SafetyNET-Rx Root Cause Analysis Steps and Instructions

SafetyNET-Rx Root Cause Analysis is method of problem solving techniques with a purpose of determining the “root cause” of a QRE in order to prevent the QRE from occurring again in the future. SafetyNET-Rx Root Cause Analysis views every QRE as an opportunity to learn and improve a process by determining the “root cause” of a QRE so that the issue can be addressed in order to take appropriate action in your community pharmacy to improve the overall process.

SafetyNET-Rx Root Cause Analysis is asking why exactly a QRE occurred in a community pharmacy and continuing to ask the question until the “root cause” of the QRE is unearthed. When determining the “root cause” of a QRE it can be helpful to use a fishbone diagram with your pharmacy staff for brainstorming purposes. The SafetyNET-Rx fishbone diagram will list various possibilities to where the “root cause” of the QRE lies.

The steps to SafetyNET-Rx Root Cause Analysis can be described as follows[1]:

Step 1: Define and describe the QRE that occurred in your community pharmacy.

When defining the QRE that occurred in your pharmacy it is important to be specific about the incident that occurred (e.g. what drugs were involved). You may also want to categorize the QRE that occurred in your pharmacy as well during this step (e.g. wrong dose; wrong drug).

Step 2: Detail as much information about the QRE as possible.

Gather as much detail about the situation as possible on your own and from pharmacy staff who were working at the time of the QRE. Asking questions such as “when did the QRE happen?” and “what else was going on in the community pharmacy at the time?” are some examples. You may want experienced staff, who may be knowledgeable of why exactly the QRE happened, to speak at your brainstorming session for determining the root cause of the problem.

Step 3: Determine all possible causes of the QRE using the SafetyNET-Rx Fishbone Diagram and sort based on the categories of causes in the diagram.

During your brainstorming session with your pharmacy staff, start out by using the SafetyNET-Rx Fishbone Diagram on a white board or where everyone can see it and contribute. Fill in the QRE defined in Step 1 in the head of the fishbone where it says QRE. The back of the fishbone diagram contains categories where causes of the QRE may lie. Brainstorm with your staff all the possible causes of the QRE and fill them into the lines under the appropriate categories. The categories listed in the diagram are only a suggestion so feel free to add any categories that you

feel are appropriate for your pharmacy. Also, it is not important to fill all of the categories, it is only important for you and your staff to do a thorough brainstorming session here and to consider all of the categories on the SafetyNET-Rx Fishbone Diagram so that no potential causes of the QRE are missed.

Step 4: Define relationships between the potential causes of the QRE identified in Step 3 by asking why repeatedly.

Now that your SafetyNET-Rx Fishbone Diagram is filled out, look at each of the causes of the QREs that you've listed under the categories individually. For each cause ask the team to brainstorm why it happened. For example, if you've determined that the QRE was that the wrong medication was given out and one potential cause was that the staff member was not trained correctly, ask why. When you've determined the potential cause of the staff member not being trained correctly ask why again and keep going with this process until the question why cannot be answered. Continue this process for each of the potential causes that you have listed in your SafetyNET-Rx Fishbone Diagram.

Step 5: Brainstorm which potential cause would eliminate the QRE in the community pharmacy if it was fixed and identify potential solutions to eliminate the potential cause.

When brainstorming possible solutions to eliminate the cause of the QRE the solution must meet three important criteria. First, the solution to eliminate the cause of the QRE must eliminate the QRE if it is implemented. Second, if eliminated, the root solution cannot result in more QREs within the pharmacy. Third, the solution must also be possible within the pharmacy. When conducting the brainstorming session there should be discussion among the pharmacy staff why a potential strategy for the removal of the cause of the QRE does or does not meet the specified criteria. This process could leave you with only one possible solution or several.

Step 6: Rank solutions that will best eliminate the QRE in the pharmacy

If Step 5 leaves you with only one possible solution than there is no need to determine the best solution as there is only one choice. If instead there are several possible solutions from Step 5 then the team should be asked to rank each solution based on effectiveness of eliminating the QRE and feasibility of the solution. The averages of the two scores should be calculated and the solution with the best score should be chosen for implementation.

Step 7: Implement the solutions determined in Step 6 into your pharmacy's process and monitor to ensure the solutions have been effective.

Upon implementation of the chosen solution it is important to monitor to ensure the solution has had the desired effectiveness. If the solution has not resulted in the desired effectiveness it could be because the "root cause" of the QRE was incorrect or because the best possible solution to remove the "root cause" was not chosen.

Step 8: If the QRE continues to occur repeat the SafetyNET-Rx Root Cause Analysis process

If you determine that the solution implemented has not had the desired effectiveness it may be necessary to complete the SafetyNET-Rx Root Cause Analysis again to determine a different "root cause" to the QRE that may have been incorrectly defined previously, or to brainstorm a better solution to remove the "root cause" from the process. Because it may be necessary to repeat the SafetyNET-Rx Root Cause Analysis in your pharmacy for the same QRE if the solution is not effective it is important to keep all notes and information gathered about the QRE until the solution has been deemed to be a success.

[1] **Footnotes and References**

Nielsen, Dave. "The Project Management Hut". Root Cause Analysis in Project Management. http://www.pmhut.com/root-cause-analysis-in-project-management (13 July, 2010)

"NASA Process Control". Root Cause Analysis. http://process.nasa.gov/documents/RootCauseAnalysis.pdf (13 July, 2010)

Canadian Patient Safety Institute Canadian Root Cause Analysis Framework. http://www.patientsafetyinstitute.ca/English/toolsResources/rca/Documents/March 2006 RCA Workbook.pdf (16 July, 2010)