cause an injury or illness.

Go online and jump here for more information on safety supervision.

The fourth supervisor accountability: Enforcing safety rules. Accountability is generally thought to mean "enforcement of safety rules" using progressive discipline. However, it's important to understand that consequences may take many forms, and that they are not always negative. If progressive discipline is used, it's important that supervisors understand how to administer it fairly and consistently.

Go online and jump here for more information on enforcing safety rules.

Last Words

Well, that was a lot of information. You learned that the components of responsibility and accountability are different. Accountability has three basic components: established standards, methods of measurement, and consequences. You also learned that supervisors have accountabilities associated with controlling the workplace, and employees have accountabilities related to personal behavior. Now it's time to take the module quiz.

MODULE 2 QUIZ

6. According to the text, being held "accountable" may be defined as being able to give the right answers to any questions that might be asked.

    a. true
    b. false

7. One of the important responsibilities of a supervisor or manager is to make sure safety is considered when purchasing materials, equipment, and tools for employees?

    a. true
    b. false

8. According to the text, which of the following is not a question a manager should ask first before considering discipline?

    a. Have I provided adequate resources?
    b. Have I provided appropriate safety training?
    c. Have I provided proper safety supervision?
    d. Have I provided adequate discipline?

9. You are a supervisor and you have just noticed an employee driving a forklift at a dangerous speed in the warehouse. Today is his first day at work. Of the five questions you should ask yourself to determine if discipline is appropriate, which one is most likely going to be answered no?

    a. Have I provided as safe and healthful work area?
    b. Have I provided appropriate safety training?
    c. Have I provided proper safety supervision?
    d. Have I enforced safety rules in the past?

10. According to the text, to build a high level of trust between management and labor, accountability must be:

    a. reviewed by the safety committee
    b. applied immediately after the violation
    c. applied consistently at all levels of the organization
    d. understood by all

◼ MODULE THREE: EMPLOYEE INVOLVEMENT

Introduction

It's difficult to have an effective safety and health program without developing a corporate safety culture that encourages genuine employee involvement.

As we discovered in Module Two, employees are held accountable by the employer for three personal behaviors: (1) complying with safety rules, (2) reporting workplace injuries immediately, and (3) reporting hazards. We also learned that making safety suggestions and involvement in a safety committee or team are two very important behaviors that, although not mandated, should be strongly encouraged. It makes sense for the company to develop strategies that promote these employee behaviors.

This module will explore some of the effective strategies for increasing employee involvement in workplace safety. We'll primarily address effective recognition because, as we learned earlier, we do what we do to avoid negative consequences or obtain positive consequences. Recognition as a positive consequence can be quite effective in dramatically increasing daily involvement in safety. Let's see what Michael Topf has to say about employee involvement:

What is Employee Involvement - Michael D. Topf
What does it look like?

Employee involvement... "means participation by employees at every level. When used as part of the term employee ownership, "employee" does not refer uniquely to line or hourly workers, but to everyone involved in the organization at every level and in every department.

What does it require?

For any safety, health and environmental improvement process to become self-sustaining and successful, it needs to become a seamless part of the organization. This is doubly true if the desired end result is employee ownership. To that end, the process and its benefits must be seen as having value for the employees, their families and others in the company." Michael D. Topf, President, The Topf Organization www.TopfOrg.com Occupational Hazards, May 2000

Recognition goes a long way!

A company cannot be successful in its safety and health effort without motivated employees. Motivation doesn't just happen. It's influenced by the nature of the consequences we receive as a result of our involvement. Motivated employees are willing to put forth greater effort to accomplish tasks or reach objectives. But what motivates employees? There are many

theories, including Maslow's <u>Hierarchy of Needs Theory</u> and Herzberg's <u>Two-Factor Theory</u> that display a common thread; consequences motivate behavior.

Successful recognition programs require smart management and strong leadership

It's important to understand that administering "programs" is basically a management function requiring effective organizational skill. Many companies develop and implement formal safety recognition programs because, well, that's what they've been told works best and that's what everyone else does. There are many different types of safety recognition program strategies used and promoted these days. Of course, some are more effective than others, but there is certainly no one-fits-all program available today. To be successful, the recognition program must fit the unique culture of the organization.

For instance, you can't work a highly participative safety recognition program successfully in an oppressively authoritarian corporate culture. It just won't work. On the other hand, a world-class safety culture may not develop a managed safety recognition program with formal procedures. Rather, managers will likely perceive the process of recognition as their opportunity to demonstrate leadership so that ultimately, positive working relationships are established or reinforced.

> From Robert: I set up a new suggestion box at my last office. Employees were informed it was there to use for any suggestions they may have. I would check it once a day and they could either sign their suggestion or not. All suggestions would be looked into and [the] person making the suggestion would be advised of the outcome within (5) days or, if the suggestion was unsigned, the outcome would be announced at our next safety meeting.
>
> Because of the feeling it was all a big joke anyway and no one really cared, only one person in 12 months made a suggestion. I handled it just as I said I would. If the employee's suggestion was such that I could fix it without getting approval, I did so. Didn't seem to encourage others. The real problem was they had heard it all before and just didn't believe anymore.

You will find that safety recognition programs work best when they exist within a framework of strong leadership. However, if your company does not currently have a formal safety recognition program, it doesn't necessarily mean safety incentives and recognition are not in place and being used effectively. It just means a formal program has not been established. In the best case scenario where there is the presence of strong, tough-caring safety leadership, a formal program may not be needed because leaders are regularly providing meaningful incentives and recognition informally, one-on-one to their employees.

So, in evaluating your organizations need for incentives and recognition, take a good look at the current quality of leadership. If you believe safety leadership could be improved, it's probably a good idea to think about introducing and implementing some of the ideas presented in this module to your safety committee or

safety director. By doing so, your company may implement an effective recognition program that can also act as a catalyst to help move the corporate culture towards strong safety leadership.

Recognition and rewards

Rewards are great...

Safety rewards come in a bazillion colors, flavors, and varieties. We are all motivated by primarily two types of rewards: extrinsic and intrinsic. **Extrinsic** rewards are tangible and external. You can touch, eat, see, smell, or otherwise use them. On the other hand, **intrinsic** rewards are intangible, internal, and housed within us. See some examples.

But, recognition is better...

Now, consider this. Is it the reward, itself, or the recognition you receive that matters most? Like many others, you probably think that the recognition behind the reward is most important. We like to be recognized and appreciated for what we do. It makes us feel that we are valuable, important, and a part of a team...something bigger than ourselves. Go online to take a look **Geigle's 15 Steps to Effective Recognition**.

The big secret: It's not what you reward with...it's what you reward

It's important, when designing safety recognition programs to remember that it's not the nature of the reward that is most important: the big secret is recognizing **appropriate behavior** in the right way. To be most effective, as you learned by reading the 15 Steps to Effective Recognition, recognition needs not be formal and fancy. To be most effective, recognition needs to come from the heart. Listen to one of Steve's short "safety sermons" on policy-driven vs. heart-driven recognition below.

Reactive safety incentive programs

In Module One we talked about the concepts of reactive and proactive safety programs. Safety incentive programs can be both reactive and/or proactive, depending on the behaviors that are being recognized and rewarded.

Believe it or not, most companies implement reactive safety incentive programs that reward inappropriate behavior. What might this most common behavior be?

<p align="center">**They reward "withholding injury reports."**</p>

That's right! Look for a banner or a sign that says, "80,000 bazillion work hours without a reported accident!" When you see that, you'll know the company is rewarding its employees for not reporting their injuries. Sure, they might have 80,000 hours without a reported accident, but that doesn't mean the workplace is accident free: only that accidents aren't being reported. In reality, the workplace may be full of the "walking wounded" who don't report an injury or illness.

The problem occurs when employees, in an effort to be team players and loyal co-workers, or as a result of negative peer pressure, do not report their injuries. They do not want to ruin the safety record for their department. In some cases the pressure is so great they will not report an injury until the pain becomes so severe that they miss work and must report it to their supervisor. Consequently, the actual number of injuries in the workplace may decline, but the severity of each injury increases, and becomes much more costly. In such cases, everybody loses.

Of course, the employer is not intending to encourage or promote "not reporting," but, because the inherent strategy of the program is flawed, it functions unintentionally to do just that. The employer is doing the right thing...by having a recognition program...but the employer is doing it wrong...consequently the result actually functions to hurt the safety and health program rather than help it.

This unfortunate situation can be seen most easily when "not reporting" is the only behavior rewarded. If appropriate behaviors are also being recognized and rewarded, the negative impact of this reward strategy is diminished. So, let's take a look at what those appropriate behaviors are.

Proactive safety recognition programs

More and more companies are discovering that the most effective safety recognition programs are primarily proactive. Proactive recognition programs reward employee behaviors that are both (1) mandated by the employer and/or OSHA regulations, and (2) encouraged but not required. All of the proactive behaviors listed below actually prevent or minimize the negative impact of injuries and illnesses in the workplace.

For management:

- Providing the resources for a safe and healthful workplace.
- Providing effective safety education and training.
- Providing effective safety supervision - oversight.
- Providing and maintaining a culture of tough-caring accountability.

For employees:

- Complying with company and OSHA safety rules;
- Reporting injuries immediately;

- Reporting hazards.

For all:

- Making safety suggestions.
- Involvement in safety (committees, teams, events, etc).

Those behaviors listed for management and employees are mandated by OSHA regulations. Making suggestions and involvement are not mandated, but should be strongly encouraged. All of these behaviors represent highly professional behavior that should also be recognized, and when justified, rewarded.

When employees are recognized and rewarded for these behaviors, their overall involvement in safety and health increases greatly. They become more aware, interested, and involved in uncovering unsafe work conditions, unsafe practices, and system weaknesses. They know that reporting injuries as soon as they occur reduces lost work time and accident costs. It minimizes hurt (pain) for the employee...and hurt (monetary loss) for the employer.

Integrate the safety recognition program

So now we come around full-circle back to our main point. Recognition is actually more a function of leadership than management. A company that delegates safety recognition responsibilities to a safety director or a safety committee sets up a system that relies on only a few people to provide leadership. Of course, it also sends the message that safety is not a line responsibility, but a staff duty. On the other hand, an organization that places responsibility squarely on the heads of managers, supervisor, and employees for recognizing professional safety behaviors, provides everyone with opportunities to display leadership.

Proactive recognition programs that work

Here are a few ideas for developing a proactive safety recognition program for your company:

Safety Buck: Supervisors carry safety bucks, and when they see someone doing something right, they reward them. The employee can take the safety buck to the company cafeteria for lunch, or they can use it at a local participating store to purchase items.

Bonus Program: When an employee identifies a hazard in the workplace that could cause serious physical harm or a fatality, they are rewarded with a bonus check. In some cases the bonus check is a fixed amount. In other programs the bonus check is a small percentage of the potential direct cost for the accident that might have occurred.

By the way, the average direct cost for a disabling claim in is around $10,000. Doesn't it make sense to reward an individual with $100 for identifying a hazard that could potentially cost the company thousands?

Safety Hero: After an extended period of time, employees are rewarded with a certificate or bonus check for complying with company safety rules.

Reporting Injuries: Wait a minute...Do I really mean that employees should be recognized for reporting injuries? That's right. If employees report injuries immediately, they not only minimize the physical/psychological impact of the injury on themselves, they reduce the direct/indirect accident costs to the company. Both the individual and the company win if the employee reports injuries immediately.

These are just a sample of many ideas available. There are many other ways to recognize employees being used by companies across the country. Call your local OSHA office to see if they know of companies in your area that have developed successful proactive safety recognition programs. Use those companies as benchmarks.

Well, that about wraps it up for this module. In the next module, we'll take a look at communications and the use of safety committees. The only task left is the module quiz below. Good Luck!

MODULE 3 QUIZ

11. Mugs, jackets, safety bucks, pizza parties, certificates, and bonuses are all examples of:

    a. intangible recognition

    b. tangible rewards

    c. effective reprimands

    d. tricky redirection

12. Which of the following is a behavior typically rewarded in a reactive safety incentive program?

    a. complying with safety rules

    b. reporting injuries

    c. withholding injury reports

    d. reporting Hazards

13. To be successful, the recognition program must:

    a. fit the unique culture of the organization

    b. be formally approved by the safety committee

    c. meet governmental regulatory requirements

    d. always recognize accident records

14. All of the following are behaviors mandated by OSHA law except:

    a. complying with safety rules

    b. reporting injuries

    c. reporting hazards

    d. making suggestions

15. Which of the following is not a proactive behavior that helps prevent or minimize the negative impact of injuries and illnesses in the workplace?

    a. complying with safety rules

    b. withholding injury reports

    c. reporting hazards

    d. making suggestions

▪ MODULE FOUR: EFFECTIVE COMMUNICATIONS

Introduction

In Module Three we learned about the importance of recognizing appropriate safety behaviors to improve employee involvement, the third element of a world-class safety and health management culture. In this module we'll continue learning about increasing employee involvement through effective communications. Effective communications is extremely important to the goal of increasing employee involvement in safety and health. Skilled safety communications will support leadership, at all levels, from the CEO to the employee. So, let's get started with a review of some basic communications concepts and principles.

Return to sender...

The most basic communication theory talks about the requirement for both a sender and receiver in the communication process. The characteristics of the sender and receiver may be quite different. For instance, communication may take place between two individuals, two groups, two companies, two nations, and sometime in the future...(maybe) between two worlds. Although the scope of the communications process may expand, the process still boils down to basically two people talking over various channels.

The sender initiates the communication and the receiver receives, interprets, and responds to the communication. At this point the initial sender assumes the role of receiver. Where and how the process ends depends on the purpose of the communication and the dynamics of the process itself. Even the simplest communication between two individuals may be a very complicated process.

It's not what you say...it's how you say it!

Another important concept in communications is the Two-Level Theory which states that in any communications process messages are sent and received on two levels. The first level is called the **content level** and describes only what is sent. The only information transferred at this level is data, usually in the form of spoken words.

Speaking of data... Data, the android on Star Trek only communicates on the content level. If you are familiar with this character you know that the failure to communicate on a relationship level prevents him from becoming more like his human counterparts.

The second level of communication exists on a higher, more abstract plane. It's called the **relationship level** which describes the communication that establishes the relationship between the sender and the receiver. It is how the message is sent that sets up the relationship. Relationships between sender and

receiver are always established with every communication. Generally the tone of voice and body language combine to set up relationships.

Back to Star Trek (the original series). James Kirk, the Captain of the Starship Enterprise, always communicated on both the content level and relationship level, while Mr. Spock, our favorite Vulcan, tried with some difficulty to communicate only on the content level. Consequently he always appeared cool, calm, cold, and mechanical.

Eggs on the wing...

Let's take a closer look at the dynamics of content/relationship communications:

First Scenario: Charlie Pendergast is sitting at the breakfast table reading the morning paper while his wife, Gloria is cooking up some turkey sausage and eggs (They take turns cooking). Charlie suddenly looks up from the paper and asks rather flirtatiously, "Oh dear, when are those eggs going to be done?" Gloria is getting positive attention from Charlie and responds casually with, "Here they come now, dear," and brings Charlie a nice plate of bacon and eggs, and gives him a big kiss.

Second Scenario: Charlie Pendergast is sitting at the breakfast table, face buried in the morning paper while his wife, Gloria, is cooking up some turkey sausage and eggs. Charlie, face in paper, obviously irritated, verbally assaults Gloria with, "Oh Dear, WHEN ARE THOSE EGGS GOING TO BE DONE?!" Gloria feels hurt and unappreciated. She slowly turns, fire in her eyes, and says, "Here they come now...DEAR!" and throws the plate full of eggs down on the table in front of him, and stomps off to the bedroom.

In both cases, the content of Charlie's message was exactly the same. However, the relationship set up between the two in the second scenario differed greatly from that established in scenario number one. Consequently, Gloria gave Charlie a vastly different response in the second scenario. In the first scenario, Charlie sent a positive relationship message. In the second scenario, the relationship message was very negative. To Gloria, **how** Charlie sent the message had far more impact than **what** he said.

I'm Okay...You are Okay...

So how does all this fit into workplace safety and health?

Every time a supervisor recognizes an employee for safe work behaviors, it reinforces and makes that behavior more likely to occur in the future. It sends a very positive message, doesn't it? On the other hand, if a supervisor yells at you for "complaining," a very negative message is sent. But, I think the worst situation occurs when you are totally ignored by a supervisor. It sends a message that you are invisible, unimportant, and of little or no value. Ignoring others who are trying to communicate is the worst response

possible. People won't care why you are ignoring them: They just don't like being ignored. They'll make all kind of assumptions about why they're being ignored, and be upset about it. Here's a tip. If you want to have better working relationships with co-workers, always be the first to say "hi" when you meet them for the day. Always be first. It sends a positive message.

A most important responsibility!

If you are a safety committee representative, think about the relationship set up between you and your co-workers. What happens when you receive their concerns and suggestions, report them to the safety committee, but fail to provide feedback in a timely manner? Aren't you ignoring them? Again, it's the worst of all possible responses. Make sure that you get back with your co-workers as soon as possible to let them know the status of their concerns or suggestions. This is probably your most important job as a safety committee representative.

A rusty latch on the suggestion box...

How do you know your safety suggestion program is working? When the suggestion box isn't crammed with candy wrappers and the remnants of old tuna sandwiches. Well, it isn't that bad, but if your suggestion program results in only a few suggestions each month, that's a symptom of failure. So, let's look at it.

Again, communications is the key. If the program is failing, it means that those managing the program are not communicating well on the relationship level. They're not thanking employees in a timely manner for making suggestions. Program managers may be perceived as ignoring employees who make suggestions (shutter the thought). If management wants a successful suggestion program, they must effectively communicate that on both the content and relationship levels. On the content level, they can write a suggestion program plan, and inform everyone about it. On the relationship level, however, they need to respond positively to each and every suggestion employees make. That means action! It means showing appreciation through recognition and rewards, and it means acting on the suggestions offered.

Imagine, workers competing to be on the safety committee...

Are your co-workers just "dying" to be a member of the safety committee? Most likely not. Why not? They really don't perceive much benefit from it, do they? So how do we increase employee involvement in the safety committee? Well, that's one of the subjects discussed in OSTN Course 701, Safety Committee Operations. But for now, it's time for you to take this module's quiz. Good luck!

MODULE 4 QUIZ

16. The words we speak when talking with another person is the _____ of the message. The tone of voice we use is likely to establish a _____ between the sender and receiver.

       a. information, distance
       b. content, relationship
       c. relationship, content
       d. transmission, reception

17. Which communication level has the greatest impact on the receiver?

       a. Content Level
       b. Interpersonal Level
       c. Personal Level
       d. Relationship Level

18. According to the text, this behavior probably sends the most negative message to another person:

       a. debating
       b. yelling
       c. ignoring
       d. arguing

19. What was given as the "tip" for improving your work relationship with co-workers?

       a. always say "hi" first
       b. never kiss up to your boss
       c. always look the other in the eye
       d. never be the first to say "hi"

20. According to the text, if your suggestion box is continually empty, the most likely problem is:

       a. failure to check the box often
       b. failure to lock the box
       c. failure to tell employees about the box
       d. failure to thank employees in a timely manner

MODULE FIVE: HAZARD IDENTIFICATION AND CONTROL

Introduction

In Module Four we studied about communication and how it can be used to improve employee involvement in the company's injury and illness prevention program. In this module, we'll take a look at how employees can get involved in proactive hazard identification (eh-heh...that should be hazard investigation) to help eliminate hazards in the workplace. So, let's get hopping!

OK...so what's a hazard?

Before we study identifying, investigating and controlling hazards in the workplace, it's important to know how OSHA defines the term. A hazard is:

Any workplace condition or a person's "state of being" that could cause an injury or illness to an employee.

Look around...what do you see?

I'll bet if you look around your workplace, you'll be able to locate a few hazardous conditions or work practices without too much trouble. Did you know that at any time an OSHA inspector could announce their presence at your corporate front door to begin a comprehensive inspection? What would *they* find? What do *they* look for? Now, if you used the same inspection strategy as an inspector, wouldn't that be smart? Well, that's what I'm going to show you in this module!

Controlling Exposure - The Hierarchy of Controls

Controlling exposures to occupational hazards is the fundamental method of protecting workers. Traditionally, a hierarchy of controls has been used as a means of determining how to implement feasible and effective controls. One representation of this hierarchy is summarized below.

1. Elimination
2. Substitution
3. Engineering controls
4. Administrative controls
5. Personal protective equipment

The idea behind this hierarchy is that the control methods at the top of the list are potentially more effective and protective than those at the bottom. Following the hierarchy normally leads to the implementation of inherently safer systems. The risk of illness or injury should be substantially reduced.

Elimination and **substitution**, while most effective at reducing hazards, also tend to be the most difficult to implement in an existing process. If the process is still at the design or development stage, elimination and substitution of hazards may be inexpensive and simple to implement. For an existing process, major changes in equipment and procedures may be required to eliminate or substitute for a hazard.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The initial cost of engineering controls can be higher than the cost of administrative controls or personal protective equipment, but over the longer term, operating costs are frequently lower, and in some instances, can provide a cost savings in other areas of the process.

Administrative controls and **personal protective equipment** are frequently used with existing processes where hazards are not particularly well controlled. Administrative controls and personal protective equipment programs may be relatively inexpensive to establish but, over the long term, can be very costly to sustain. These methods for protecting workers have also proven to be less effective than other measures, requiring significant effort by the affected workers.

Note: ANSI/AIHA Z10-2005 also includes "Warnings" as one of the strategies in the Hierarchy of Controls. However, I would classify this strategy as an administrative control because warnings are only as effective as the awareness of and compliance with their message. Warnings do not eliminate or reduce hazards.

The Five Workplace Hazard Categories

To help identify workplace hazards it's useful to categorize them into easy-to-remember categories. The first three categories represent hazardous physical conditions that, according to SAIF Corporation, account for only 3% of all workplace accidents. The fourth category describes behaviors in the workplace which may contribute up to 95% of all workplace accidents. The final category may contribute to both the hazardous conditions and unsafe behaviors, and therefore, may be ultimately responsible for fully 98% of all accidents in the workplace.

1. **Materials.** Hazardous materials include hazardous:

   - Liquid and solid chemicals such as acids, bases, solvents, explosives, etc. The hazard communication program is designed to communicate the hazards of chemicals to employees, and to make sure they use safe work practices when working with them.
   - Solids like metal, wood, plastics. Raw materials used to manufacture products are usually bought in large quantities, and can cause injuries or fatalities in many ways.
   - Gases like hydrogen sulfide, methane, etc. Gas may be extremely hazardous if leaked into the atmosphere. Employees should know the signs and symptoms related to hazardous gases in the workplace.

2. **Equipment.** This area includes machinery and tools used to produce or process goods. These examples all represent hazardous conditions in the workplace. Hazardous equipment includes machinery and tools.

   - Hazardous equipment should be properly guarded so that it's virtually impossible for a worker to be placed in a danger zone around moving parts that could cause injury or death. A preventive maintenance program should be in place to make sure equipment operates properly. A corrective maintenance program is needed to make sure equipment that is broken, causing a safety hazard, is fixed immediately.
   - Tools need to be in good working order, properly repaired, and used for their intended purpose only. Any maintenance person will tell you that an accident can easily occur if tools are not used correctly. Tools that are used while broken are also very dangerous.

3. **Environment.** This area includes facility design, hazardous atmospheres, temperature, noise, factors that cause stress, etc. Are there areas in your workplace that are too hot, cold, dusty, dirty, messy, wet, etc. Is it too noisy, or are dangerous gases, vapors, liquids, fumes, etc., present? Do you see short people working at workstations designed for tall people? Such factors all contribute to an unsafe environment.

4. **People.** This area includes unsafe employee behaviors at all levels in the organization such as taking short cuts, not using personal protective equipment, and otherwise ignoring safety rules.

5. **System.** Every company has, do some degree, a safety and health management system (SHMS). It's good to think of the "state" of the SHMS as a condition. For instance, management may develop and implement ineffective policies, procedures and safety rules. I consider a flawed SHMS as a systemic hazardous condition because it could increase the number accidents. If the condition of the SHMS is flawed, it may also result in manager and supervisor behaviors such as ignoring safe behaviors or by actually directing unsafe work practices that will contribute to accidents in the workplace.

To remember the five hazard areas, just remember the acronym...

MEEP = **M**aterials, **E**quipment, **E**nvironment, **P**eople, and **S**ystem.

Two strategies

To identify and control hazards in the workplace, two basic strategies are used. First, and most common is the **walkaround inspection**. Now, you probably have participated in a safety inspection, or at least have watched others conduct one.

- Most companies conduct safety inspections in compliance with OSHA rule requirements. But, is that good enough? Safety inspections may be effective, but only if the people conducting the inspection are properly educated and trained in hazard identification and control concepts and principles specific to your company. In high hazard industries which see change on a daily basis, it takes more than an occasional inspection to keep the workplace safe from hazards.
- In world-class safety cultures supervisors, as well as all employees inspect their areas of responsibility as often as the hazards of the materials, equipment, tools, environment, and tasks demand. It's really a judgment call, but if safety is involved, it's better to inspect often.
- Employees should inspect the materials, equipment, and tools they use, and their immediate workstation for hazardous conditions at the start of each workday. They should inspect equipment such as forklifts, trucks, and other vehicles before using them at the start of each shift. Again, it's better to inspect closely and often.

Inspection checklists...write'm and use'm!

- Use the following steps if you are asked to write questions for a safety inspection.
- Determine the area to be inspected.
- Ask workers in the area what tasks/jobs they do.
- Call OSHA Technical Services (1-800-922-2689) and ask one of their representatives to help you determine which rules apply to your workplace.
- Ask them to send you a copy of applicable rules.
- When you receive the rules (don't panic) read through the applicable sections and mark those rules that you feel might result in serious injury if violated.
- Change each marked rule into a simple question. Questions will start with the words: Do, does, is, are.
- Construct your checklist using the questions you have developed.
- Show your boss. He or she will be surprised! (You will probably become a safety director!)

Go online to download and use this **general safety inspection** checklist published by OSHA.

What's the major weakness of the safety inspection?

By its very nature, the walkaround inspection is ineffective in uncovering unsafe work practices because most inspectors look primarily at hazardous conditions and do not take enough time to effectively analyze individual task procedures. Sometimes the inspectors walk into an area, look up...look down...look all around...possibly ask a few questions, and move on to the next area (I call that the rolling-eyeball syndrome). In fact, the safety inspection may be effective in uncovering only about 3 percent of the causes for workplace accidents because the process only looks for conditions. Isn't it possible to inspect a workplace on a Monday, and then experience a fatality on Tuesday as a result of an unsafe work behavior that the inspection failed to uncover the day before? You bet it is.

So, what's the solution?

A walkaround inspection of this job site was completed just 30 minutes prior to this picture being taken. Did it catch this unsafe practice? This illustrates the major weakness of the inspection process. The Job Hazard Analysis (JHA) can be the answer to this weakness. It uncovers unsafe work practices as well as hazardous conditions because sufficient time is given to closely analysis of one unique task at a time. A typical JHA uses the following steps:

- While the employee accomplishes several cycles of the task, the supervisor or other person observes and takes notes about what's being done.
- Once the observation is completed, the analysts divide the task into a number of unique steps which are listed sequentially.
- Next, each step is analyzed to uncover hazardous materials, equipment, tools, and unsafe exposures are involved.
- Next, the hazards and exposures of each step are analyzed to determine the safety precautions required to eliminate or at least reduce any hazards or exposures present. This might include the use of personal protective equipment (PPE), using new or redesigned equipment, or changing the procedure itself.
- Lastly, a written safe work procedure (SJP) is developed for the entire task. The SJP is reviewed prior to accomplishing the task and it can also be used as a lesson plan to conduct training.

## Key Principle: Employees use their "own" procedures when not being directly supervised

Involvement is one of the key principles in making sure your safety management system (SMS) is effective (gets desired results). Management should involve employees/unions in all aspects of SMS development so that they will gain a sense of buy-in or ownership in the system.

Employee involvement in the JHA process helps ensure they will use the safe job procedure developed by the JHA when not being directly supervised. Employees want to work efficiently, and that means they're more likely to use procedures they believe will get the job done most efficiently. If they're not involved in developing safe job procedures, they're more likely to see their own (possibly less safe) procedures as more efficient. When employees are directly involved, supervisors can be a little more sure their employees are using safe job procedures.

Dig up the roots!

When investigating hazards discovered in a walkaround inspection or JHA, it's important that you uncover the root causes that have allowed those hazards to exist in the workplace. Taking this approach to hazard investigation is called root cause analysis.
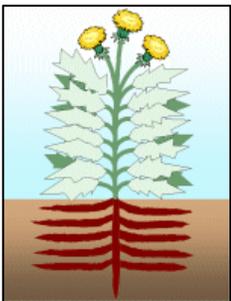
Check out the well-known "accident weed" to the left.

The flower represents the injury. It's the result of the transfer of an excessive amount of energy from an outside source to the body. This is called the **direct cause** of the accident.

The leaves of the weed represent hazardous conditions and unsafe work practices in the workplace. Conditions and/or practices are typically called the **surface or indirect causes** of an accident.

The roots of the weed represent management's effort to maintain a safe and healthful workplace, safety policies, safety supervision, safety training, and enforcement of safety rules. Think of these as management controls which pre-exist every hazardous condition, unsafe work practice, and accident. Inadequate or missing system components represent the **root causes** for accidents in the workplace. System weaknesses may include programs, policies, plans, processes and procedures (remember the "5 P's") in any or all of the seven element areas of the safety management system. Root causes may feed and actually promote or nurture hazardous conditions and unsafe work practices.

Research findings indicate hazardous conditions, alone, represent only about 3% of the causes for accidents in the workplace, while unsafe behaviors make up about 95% of the causes for accidents. Consequently, about 98% of all workplace accidents are ultimately caused by a combination of inadequate safety management system components, under the control of management, that result in hazardous conditions and/or unsafe work practices.

If you have <u>Adobe Acrobat Reader</u>, go online and take a look at a more complete **accident weed** with explanation.

The missing guardrail

You are conducting a walkaround safety inspection when you notice the guardrail along an elevated platform area is missing. As you now understand, the missing guardrail represents a hazardous condition and would be considered a surface cause if an accident occurred. But it also represents a symptom of a deeper problem...a root cause...a system weakness: What might that be? Use the accident weed to figure that out.

To make sure the guardrail gets replaced, and remains in place, you must always consider and correct the system weaknesses that allowed the hazardous condition in the first place.

Well, there it is: a few basic hazard identification, investigation and control concepts that will help you keep your workplace safe and healthful for all employees. If you develop effective inspection and JHA procedures, and always go after the root causes of the hazards you find in the workplace, you **will** be successful in proactive accident prevention. But don't rush off....it's time for a checkup!

MODULE 5 QUIZ

21. Unsafe _____ account for only about 3 percent of all workplace accidents.

      a. behaviors
      b. conditions
      c. situations
      d. people

22. Which cause category is ultimately most responsible for accidents in the workplace?

      a. hazardous conditions
      b. unsafe behaviors
      c. management system weaknesses
      d. lack of common sense

23. Which of the following is not one of the four areas within which all workplace hazards exist? (Hint: MEEP)

      a. materials
      b. employees
      c. energy
      d. people

24. What is a major weakness of the walkaround inspection?

      a. it takes too much time
      b. it looks only at conditions
      c. it isn't conducted often enough
      d. it requires experts

25. What system weaknesses might explain an unsafe behavior?

      a. inadequate supervision
      b. lack of training
      c. inconsistent enforcement
      d. any of the above

MODULE SIX: INCIDENT AND ACCIDENT INVESTIGATION
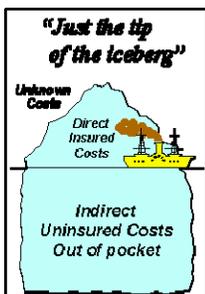
Introduction

The process of analysis is extremely important in identifying and eliminating those conditions, behaviors and system weaknesses that result in workplace accidents. In this module, we'll be discussing the various concepts, principles and procedures related to the analysis process so that you can, hopefully, transform your workplace, as close as possible, into a "risk free" zone.

Fix the system not the blame!

If your safety program fails to eliminate workplace hazards, chances are very likely an accident will result. When it does, it's important to conduct an effective accident investigation. Wait a minute! Did I say "investigation"? Well, wash my mouth out with soap. It's important that we get beyond accident investigation and perform an accident "analysis."

In most workplaces, the term "investigation" implies that the primary purpose of the activity is to establish blame. That may be why OSHA conducts their investigations, but to be most effective, you can't afford to get stuck in that rut. You've got to conduct this activity for the express purpose of improving your safety management system. The only way to receive any long-term benefit from accident analysis is to make sure system weaknesses are uncovered and permanently corrected.

Remember this graphic from the course introduction? The message is that there is a substantial cost to pay for each and every accident your company has.

Although accident investigation is a valuable and necessary tool to help reduce accident losses, it is always considerably more expensive to rely on accident investigation than hazard investigation as a strategy to reduce losses and eliminate hazards in the workplace. In some cases it may cost hundreds of thousands of dollars more as a result of direct, indirect, and unknown accident costs.

But, when the accident happens...it happens. And it's important to minimize accident costs to the company. This can be done if effective accident investigation procedures are used.

So, let's take a quick look at some basic concepts and then discuss the first steps to take in building an effective accident investigation program.

Accidents just happen...don't they?

Do they? Are they really unexpected or unplanned? If a company has 20 disabling injuries one year, and sets an objective to reduce the accident rate by 50% by the end of the next year, aren't they planning 10 accidents for that year? If they reach that goal, won't they be happy about it...content? "Hey, let's kick our feet up, pat ourselves on the back, and relax!" Is that really acceptable? (Just some food for thought.) You can't ever afford to relax, or be content in safety.

Incident and Accident defined

What is the difference between an incident and an accident? We'll use the following definitions for these two terms in this module:

- An **incident** is an unexpected event that may result in property damage, but does not result in an injury or illness. Incidents are also called, "near misses," or "near hits."
- An **accident** is an unexpected event that may result in property damage, and does result in an injury or illness to an employee.

A typical accident is the result of many related and unrelated factors (conditions, behaviors) that occur sometime, somewhere that somehow all directly or indirectly contribute to the injury event or accident. It is estimated that there are usually more than ten factors that contribute to a serious accident. Other experts state that an average of 27 factors somehow contribute to most serious accidents. What's the point here? Explaining why an accident occurred may not be an easy task.

Plan the work...work the plan!

When a serious accident occurs in the workplace, everyone will be too busy dealing with the emergency at hand to worry about putting together an investigation plan, so the best time to develop effective accident investigation procedures is before the accident occurs. The plan should include as a minimum procedures that determine:

- Who should be notified of accident.
- Who is authorized to notify outside agencies. (fire, police, etc.)
- Who is assigned to conduct investigations.
- Training required for accident investigators:
- Who receives and acts on investigation reports.
- Timetables for conducting hazard correction.

Accident Scenario: John's hurt bad... fell off a scaffold over at the worksite!

You've just been notified of an injury in the workplace and immediately swing into action. You grab your investigator's kit and hurry to the accident scene. By the time you get there, the Emergency Medical Team (EMT) is administering first aid. It's a serious accident so the victim is transported to the hospital. Now it's safe to investigate.

The first task is to secure the accident scene. The easiest way to do this is to place yellow warning tape around the area. If tape is not available, warning signs or guards may be required.

Just the facts, ma'm...just the facts

The next step in the procedure is to gather useful information about what directly and indirectly contributed to the accident. Interviewing eyewitnesses to the accident is probably one of the most important techniques in gathering information, but there are many other tools and techniques too.

Gathering background information about the accident may be accomplished in many ways.

Of course you want to get initial statements through interviews with eyewitnesses. They can give you much information about the circumstances surrounding the accident. You should tell those who you initially interview that you may conduct follow-up interviews if more questions surface. Interview other interested persons such as supervisors, co-workers, etc.

You should also review any records associated with the accident, including:

- Training records Disciplinary records

- Medical records (as allowed)
- Maintenance records
- EMT reports
- Police reports (rare)
- Coroner's report (fatalities)
- OSHA 300 Log (past similar injuries)
- Safety Committee records

More methods include:

- Take photographs of the scene.
- Videotape the scene.

- Make sketches of the scene.
- Make observations about the scene.
- Include measurements.

Remember you are gathering information to use in developing a sequence of steps that led up to the accident. You are ultimately trying to determine surface and root causes for the accident. It is not your job, as an accident investigator, to place blame. Just gather the facts.

What happened next?

Now you've gathered tons of information about the accident, and it's piled high on your desk. What do you do with it? It's important that you read through the information initially to develop an **accurate sequence of events** that led up to and included the actual injury event. See what an accident investigation sequence of events might look like. OSTN Online Safety Training Course 702, Effective Incident/Accident Investigation, covers this topic in more detail on this subject.

It's important, here, to note that one of the symptoms of conducting accident investigations to determine liability is that not much analysis is conducted once liability can be established. On the other hand, in a fix-the-system culture, analysis is in-depth and the question of liability does not surface until after system weaknesses have been determined. If system weaknesses did not in any way contribute to the accident, the question of discipline may be discussed.

What caused the accident?
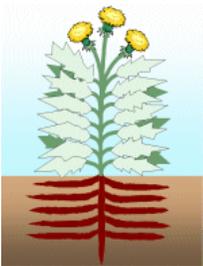
The next step is to determine surface causes. This step may be difficult because you are first searching for the **surface causes** of the accident in each step. This can take some time. From the clues you uncovered during this phase of the analysis, you'll be able to determine the system weaknesses or **root causes**. Remember, just like the leaves on the plant to the left, surface causes are usually pretty easy to see and not too difficult to uncover. However, you may find it takes a great deal more time to accurately "dig up" the underlying safety management system weaknesses that contributed to the accident.

Surface causes. The conditions and behaviors directly or indirectly producing the accident. A readily apparent reason for an accident/incident that usually appears early in an accident/incident investigation. A long-lasting corrective action does not come from a surface cause. A surface cause leads to a root cause. Primary surface causes directly cause the accident and usually involve the victim and some object or behavior. Secondary surface cause are unique conditions or behaviors that indirectly contribute to the accident. Secondary surface causes can occur anytime, by any person in the organization, and at any location. Conditions are objects or "states of being." Behaviors describe some sort of action, activity. Examples:

- Unguarded saw (condition)
- Horseplay (behavior)
- Not using hearing protection when required (behavior)
- Slippery floor (condition)
- Inadequately trained employee (condition)

Root causes. Underlying system weaknesses that indirectly produce the primary and secondary surface causes leading to the accident incident/accident. The system weaknesses always exist prior to the surface causes that produced the accident. They are the programs, policies, plans, processes, and procedures in any of the seven elements or activity areas in a safety management system. It takes more in-depth investigation and results in long-lasting corrective action that can prevent repetition of the accident. A root cause may be referred to as a "basic" cause in OSHA accident investigation reports.

- Inadequate or missing safety training plan.
- No clearly stated supervision.
- No inspection procedures.
- Inadequate hazard reporting process.
- Inadequate purchasing policy.
- No progressive discipline process.

Time to report...

Now that you have developed the sequence of steps leading up to, and including the accident, and determined surface and root causes, it's time to report your findings. Some employers also ask accident investigators to make recommendations for corrective action, so be prepared for that.

Most companies purchase accident investigation forms. That's fine, but some forms leave little room to write the type of detailed report that is necessary for a serious accident. If you use such a form, make sure you attach important information like the sequence of events, and findings which include both surface and root causes.

A better idea is to develop your own report form that includes the following five sections:

Section One: Background Information. This is the who, what, where, whey, why, etc. It merely tells who conducted the inspection, when it was done, who the victim was, etc: Just a fill-in-the-blank section.

Section Two: Description of the Accident. This section includes the sequence of events you developed to determine cause. Just take the numbers off, and make a nice concise paragraph that describes the events leading up to, and including the accident.

Section Three: Findings. This section includes a description of the surface and root causes associated with the accident. List the surface causes first, and then their associated root causes. Remember, your investigation is to determine cause, not blame. It's virtually impossible to blame any one individual for a workplace accident. Don't let anyone pressure you into placing blame.

Section Four: Recommendations. This section may be part of your report if requested by your employer. Recommendations should relate directly to the surface and root causes for the accident. For instance, if one of the surface causes for an accident was a slippery floor, the related recommendation should address eliminating that hazard through:

- Engineering controls
- Work Practice controls
- Administrative controls
- Personal protective equipment

It's crucial that, after making recommendations to eliminate or reduce the surface causes, you use the same procedure to recommend actions to correct the root causes. If you fail to do this, it's a sure bet that similar accidents will continue to occur.

Section Five: Summary. In this final section, it's important to present a cost-benefit analysis. What are the estimated direct and indirect costs of the accident being investigated? These represent potential future costs if a similar accident were to occur. Compare this figure with the costs associated with taking corrective action? You may want to address return on investment also. Information on cost benefit analysis is presented in OSHAcademy Course 702.

Well, there it is. Remember, an effective accident investigation program will help to prevent similar accidents from happening and minimize accident costs. OK, ace detective, it's time to take the quiz.

MODULE 6 QUIZ

26. According to the text, OSHA investigates to fix the _____ but to be most effective we need to analyze accidents to fix the _____.

      a. surface causes, root causes
      b. blame, system
      c. penalties, blame
      d. conditions, behaviors

27. Methods for gathering information for an accident investigation include all of the following, except:

      a. photos
      b. witness statements
      c. determining level of discipline
      d. event analysis

28. Once the sequence of events has been developed, what is the next step in the accident analysis process?

      a. surface cause analysis
      b. root cause analysis
      c. determine appropriate discipline
      d. write the report

29. Which cause category has the greatest impact on eliminating future accidents?

      a. special causes
      b. root causes
      c. surface causes
      d. common causes

30. Which of the following control strategies eliminates or reduces the hazard, itself?

      a. engineering controls
      b. work practice controls
      c. administrative controls
      d. personal protective equipment

MODULE SEVEN: SAFETY EDUCATION AND TRAINING

Introduction

This module will introduce you to general OSHA requirements for education and training. However, I will emphasize "getting beyond compliance" by addressing best practices in effective safety and health education programs. To learn more about safety education and training, be sure to complete OSTN Course 703, Train the Safety Trainer.

The Big Picture

Safety education and training is extremely important to ensure all processes in your company's safety and health management system are effective. If this critical element is missing, none of the other system elements can, or will be effective. But, this element is often neglected or managed ineffectively because the benefits may not be immediate, tangible, and directly related to profits. Managers may find it difficult to see the long-term improvements in process and product quality that result from an effective safety education and training program. It's hard to see the big picture: to see the accidents that <u>don't</u> happen.

What are the OSHA training requirements?

It's outside the scope of this training module to cover all OSHA training requirements, but I'll point you to some good references that will help you determine those requirements specifically for your company. These references are in Adobe Acrobat format and require the free **Acrobat Reader** software.

Be Trained. OSHA's Training Requirements Guide. Here's a great booklet that covers many OSHA training requirements and also gives you some ideas on training strategies.

Assessing Occupational Safety and Health Training: A Literature Review. (621K) This NIOSH sponsored report reviews data found in the literature reflecting the significance of training in meeting these kinds of objectives and outcomes. An analysis to identify factors underlying a successful training experience is also presented .

Ok...now let's get beyond compliance

I want to make sure you firmly understand that, to be effective, your program must include safety education <u>and</u> safety training. But, how do the objectives differ between education and training?

Education and Training: What's the difference?

We educate to show why. There are many definitions for education. Within the context of occupational safety and health, education describes who, what, where, when, and most importantly, why safety procedure and practice are necessary. Education informs, persuades, and motivates to affect attitude.

To make sure safety education and training is effective, it's necessary to tie it to accountability. One of the most effective ways to do this is to emphasize the natural and system consequences that result from the appropriate application of what's being learned. Natural consequences describe the type of injury/illness that might result if we don't follow procedures. The system consequences describe the disciplinary process if we fail to comply, and the recognition and possible reward we will receive if we meet or exceed expectations. Remember, we do what we do in the workplace because of consequences. Safety education and training must make consequences clear.

Safety education is effective in saving lives by primarily increasing our knowledge. Increased knowledge will improve attitudes and skills. For example, Gary, a recent student wrote:

"I stress to my co-workers that a life jacket is mandatory on deck. We hired a young guy who was a swimmer in college. He felt his swimming skills were such that he did not need the jacket. We educated him on hypothermia and that he could not save himself if he fell over in 35 degree water. Once he understood the hazard, he wore the jacket at all times, because he wanted to, not because he had to."

We train to show how. Training, as a form of education, has a slightly different definition . Safety training is primarily concerned with affecting attitude through improving skills. This is generally accomplished through demonstration -- showing how to safely accomplish the steps of a particular task or procedure. For instance, I might train someone how to accomplish the procedures for lockout/tagout, or clean up an incidental chemical spill.

The number one reason employees don't follow safety rules is that they don't know why they are important!

To make sure safety education and training is effective, it's necessary to tie the training to accountability. One of the most effective ways to do this is to emphasize the natural and system consequences that result from the appropriate application of what's being learned. Consequences represent the <u>why</u> in safety education.

Natural consequences describe the type of injury/illness that might result if we don't follow procedures. For instance...

- An employee breaks an arm or leg as a result of a fall.
- An employee escapes injury by properly using a personal fall arrest system.

System consequences describe the organizational response to performance. For instance...

- An employee would be subject to a disciplinary process for failing to comply with safety rules.
- An employee might be recognized for meeting goals or exceeding expectations.

Remember, we do what we do in the workplace because of consequences. Safety education and training must make consequences clear.

We train to show how. Training, as a form of education, has a slightly different definition . Safety training is primarily concerned with affecting attitude through improving skills. This is generally accomplished through demonstration -- showing how to safely accomplish the steps of a particular task or procedure. For instance, I might train someone how to accomplish the procedures for lockout/tagout, or clean up an incidental chemical spill.

Why is education so important?

Earlier I said that education tells the "why" in a learning process. In safety and health, the why can save a person's life. By far the most common reason workers do not follow safety rules (or any rule) is that they don't understand **why** doing so is important. They don't understand the consequences.

For instance, I'll bet your company has a list of safety rules that they asked you to read when you were first hired. Did anyone discuss with you at that time each rule, and why that rule was important to follow? Likely not. (There's always an exception to this, and if you are one...congratulations!) If you only have a list of rules, you may want to suggest incorporating a short paragraph explaining why the rules are important.

If your company attempts to institute change in any part of the safety and health program (or any other program), the effort will fail if the company only trains people how to change without educating in such a way that not only informs, but also motivates and persuades workers that the change is necessary and in everyone's' best interest.

It's all about "Show and Tell"

Safety education and training doesn't have to be difficult or expensive: it's not rocket science. So, what is probably the best and most common method to train specific safety procedures? On-the-job show and tell.

A Simple Seven-Step On-The-Job (OJT) Training Process

Safety training should be simple training. Hopefully, it's done where the task is performed. Hopefully the supervisor - the person responsible for the worker's safety - is conducting the training. Why...? Well, if a supervisor isn't knowledgeable enough to train safe procedures, how can he or she properly supervise, discipline, or recognize safety behaviors adequately? (Sorry...got on my soap box again.)

Below is a simple seven-step OJT training process that helps to ensure new employees don't get hurt while being trained. Now I know that might sound funny, but it's happened. Especially notice in step 3 that the employee must get permission to continue. That's a critical component of the safe procedure.

Step 1. Introduction. State and discuss the learning objectives and answer any questions the employee may have. Discuss the acceptable standards of knowledge and performance. Tell the trainee what you're going to train. Emphasize the importance of the procedure to the success of the production/service goals. Invite questions. Emphasize the natural and system consequences of their performance. The natural consequences describe the hurt or health that automatically results. The system consequences are those consequences the organization applies as a result of an employee's performance; discipline or positive recognition.

Step 2. Trainer shows and tells. In this step the trainee becomes familiar with each work practice and why it is important. Review the initial conditions for the procedure. Demonstrate the process, carefully explaining each step as you go. Answer questions and continue to demonstrate and explain until the employee understands what to do, when and why to do it, and how to do it.

Trainer: EXPLAINS and PERFORMS each step.

Learner: OBSERVES each step and QUESTIONS the trainer.

Step 3. Learner tells - Trainer shows. This step is necessary when exposure to hazards inherent in the procedure could cause serious harm. It protects the trainee because the trainer performs the procedure. The trainee explains the procedure to the trainer, while the trainer does it. This gives the trainer an opportunity to discover whether there were any misunderstandings in the previous step. The trainee also responds to trainer questions.

Learner: EXPLAINS each step and RESPONDS to questions.

Trainer: PERFORMS each step and QUESTIONS the trainee.

Step 4. Learner shows and tells. The trainer has the trainee do it. The trainee explains the step, gets permission to perform the step and then carries out the step. This step is very important when training tasks that might result in serious physical injury or death if not performed correctly. The learner may try to perform the task too quickly, increasing the probability of an injury. Requiring permission helps prevent this from happening.

Learner: EXPLAINS the step, gets PERMISSION and then PERFORMS each step.

Trainer: Give PERMISSION and OBSERVES each step, ask QUESTIONS as the trainee performs.

Step 5. Conclusion. Recognize accomplishment – "Good job"   Reemphasize the importance of the procedure and how it fits into the overall process. Tie the training again to accountability by discussing the natural and system consequences of performance.

Step 6. Document. Training documentation should be more than an attendance sheet. See the sample training certification document on the next page. It represents one possible way to document training. Strong documentation includes:

- Trainee's and trainer's name.
- Date of training.
- Subject(s) being trained - procedures, practices, related policies, rules, etc.
- Certification - trainee and trainer signatures.

- Trainee statement of understanding and intent to comply.
- Trainee statement that he/she was provided opportunity to practice.
- Trainer statement that testing of knowledge and skills was conducted.
- Trainer statement that student demonstrated adequate knowledge and skill.

Step 7. Validate. At some point in time after the conclusion of the OJT session, observe and question the employee to validate that the training has been successful and that the employee has developed a proper attitude related to the work. There it is. You are ready to go out there and train the world. No, not really. You've received a few of the technical concepts and ideas for training in this module, but in reality there is an art as well as a science to training. Like any artistic endeavor, only practice and long-suffering will produce excellent work. So, go forth and train! Oh, but before you do, it's time to...you guessed it, take the quiz.

MODULE 7 QUIZ

31. Safety education must tell _____ and safety training primarily tells _____:

>   a. where, when
>   b. how, why
>   c. when, where
>   d. why, how

32. You're a supervisor. You implement changes, but they usually fail. The most likely reason is that:

>   a. you're failing to train
>   b. you're failing to send an email
>   c. you're failing to enforce the change
>   d. you're failing to educate

33. According to the text, what is probably the best and most common method to train specific safety procedures?

>   a. lecture
>   b. show and tell
>   c. online training
>   d. classroom discussion

34. In the six-step OJT procedure, this component helps make sure the new employee does not get injured performing a step in the task being learned:

>   a. explain the step
>   b. do the step
>   c. get permission
>   d. ask questions

35. All of the following are necessary to adequately document training, except:

>   a. intent to comply
>   b. certification of knowledge and skills
>   c. worker name, date, subject
>   d. test scores

MODULE EIGHT: TOTAL QUALITY SAFETY MANAGEMENT

A Never Ending Story

Congratulations on reaching the last module in this course. Actually, this is just the start of a continuous safety improvement process upon which you and others in your company will hopefully embark. The module is quite long, so you may want to print it out first, do the work off-line and then enter/submit the answers later.

In this module we'll examine Total Quality Safety Management concepts that apply to all elements of the safety and health management system. Since we're talking about "life and limb," continuous evaluation and improvement of the safety and health management system is all the more important to make sure all elements are in place and effectively maintained.

Quality and Safety: Partners in productivity

It's important to think of safety as an important aspect of both product and process quality in the workplace. In this course, we'll address those concepts and principles that apply safety specifically to process safety. Let's take a brief look at how product and process safety differ.

Product quality is elusive. The only way you know you have it is by asking those who define it: The customer. All the company can do is to try hard to produce a product that fits the customer's definition of quality. When the product is designed to prevent injury or illness, the customer will define the product as safe. As we all know, customer perceptions about product safety are very important these days. Unfortunately, some companies do not take safety into consideration when designing their products. Consequently they may unintentionally design unsafe or unhealthful features into their products.

Process quality and safety are very closely related. Process quality may be considered <u>error-free</u> work, and safety, as one element of process, can be thought of as <u>injury-free</u> work. When an injury occurs, the "event" increases the number of unnecessary and wasted steps in the production process. How does safety fit into the continuous quality improvement philosophy?

The Shewhart/Deming Cycle

After asking the questions above, you may discover that one or more improvements to your training program is necessary, it's important to carefully develop and implement the change through effective change management principles.

One simple change management technique is to use the Plan-Do-Study-Act (PDSA) Cycle, first developed by Dr. Walter Shewhart, and later applied by W. Edwards Deming, the father of total quality management, to transform the industry of Japan after World War II. He promoted the PDSA Cycle that was partly responsible for Japan's meteoric rise in manufacturing. He believed that statistics hold the key to improving processes, and that management must take responsibility for quality in the workplace because management controls the processes.

Step 1: Plan - Design the change or test. Take time to thoroughly plan the proposed change in the training program before it's implemented.

Step 2: Do - Carry out the change or test. Implement the change or test it on a small scale.

Step 4: Act - Adopt, abandon, or repeat the cycle. Incorporate what works into the system. Ask not only if we're doing the right things, but ask if we're doing things right.

Step 3: Study - Examine the effects or results of the change or test. To determine what was learned: what went right or wrong. Statistical process analysis, surveys, questionnaires, interviews.

What is Total Quality Management (TQM)?

Total Quality Management is a strategic approach to management that takes advantage of all corporate resources to continually improve performance and processes so that they may ultimately be error free. The result is a product or service that greatly exceeds customer expectations.

The champions of Total Quality Safety Management

Dr. W. Edwards Deming is considered by most to be the father of Total Quality Safety Management. He was probably more responsible than any other person for Japan's meteoric rise in manufacturing. He believed that statistics hold the key to improving processes, and that management must take responsibility for quality in the workplace because management controls the processes. This module will take a look at his 14 Points of Total Quality Safety Management as they relate to safety.

Joseph M. Juran was a contemporary of Deming, and a second great contributor to the success of Japan's management revolution of the 40's and 50's. He viewed quality problems as 80% the result of weaknesses in the management system and 20% attributable to workers. He would have, no doubt, the same opinion about the causes of workplace injuries and illness. Like Deming, he admonished managers to avoid campaigns and slogans to motivate the workforce to solve the company's quality problems. He favored the use of quality circles because they improved communications between management and labor, and would have surely improved of the idea of management-labor safety committees which have been established for the same purpose.

Philip B. Crosby, a quality expert, was responsible for quality for the Pershing missile project at Martin Corporation, was director of quality for ITT, and in 1979 formed Philip Crosby Associates. He defines quality as "Conformance to requirements, ...which can only be measured by the cost of nonconformance." He might consider safety as the "conformance to injury- and illness-free work practices, ... which can be measured only by average industry costs." Like Deming, he developed 14 steps to quality improvement.

You'll find more about each of these contributors to continuous quality improvement by reading the texts listed at the beginning of this module.

Deming's Fourteen Points Applied to Total Quality Safety

Deming's 14 Points form some of the most important concepts and approaches to continuous quality improvement philosophy. The focus of this module is to better understand and apply each of Deming's 14 points to workplace safety. So, let's examine what he says about quality, and how it can be applied to safety.

> **Point 1. Create a constant purpose to improve the product and service, with the aim to be**

> **competitive, stay in business, and provide jobs.**

Deming spoke about the "problems of today and the problems of tomorrow," and that management in America today tends to focus only on today's problems when it should be placing increased, if not most emphasis on tomorrow's threats and opportunities to improve competitive position. Management should be focused constantly on improving the safety of materials, equipment, workplace environment, and work practices today so that it can remain successful tomorrow. The objective of continually working toward a safe and healthful workplace today, so that fewer injuries and illnesses occur in the future fits well with Deming's constancy of purpose. If management successfully communicates the clear, consistent message over the years that workplace safety is a core <u>value</u> (as stated in the mission statement), and there are "no excuses" for accidents, the company can be successful in developing a world-class safety culture. If a company considers safety only a <u>priority</u> that may be changed when convenient, constancy of purpose is not communicated.

> **Point 2. Adopt a new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for a change.**

We continually teach that management must step outside itself to reflect, to take a new look at what its purpose is, long term. Safety can never be understood or properly appreciated if only the short term view is taken by management. Quick fix programs to "impose" change will not work. Only understanding of the long term benefits will give management the vision to properly and consistently send and act on the message of workplace safety.

The old philosophy accepts as fact that a certain level of injury and illness will result from a given process, and that the associated costs should represent one of many costs of doing business.

The new safety philosophy strives to:

- Prevent injuries and illnesses by continually analyzing and improving upstream factors such as work practices, equipment design, materials, and the workplace physical and cultural environment through education, training and recognition.
- Improve product safety for the benefit of the customer.

> **Point 3. Cease dependence on mass inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.**

Deming was referring to the practice of inspecting every piece of product at the end of an assembly line to separate out the defects. Instead, he encouraged improving the quality of the process to decrease the defects, thus eliminating the need for mass inspection. When we apply this to safety, Deming might consider relying on the results (defects) as measuring our success solely by counting the number of accidents (also defects) that occur. No consideration is given to measuring employee and management-level safety activities.

In safety, evaluating only results statistics is like driving a car down the road and trying to stay in your lane by looking through a rear-view mirror. All you can do is react, after the fact. When we only analyze accident rates, we can only react to the number. Accident rates tell us nothing about why the accidents are happening. The old safety philosophy we discussed above primarily measures injury and illness rates (defects) which represent the end results of the safety component of the process. Incident rates, accident rates, MOD rates, etc. all measure the end point, and since these measures are inherently not predictive, these statistics provide little useful information about the surface and root causes (upstream) for injuries and illnesses.

The new philosophy emphasizes measurement along the entire production process, primarily:

- Measurement of management/supervisor safety activities;
- Employee safety education and training;
- Individual worker behaviors; and
- Materials and equipment design prior to purchase.

> **Point 4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.**

Safe equipment, materials, and chemicals may cost a little more but will save in the long-term through fewer injuries and illnesses. Management should write safety specifications that meet their requirements into contracts. Even today, manufacturers of equipment and machinery sell equipment that does not meet NEC, NIOSH, ANSI, or other safety standards for product safety. Employers purchasing such equipment run increased risk of injury and illness to their employers.

With respect to personal protective equipment (PPE), "cheap" is not better. Ensuring employees have high quality personal protective equipment is smart business when we realize that it's a profit-center activity. How's that? If you spend $5,000 in various types of PPE in a given year and any one piece prevents a serious injury, your company has just paid for all the PPE for that year and probably for many years into the future. The money spent on PPE should be thought of as an investment that may result in substantial returns (reduced direct and indirect accident costs) to the company. Unfortunately, many consider only the initial cost of PPE. They don't see the big picture benefits.

Relying on a single supplier for safety equipment, such as personal protective equipment, may have many benefits. Supplier representatives, calling on an employer over a period of years, will become familiar with the particular safety equipment needs of the employer. The employer who establishes a long-term close relationship with the supplier is more likely to receive the attention and higher quality equipment when requested. Developing a close, cooperative partnership between the employer and the supplier of safety equipment is extremely important for the success of both parties, and is possible by applying the single supplier principle.

Point 5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

A system refers to a number of processes or procedures that have been standardized. Everyone does something the same way. It's important to have an effective safety and health management system. What safety process or procedure might be standardized to improve your company's safety and health management system?

Jeffrey Castillo, CSP, states that "Traditionally, safety functions have been under the direction of the human resource department, which places safety and health at odds with the organization's primary goals: to produce and sell goods/services. Too often, managers in other departments feel the safety manager (alone) should contain costs, solve safety problems via training or committees, and reduce injury costs. Yet, in most cases, the safety manager must accomplish such tasks while other managers increase production goals." Jeffrey E. Castillo, CSP, IHIT, "Safety Management: The Winds of Change." *Professional Safety*, Feb 95.

Management must integrate safety as an element of quality into operations so completely that it disappears as a separate function. It must be viewed by each employee, supervisor and manager as his or her personal responsibility; one that is important in not only improving the production process, but in saving lives.

Point 6. Institute training on the job.

Some companies today consider training a cost, not a benefit. How many workers are properly educated and trained in supervisory, management, and leadership principles as they move up the corporate ladder? Have you ever been in a situation where the worker who "makes the most widgets" gets promoted? Does management assume new supervisors and managers know what they're doing?

Currently many companies rely on the safety director or the human resources department to train safety. The new employee receives a safety overview when hired, and a safety "expert," conducts more specific training related to the employee's job exercise. The supervisor, in many instances, does not think he or she is getting paid to train safety. But, who is better suited to do the training than the person responsible for the safety and health of his or her employees? If the supervisor cannot train safety, how can he or she have the

knowledge to effectively oversee safe work practices? How can the supervisor provide effective safety feedback? How can the supervisor, when needed, properly enforce safety rules?

The supervisor cannot perform any of these responsibilities unless he or she thoroughly understands safety concepts and principles, the hazards in the workplace, and is competent to train those subjects specifically related to the workspace he or she controls. The human resources department or the safety director can't provide that quality of training for a couple of reasons: They don't work in the area, and they're "not the boss."

> **Point 7. Adopt and institute leadership. The aim of supervision should be to help people and machines do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.**

The key to adopting and instituting leadership, of course, lies at the top. Management needs to lead by example, action, and word. The leader "cares" about those he or she leads. After all, the leader's success is tied to the success of his or her workers. The "servant leadership" model fits well into the ideas expressed by Deming and others.

There is no better way to demonstrate these principles of leadership than in making sure employees use safe work procedures in a workplace that is, itself, safe from hazards. Ensuring safety is one of the most visible undertakings that management can take to show employees that they are not merely hired hands who can be replaced, but are valued human resources...part of the family.

> **Point 8. Drive out fear, so that everyone may work effectively for the company.**

Driving out fear is the most important requirement when implementing a Total Quality Safety Management process. **You must begin here.** Management controls the workplace. It influences the standards of behavior and performance of its employees by creating cultural norms in the workplace that dictate what are, and are not acceptable behaviors. Management may rely solely on safety rules and progressive discipline (negative reinforcement) in their attempt to control the safety behavior and performance of its employees. However, a strategy such as this, that may be successful in forcing compliance, is never successful in producing excellence in product or process. Strategies using fear and control are rarely, if ever successful. What develops from such a strategy is a controlling, compliance driven climate of mistrust and disgust; only a shell of an effective safety and health management system.

In the TQM system, managers and supervisors drive out fear through a real commitment to fact-finding to improve the system, not fault-finding to punish someone. They emphasize uncovering the weaknesses in the system that have allowed unsafe work practices and hazardous conditions to exist. They educate and train everyone so that those weaknesses are strengthened, thus helping to continually improve the production

process. They recognize employees for appropriate safety behaviors; compliance with safety rules, reporting injuries immediately, and reporting hazards in the workplace. Trust increases. Morale and motivation improve because employees are not afraid to report safety concerns to management. Safety is never a complaint in a TQM organization.

> **Point 9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.**

We should only compete with our competitors, not ourselves. Internal cooperation and external competition applies to safety as well. Cooperation among all internal functions is another key to effective safety.

Competitive safety incentive programs. Reactive safety incentive programs that challenge departments to compete against each other for rewards set up a system that may promote illegal behaviors by creating situations where peer pressure causes the withholding of injury reports. Consequently, the "walking wounded syndrome" develops that eventually results in increased injury costs and workers compensation premiums. The performance of one employee impacts the success of others in the department. Employees will do virtually anything, in some cases, to ensure the department gets their pizza parties, saving bonds, or safety mugs. The fix: Reward/recognize employees individually for appropriate behaviors: complying with safety rules, reporting injuries and reporting workplace hazards. Reward activities that enhance cooperation.

Bringing management and labor together. Cooperation at all levels of the company to identify and correct hazards is very important. Of course, the process designed to promote this kind of cooperation is called the safety committee (or safety improvement team). A world-class safety system will take advantage of the cross-functional makeup of safety committees to bring management and employees together in a non-adversarial forum to evaluate programs and make recommendations for improvement in workplace safety.

> **Point 10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.**

What! Zero defects is not an appropriate goal? Does that apply to safety too? Remember, Deming is talking about product defects here. The related safety goal might be "zero accidents." Although this goal may be unachievable, it's the only morally appropriate goal to have because we are dealing with injuries and fatalities. If we set a goal of anything less than zero accidents, what's going to happen? If we reach the goal,

we pat ourselves on our collective back, sit back with our feet up on the desk, and believe we "have arrived." When this occurs, you can bet your accident rate will start rising once again. Contentment is a dangerous condition in safety. If we set zero accidents as our goal, we may never reach it, but that's fine. We should never be content anyway. We should always be frustrated...never satisfied to make sure we continually improve the system.

If we set a goal to reduce accidents by 50%, we will design a less effective system to get us to the goal, but no farther. If we set a zero-accident goal, we will design the more effective system to reach that goal. On another line of thought: In safety, the "happy poster syndrome" is a common occurrence. Managers think that by placing a safety poster every thirty feet on a wall, they have a successful safety awareness program. Employees, for the most part, ignore the posters, and may not believe the message that management is trying to convey. The Fix: Get rid of the posters and meaningless slogans. Replace them with action, example, and word. Each supervisor and manager becomes a walking safety slogan.

> **Point 11. Eliminate numerical quotas for the workforce, and eliminate management by objectives. Eliminate numerical goals for people in management. Substitute leadership.**

According to Krause, in the safety field, many reward systems and performance appraisals are based on numerical goals and measures, such as incident rates, that are untested for random variability....this could mean receiving an undeserved bad performance rating...On the other hand, ignorance of the concept of random variability also means that work groups often get good safety ratings when they do not deserve them.

The problem with measuring the success of a company's safety effort using incident rates is that once the rate has been reduced to what management feels is an acceptable level, complacency sets in, the effort to reduce incident rates relaxes, and incident rates begin the inevitable rise to previous unacceptable levels. Management reacts to the increase in incident rate with a renewed safety emphasis. This reactive management approach to loss control, based on end results (defects), creates an endless cycle of rising and falling incident rates.

Deming would look upon such a situation with dissatisfaction (and wonder). He would probably encourage management to do away with any numerical quotas or goals based solely on unpredictable measures such as incident frequency rates. He would stress the need to measure upstream activities such as the degree of safety education and training, number of safety meetings, individual safe work behaviors, and the safety of materials, chemicals, and equipment purchased by the company.

In emphasizing TQM principles, the company may never realize sustained zero accident rates, but the critically important ingredient in a successful process, that of continually journeying closer to that end state would be realized. Focus on the journey, not the result.

Relying solely on quotas in the "production" system results in management looking the other way, when unsafe work practices, and hazardous conditions exist. A macho (it is part of the job) attitude by management, under pressure to produce the numbers, results in higher rates of injury and illness. Very little thought is given to the human tragedy involved with serious injuries or fatalities. Even less thought to the indirect and 'unknown and unknowable' losses to the company. Management must understand the danger of the pressure ever-increasing quotas place on supervisors and employees. Short cuts in work practices are inevitable, and along with them, injuries and illnesses.

Remember, managers and employees should be held accountable only for what they can control. It's difficult to control statistical results. However, as we learned earlier, they can control activities.

> **Point 12. Remove barriers that rob people of pride of workmanship.**

According to Deming, the responsibility of supervisors must be changed from sheer numbers to quality. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. Abolish the annual merit rating and adopt continual feedback processes. Deming offers some interesting ideas here, but they are crucial to success in safety as well as production.

Supervisors must ensure their workers receive equipment and materials that are as safe as possible. Employees should work at stations that have been ergonomically designed for them to decrease the possibility of strains and sprains, and repetitive motions disease which represent the greatest category of workplace injury and illness in the workforce today. Workers require and deserve the highest quality personal protective equipment to protect them from workplace hazards. The highest quality safety equipment, materials and environment all contribute to pride of workmanship.

> **Point 13. Institute a vigorous program of education and self-improvement for everyone.**

Continual learning is an important concept. It's important that employees be educated in personal and professional skills. Safety certainly applies here as well. Return on the investment made in education is well worth the money.

Weekly or monthly safety education and training sessions, when conducted properly by supervisors, can go far in improving the performance of employees, and would send a strong message to all that safety is a core value in the company. Unfortunately, most companies do not see the wisdom in adopting the principle that to be successful today, each manager and employee in the company must be continually learning. Currently, most employees receive very little safety training, internal or external, on safety related topics.

> **Point 14. Take action to accomplish the transformation.**

Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job. What a concept! Put everybody to work to accomplish the transformation. How can we do this when it comes to safety and health?

Here's the hard part. Someone must have the vision: If not top management, who? How do you shift responsibility for safety from the safety director and/or safety committee to line management? If the effort does not have the blessing of the CEO (with action), the transformation may never be successful. The safety committee may serve as the catalyst to initially begin the planning for the transformation. Expanding the size of the committee, then breaking it into "safety teams" specializing in various process functions in the company might be a way to go. However, educating up is crucial if top management balks at the need for the transformation. The safety committee must provide the education (usual data... sorted... objective... bottom line) to influence the perceptions that ultimately shape the transformation. Up hill all the way.

Last words...

Taking on the goals of TQSM is not an easy task. If you decide to begin the TQSM journey, be sure to continue your study of the concepts. Go slowly and don't expect big changes overnight. Ultimately, you are attempting to change culture and that process can, and probably will, take years.

MODULE 8 QUIZ

36. Quality safety in the workplace may be thought of as one aspect of _____ - free performance:

    a. quality
    b. emotion
    c. error
    d. stress

37. This person is considered by most to be the father of Total Quality Safety Management:

    a. Peter Drucker
    b. Howard Trump
    c. W. Edwards Deming
    d. Bill Gates

38. According to the text, safety can never be understood or properly appreciated if the _____ view is taken by management:

    a. national
    b. global
    c. long-term
    d. short-term

39. According to Deming, this is the most important requirement when implementing a Total Quality Safety Management process:

    a. instituting continuous safety education and training
    b. expressing constancy of purpose
    c. driving out fear in the workplace
    d. purchasing safe materials and equipment

40. The primary idea behind Total Quality Safety Management is that improvement should occur _____:

    a. continually
    b. often
    c. regularly
    d. just in time