VA

U.S. Department of Veterans Affairs

Root Cause Analysis Tools

VA National Center for Patient Safety

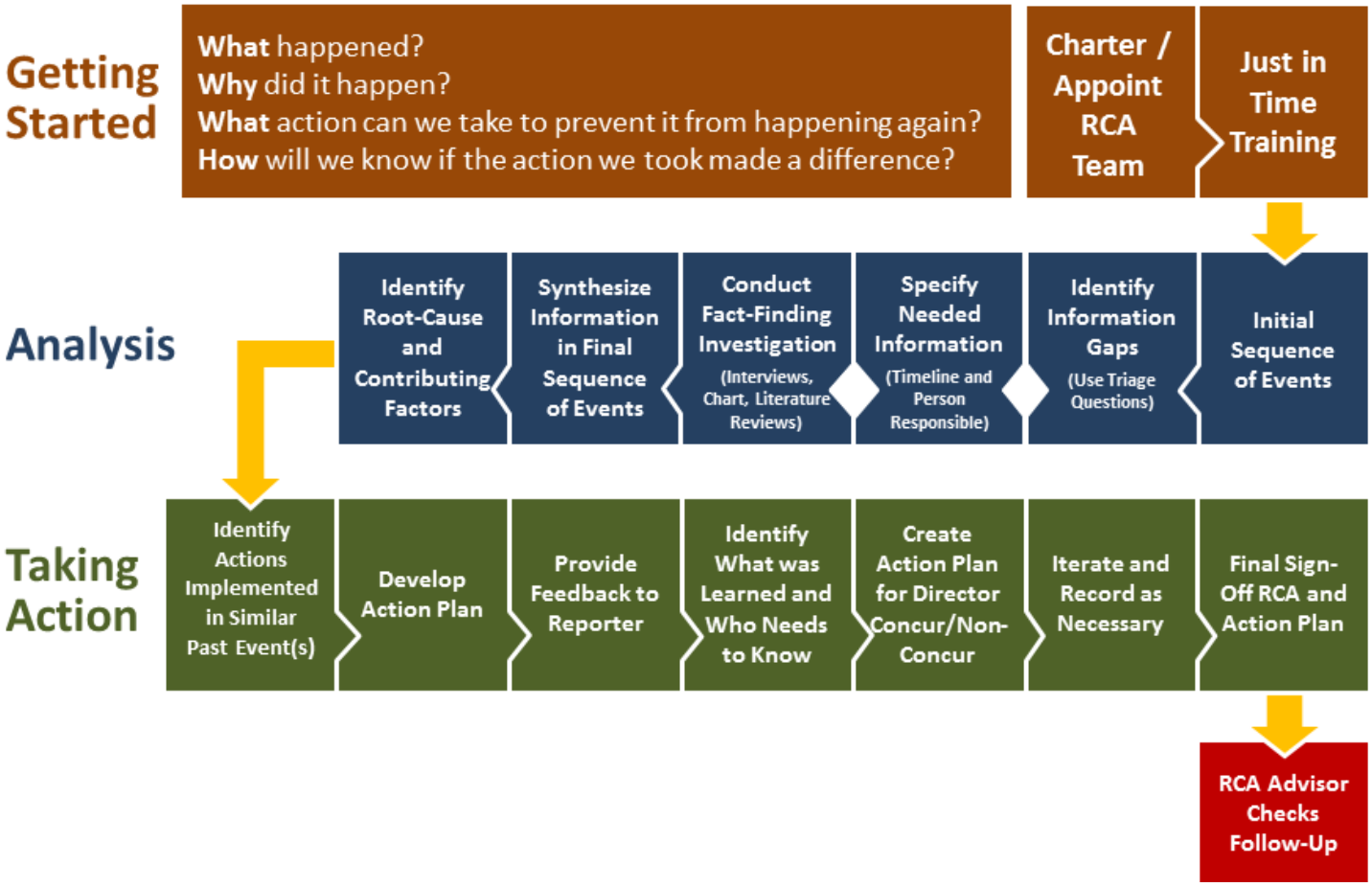
Root Cause Analysis (RCA) Step-By-Step Guide

NCPS

VA National Center for Patient Safety

Safer Systems • Safer Care

Root Cause Analysis (RCA) Process Steps



Root Cause Analysis (RCA) Process Steps.

Getting Started: What happened? Why did it happen? What action can we take to prevent it from happening again? How will we know if the action we took made a difference? Step 1 – charter/appoint RCA team. Step 2 – Just in time training. Go to Analysis.

Analysis: Step 1 – Initial sequence of events. Step 2 – identify information gaps (use triage questions). Step 3 – Specify needed information (timeline and person responsible). Step 4 – conduct fact-finding investigation (interviews, chart, literature reviews). Go back and forth between Step 3 and Step 4 if needed. Step 5 – synthesize information in final sequence of events. Step 6 – identify root-cause and contributing factors. Go to Taking Action.

Taking Action: Step 1 – identify actions implemented in similar past event(s). Step 2 – develop action plan. Step 3 – provide feedback to reporter. Step 4 – identify what was learned and who needs to know. Step 5 – create action plan for director, concur/non-concur. Step 6 – final sign-off RCA and action plan. Go to Final Step.

Final Step – RCA advisor checks follow-up.

Root Cause Analysis (RCA) Step-By-Step Guide

RCA is a process for identifying the basic or contributing causal factors that underlie variations in performance associated with adverse events or close calls. An RCA is a specific type of focused review that is used for all patient safety adverse events or close calls requiring analysis. The term RCA is used to denote this process specified in the Patient Safety Improvement Handbook 1050.01. http://vaww1.va.gov/vhapublications/ViewPublication.asp?pub_ID=2389

Patient Safety reports and RCAs are confidential and privileged under 38 U.S.C. 5705 and its implementing regulations.

RCA teams focus on systems and processes, not individuals. They work to define:
What happened?
Why did it happen?
What action can we take to prevent it from happening again?
How will we know if the action we took made a difference?

Getting Started	Notes
Charter/Appoint Team	• RCAs need to be initiated with a specific charter memorandum and the term "Root Cause Analysis" used in documents to reaffirm they are protected and deemed confidential under 38 U.S.C. 5705 and its implementing regulations. A template is available in the Patient Safety Information System (nicknamed SPOT). • The charter memorandum is signed by the facility director/designee. • Teams usually consist of 4-5 people. • Teams should be interdisciplinary in nature with involvement of those knowledgeable about the processes involved in the event. Having team members with different professional backgrounds generally supports creative thinking. • The RCA team is comprised of VA staff. (At times, other individuals within the facility subject to the same restrictions and training applicable to VA employees, e.g., residents, volunteers may participate; however they are responsible to follow the same confidentiality requirements of 38 U.S.C. 5705.) Please contact NCPS for specific clarification related to this issue of non-VA staff on RCA teams. • Consider including leadership, clinical and administrative department chiefs on RCA teams to help obtain "buy-in." ***NOTE:*** *This is not to suggest that the team should consist solely of leaders and individuals with special knowledge of clinical or other processes thought to be associated with the adverse event or close call. Valuable contributions have been made by employees with little background in the clinical or other areas that were thought to be relevant at the outset of the RCA process.* • In the interest of objectivity, exclude individuals directly involved in the adverse event or close call as RCA team members. However, their experience and knowledge of the situation is vital to the RCA process. Their interview and suggestions about how to prevent the situation from happening again may be invaluable to the RCA team. • In cases where the facility director serves on the RCA team, final concurrence must come from the Veterans Integrated Service Network (VISN) director, or designee. • Team members need to be available to participate; obtain support from supervisors prior to appointment on the RCA team. • If in the course of conducting an RCA it appears that the event under consideration is the result of an Intentionally Unsafe Act (a criminal act; a purposefully unsafe act; an act related to substance abuse by provider and/or staff; or events involving alleged or suspected patient abuse of any kind), the RCA team must refer the event to the facility director for appropriate further consideration as described in the Patient Safety Handbook. In such situations, the RCA team discontinues their efforts, since the facility

Getting Started	Notes
	director has the responsibility for any further fact finding or investigation.
Just in Time Training	• At the first RCA team meeting, an orientation of the RCA process needs to be provided so all participants have a common understanding. • Discussing the Triage questions and the strength of actions hierarchy is encouraged. Here's the link for triage questions: http://www.patientsafety.va.gov/docs/joe/rca_tools_2_15.pdf • A simulated RCA video created by NCPS and provided to all PSMs may be part of the just in time training. Please contact NCPS if additional copies are needed. • Assign roles for the leader, advisor and recorder. • Decide on meeting dates and times to avoid potential delays. • Review rules of behavior and expectations. • A greeting by a top manager may reinforce the importance of the team's work.

Analysis	Notes
Initial Sequence of Events (Initial Flow Diagram)	• An initial sequence of events is an outline of the story that progresses chronologically from the first known fact through the final known fact. • This initial sequence of events gives all team members the same understanding of what occurred which helps avoid differing interpretations of the same event. • Establishing the series of events preceding the event is a critical step towards helping discover what caused the event and what to do to prevent it from happening again. • Include only those key events that are crucial to understanding what transpired. • It is not necessary to include the amount of time that elapsed between events, but if the information is available it may provide valuable insights. • The diagram/storyboard can be easily rearranged if "sticky notes" are used. • Use tools and techniques (flip charts, brainstorming, "parking lot" for questions, etc.). • The initial flow diagram should make clear what you know and what you don't know. • Visit the scene of the event, use the equipment, and safely simulate what happened. • Stick with the facts.
Identify Information Gaps (Use Triage Questions)	• When addressing each event in the flow diagram, ask why each event occurred until there are either no more questions or no more answers. • If the answer results in blaming an individual or group of individuals, ask a "why" question again to get to the systems issue. • Using the triage questions, identify questions that need to be answered. • Beware of hindsight bias (a.k.a. Monday morning quarterback). Teams often jump to conclusions, thinking they know the cause of the adverse event, a natural tendency. In reality, multiple decision points are encountered and must be dealt with. These environmental factors and decision points must be understood in order to identify the root cause or contributing factors.

Analysis	Notes
Specify Information Required/Who is Responsible to Get It and Timeline for Acquiring	• List the services, departments and information needed by the RCA team, including policies, procedures, reports, regulations, medical records, and committee minutes, etc. • Define the interviews with personnel needed. • Identify who is responsible to obtain the information. • Identify the timeline required to obtain the information.
Conduct Fact Finding: Interviews, Chart Reviews and Literature Reviews	• When fact finding: o Visit the site of the event and simulate the event. (Do not have a second accident!) o Interview a broad range of individuals for a thorough investigation of the systems. o Focus primarily on systems and processes rather than individual performance. • When interviewing, remember: o Interview one person at a time. o Inform them RCA information is protected and deemed confidential and privileged under 38 U.S.C. 5705. o Encourage the interviewee to tell their story without questions or interruption. o Encourage the interviewee to confine their comments to what they observed, avoid hearsay and avoid comments not in their personal knowledge or experience. o Have a single member of the team ask pre-selected questions. o Open the discussion for all team members only after all the predetermined questions have been asked. o Avoid questions that have "yes" or "no" answers. o Be courteous, considerate and open minded, avoid embarrassing any interviewee, adjust your style to match the needs of the interviewee, treat interviewees with overt diplomacy, and help timid interviewees. o Stay on the topic; don't get distracted by "hearsay." o Remember you are looking for truth about systems issues, not individuals and the primary goals are to find what happened and why it happened. o Conclude the interview by thanking each individual and inviting them to contact a team member with additional information if necessary. • Conduct fact finding and chart reviews as needed. • Define and record documents, books, websites or other materials used during the research related to this event.
Final Sequence of Events (Final Flow Diagram)	• The final sequence of events represents what was learned through the investigation. • Last, ask for the significance or relevance of each event (the "so what?" question), and capture answers under the event. This helps the team identify vulnerabilities and potential root causes/ contributing factors as well as their priority.
Identify Root Causes/Contributing Factors (RC/CF)	• The discussion of system vulnerabilities supports the team's prioritization. • Root causes/contributing factors define the team's priorities about what must be fixed. • RC/CF identifies changes that could be made in systems and processes that would reduce the risk of the adverse event or close call recurring. • There is rarely only one underlying cause. • RC/CF statements should not blame or single out an individual. • Root causes/contributing factors guide everything else that follows in the action plan. • To help adhere to these characteristics, the following five rules need to be considered when developing root cause statements: 1. Root cause statements need to include the cause and effect. 2. Negative descriptions about people are not to be used in root cause statements.

Analysis	Notes
	3. Each human error has a preceding cause. 4. Violations of procedure are not root causes, but must have a preceding cause. 5. Failure to act is only a root cause when there is a pre-existing duty to act.

Taking Action	Notes
Identify Corrective Actions That Were Instituted Due to a Similar Event in the Past	• Review prior RCAs to determine what corrective actions were implemented for similar events in the past. • Review and evaluate actions taken to address previous adverse events/close calls.
Develop Action Plan	• The action plan is comprised of one or more: o Root cause/contributing factor statement o Action o Outcome measure o Responsible person o Management concurrence or non-concur • Actions and outcome measures should specifically address the RC/CF. • Include all actions recommended by the RCA team; inspiring the team to advance their best recommendations and not self-limited the action plan. • If at all possible, select some intermediate or stronger actions (according to the action hierarchy) as they may lead to elimination of the vulnerability. • When defining who will be responsible to implement the action, review the action plan with them so they are not blindsided by the team's action plan. • Each action must have at least one outcome measure. Outcome measures: o Tell you if the action has made the situation better or not. o Are specific and quantifiable and use numerators, denominators and thresholds. o Offer timelines and due dates; state how many things you're going to check, how often you're going check, and the deadline date. o Define where the measurement results will be reported. • Share the actions with a "cold" reader to see if they make sense.
Provide Feedback to Reporter	• Staff who submit close call and adverse event reports that result in an RCA must receive feedback on the actions being taken as a result of their report and ask the reporter for any additional suggestions about how to eliminate or correct root cause/contributing factors during this conversation. The feedback is to be of a timely nature and come from the PSM, or other appropriately designated party. Prompt feedback to those reporting adverse events helps establish trust in the system and demonstrate the commitment on the part of the organization to the importance of reporting. • Maintain the confidential/protected nature of the RCA process during this discussion. • This step is unnecessary if the reporter is unknown. • *Feedback must only be given to individuals who remain on staff when the information from the RCA is available.*
Identify What was Learned and Who Needs to Know	• Present any additional recommendations of the RCA team which were not included in the action plan. • Define what was learned, who needs to know and how they will be informed.

Taking Action	Notes
Create Action Plan for Director to Concur/Non-Concur	• The root causes/contributing factors, associated actions and outcome measures are documented for reviewing the RCA with the director and/or leadership team. • In the event that top management does not concur with a proposed action developed by the RCA team, an alternative action to address the root cause/contributing factor needs to be developed and documented. Each RC/CF must have an action taken.
Iterate and Record as Necessary	• Finalize the written RCA document • Assure all reports are free of identifiers prior to submission to NCPS. (A tool for De-identifying is on the NCPS website: "De-identifying an RCA-what it means, and what it doesn't." http://vaww.ncps.med.va.gov/Tools/RCAToolbox/index.html • The SPOT database maintains the copy of record of the RCA and it is not necessary or advisable to maintain a paper copy since it is relatively easy to retrieve via SPOT. • For detailed and relevant information on recordkeeping see VHA Records Control Schedule (RCS) 10-1 (RCS 10-1).
Final RCA and Action Plan Sign-Off	• The completed RCA is signed by all RCA team members and the facility director/designee. • The date the facility director signs-off on the RCA is the date the RCA is considered complete. • In the Patient Safety Information System/SPOT this data entry field is called the "Director Sign-Off Date."
RCA Advisor Conducts Follow-Up	• Reporting back on the effectiveness of RCA actions is required. (This is completed in the Patient Safety Information System/SPOT.)