Root Cause Analysis Case Study: Broken Big Toe

I suffered an injury recently and it left me wondering if it could have been reasonably prevented. As I was sitting in urgent care waiting to see a doctor, I began to mentally build a Cause Map™ diagram to see if there were any obvious hazards that I failed to recognize. This blog is an honest case study analysis of my own actions, consequences and possible solutions.

A Cause Map provides a visual explanation of why an incident occurred. It connects individual cause-and-effect relationships to reveal the system of causes within an issue. A Cause Map can be very basic or it can be extremely detailed depending on the issue.

Expand as Needed  Continue to ask why questions and capture the causes of the incident in a visual Cause Map. Using a Cause Map provides a thorough and intuitive explanation. Cause Maps reveal all of the causes required to produce the problem.

Start Simple  Start with one goal that was impacted and ask why that goal was impacted. Investigating a problem begins with the problem and then backs into the causes by asking Why questions. If there are multiple goals that were impacted, you can start a 4-Why diagram with any of them.

4-Why Cause Map

Impact to Safety

Chipped bone on big toe on right foot

Right foot big toe exposed, unprotected

Not wearing closed toe shoes

Done in the past with no issues

Kicked a branch with right foot

Branch in walking path

Didn't step over, around it

Didn't see branch?

Distracted?

AND/OR

Blended in with pine straw, leaves

Misjudged the placement of my foot?

Evidence: I have done this before. I thought I was stepping higher than I actually was.

Sandal with rigid sole to immobilize big toe

Bruising

The top of this bone was chipped off

Possible Solution: Remove potential tripping hazards from trail.

Possible Solution: Wear closed toe shoes when riding a bike

Hazards assumed to be low, minimal

Done in the past with no issues

Risk determined to be low

Evidence: Wearing flip flops

Planned to be a casual ride to a local restaurant

Develop Solutions  After you have revealed causes that led up to the incident, then you can brainstorm possible solutions that will reduce the likelihood of a similar incident from happening again.

Possible Solution: Remove potential tripping hazards from trail.

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