Root Cause Analysis
A Tool for Improvement

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Introduction

• Objective
  – Demonstrate one method for conducting a root cause analysis
  – Describe tools and techniques that help analyze breakdowns in work processes

• Outcome
  – You will be able to prepare an action plan for conducting a root cause analysis (RCA) in your local setting
What is Root Cause Analysis?

• A step by step questioning process to identify the basic or causal factors of an error or “near miss”

• Used in high risk industries such as nuclear power, airlines, the military, and increasingly….in healthcare

When Do We Use It?

• When we need to understand and prevent Sentinel Events
  - Sentinel Event = “Unexpected occurrence involving death or serious physical or psychological injury, OR THE RISK THEREOF…”
  - Signals the need for immediate investigation and response.
A Tool to Understand

- What happened?
- How did it happen?

“Sharp End”

- Why did it happen?
- What can be done to prevent it from happening again?

“Blunt End”
Acceptable RCA

- Acceptable if:
  - Focuses on systems – not people
  - Progresses from special cause to common cause
  - Digs deeper asking why, why, why
  - Identifies changes through re-design or new system
What’s thorough?

• Thorough if:
  – Human and other factors associated with event identified
  – Detailed inquiry into the key areas specific to the event
  – Identification of contributing factors and root causes
  – Determination of improvements

What’s Credible?

• Credible if:
  – Include participation/support from leadership and by individuals most closely involved in the processes and systems under review
  – Internally consistent, not contradict itself or leave obvious questions unanswered
  – Include consideration of any relevant literature
What RCA is NOT!

Used to blame any one person or group.

Sources of Information for Individual RCA

• Incident report
  – A single report or aggregate
• Near Misses/Close calls
• Medication error
• Customer complaint
• Employee complaint
A sentinel event or near miss happens….now what?

**Basic Steps of RCA**

1. Gather the facts using a timeline and interviews
2. Understand what happened
3. Identify root causes
4. Develop a Risk Reduction Plan
5. Evaluate effectiveness of actions
Step One

• Facilitator gathers facts and puts together a team

• Facilitator should
  – Not be directly involved in incident
  – Not have any preconceived ideas of causal factors
  – Understand purpose, process, outcomes of RCA
  – Have credibility within organization
  – Skills in quality improvement

Gather the Facts

• Review documents related to the event:
  – Medical record
  – Incident report
• Interviews those involved
• Observe the “typical” process
Gather the Facts

• Facilitator interviews
  – Creates trust with those involved in the event
  – Helps to determine those beneficial for the team
  – Defuses gossip, speculation and blame if done as soon as possible after the event.

Supporting Materials

• Facilitator develops a timeline of the event.
• Obtain a flowchart, policies and procedures related to the intended process.
• Conduct literature search as pertinent
Putting the Team Together

• The RCA Team is:
  – Interdisciplinary
  – Includes all staff directly involved in the event
  – Experts most knowledgeable about the process
  – Physician champions
  – Administrative support

• Everyone on the team is equal!
Ground Rules for Team

• Review purpose of RCA... change the system to minimize risk to patients
• Everyone is a professional, all are equal; treat each other with respect
• Use the “parking lot” to validate concerns but stay on task
• Be open-minded; speak candidly and honestly
• Confidentiality - What is said in the room about who said or did what stays in the room

What Leaves the Room...

The proposed system changes are what you should focus on when you leave the room.
Step Two

- Understand what happened
  - Review the timeline with everyone present
  - Compare actual sequence of events with internal policy/procedures or best practice according to literature or guidelines
  - Begin to identify opportunities or ideas
    - (Participants can record ideas down on post-it notes; one per note)

Step Three

- Determine the Root Cause
  - Based on analysis of process, brainstorm root causes; Ask why, why, why?
  - Group into categories of causal factors:
    - Human factors - communication
    - Human factors – fatigue/staffing
    - Environment/Equipment
    - Rules/Policies/Procedures
    - Information management
    - Culture
  - Include “Parking Lot” for incidental findings
Determine the Root Cause

• Determine “contributing” cause(s) = a factor that, if corrected would not prevent a recurrence, but is significant enough to fix
  – Contributing factors result in future unwanted events if not corrected

• Determine “root” cause(s) = the most basic condition that, if corrected, prevents recurrence
  – Within management’s control to correct

Step Four

• Develop risk reduction plan
  – For each contributing and root cause, identify corrective measures and improvement opportunities

  – Create a timeline

  – Assign accountability for implementation
Step Four

• Develop risk reduction plan continued,
  – Develop a plan for pilot testing
  – Determine measurement method
  – Assign accountability for measurement

Step 5

• Evaluate effectiveness of actions
  – Set a date to review measurement results
    • Evaluate if actions taken have reduced the risk of a recurrence
    • Revise action plan if necessary
    • Evaluate the RCA process – (ask team members if process was valuable)
Step Five

• Final action:
  – Report activities and outcomes to the quality oversight committee and/or Leadership

Special Concerns for Small Hospitals

• Few staff to draw team from
  • Management must encourage & adjust staff to allow participation in RCA team activity
  • Create an incentive system for participation
  • Ensure feedback/ “thank you”s to participants

• Team members must be truly equal…titles are dropped at the door
• Maintain the firewall
Drop Your Title at the Door

• Open, learning environment must be created

• Symbolic – place name badges in a bowl

• Administrator – “show and go”; re-engage during action planning

• Facilitator can ask those who blame to leave

Firewall Solutions

• Assume system failure is NOT individual fault

• If evidence points to an intentional unsafe act, stop RCA; refer for disciplinary action

• Those involved in discipline DO NOT facilitate RCA

• Train multiple people to facilitate RCA

• Consider external facilitator for sensitive events
Consider Different Time Frames

- Individual interviews or group debriefing
- Multiple sessions or single session to identify root causes
- Availability of skilled facilitator

Individual or Group Debriefing?

- **Individual Interviews**
  - Internal facilitator has time, skill to conduct multiple individual interviews, & lack of bias
  - Organizational history of success, maturity with RCA process

- **Group Debriefing**
  - Need for external facilitator
  - Need to build organizational understanding & success with RCA process
  - Need to create RCA champions
Number of Meetings

• Multiple meetings
  – Complex process
  – Multiple people involved in the event
  – Staff available for multiple one hour meetings
  – Internal skilled facilitator available

• Single meeting
  – Difficult for staff to meet multiple times
  – Staff available for one 3-hour meeting
  – Need for external facilitator
  – First meeting debriefs & identifies topics for action plans

Symptoms of Inadequate RCA

• Staff quite during/after an RCA

• Staff associate RCA with assigning individual blame

• Action plans stall
“Every problem is really an opportunity. Every system defect, a treasure”

Kitchiro Toyoda
Founder of Toyota

QUESTIONS

Contact us:
• Bev Ranstrom
  branstrom@altru.org

• Suzy Beattie
  sbeattie@medicine.nodak.edu