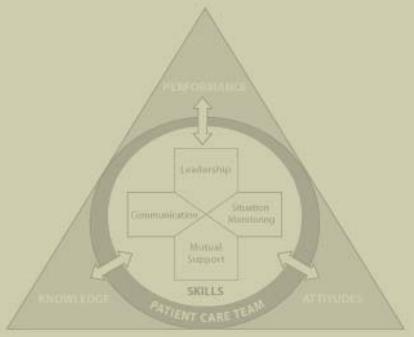


TeamSTEPPS™

Team Strategies & Tools to Enhance Performance & Patient Safety

for

Rapid Response Systems

Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

PATIENT SAFETY

TRICARE

Overview

- **What is the Rapid Response System?**
  - The Rapid Response System (RRS) is the overarching structure that coordinates all teams involved in a rapid response call
- **What is TeamSTEPPS**?
  - The Agency for Healthcare Research and Quality's curriculum and materials for teaching teamwork tools and strategies to healthcare professionals
  - This module of TeamSTEPPS is for RRS

Overview

- **What is the Rapid Response Team?**
  - RRS has several parts, one of them being the Rapid Response Team (RRT)
  - A RRT – known by some as the Medical Emergency Team – is a team of clinicians who bring critical care expertise to the patient's bedside or wherever it is needed (IHI, 2007)

Why Should You Care?

- People die unnecessarily every day in our hospitals
- It is likely that each of you can provide an example of a patient who, in retrospect, should not have died during his or her hospitalization
- There are often clear early warning signs of deterioration
- Establishing a RRS is one of the Joint Commission's 2008 National Patient Safety Goals
- Teamwork is critical to successful rapid response
- The evidence suggests that RRS work!

Does it Work?

	Before	After
No. of cardiac arrests	63	22
Deaths from cardiac arrest	37	16
No. of days in ICU post arrest	163	33
No. of days in hospital after arrest	1363	159
Inpatient deaths	302	222

Bellomo R, Goldsmith D, Uchino S, et al. A prospective before-and-after trial of a medical emergency team. *Medical Journal of Australia*. 2003;179(6):283-287.

Does the RRS Work?

- 50% reduction in non-ICU arrests

  Buist MD, Moore GE, Bernard SA, Waxman BP, Anderson JN, Nguyen TV. Effects of a medical emergency team on reduction of incidence of and mortality from unexpected cardiac arrests in hospital: preliminary study. *BMJ.* 2002;324:387-390.

- Reduced post-operative emergency ICU transfers (58%) and deaths (37%)

  Bellomo R, Goldsmith D, Uchino S, et al. Prospective controlled trial of effect of medical emergency team on postoperative morbidity and mortality rates. *Crit Care Med*. 2004;32:916-921.

- Reduction in arrest prior to ICU transfer (4% vs. 30%)

  Goldhill DR, Worthington L, Mulcahy A, Tarling M, Sumner A. The patient-at-risk team: identifying and managing seriously ill ward patients. *Anesthesia.* 1999;54(9):853-860.

- 17% decrease in the incidence of cardiopulmonary arrests (6.5 vs. 5.4 per 1000 admissions)

  DeVita MA, Braithwaite RS, Mahidhara R, Stuart S, Foraida M, Simmons RL. Use of medical emergency team responses to reduce hospital cardiopulmonary arrests. *Qual Saf Health Care*. 2004;13(4):251-254.

NQF Safe Practices

- In 2003, the National Quality Forum (NQF) identified the RRS as a chief example of a team intervention serving the safe practice element of Team Training and Team Interventions
  - RRSs are viewed as an ideal example of safe practices in teamwork meeting the objective of establishing a proactive systemic approach to team-based care
- In 2006, the NQF updated their Safe Practices recommendations
  - NQF continues to endorse RRSs and concludes that annually organizations should formally evaluate the opportunity for using rapid response systems to address the issues of deteriorating patients (NQF, 2006)

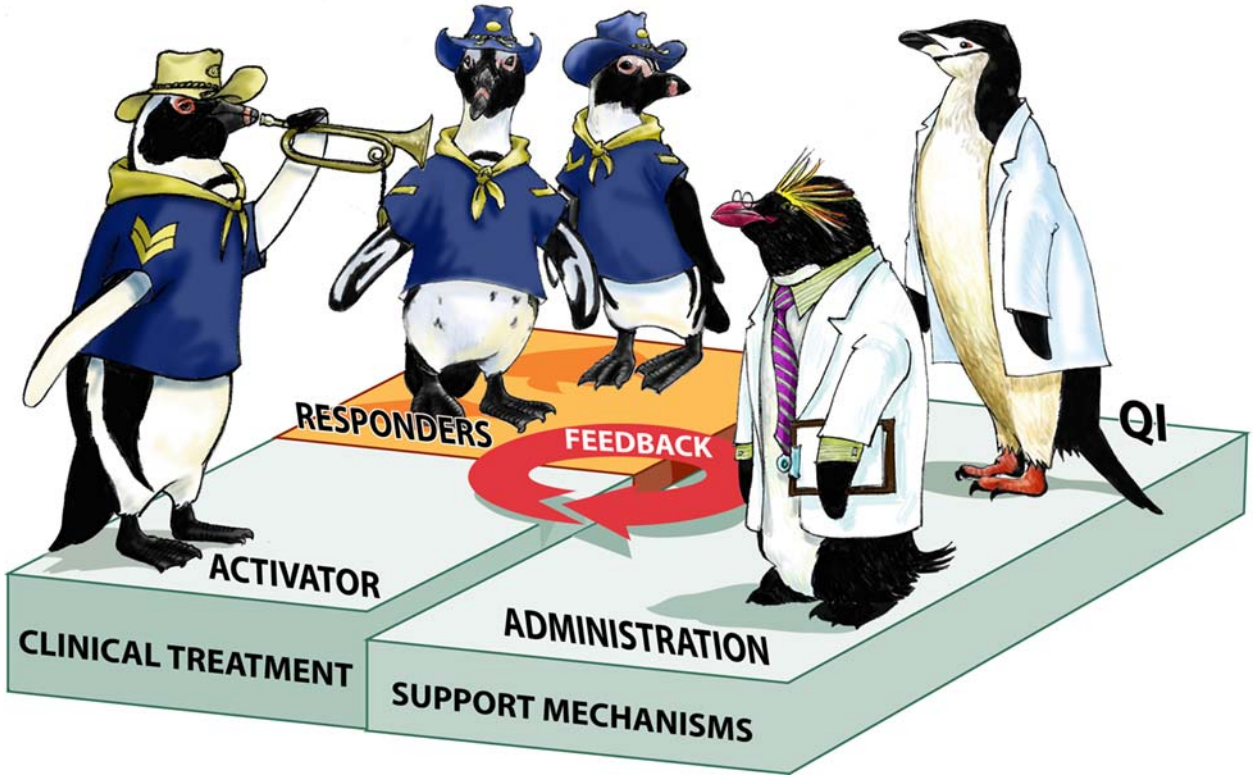
Joint Commission 2008 National Patient Safety Goal

- **Goal 16: Improve recognition and response to changes in a patient's condition**
  - 16A. The organization selects a suitable method that enables health care staff members to directly request additional assistance from a specially trained individual(s) when the patient's condition appears to be worsening

Implementation

- **When implementing RRS, the Institute for Healthcare Improvement (IHI) recommends:**
  - Engaging senior leadership
  - Identifying key staff for RRTs
  - Establishing alert criteria and a mechanism for calling the RRT
  - Educating staff about alert criteria and protocol
  - Using a structured documentation tool
  - Establishing feedback mechanisms
  - Measuring effectiveness
- **RRS can be customized to meet your institutions' needs and resources**

RRS Structure

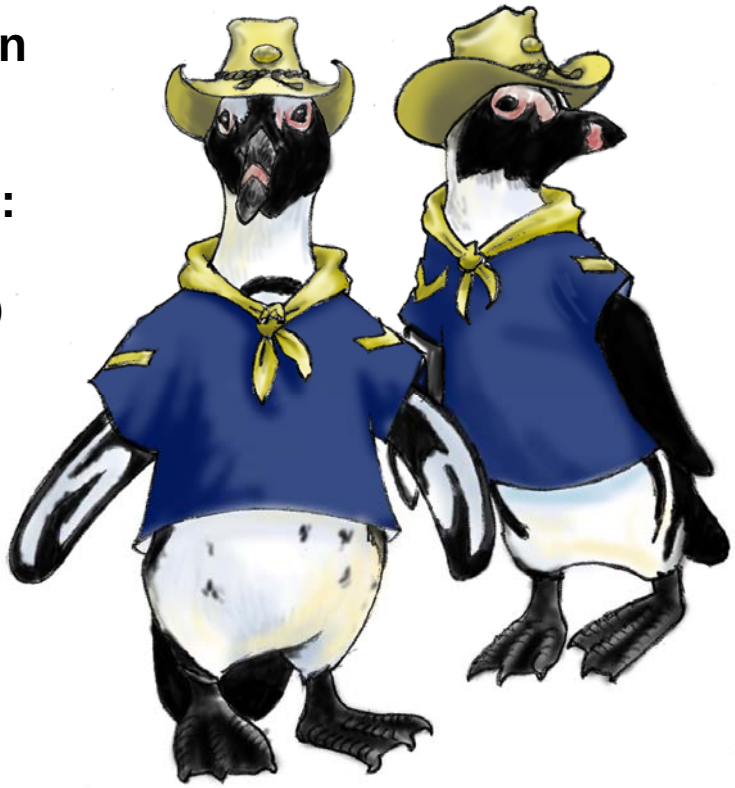


Activator(s)

- **Activators can be:**
  - Floor staff
  - A technician
  - The patient
  - A family member
  - Specialists
  - Anyone sensing the acute deterioration

Responder(s)

- **Responders come to the bedside and assess the patient's situation**
- **Responders determine patient disposition, which could include:**
  - Transferring the patient to another critical care unit (e.g., ICU or CCU)
  - A handoff back to the primary nurse/primary physician
  - Revising the treatment plan
- **Activators may become Responders and assist in stabilizing the patient**



Activators & Responders

- Activator(s) are responsible for calling the Responder(s) if a patient meets the calling criteria
- Responders must reinforce the Activator(s) for calling:

"Why did you call?" vs. *"Thank you for calling. What is the situation?"*

Remember: There are no "bad calls"!

Support: Quality Improvement & Administration

- The Quality Improvement (QI) Team supports Activators and Responders by reviewing RRS events and evaluating data for the purpose of improving RRS processes
- The Administration Team of the RRS brings organizational resources, support, and leadership to the entire RRS and ensures that changes in processes are implemented if necessary

Let's Watch the RRS in Action

Teamwork & RRS

- The RRS has all these barriers to effective care:

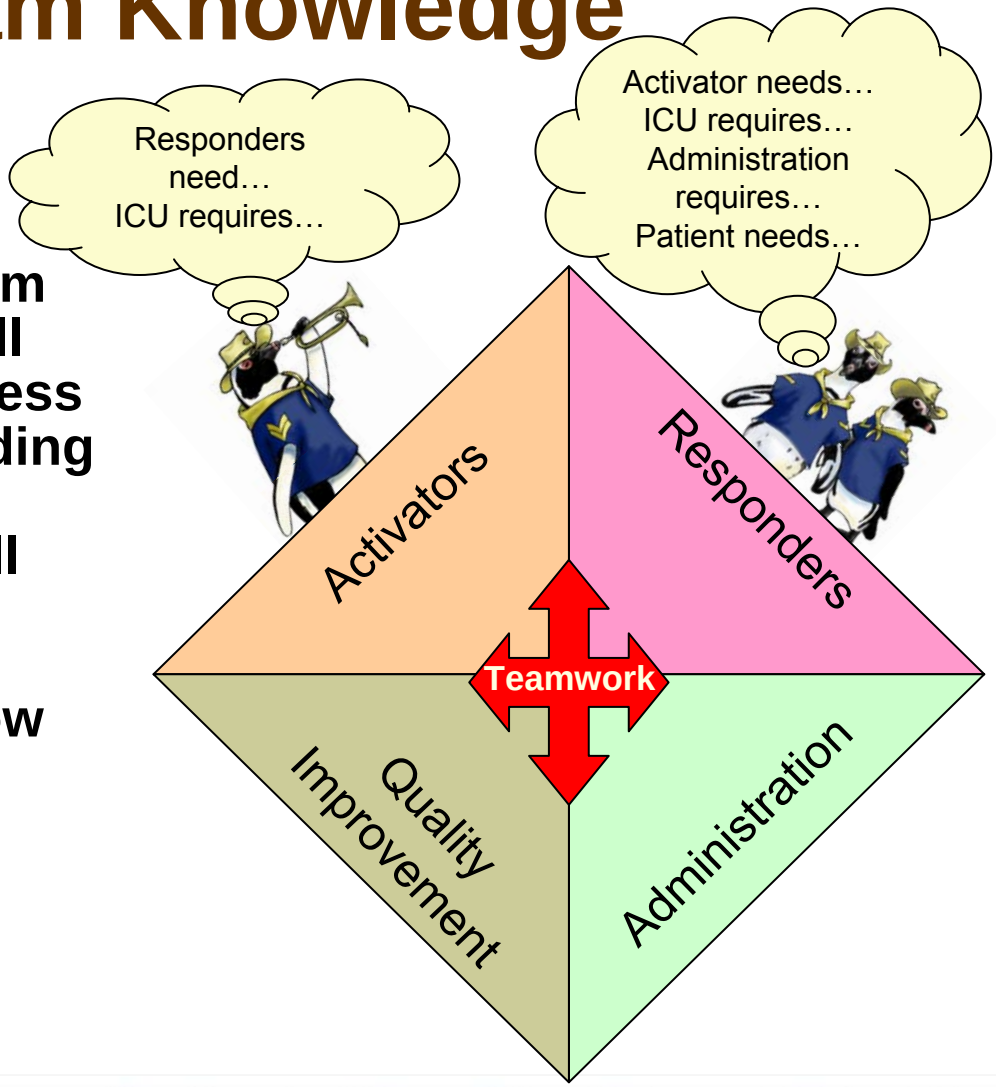
Necessary Teamwork Skills

Inter-Team Knowledge

- **Supports effective transitions in care between units**
- **Is a prerequisite for transition support (or “boundary spanning”)**
- **Consists of understanding the roles and responsibilities of each team within the RRS**

Inter-Team Knowledge

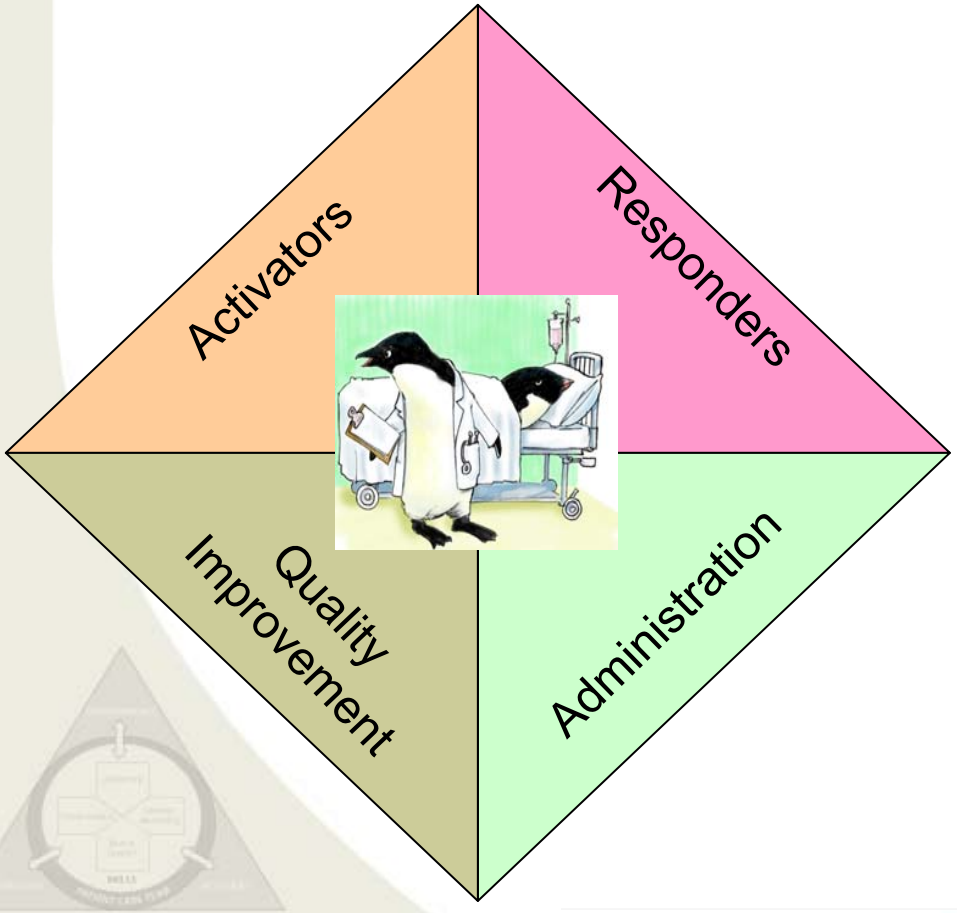
- **In the RRS, inter-team knowledge means all RRS members possess a shared understanding of the roles and responsibilities of all other members**
- **Activators must know the roles and responsibilities of Responders and vice versa**



Transition Support ("Boundary Spanning")

- **Requires inter-team knowledge**
- **Combines monitoring transitions in care and providing backup behavior when needed**
- **Provides role support**
  - Example: Activator becoming Responder

Transition Support ("Boundary Spanning")



- Manage data
- Monitor transitions
- Educate staff on situation and roles
- Ensure data recording
- Assist in role orientation

Example of One RRS

- **Activators call Responders using a pager**
- **Who are the Responders?**
  - ICU Physician
  - ICU Charge Nurse
  - Nurse Practitioner (if available)
  - RRS coordinator
  - Transportation service
  - For Pediatric Unit, chaplain's office, security, and respiratory therapist are also included

Example of One RRS (continued)

- Training
  - Includes direct teaching modules on rapid response and practice using Situation-Background-Assessment-Recommendation (SBAR)
  - Online training modules
  - Single-discipline training sessions
- Data Collection includes reporting:
  - Who called the response team and what criteria were used?
  - Who responded and in what timeframe?
  - What was done for the patient?
  - What are the top 5 diagnoses seen in the RRS?

Example of Another RRS

- **Activators call Responders using an overhead page and a pager**
  - Family members are considered Activators
- **Responders include:**
  - Nursing staff
  - Respiratory care staff
  - ICU staff

Example of Another RRS (continued)

- **Training**
  - In-class sessions
  - Simulation center
  - Interdisciplinary training in same location
- **Data collection**
  - Event debriefing
  - Task-oriented checklist by roles

Example of Another RRS (continued)

Nursing Tasks	Completed?
1. Check the patient's pulse.	☑
2. Obtain vital signs.	☐
3. Place the pulse oximeter.	☐
4. Assess patient's IVs.	☐
Respiratory Therapist Tasks	**Completed?**
1. Assess the airway.	☐
2. Count the respiratory rate.	☐
3. Assist ventilation.	☐
4. Check the patient's pupils.	☐

Exercise I:
Let's Identify Your RRS Structure

Think about the four components of the RRS:

Activators, Responders, QI and Administrative

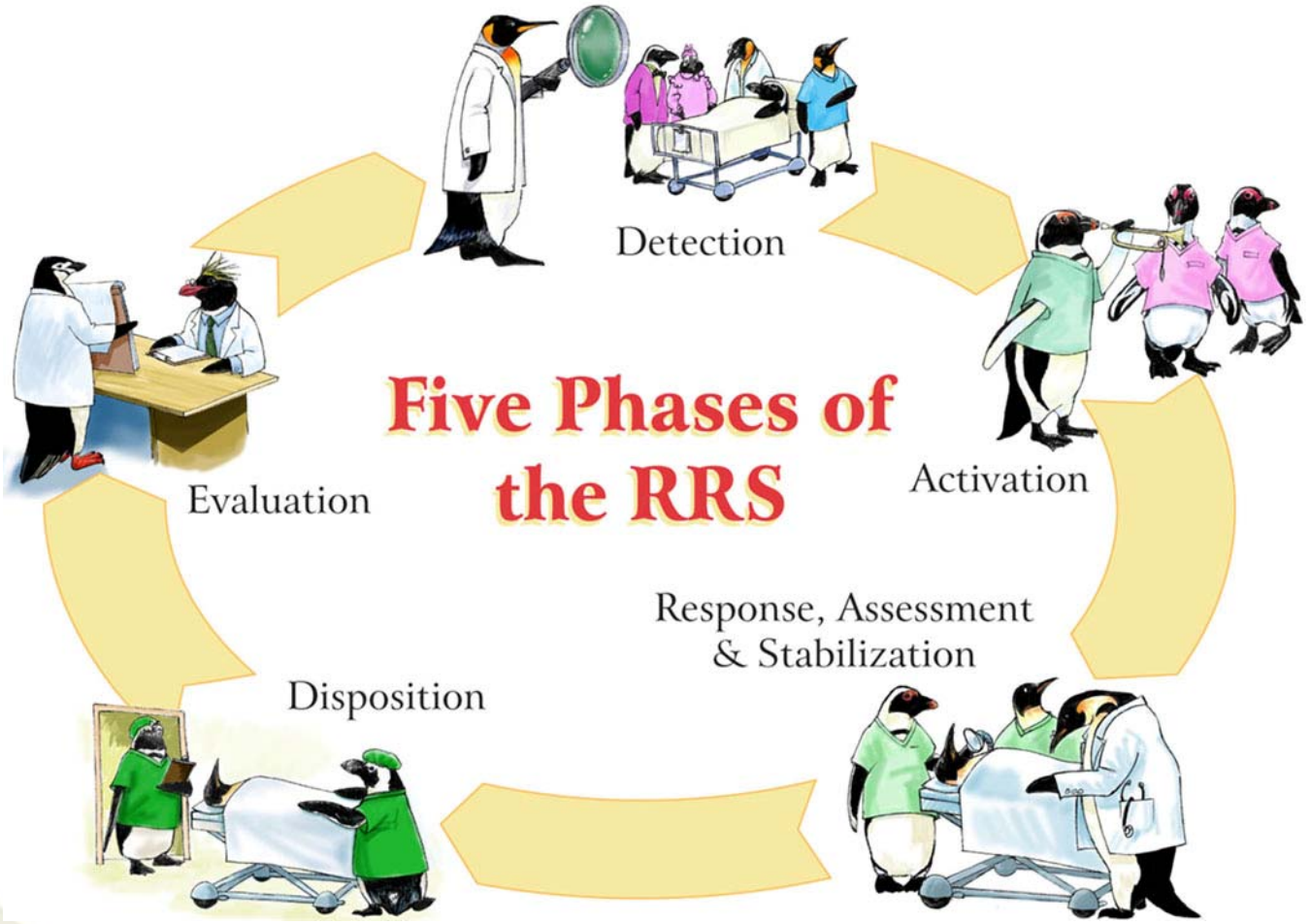
- **Who are the Activators?**
  - What are the alert criteria?
  - How are Responders called?
  - What do Activators do once Responders arrive?
- **Who are the Responders?**
  - How many Responders arrive to a call?
  - What is each person's role?

Exercise I (continued): Let's Identify Your RRS Structure

- **What are the common challenges facing your RRS?**
- **Are there challenges during:**
  - Patient deterioration?
  - System activation?
  - Patient handoffs?
  - Patient treatment?
  - Evaluation of the response team?

EXERCISE

RRS Execution



Detection

Activator sees signs of acute deterioration before actual deterioration

DETECTION

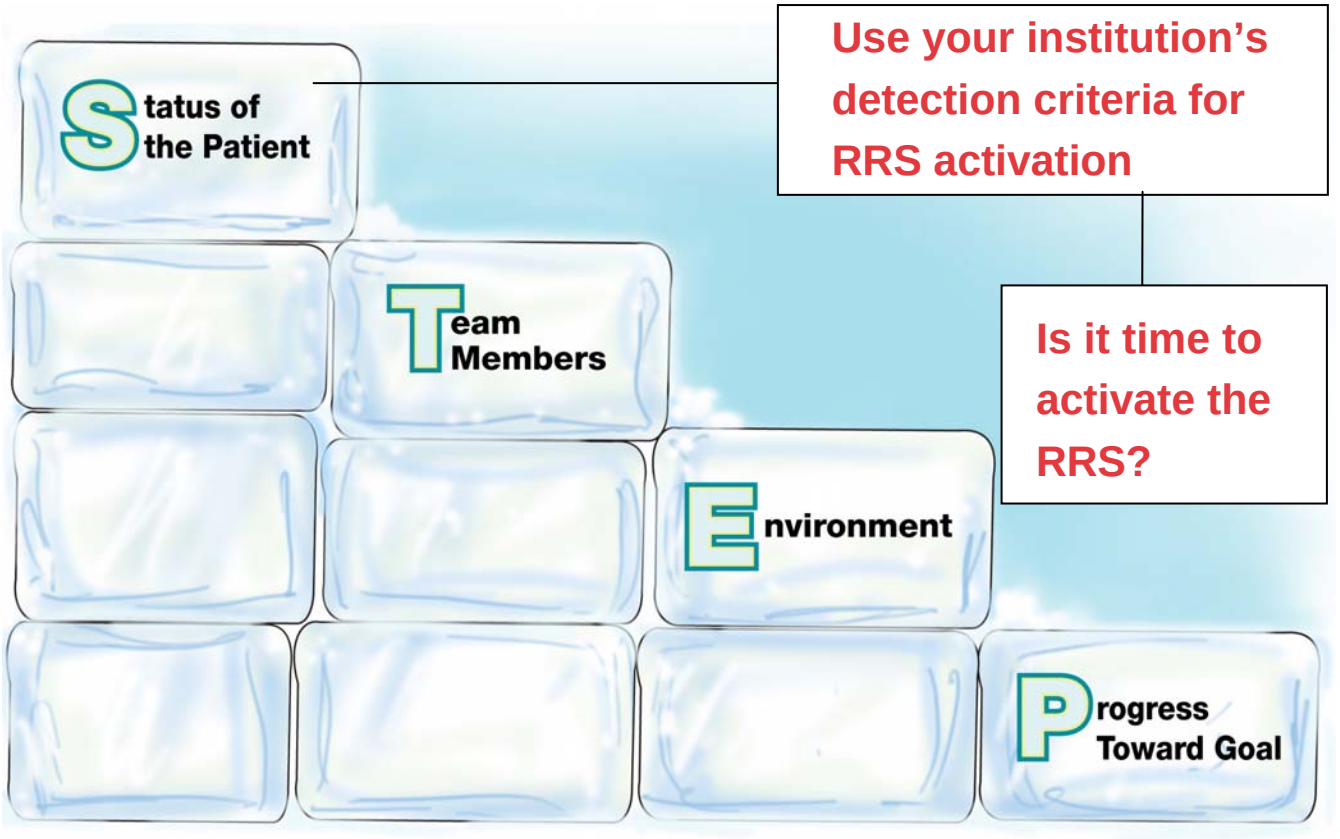
Situation Monitoring

DETECTION

Tools/Strategies

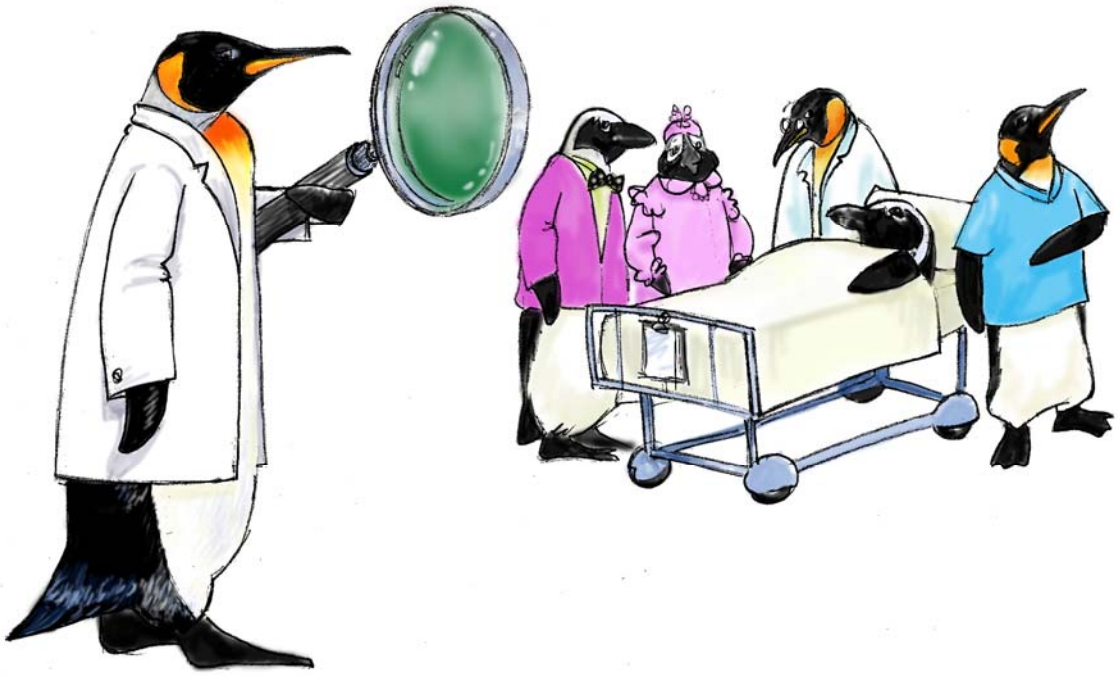
HUDDLE STEP

Detection: STEP Assessment



Where can Detection occur?

- Detection can occur from a variety of sources or concerns



RRS Activation

Communication Tools/Strategies

SBAR

RRS Activation: SBAR

- **SBAR provides a framework for team members to effectively communicate information to one another**
- **Communicate the following information:**
  - Situation—What is going on with the patient?
  - Background—What is the clinical background or context?
  - Assessment—What do I think the problem is?
  - Recommendation/Request—What would I recommend/request?

Remember to introduce yourself…

Response, Assessment & Stabilization

Responders analyze patient condition; attempt to stabilize

RESPONSE, ASSESSMENT & STABILIZATION

Leadership, Situation Monitoring, Mutual Support, Communication, & Inter-Team Knowledge

RESPONSE, ASSESSMENT & STABILIZATION

Tools/Strategies:
Leadership
Brief
Huddle

Tools/Strategies:
Communication
Check-back
Call Out

Tools/Strategies:
Mutual Support
Task Assistance
CUS

Response, Assessment & Stabilization Huddle

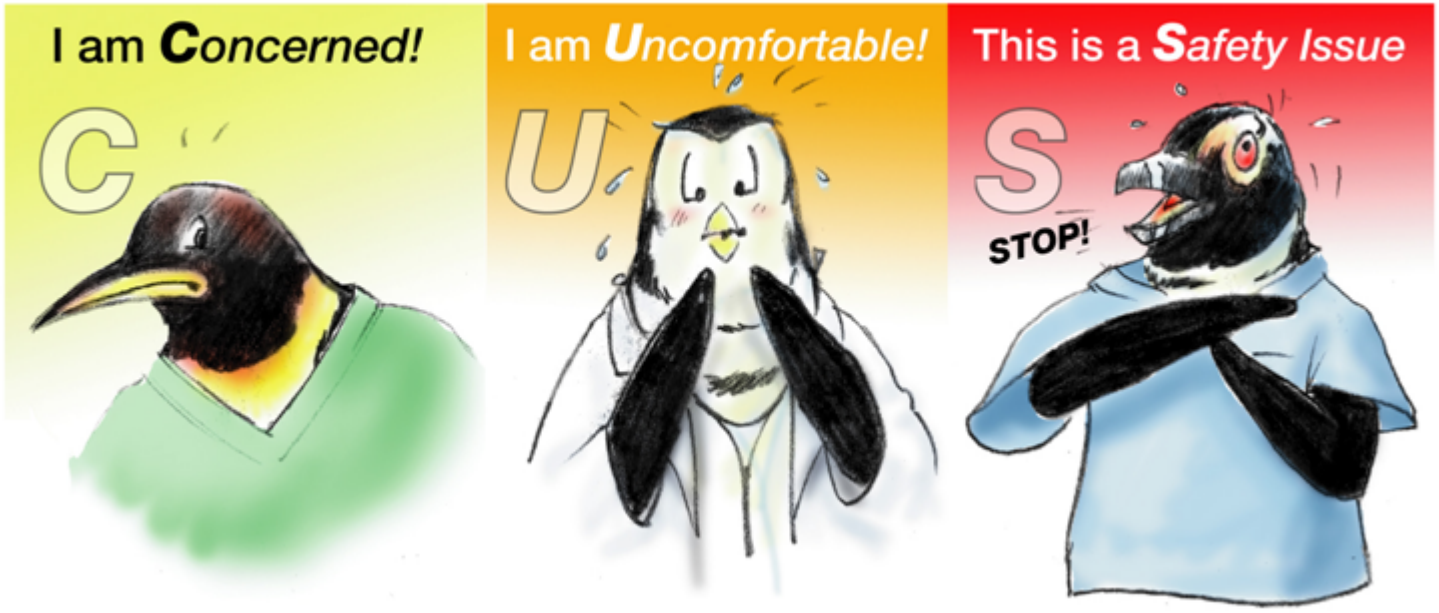
Problem solving

- Hold ad hoc, "touch-base" meetings to regain situation awareness
- Discuss critical issues and emerging events
- Anticipate outcomes and likely contingencies
- Assign resources
- Express concerns

Devise contingencies for sending the patient to the ICU or other ancillary units.

Devise contingencies for a handoff back to the general care area (i.e., keeping the patient in current location).

Response, Assessment & Stabilization
CUS Words



Patient Disposition

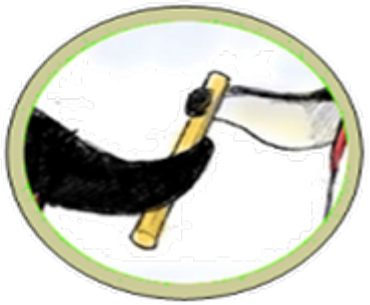
Communication Tools/Strategies

Handoffs
SBAR
I PASS the BATON

Patient Disposition

- **Disposition can refer to a number of decisions, including:**
  - Transferring the patient to another unit
  - A handoff back to the primary nurse/primary physician (i.e., patient stays in same location)
  - A handoff to a specialized team (cardiac team, code team, stroke team, etc)
  - A revised plan of care

RRS Transition: I PASS the BATON



Introduction:	Introduce yourself and your role/job (include patient)
Patient:	Identifiers, age, sex, location
Assessment:	Present chief complaint, vital signs, symptoms, and diagnosis
Situation:	Current status/circumstances, including code status, level of uncertainty, recent changes, and response to treatment
Safety:	Critical lab values/reports, socio-economic factors, allergies, and alerts (falls, isolation, etc.)
THE	
Background:	Co-morbidities, previous episodes, current medications, and family history
Actions:	What actions were taken or are required? Provide brief rationale
Timing:	Level of urgency and explicit timing and prioritization of actions
Ownership:	Who is responsible (nurse/doctor/team)? Include patient/family responsibilities
Next:	What will happen next? Anticipated changes? What is the plan? Are there contingency plans?

Question, Clarify, and Confirm

RRS Evaluation

Activators, Responders, Admin & QI Components evaluate performance and assess data for process improvement

EVALUATION

Leadership, Sensemaking & Communication

EVALUATION

Tools/Strategies

Debriefs
Sensemaking
Checklist

Evaluation: Debriefs

- Debriefs occur right after the event and are conducted by the Responders
- Debriefs should address:
  - Roles
  - Responsibilities
  - Tasks
  - Emphasis on transitions in care
  - Achievement of patient stabilization

TOPIC	
Communication clear?	☑
Roles and responsibilities understood?	☑
Situation awareness maintained?	☑
Workload distribution?	☑
Did we ask for or offer assistance?	☑
Were errors made or avoided?	☑
What went well, what should change, what can improve?	☑

System Evaluation: Sensemaking

Sensemaking Review Sheet

1. How did the Activators and Responders react to this situation?

2. When looking at the “big picture,” are there any patterns or trends?

System Evaluation: Sensemaking Tools

- Proactive approaches
  - Failure Modes and Effects Analysis (FMEA)
  - Probabilistic Risk Assessment (PRA)
- Reactive approaches
  - Root Cause Analysis (RCA)

Integrated Sensemaking Approach

- *What can go wrong?*
- *What are the consequences?*
- *How do things go wrong?*
- *How likely are they?*
- *What went wrong?*
- *Why did it go wrong?*

Let's look back at our example

Exercise II: RRS Execution

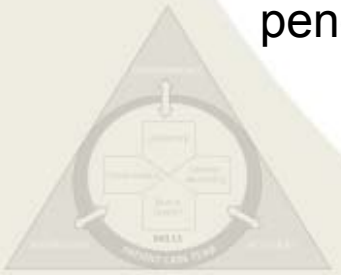
- **Using the scenario provided, identify the five phases of the RRS and what tools and/or strategies were used during each phase**
  - Detection
  - Activation
  - Response, Assessment, and Stabilization
  - Disposition
  - Evaluation

Exercise III

- **Let's see if we can identify the tools needed or used in each example**
  - Scenario 1
  - Scenario 2
  - Scenario 3
  - Scenario 4
  - Scenario 5

Scenario 1

The nurse called the RRT to a patient who exhibited a reduced respiratory rate. The team was paged via overhead page. Within several minutes, team members arrived at the patient's room; however, the respiratory therapist did not arrive. After a second overhead page and other calls, the respiratory therapist arrived, stating that he could not arrive sooner due to duties in the ICU. This critical team member did not ascribe importance to the rapid response call and failed to provide a critical skill during a rapid response event. As a result, there was a delay in the assessment of the patient's airway and intervention pending arrival of the response respiratory therapist.



Scenario 2

The RRT was called for a patient who had a risk of respiratory failure. The patient was intubated and transferred to a higher level of care. Response team members and the nurse who called the team completed a Call Evaluation Form. The response team members noted that some supplies, such as nonrebreather masks and an intubation kit, were not readily available on the floor, which resulted in a delay. This delay could have impacted the patient, and it also affected the team members' ability to return to their patient assignments. The patient's nurse noted on the form that the response team seemed agitated by the lack of supplies and the delay. The evaluation forms were sent via interdepartmental mail to the quality department as indicated on the form. The forms were not collated or reviewed for several weeks. The analyst responsible felt that most of the reports prepared in the past were not used by or of interest to management. Several times the agenda item for RRS updates had been removed from the Quality Council's meeting agenda due to an expectation that the "Rapid Response System is running fine."

Scenario 3

A family member noticed the patient seemed lethargic and confused. The family member alerted the nurse about these concerns. The nurse assured the family member that she would check on the patient. An hour later, the family member reminded the nurse, who then assessed the patient. The nurse checked the patient's vital signs. She did not note any specific change in clinical status, though she agreed that the patient seemed lethargic. At the family member's urging, the nurse contacted the physician, but the conversation focused on the family member's insistence that the nurse call the physician rather than conveying a specific description of the patient's condition. Based on the unclear assessment, the physician did not have specific instructions. The physician recommended additional monitoring.

Another nurse on the floor suggested calling the RRT, which she heard had helped with this type of situation on another floor. The first nurse missed the training about the new RRS, which was not discussed in staff meetings. Based on her colleague's recommendation, the nurse called the RRT via the operator. The overhead page stated the unit where assistance was needed but not the patient's room number. The operator forgot to take down all of the usual information because he missed lunch and was distracted. The team arrived on the floor but had to wait to be directed to the appropriate room. Once there, the RRT received a brief overview from the nurse, who left the room shortly afterward. The responders conducted an assessment of the patient and identified that the patient was overmedicated.

Scenario 4

The RRT was called to the outpatient (OP) area for a report of a patient with a seizure. The usual or expected set of supplies was not available for the team in the OP area. The RRT arrived and assessed the patient. As part of the assessment, the team ordered a stat lab. The lab technician working with the OP area had not heard of the RRS and refused to facilitate a stat lab because he was unfamiliar with having this need in an OP area. The RRT members were frustrated but did not challenge the lab technician. The patient was taken to the Emergency Department.

Scenario 5

A night nurse noted that a patient who had been on the unit for 2 days seemed more tired than usual. Although the patient was usually responsive and animated, she did not seem as responsive during the evening shift. After checking on her twice, the nurse noted that the patient seemed weak and confused. The nurse called the physician at 3 a.m. and described the patient's general status change as being "not quite right" but did not provide a detailed report or recommendation. The physician, frustrated, did not ask probing questions about the patient. The physician noted that it was 3 a.m., mentioned that perhaps the patient was tired, and instructed the nurse to monitor the patient. The next morning, the physician came in to do rounds and could not find a complete update from the previous evening. Upon assessing the patient, the physician ordered a stat MRI to rule out stroke.

The nurse experienced anxiety due to deterioration of patient status and inability to communicate with the physician. The physician was frustrated by not clearly receiving all of the relevant patient information during the first physician-nurse communication. The patient's stroke remained unidentified during evening shift.