

Compliance vs. Injury Prevention

**Gary A. Higbee EMBA CSP
Senior Consultant
SafeStart SafeTrack
Johnston, Iowa**

Introduction

Well we all think compliance with the safety laws and regulations will lead to injury reductions and it does at first. After all compliance and injury reduction are supposed to be the same thing. Well they are the same thing for a while but there is a point in time where they are not the same thing and everyone knows it. The reason we have OSHA laws is to prevent injury. But the great irony is that the laws can at times become a distraction. We're so wrapped up in getting all the details of compliance right that we tend to overlook what should be obvious safety risks. I mean, why is it that an experienced and certified safety professional performing a compliance audit can spot a container on the back shelf without a label during a compliance audit, but not notice that everyone—and I mean everyone—is violating an ergonomic procedure on the production floor (pulling carts instead of pushing them). Could it be that the former would constitute an OSHA violation and the latter wouldn't? If so, this is sad—especially when you consider that the number one injury at this particular facility of 2,650 was and probably still is shoulder strains.

Now before you call out the medical professionals to put me away because I must have lost my mind let's put things in perspective. Illustration #1 below is one I have been using for years to explain how organizations can become world class in safety performance. I call it the Five Stages to World class Safety.

Five Stages to World Class Safety

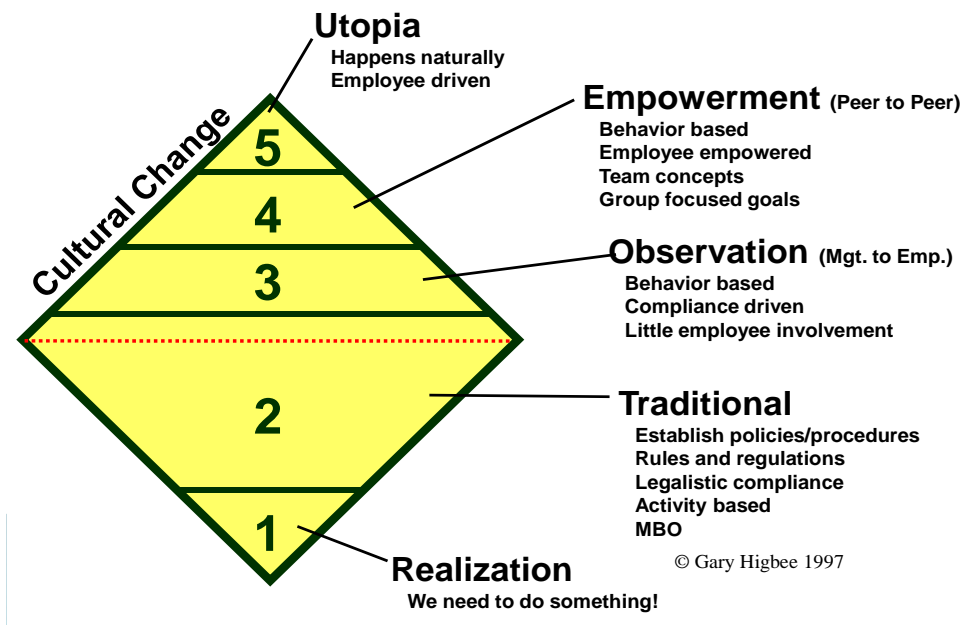


Exhibit 1. Five Stages to World-Class Safety

What this illustration represents is the path that organizations must follow to attain world class safety performance. Spend a little time reading the descriptions of each stage below to familiarize yourself with the illustration. While the situation at your organization might be slightly different most organizations follow this course.

Description of each stage:

1. Realization

Organizations in this stage see skyrocketing injury rates and “through the roof” worker compensation costs are prompting management to do “something”. Governing bodies often conduct audits and identify areas of improvement to meet minimal compliance requirements. Consequences to non-compliance can be very costly. Financially the direct costs of loss time injuries are affecting overall profitability. Companies at this stage are at a legal risk and employees have a high risk of injury.

2. Traditional

Companies at this stage of the process are still at risk of injury but are probably at a point where they are protected from most legal risk by Worker’s Compensation sole remedy laws. There is minimal legal risk at this stage. Priorities are placed on developing policies and procedures and the education process begins. They haven’t succeeded in changing behaviors yet and workers and management are still apt to do what is convenient for them. An increase in production and overhead costs results from having identified at risk conditions and taking appropriate steps to engineer out the hazards. Machine maintenance and repair, shielding and guarding derive from a reactive management approach - “we’ll fix it when it’s broken”. When

an organization reaches the top of stage #2 they are essentially compliant. Incidents still happen but a high percentage has nothing to do with regulatory compliance issue. Human error starts to become an issue. Understand that human error has always been an issue but now the injury rates have been reduced and a larger percentage of the remaining incidents are due to human error.

3. Observation (process)

Management initiates an observation based safety program in addition to the traditional program and spends more time on the production floor or the worksite “observing” for hazards with compliance in mind. Concern for compliance is at the forefront of their minds and more adequate record keeping becomes a priority. Management drives the improvement process. There is little to no employee involvement at this stage. Better compliance does not reduce injuries at this point. The relationship between compliance and injury reduction has diminished and ever improving compliance fails to lower injury rate because the improvements are more cosmetic and contain little substance.

4. Empowerment

Management is frustrated by the limited or lacking injury reductions and employees are invited to share in the responsibility of understanding risks, preventing injuries and are jointly accountable in the education process. The employees have gained confidence in the management group that safety is a core value of the organization. Employees drive the improvement strategies and all are committed to company and team goals. Human error is now a recognized issue by all parties and systems have been put in place to help reduce unintentional error. Not only is the company continuing to decrease injuries in the workplace, increasing awareness of risk factors and self-trigger techniques are put in place. Financially the organization is reaping the benefit as a result of a continuous decrease in loss time injuries and is experiencing a competitive advantage as monies are being allocated to other areas of the organization. Productivity and quality is also improved.

5. Utopia

The company’s safety culture is self-sustaining and developing. The company is progressive in its approach to safety and has become the benchmark by which other companies in the industry measure their safety performance.

The illustration helps the reader to visualize where their company is and how it compares to others. The larger the area of the diamond the more companies in that stage. For example the safety performance of most companies in North America can be found in stage two.

Compliance and Injury Reduction Split

When an organization works through stage #2 and enters stage #3 it has reached a point when compliance with regulations has been essentially met but the injuries have not stopped completely. The injuries now are the result more of human error then failure to comply. Slips, trips and falls, sprains and strains, cuts and abrasions and back injuries are starting to become the majority of the injuries. You see there comes a time when better compliance does not reduce injuries anymore.

Now the organization will often continue the effort toward better compliance in stage #3 by implementing some type of management observation process. They miss the fact that most injuries are now the result of unintentional human error and efforts to reduce injuries without reducing human error are not going to be very productive. So how do you combat human error? Well to get a handle on human error reduction you first need to understand the At-Risk behavioral model

At- Risk Behavioral Model

We need to understand that there are three types of at-risk behavior, three sources of unexpected, four critical errors and four states of being in the At-risk behavioral model. We need to understand each segment of the model and how they relate to each other. First we will deal with the three types of at risk behavior, which are:

1. Intentional: This is where the employee knows full well that the activities they are doing are not safe and that there is a significant amount of risk associated with the activity. The activity is usually against a policy or procedure. Often this type of activity is supported by a concept called “Positive Reinforcement of a Negative Act”. The employee knows both the risks and benefits of doing a task at risk but the benefits, in his or her mind outweigh the risks. Now each time they successfully perform the task “at risk” there is a little more “Positive Reinforcement of a Negative Act”. The more reinforcement the more they will perform the task at risk. For example: an employee may have an assignment that requires the use of a step ladder. The task requires at least a twelve foot step ladder. The twelve foot step ladder the employee is to use is very heavy and stored far from the point of use. The employee has found a light fiberglass step ladder stored near the point of use but that ladder is only seven foot tall, however by standing on the top of the ladder, where there is a sign stating “not a step or no step” he can perform the task required. Using the wrong ladder has increased the risk of the task but the increased risk does not mean an injury is going to happen. When he first starts to use the improper ladder he is very alert to the added risk and exercises extra caution. If the positive reinforcement to this negative act is strong enough he will even share his “success” with others (use this ladder it is quicker and easier) and if not checked this activity soon becomes the new standard and everyone will be doing the activity at risk. Note that even if people are deliberately willing to increase the risk of a situation, hardly any of them are deliberately trying to get hurt. The interesting thing about intentional at risk behavior is that if the intentional risk continues to be accompanied with high awareness and alertness the injuries are infrequent.

2. Unintentional: This is where the employee is unaware of the risks. There is a flaw in the training and their personal experience has not yet caught up with the risk. They are simply not aware of the risks or the methods they need to use to protect themselves. This can be a case of no training, under training or employee inattention to the training.

3. Habitual: Like the intentional at risk behavior we covered above, the employee knows the risks but has been doing the activity so long that they are no longer as alert to the risks. When the employee in our example above first started to use the improper ladder he was very alert to the added risk and exercised extra caution but over time the activity has migrated from intentional with a high degree of caution to habitual with limited caution. Once a high risk task moves to habitual complacency has set in.

Three Sources of Unexpected

Another concept we need to understand before we can work on preventing or at least limiting Human error is “sources of the unexpected. To get hurt or even have a close call a number of things have to happen. In effect all the dominos need to fall into place. To get hurt you must have at a minimum enough energy to cause an injury, you have to come in contact with the energy and something unexpected has to happen. There are three sources of the “unexpected:”

1. Mechanical: Something breaks usually due to a mechanical failure. A seal breaks, a chain fails or the brakes fail on your car. There is no warning and the person or employee has no idea anything is wrong or will go wrong.

2. The Other Person: Someone else does something the person or employee does not expect: Someone runs a red light or stop sign. Someone working overhead drops a hammer from above.

3. Our Self: The third source is that the person or employee does something he or she never intended to do in the first place. This source of the unexpected is where over 90% of the injuries originate after an organization has reached stage #3. It is difficult to blame the hammer or someone else when you hit your thumb or blame the chair or someone else when you stub your toe.

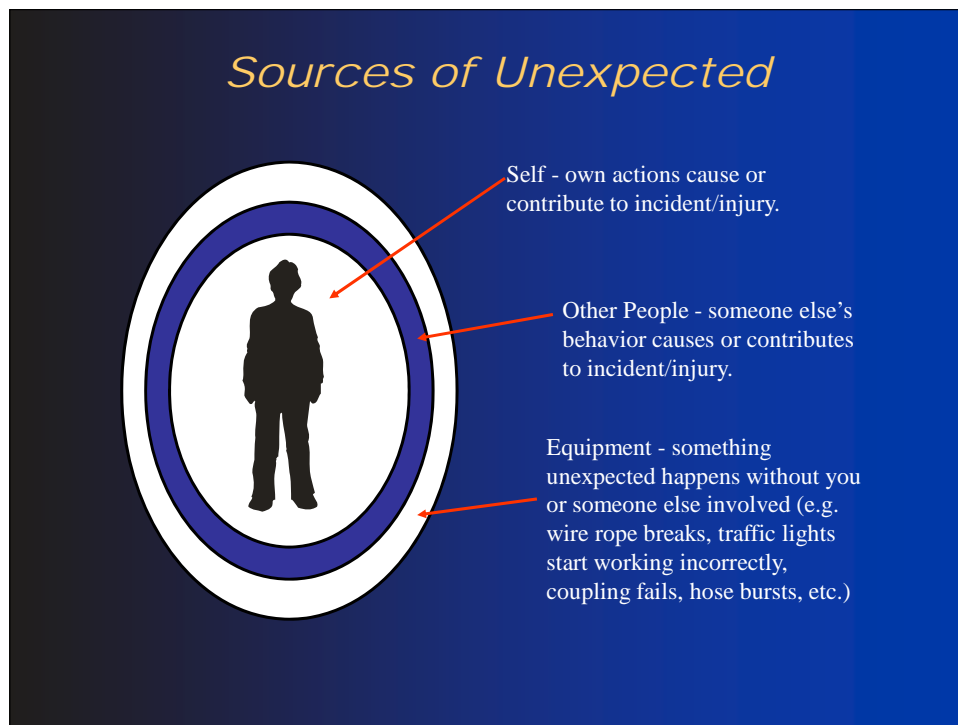


Exhibit 2. Three Sources of Unexpected

Now we are going to concentrate on the “self” area given it is from a behavioral focus the area with the most potential to improve. So, in the self-area mentioned above, there are four critical errors that give us the most trouble:

1. Eyes not on task: Not looking at what we are doing or not looking before we move our hands, feet or body. Without looking we lose the ability to react to events as they occur and have lost our best defense against injury.

2. Mind not on task: Not thinking about the task we are doing. We are driving on the interstate not thinking about where we are and miss our exit.

3. Being in or moving into the “line-of-fire:” Placing ourselves in the line of fire like reaching into the car while someone else shuts the door or the wind blows it shut.

4. Losing our balance traction or grip: Slipping or tripping that causes us to lose our balance and fall, or something as simple as losing our grip leading to a fall or dropping something.

Understand that you may have an injury in the Mechanical and Other Person sources of unexpected area mentioned above without one of these four errors but you will never have an injury in the “self-area” without making one or more of these four errors. Now we are never trying to make one of these errors and we certainly do not make an error every time we do something.

Four States of Being

So what makes us make the error in the first place? Well we often make the error because we are in one of the following four states of being:

1. Rushing: Rushing is going faster than you’re used to going or trying to do two or more things at once. It’s the end of the day and you have about fifteen minutes of work to complete a project and only ten minutes to do it in. So you go a little faster than usual and this increases the risk of injury significantly. Going faster than you usually do doesn’t mean you are going to get hurt only that the odds of getting hurt have increased. So have the odds of making a quality or productivity error.

2. Frustration: Things are not going well and the emotions are running high. You can’t seem to get the nut to break loose so you start jerking on the wrench and it slips off the nut. Possible using some penetrating oil would have solved the problem but frustration had already set in and clear thinking was out of the question.

3. Fatigue: For any number of reasons we are simply tired. Lack of sleep, extended work hours, high exertion, boredom and a whole host of other things can cause fatigue. When we are fatigued our motor skills and mental alertness diminishes. We start making errors we would not normally make. Like driving when we are tired. We convince ourselves that we can keep going (mental error) and we have trouble keeping the vehicle in the center of the road (motor skill problems).

We are trying hard but the car seems to constantly move over close to the center line and then the shoulder and we go back and forth. We know we are tired but we do not know when we are too tired and the next thing we know we are on the shoulder or over the center line and it is only a matter of chance what will happen next.

4. Complacency: With complacency we have just become numb to the hazards. We see complacency everywhere. Even when the energy level is very high, complacency can and will set in. We read a map while we are driving.

There are other states like depression, elation, illness and fear that can take your mind and eyes off the current task but the four most likely to cause us trouble on a day to day basis are rushing, frustration, fatigue and complacency. Now you see where complacency fits into the at risk model. Complacency is one of the states and to make things worse it is the most difficult state to deal with.

There is a pattern to injuries in the self-area. It works like this. When you make one of the four errors you do not actually get hurt every time but you do increase the likelihood of an injury and the potential severity of that injury every time. That increase in probability and severity is illustrated by the change in the risk triangle shown in Exhibit 3 below.

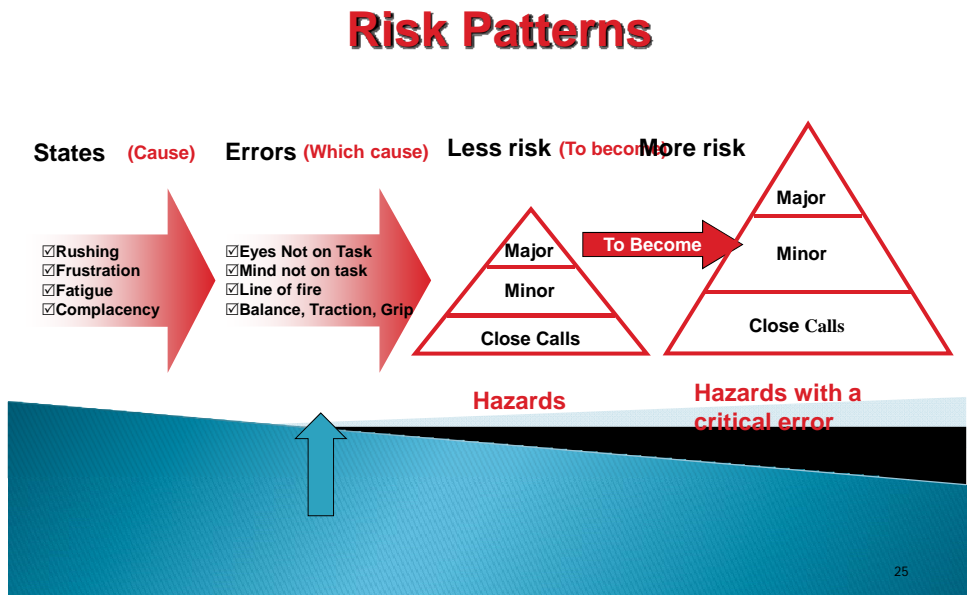


Exhibit 3. Risk Patterns

Critical Error Reduction Techniques

With respect to developing safety skills we should note that employees need a comprehensively designed training course not just a motivational session. Improving safety skills takes a little work on their part also. Listed below are four safety skill development techniques that can help prevent injuries. While the techniques are much more effective when taught properly you can learn a great deal about yourself and your personal safety skills by practicing the following critical error reduction techniques. What we are doing here is moving the arrow in illustration #1 to the left moving from an error focus of safety training to focus the training on something more tangible, in this case the state. Training directed toward the error involves relying on awareness and to some degrees a little luck to improve safety performance. What we are trying to do by focusing the training on the state is moving from the limited effectiveness of awareness and luck to a more skill based focus. In effect we are moving from luck based safety training to skill based. Now this type of training does not replace all the technical training required to provide a safe and health workplace. However we all know that knowing the rules and how to do an activity properly does not always drive us to positive safety performance. We all know the speed limit on the interstate; we are able to drive the proper speed but are often motivated to exceed the speed limit. The focus here is on better safety skills. Listed below are the four critical error reduction techniques.

1. Self-Trigger on the State to prevent or avoid making the error. This is something many of us do already. We get so frustrated with something that we just stop and walk away for a while before coming back to the task later. The problem is that we may not trigger at all or soon enough without practice. We know when we are in a rush, becoming frustrated and when we are tired. We can learn to trigger on one of these states to help prevent making one of the four errors that get us hurt. Even when we have to rush we can use the realization to improve our eyes on task and mind on task safety skills to increase alertness and focus extra hard on the task at hand. This technique works very well on the first three critical errors but has limited effectiveness on complacency.

2. Analyze Close Calls and small injuries to prevent big ones – Learn from our OOPS! When we first start trying to trigger on the state to prevent the error we may still make some mistakes. It takes time and practice to improve safety skills. So while you're working on improving we do not want to miss the opportunity to learn from our mistakes. Often when we make a mistake we are just hoping no one we know saw us make the mistake. We need to analyze those errors and close calls to see what states were involved and if it wasn't a state maybe it was a habit we need to work on. It takes practice but is very effective at controlling the frequency and severity of injury.

3. Observe Others for the State to Error Patterns. Here is where the most help with complacency can be found. When we observe others in the state to error pattern we know something serious could happen so we can do the following:

- Get away from them to avoid being caught up in their at risk behavior. For example, when you see someone driving erratically while trying to read a book (this does happen) and drive at the same time. Getting out of their way and avoiding them may be the best defense against injury. The driver is obviously very complacent.
- Simply recognizing that they are reading and driving is increasing the risk of injury should help you realize that you do not want to do the same thing. This should give you a

- strong boost to not do the same thing and avoid becoming complacent yourself. Maybe it's time to stop driving and checking a map at the same time. Your driving could be the same as theirs when you're paying attention to the map instead of the task of driving.
- You will also see the state to error pattern in your co-workers before they will. It is always easier to see the pattern in others than ours compliance audit—has become an end in itself, a distraction from safety. Let me put the compliance audit into what I consider is its proper perspective.

The Shortcomings of Audit Scores

Prevention is far more important than audit scores. Don't get me wrong, I'm not saying compliance audits aren't a good thing. It's just that when push comes to shove, and it will whether your work involves cutting down 200-foot trees with 3-foot chainsaws on 45-degree hills or less risky operations—injury prevention is what it's all about. Things like rushing, frustration, fatigue and complacency cause the vast majority of injury-causing errors like “eyes not on task, mind not on task, being in the line-of-fire and somehow losing your balance, traction or grip. “However, even that isn't enough. You also have to teach them about what I call the four “Critical Error Reduction Techniques.” And perhaps most importantly, you must motivate them to put some effort into improving their skills, habits and techniques. If you're committed, this is easy enough to do. It takes about 10 hours spread out over 10 weeks. The reward: You can expect a 50, 60 or as much as 90 percent decrease in recordables. You can also expect to achieve decreases in first aid incidents, off-the-job injuries and most importantly—if you're trying to prevent fatalities—motor vehicle accidents. How many plant audits do you think you would have to do to prevent a fatal automobile accident?

Conclusion

So, let me ask the question again—when are you going to deal with injury prevention? I know, I know... just as soon as you get done with your compliance audit. But if prevention is our priority, then we should focus on the real cause of accidents—inattention and human error