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The 5 Whys of Root Cause Analysis

By Kelly Huckabone

The 5 Whys is a simple root cause analysis tool that can help you “peel back the onion” to expose the true root cause of an issue. Too many times people will automatically jump to what is the most obvious root cause, but sometime this approach can cause longer term systemic issues by correcting something that is not the true root cause.

The 5 Whys is an iterative back-and-forth process used to explore the cause-and-effect relationships underlying an issue or problem. Simply, the goal of the 5 Whys is to determine the root cause of an issue by repeating the question, “Why?” five times. Each answer forms the basis for the next question.

The “5” in the name comes from an anecdotal observation on the number of iterations needed to resolve the problem. For simple issues, sometimes you can get to the root cause in less than 5 Whys.

In our Corrective Action Preventive Action (CAPA) and internal audit programs, we use the 5 Whys to help us narrow down the root cause of the issue. If the issue is more complicated, we use other problem-solving tools which I will discuss in later articles.

Not all problems have a single root cause. If you need to uncover multiple root causes, the method should be repeated, asking a different series of questions each time.

Let’s walk through an example. During an internal audit, it is discovered that a key step in the process has not been followed. This could have a detrimental downstream effect if not resolved. At a first glance, one may assume a step was skipped because an employee has not followed procedure, but let’s see what really happened.

Why was the customer signature missing on the calibration report?

Because the procedure was not followed.

Why was the procedure not followed?

Because the customer was not available to sign the report.

Why was the customer not able to sign the report?

The customer was not available.

Why was the customer not available?

Because the calibration procedure took longer than expected and the lab manager went home.

Why did the procedure take longer than expected?

It was a new piece of equipment. The condenser failed, and I had to fix it before I could do the calibration.

The outcome

The technician in this case made sure the equipment was fixed before the calibration was completed, which resulted in the customer not being available to sign the report. This root cause is very different from assuming the technician did not follow procedure.

Does the 5 Whys work? Yes, however the exact reasons may be varied because statistical relevance as well as the question approach can impact the outcome.

About the Author

Kelly Huckabone is the North American Audit Program Manager who oversees Unity Lab Service’s internal and external customer and supplier audit programs. Kelly is a certified risk manager, lead auditor with ASQ, and has been conducting audits for over 25 years for different quality systems, including ISO 9001, 13485, and 17025, as well as Health Canada and the FDA.

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