CONTEXT

Root-Cause Analysis

By David G. Lynn

I know what it is like to get injured on the job. When I was 18 years old, I worked as summer help for a small contractor in industrial environments. I did what I was told. During this particular summer, we worked at a textile mill in South Carolina and my supervisor asked me to move some platform grating from inside the plant to the back of it.

The grating was heavy, awkward and unstable, but I loaded it onto the hand trucks anyway. As I transported the load through the plant, I bounced over uneven surfaces and the grating started to fall. I reacted and tried to stabilize the load by placing my right hand between two sheets of grating. The pinch point lacerated the top of my hand and I could see the tendons and veins. Five stitches later, I became an OSHA-recordable injury.

As a safety professional, I also know the frustration you may feel when you analyze an event like my injury. The two ends of the spectrum provide unique insight. I look at my past injury and ask, "What was I thinking?" But, when I was 18 years old, everything I did leading up to the incident made perfect sense. As a safety professional, I have learned there is value in context because it can help you focus on influencing future decisions. These four steps can help to put an event into context.

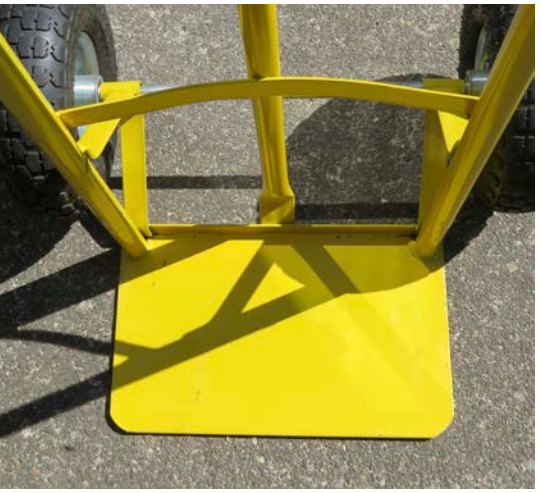
Step 1: Start With the Storyboard

Map the critical steps that lead to the event. Explain what happened that day.

1) I reported to work.

2) We traveled to the work site from the company office.

3) My supervisor told me to move the platform grating.



4) I found some hand trucks and loaded the grating.

5) I transported the grating through the mill.

6) The sheets became unstable.

7) I tried to grab the grating and pinched my hand, causing a laceration that required stitches.

Do we have all of the information we need to prevent similar incidents from happening in the future?

I have witnessed work cultures that accept similar timelines as sufficient information to complete a report. They put the blame on the employee and continue with their day. Blame is quick and easy. When you take the individual blame approach, you fail to recognize that someone else may make the same choice in the future. How are you going to influence the next person?

Step 2: Build Context

The storyboard is a critical first step that gives you a factual timeline for the event. It does not explain what the injured person thought at the time of the incident. The context of the event describes why it made sense to perform that task and also the details associated with each critical step of the day.

What did the context look like? I worked for a small company that did not have any safety training nor a structured safety program. We did not have specific rules to follow. We were not required to wear gloves. There was no formal preplanning or prejob briefs. No one ever mentioned safety. We simply performed basic contract work and never thought about getting hurt.

When you are inexperienced, you may be assigned the jobs that no one else wants to do. I did what I was told and I did not ask questions. I had minimal direction, oversight and experience. The morning I got hurt was a normal day. My supervisor asked me to clean up and move some platform grating, which was the extent of my instructions. The sheets were heavy and awkward, but I thought I could move all four sheets at once with the hand trucks. That made logical sense because I did not want to take more than one trip to move the grating.

My supervisor did not provide specific instructions, so I proceeded with my plan. I took the most direct route through the plant without consideration for the uneven surfaces and unstable load. I did not anticipate the load would shift and I never thought I could get hurt. I was confident that I could accomplish this task in one trip and there was no one around to provide safer direction. If I were performing an event analysis today, what would I learn?

Step 3: Analyze the Facts

The Individual

The fact is that I overloaded the hand trucks to save time. I did not consider the safest route to take the grating and I did not have a last line of defense, gloves. I did not anticipate any mistakes and I did not think I would get hurt. My decisions led to my injury. Would you conclude your analysis with these facts?

Tip: If the focus is on the individual, your impact on sustainable improvement is limited to that one person. Is that the goal?

The Organization

The fact is that my supervisor did not conduct any type of prejob safety brief. He did not give specific instructions and he did not monitor my work. There were no formal safety rules, safety training, safety toolbox topics, safety audits or general safety communications. I was inexperienced and my supervisor expected me to learn on my own. What responsibility does a supervisor have in this situation? Should a company have tools and techniques that help an inexperienced worker perform their job safely?

Tip: To drive sustainable improvement for more than one person, organizations must identify tools and techniques that will produce safe decisions and judgement.

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Step 4: Choose Points of Influence

Where do you have the most influence? How can leaders in an organization take an inexperienced worker and help them make good decisions? There are seven critical steps in this storyboard. Based on the individual and organizational facts, look for points of influence that impact decisions and judgement in the future.

General Influence

•Establish the tone of the safety culture with basic safety training required by OSHA.

•Conduct weekly safety meetings that reaffirm safety requirements.

•Teach supervisors and workers the importance of preplanning safety into every task.

•Talk about hazard identification and risk reduction in the workplace.

These general requirements may not have a direct impact on my injury, but safety culture can influence how we make decisions. The absence of these critical elements in a safety program will have an overall impact on safety results.

Specific Influence

•Conduct a prejob safety brief before each shift. Cover critical steps, hazards and controls.

•Monitor safe work practices with safety audits and walkthroughs.

•Coach and mentor employees who do not have experience.

•Implement work-critical safety rules and guidelines such as the use of proper PPE.

The benefit of an intuitive root-cause analysis process is that it improves organizational tools and techniques that prevent errors in judgement that lead to injuries. The context of the storyboard provides insight to a supervisor because s/he can choose points of future influence using the right tools. Prejob safety briefs, audits, coaching and basic rules are tactical tools a supervisor could have used in my situation.

Conclusion

Clearly, I made some bad choices and I own the results. The owner held me responsible for my actions and I did not make the same mistake again. The problem was solved, right? Do not forget that when people get hurt, the decisions they made at the time of the injury made sense. There was a reason I made the choices that led to the injury. If one person made that choice, others will certainly do the same without the right tools and techniques to mold their judgement.

The goal in an event analysis is to create a storyboard that describes the context of the event with facts, not fault. If we know what motivated the decisions that caused the injury, we can initiate a plan to influence the future with all employees who may fall into the same trap. This plan impacts more than just the person who was injured; it impacts the whole organization. **PSJ**

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