Quality Improvement Basics: Root Cause Analysis – Part 1

Slide 1 Objectives

After completing this module, participants will be able to

- Define the purpose of a root cause analysis (RCA)
- Discuss when to do an RCA
- Explore who to involve in an RCA

Slide 2 Root Cause Analysis

A common response to dealing with a problem or an unintended outcome is to identify the person who did something wrong and then deal with that person. This practice is problematic because it acts as a disincentive for people to speak up about errors or safety concerns. It contributes to staff not feeling valued, it erodes trust among staff, and it doesn't solve the problem – the same thing could happen again to that person or another person. Blaming an individual doesn't change the processes or systems that can be improved to keep patients and staff safe. Most often it is the processes or the systems in which people are working in that are failing, not the people themselves.

RCA can identify if there is a problem with the process (meaning it's a bad process), a problem with doing a process in the current setting (meaning that it is an okay process, but it is not workable in current workflow and environment), or other issues that impair a person or team of people from doing what they intend.

While existing processes may have been thoughtfully built in the past, as new technology has been introduced, or team members and team dynamics have changed, or equipment has changed, and workflows have evolved processes that previously served us well, can now trip us up. Often, we don't have the time or opportunity to proactively change processes until some event or unintended outcome occurs., and this is unfortunate. If we put more value on looking at if what we are expecting people to do fits with workflow and resources, we may be able to prevent more failures and unintended outcomes. However, when undesirable things happen, we really need to learn from them; this is the intent of the root cause analysis or RCA process. A root cause analysis is a focused review of an event or unintended outcome to learn and take action to prevent another occurrence in the future. It is one tool to help uncover where there are weaknesses in the process that may need mitigation or redesign to reflect current workflows and can be a helpful compliment to other QI tools.

Slide 3 When do we do an RCA?

One of the first things we must decide is when a root cause analysis should be considered. Ideally, each organization should have a decision-making algorithm for when a root cause analysis should be done, and when root cause analysis should be used in a quality improvement project. This provides guidance to staff and helps avoid missing potential learning opportunities.

RCAs are traditionally conducted following events that result in or could have resulted in patient harm in a health care situation, for example, a surgery or other invasive procedure performed on a wrong body part. Or in public health an example may be if there was a problem with vaccinations that were used but were outdated or possibly handled inappropriately resulting in risk to those who receive them.

In some cases, there may be regulations that prompt an RCA, such as a state adverse health event law. These regulations provide guidance for which events require a root cause analysis, such as sentinel

events – patient safety events that result in death, permanent harm, or severe temporary harm - or other events deemed reportable by regulation.

Near misses are also a common prompt for an RCA because they provide an opportunity to catch a potential event before it happens. A near miss can have just as big an impact on the people or staff involved as an actual event.

Another situation to consider for the root cause analysis process, is when you see the same problem recurring over and over, as this suggests there is opportunity for improvement and likely a risk for an unintended event. In this situation, you want to ensure that the RCA process is looking broader than just process steps – consider stepping back and asking what are we trying to accomplish and is there a different way since this seems to be failing over and over?

Slide 4 RCA Decision-making Algorithm

This slide shows an example of a root cause analysis decision-making algorithm used by a hospital. This example is for a procedure-related reportable adverse event.

An advantage of having an algorithm is that often when an event occurs people are focused on dealing with the event and you want to make it easy for them to know what should be moved to a root cause analysis and how to easily get that process started.

Let's walk through this algorithm.

When quality or safety leaders are notified of an event, they determine if it is a reportable event (meaning does the organization have a requirement to report to a state agency or other organization and to conduct an RCA?) If yes, an RCA is done.

Also ask, if the organization is accredited by Joint Commission or another accrediting body if it is a sentinel event. If yes, conduct an RCA.

The next set of questions are both answered – starting on the left side, the question is asked about if this is a physician peer review situation, meaning whether a performance assessment is needed by a peer to evaluate the physician's clinical performance. The purpose of the medical peer review is to improve patient safety and the quality of care, but it is focused on individual actions. An RCA focuses on systems and processes that allowed the event to happen. It is important to mention that this is not always clear cut – performance is impacted by system factors such as time pressure, fatigue, lack of resources, distractions, and more.

On the right side, this algorithm asks if this was a close call or near miss, and work through questions to determine if an RCA should be performed.

Slide 5 Characteristics of an RCA

A root cause analysis is a systematic approach for identifying the causal factor or factors for any undesirable event or problem. It focuses on the systems and processes and not on individual behavior. The point of an RCA is not to point fingers but instead to find out why something happened. If you are in a role of facilitating cause analysis, this is something that you always need to be watching for and refocus the team or team members back to the process and system in which processes are being implemented. Sometimes individuals that are involved in an event will want to take the blame because they feel it should have been their responsibility to prevent the event from occurring. Again, the facilitator in the situation needs to acknowledge that person's desire to take responsibility but remind them it is not a blaming culture, and this is not the intent of the root cause analysis process. Of course,

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an organization needs to have a culture that is not blaming for RCAs to be successful. If an organization has more of a "watch your back" culture, an RCA is not going to yield helpful results.

A root cause analysis should be an opportunity to learn and for the people involved to tell their story. This is why the root cause analysis process should be confidential. Reviewing an adverse event or outcome can be very emotional for those involved. People will come into an RCA not knowing what to expect. They may be angry at themselves or fearful of what will happen next. That is one reason it is helpful to do the root cause analysis as soon as possible after the event. It can be reassuring to those involved (that you are looking at processes and systems to improve to prevent recurrence) as well as capture information while it is still fresh in people's minds.

Always remember, the goal of an RCA is to learn.

Slide 6 Who is involved in an RCA?

There are two schools of thought on who should be involved in a root cause analysis process. The first is that the individuals who were involved in the actual event should be the ones on the root cause analysis team. This assumes that the team environment feels safe so that individuals can tell their story openly and honestly without fear of retaliation or retribution.

The other school of thought is that because those involved in the actual event may be too close to the event or have too many emotions associated with the event, they are asked for their detailed description of what they feel occurred, and another team uses that information to inform the actual RCA process.

Another question is whether leaders should be included, especially managers of people involved in the event. It can be important to have leadership involved in the process. They may have authority to make certain changes or remove barriers that other team members are not able to impact. But if involved, leaders must truly understand that the RCA process needs to be a safe place for all those participating.

It can also be helpful to have a subject matter expert that may be more knowledgeable about factors that could have been at play or current best practices. For example, consider having an MRI technician or supervisor participate in an RCA that looks at causes of a patient being injured by a metallic object that was introduced into the MRI area. Another example would be to consider having an IT person involved if an event involved electronic communication.

The RCA team should always have a facilitator who is prepared to keep the team focused on process rather than individual behavior, and to encourage participation from each team member. Another job of the facilitator is to keep the process moving. Although we are trying to get at all the important details during an RCA process, we also want to be respectful of people's time. The facilitator is like a project manager and needs to determine what work can be done outside of the team meetings and what work requires the team members to gather. An experienced facilitator may only need the entire team to be together for 1 to 2 hours.

It can be helpful to have a recorder so the facilitator and team members can focus their full attention on gathering the data and information related to the event. It is the recorder's job to document the thoroughness of the analysis – did the team dig deep enough or did they just jump to the first thing they identified. If you are doing an RCA of a reportable event, the thoroughness of the recorded information can be very important.

Slide 7 RCA asks many questions

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An RCA is intended to answer many questions, including:

- What happened and why did it happen?
- What are the system issues?
- Was it a communication issue?
- Was it a failure to plan, that is to have a common understanding of what was to be accomplished and how it was expected to happen?

The goal is to identify the root causes and causal factors so a change or corrective action can be implemented to prevent similar events from occurring. RCA looks to make changes in the system or processes so that the event is less likely to recur. You might find there was a breakdown in the process or identify a poor design or external factors that impacted performance. This is not about assigning blame to an individual, it is about understanding the conditions that allowed this to happen and protect staff and patients going forward.

Slide 8 Summary

- The goal of the root cause analysis process is to learn and help make changes to prevent recurrence of adverse events or problems.
- It can be helpful to develop an algorithm to determine when to conduct an RCA. Consider factors such as whether the event resulted or could have resulted in patient or staff harm, if there are regulations or accrediting organizations that require an RCA, or if the problem is recurring.
- Consider thoughtfully who to involve in an RCA and how and when to involve them. For example, persons involved in the actual event need to share their detailed description of what happened, and they may be part of the RCA team. Think about when and how to involve leaders in the RCA. And it is important to have a skilled facilitator who can keep the team focused on processes that contributed to the event, rather than on individual behavior.

Slide 9 Where to learn more

Check the resources listed on this slide from the National Patient Safety Foundation and the VHA Center for Patient Safety. Both provide detailed information and tools to help you to think about the intent of RCA, when to do an RCA, and who to involve in the process.

In the RCA Part 2 module, we will talk about how to start an RCA and how to identify root causes and causal factors.

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