Applying RCA2 to strengthen your patient safety program

Kathleen Rauch, RN, MSHQS, BSN, CPHQ
Learning objectives

By the end of this session, participants will be able to:

• identify methodologies and techniques leading to more effective and efficient RCAs;

• use tools to improve the process of completing RCAs to improve patient safety; and

• identify and apply tools that assist management in the evaluation process.
One preventable safety event is one too many, and more work remains to be done.

Source: AHA
Setting the stage...
20 years later…

Patient-centered
Timely
Efficient
Effective
Safe
Equitable
Six Aims - STEEEP

QUALITY
Efficient
Timely
Patient-centered
Effective
Safe
Equitable
Six Aims - STEEEP
Why RCA²?

- Risk-based rather than severity-based approach
- Non-punitive
- Stronger actions
- Sustainable results
Let’s get started...
Evaluating events based on risk

### Safety Assessment Code Matrix

The Safety Assessment Code (SAC) is a numerical score that rates incidents affecting a patient or security incidents. The score is based on the consequence of that incident and the likelihood of its recurrence. The SAC Matrix assists in calculating the score. The score guides the level of incident investigation or review that is undertaken.

#### Definition of an incident:
- Any event or circumstance which could have (near miss) or did lead to unintended and/or unnecessary psychological or physical harm to a person and/or to a compliant, loss or damage (SA Health Patient Incident Management and Open Disclosure Policy Directive).

#### Action required by the Notifier
- Record the incident as soon as it is known, and Sentinel Events within 24 hours.
- The person recording the incident is called the Notifier.

#### Action required by the Manager
- Each incident type has designated manager(s), who will:
  - Review all incidents within two working days, change the incident status to ‘fixed reviewed’.
  - Investigate and record an appropriate management comment that reflects the Actual SAC outcome of the incident.
  - Review and score SAC 3 and 4 incidents within 30 calendar days. Investigation of SAC 1 and 2 have a 10 day time frame (with the possibility of an extension).

#### Source:
Government of South Australia

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<table>
<thead>
<tr>
<th>Probability</th>
<th>Definition</th>
<th><em>Sentinel Events</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent (almost certain)</td>
<td>Is expected to occur again either immediately or within a short period of time (likely to occur more days or weeks)</td>
<td>- Surgery or other invasive procedure performed on the wrong site resulting in serious harm or death</td>
</tr>
<tr>
<td>Probable (likely)</td>
<td>Will probably occur in most circumstances (monthly)</td>
<td>- Surgery or other invasive procedure performed on the wrong patient resulting in serious harm or death</td>
</tr>
<tr>
<td>Occasional (possible)</td>
<td>Possibly will occur at some time (usually once a year)</td>
<td>- Wrong surgical or invasive procedure performed on a patient resulting in serious harm or death</td>
</tr>
<tr>
<td>Uncommon (unlikely)</td>
<td>Possibly will occur - could occur at some time in every 1-2 years</td>
<td>- Untoward reaction of a foreign object in a patient after surgery or other invasive procedure resulting in serious harm or death</td>
</tr>
<tr>
<td>Remote (rare)</td>
<td>Unlikely to occur - may occur only in exceptional circumstances (may happen every 2 to 5 years)</td>
<td>- Hypomagnesia/blood transfusion reaction resulting from ABO incompatibility resulting in serious harm or death</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Suspected suicide of a patient in an acute psychiatric unit or acute psychiatric ward</td>
</tr>
</tbody>
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### Source:
Government of South Australia
Timing: Event review

- Review process should begin within 72 hours.
- Evaluation completed within 30 to 45 days.
  - Thorough and creditable evaluations require multiple meetings.
Team membership

Experienced and skilled team leader
  • Quality leader

Core team (4-6 members)
  • Fundamental knowledge of RCA process
    • Nurse leader
    • Pharmacist
    • Patient Experience representative
    • Subject matter expert: OR, Central Sterilization, Lab, Radiology, OB

Should not include those who were part of the event.
RCA² team member involvement

<table>
<thead>
<tr>
<th>NOTE: An individual may serve in multiple capacities</th>
<th>Team Member?</th>
<th>Interview?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject matter expert(s) on the event or close call process being evaluated</td>
<td>Yes</td>
<td>Yes, if not on the team</td>
</tr>
<tr>
<td>Individual(s) not familiar with (naive to) the event or close call process</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Leader who is well versed in the RCA² process</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Staff directly involved in the event</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Front line staff working in the area/process</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Patient involved in the event</td>
<td>No</td>
<td>Yes**</td>
</tr>
<tr>
<td>Family of patient involved in the event</td>
<td>No</td>
<td>Yes**</td>
</tr>
<tr>
<td>Patient representative</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Strongly consider including facility engineering, biomedical engineering, information technology, or pharmacy staff on an RCA² team, as individuals in these disciplines tend to think in terms of systems and often have system-based mindsets. Including medical residents on a team when they are available is also suggested.

** This might not be needed for some close calls or events that are far removed from the bedside (e.g., an incorrect reagent that is used in the lab).

Source: NPSF, RCA² Improving Root Cause Analyses and Actions to Prevent Harm, p. 11
Case Study - Part 1
Interview process

Providers and staff are interviewed.

- Shortly after the event, while details are fresh
- By the team, so they hear the information first-hand and can ask questions

Patients and/or family members should be interviewed by the team.

- Gain a more complete understanding of the event
- Provide a unique perspective that would otherwise be unavailable
Analysis steps and tools

- Describe the event.
  - Time line or flow diagram
- Visit the location of the event.
- Evaluate equipment or products, if involved.
- Use triggering and open-ended questions.
- Review internal and external documents.
- Provide feedback to the involved staff and patients.
Individual RCA² process

Source: NPSF, RCA² Improving Root Cause Analyses and Actions to Prevent Harm, p. 15
Case Study - Part 2
Actions

Most important step of the process
Identify at least one stronger- or intermediate-strength action.

• Simplify the process
• Purchase needed equipment

• Software enhancements
• Eliminate/reduce distractions
## Action Hierarchy

The table below illustrates the action hierarchy with examples provided:

<table>
<thead>
<tr>
<th>Stronger Actions</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural/physical plant changes</td>
<td>Replace existing sliding doors at the main patient entrance into the building with powered sliding doors to reduce patient falls.</td>
</tr>
<tr>
<td>New devices with usability testing</td>
<td>Perform human factors tests of patient blood glucose meters and test strips and select the most appropriate for the patient population being served.</td>
</tr>
<tr>
<td>Improving central processing function</td>
<td>Eliminate the use of universal adaptors and peripheral devices for medical equipment and use tubing and fittings that can only be connected the correct way, e.g., female tubing and connectors that cannot physically be connected to sequential compression devices or IV sets.</td>
</tr>
<tr>
<td>Simplify processes</td>
<td>Remove unnecessary steps in a process.</td>
</tr>
<tr>
<td>Standardize equipment or process</td>
<td>Standardize on the make and model of medication pumps used throughout the institution. Use bar coding for medication administration.</td>
</tr>
<tr>
<td>Tangible involvement by leadership</td>
<td>Participate in unit/patient safety evaluations and interact with staff, support the RCA process, purchase needed equipment, measure staffing, and workload are balanced.</td>
</tr>
</tbody>
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<tr>
<th>Intermediate Actions</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redundancy</td>
<td>Use two nurses to independently calculate high-risk medication dosages.</td>
</tr>
<tr>
<td>Increase staffing/pause in workload</td>
<td>Make staff available to assist when workload peaks during the day.</td>
</tr>
<tr>
<td>Software enhancements, modifications</td>
<td>Use computer alerts for drug-drug interactions.</td>
</tr>
<tr>
<td>Elimination reduce distractions</td>
<td>Provide quiet rooms for programming PCA pumps; remove distractions for nurses when programming medication pumps.</td>
</tr>
<tr>
<td>Education using simulation-based training with periodic refresher sessions and simulations</td>
<td>Conduct patient handoffs, simulation lab environment, with other action clinicians and nursing.</td>
</tr>
<tr>
<td>Checklists/notation with</td>
<td>Use pre-scriber and pre-handoff checklist in operating rooms. Use a checklist when recognizing failure in optic, anesthetics.</td>
</tr>
<tr>
<td>Eliminate look and sound alike</td>
<td>Do not store look-alikes next to each other in the unit medication room.</td>
</tr>
<tr>
<td>Standardized communication tools</td>
<td>Use bar-coding for all critical lab orders, use management or rework-back for all patient lab orders, use a standard order entry format.</td>
</tr>
<tr>
<td>Enhanced documentation, communication</td>
<td>Highlight medication name and dose on IV bags.</td>
</tr>
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</table>

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<th>Weaker Actions</th>
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<tbody>
<tr>
<td>Double checks</td>
<td>One person calculates dosage, another person reviews that calculation.</td>
</tr>
<tr>
<td>Verifications</td>
<td>Add audible alarms or caution labels.</td>
</tr>
<tr>
<td>New procedure/ equipment/unit policy</td>
<td>Remember to check IV lines every 2 hours.</td>
</tr>
<tr>
<td>Training</td>
<td>Demonstrate the hand-to-hand transfer with hidden door during an invasive training.</td>
</tr>
</tbody>
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Source: NPSF, *RCA² Improving Root Cause Analyses and Actions to Prevent Harm*, p. 17
Measure success

Failing to measure success is a common pitfall in the process.

- Select the correct measure, process or outcome.
- Assign responsibility for measurement to a specific individual.
- Be specific about what is being measured, how and when.
Final steps

1. Communicate
   • Involved staff, patients and families
   • Leadership and Board

2. Re-evaluate
   • To ensure sustainment

3. Consider
   • Leadership involvement in the RCA process
   • Establish a process for performance-related issues.
     • Just Culture
Case Study - Part 3
Keys to Success

- Leadership buy-in
- Process that aligns with your organization’s needs & structure
- Communication & education – all levels
- Consistent use
- Process monitoring & evaluation
Questions?
Thank you.

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The Statewide Voice for New York’s Hospitals and Health Systems