Applying RCA2 to strengthen your patient safety program

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Learning objectives

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

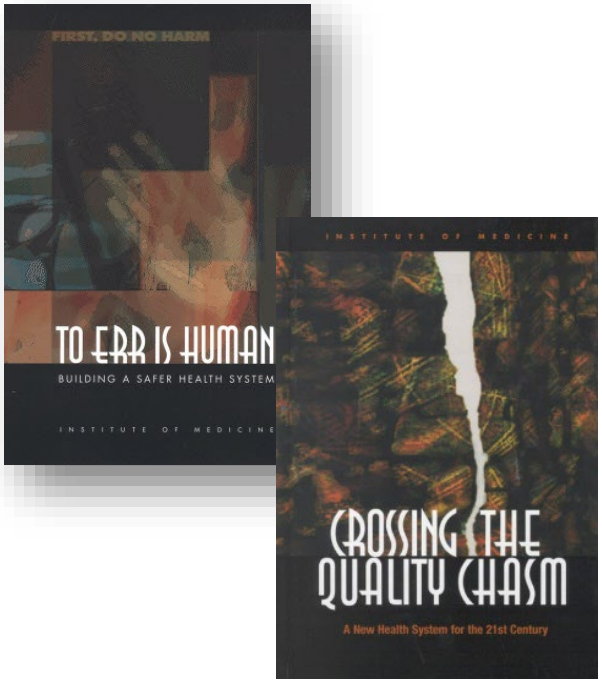
- identify methodologies and techniques leading to more effective and efficient RCAs;
- use tools to improve the process of completing RCAs to improve patient safety; and
- identify and apply tools that assist management in the evaluation process.

One preventable safety event is one too many, and more work remains to be done.

Source: AHA

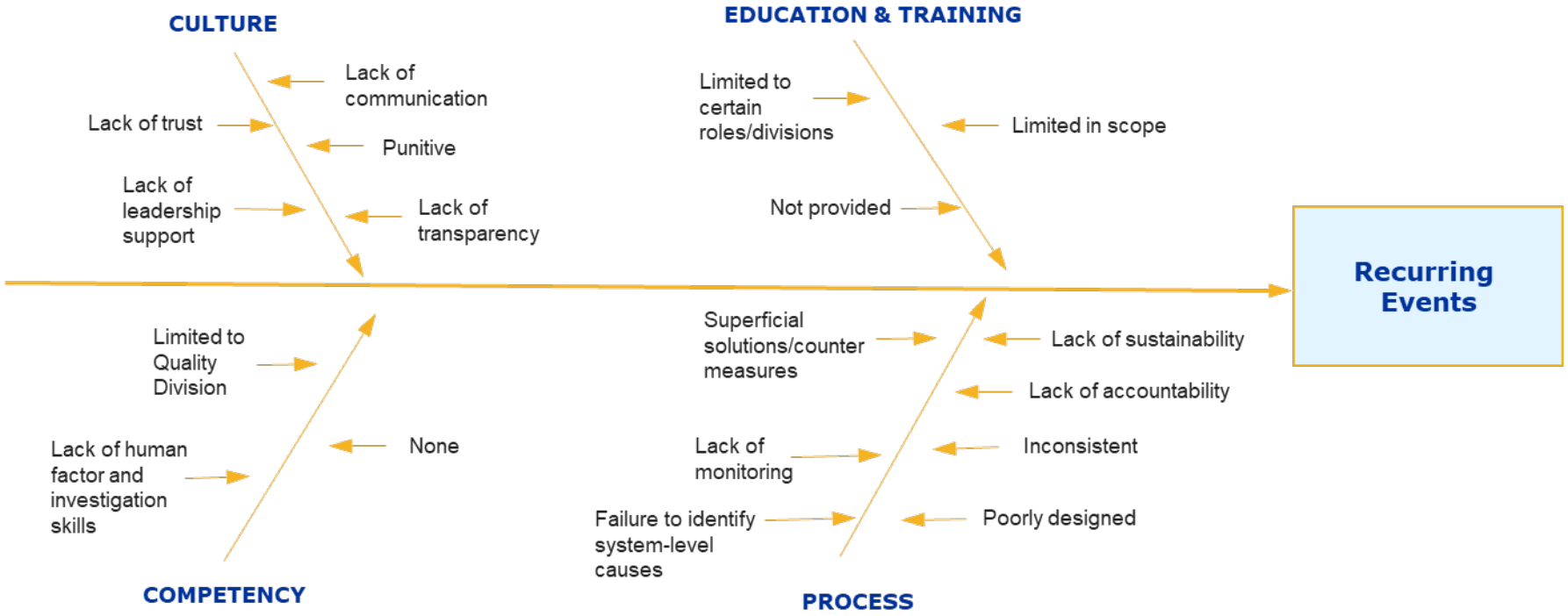
Setting the stage…

20 years later...



Six Aims - STEEEP

RCA Lessons Learned

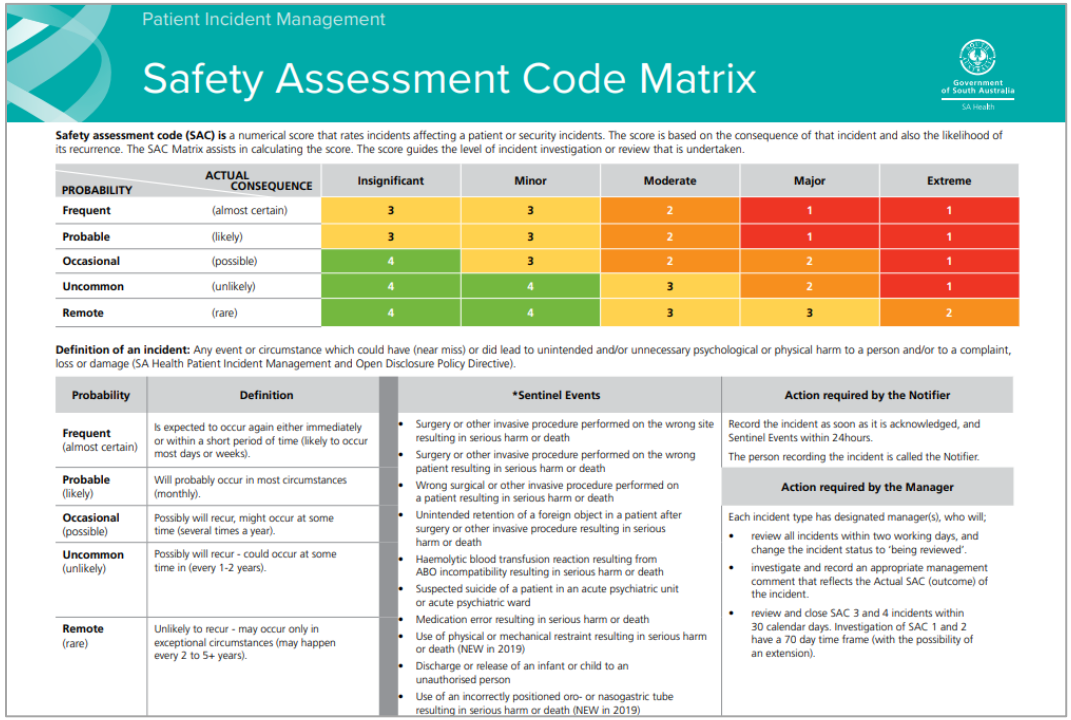


Why RCA^2?

- Risk-based rather than severity-based approach
- Non-punitive
- Stronger actions
- Sustainable results

Let’s get started…

Evaluating events based on risk



Patient Incident Management

Safety Assessment Code Matrix

Government of South Australia
SA Health

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 also 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.

PROBABILITY / ACTUAL CONSEQUENCE		Insignificant	Minor	Moderate	Major	Extreme
Frequent	(almost certain)	3	3	2	1	1
Probable	(likely)	3	3	2	1	1
Occasional	(possible)	4	3	2	2	1
Uncommon	(unlikely)	4	4	3	2	1
Remote	(rare)	4	4	3	3	2

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 complaint, loss or damage (SA Health Patient Incident Management and Open Disclosure Policy Directive).

Probability	Definition
Frequent (almost certain)	Is expected to occur again either immediately or within a short period of time (likely to occur most days or weeks).
Probable (likely)	Will probably occur in most circumstances (monthly).
Occasional (possible)	Possibly will recur, might occur at some time (several times a year).
Uncommon (unlikely)	Possibly will recur - could occur at some time in (every 1-2 years).
Remote (rare)	Unlikely to recur - may occur only in exceptional circumstances (may happen every 2 to 5+ years).

***Sentinel Events**

- Surgery or other invasive procedure performed on the wrong site resulting in serious harm or death
- Surgery or other invasive procedure performed on the wrong patient resulting in serious harm or death
- Wrong surgical or other invasive procedure performed on a patient resulting in serious harm or death
- Unintended retention of a foreign object in a patient after surgery or other invasive procedure resulting in serious harm or death
- Haemolytic blood transfusion reaction resulting from ABO incompatibility resulting in serious harm or death
- Suspected suicide of a patient in an acute psychiatric unit or acute psychiatric ward
- Medication error resulting in serious harm or death
- Use of physical or mechanical restraint resulting in serious harm or death (NEW in 2019)
- Discharge or release of an infant or child to an unauthorised person
- Use of an incorrectly positioned oro- or nasogastric tube resulting in serious harm or death (NEW in 2019)

Action required by the Notifier

Record the incident as soon as it is acknowledged, and Sentinel Events within 24hours.

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, and change the incident status to 'being reviewed'.
- investigate and record an appropriate management comment that reflects the Actual SAC (outcome) of the incident.
- review and close SAC 3 and 4 incidents within 30 calendar days. Investigation of SAC 1 and 2 have a 70 day time frame (with the possibility of an extension).

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

Figure 1. RCA² Team Membership* and Involvement

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

**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

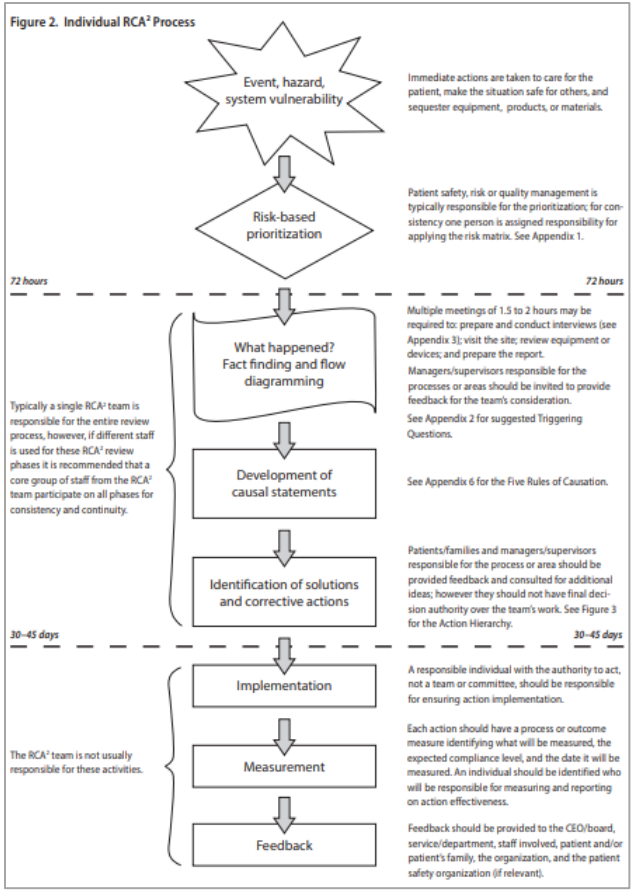
Patients and/or family members should be interviewed by the team.

- 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

Figure 3. Action Hierarchy

	Action Category	Example
Stronger Actions	Architectural/physical plant changes	Replace revolving doors at the main patient entrance into the building with powered sliding or swinging doors to reduce patient falls.
	New devices with usability testing	Perform heuristic tests of outpatient blood glucose meters and test strips and select the most appropriate for the patient population being served.
	Engineering control (forcing function)	Eliminate the use of universal adaptors and peripheral devices for medical equipment and use tubing/fittings that can only be connected the correct way (e.g., IV tubing and connectors that cannot physically be connected to sequential compression devices or SCDs).
	Simplify process	Remove unnecessary steps in a process.
	Standardize on equipment or process	Standardize on the make and model of medication pumps used throughout the institution. Use bar coding for medication administration.
	Tangible involvement by leadership	Participate in unit patient safety evaluations and interact with staff; support the RCA² process; purchase needed equipment; ensure staffing and workload are balanced.
Intermediate Actions	Redundancy	Use two RNs to independently calculate high-risk medication dosages.
	Increase in staffing/decrease in workload	Make float staff available to assist when workloads peak during the day.
	Software enhancements, modifications	Use computer alerts for drug-drug interactions.
	Eliminate/reduce distractions	Provide quiet rooms for programming PCA pumps; remove distractions for nurses when programming medication pumps.
	Education using simulation-based training, with periodic refresher sessions and observations	Conduct patient handoffs in a simulation lab/environment, with after action critiques and debriefing.
	Checklist/cognitive aids	Use pre-induction and pre-incision checklists in operating rooms. Use a checklist when reprocessing flexible fiber optic endoscopes.
	Eliminate look- and sound-alikes	Do not store look-alikes next to one another in the unit medication room.
	Standardized communication tools	Use read-back for all critical lab values. Use read-back or repeat-back for all verbal medication orders. Use a standardized patient handoff format.
	Enhanced documentation, communication	Highlight medication name and dose on IV bags.
Weaker Actions	Double checks	One person calculates dosage, another person reviews their calculation.
	Warnings	Add audible alarms or caution labels.
	New procedure/ memorandum/policy	Remember to check IV sites every 2 hours.
	Training	Demonstrate the hard-to-use defibrillator with hidden door during an in-service training.

Action Hierarchy levels and categories are based on *Root Cause Analysis Tools*, VA National Center for Patient Safety, http://www.patientsafety.va.gov/docs/joe/rca_tools_2_15.pdf. Examples are provided here.

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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