Project Sobriety: Diagnosis

Description

"Don't send a child to do an adult's job." Even after undergoing the metamorphosis of political correctness, the underlying implication of the cliché rings true. Certain tasks require specific skills to reach a successful conclusion. This is as true in quality management initiatives as it is anywhere else.

It is particularly apropos when discussing the diagnostic stage of a quality improvement journey. As Dr. Joseph Juran's example suggests, data collection and analysis are not always as simple as plugging in information and identifying the clearest common denominator.

In Dr. Juran's story, the amateur statistician used limited data to determine that tonic was the common factor in each drink his troubled friend took. Of course, had he performed a chemical analysis of the elements in each drink, he would have discovered that, in addition to tonic, alcohol content was common to each drink and was indeed the root cause of the drunken effect. Having missed that in his common-sensical approach, such insight obviously was beyond the ken of his diagnostic and analytical skills.

Some diagnostic tools, such as simple run charts and line graphs, are relatively easy to plot and to analyze, given the right circumstances. Other tools, including scatter diagrams, histograms, Pareto analysis, stratification, and the like, require in-depth training both to construct and to provide a detailed and accurate analysis. When undertaking complex quality initiatives, it is therefore critical that the team roster includes a member, either full-time or on an ad-hoc basis, who is well-schooled in the diagnostic disciplines.

Learning Points

Quality tools are powerful analytical devices that can help reveal information to solve critical problems. Oftentimes, when the problem is particularly complex, it may require intensive training and experience to expose the true root cause. A structured quality improvement approach will thoroughly train team members in the tools and processes needed to identify and remedy a problem effectively. In this structured system, team members can offer a working knowledge of the process under investigation, and a trained facilitator will provide them with in-depth instruction on the skills and tools required to identify the root cause(s) hindering the process.

The root cause of a problem must be identified before a solution can be determined. Taking shortcuts or wrong turns through the critical analysis phase can result in applying an inappropriate solution that doesn't address the problem, or worse yet, creates new problems.

Discussion Questions

Question: What can quality tools help you do?

Answer: Quality tools contribute greatly to the success of teams as they tackle difficult problems. By collecting and organizing data with the help of quality tools, patterns and trends will emerge to shed new light on problems. Once a team has discovered the root cause of the problem, an appropriate remedy can be applied to solve the problem.

Question: What methods has your organization used to collect data?

Answer: Responses will vary. Probe the effectiveness of the collection method and the use(s) of the collected data.

Question: What do we mean by the phrase, "the root cause of a problem"?

Answer: A theory is an unproven assertion as to the cause of a problem (and its symptoms). The root cause is a theory about the cause of a problem that is supported and validated by the evidence. We may generate many theories about the cause of a problem, but the root cause is that theory that has been proven to have a true impact on the problem, based on the appropriate data and facts, not consensus, opinion, or "gut feeling."

Question: When tackling a problem, people often do not take the time necessary to find the root cause of a problem. Why not?

Answer: Most cultures reward those who are quick and decisive. Organizations have historically recognized and rewarded their quick decision makers through promotion, recognition, and salary increases. This pro-action bias often overlooks the systemic, scientific approach needed to identify the root cause.

Question: What happens when we apply solutions to problems before identifying the root cause?

Answer: The problem does not go away. Instead, we waste time and energy on ineffectual solutions that may require people to change the way they do things. When the situation does not improve, people are doubly frustrated by having to make a change and yet not seeing positive results. The original problem still exists, and the faith in quality efforts is shaken, even though the fault lies not in the quality process but in the execution of the steps.

Question: Can you think of a problem encountered in your job that persisted because no one identified the root cause?

Answer: Responses will vary. Probe: What was the effect on you? What was the effect on the organization?

Question: Can you think of another recent problem where you benefited from identifying the root cause?

Answer: Responses will vary. Probe: What was the effect of finding the root cause? How did you know when you had found the root cause?