

# **INTRODUCING RRS IN HEALTHY SYSTEM**

**Jorge Sinclair Avila**

**MD. FCCM. FCCP. FACP**

**Director ICU Punta Pacifica Hospital/ Johns Hopkins  
Medicine**

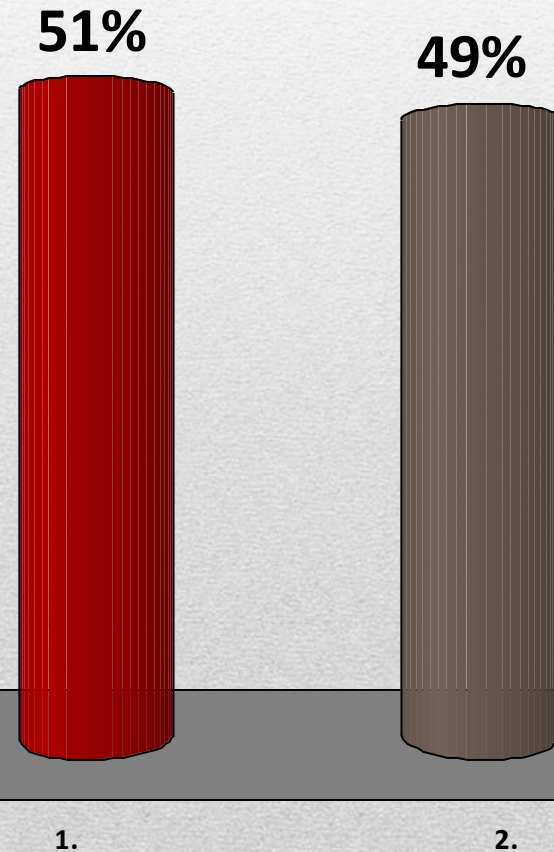
**Associate Dean School of Medicine University of Panama  
Past- President COCECATI**

---

# Sabe lo que son los equipos de respuesta rápida o sistemas de respuesta rápida ?

## Si

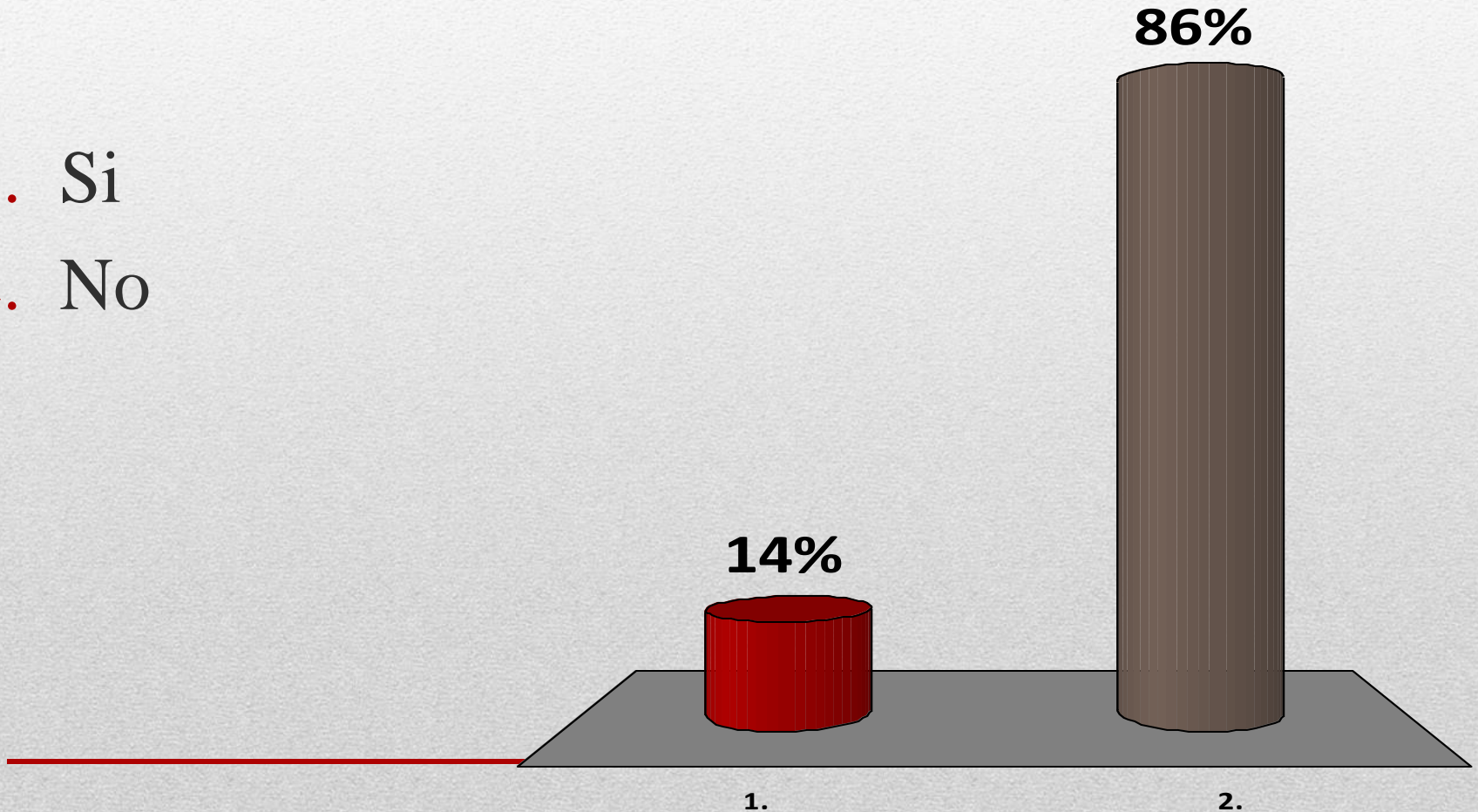
1. Si
2. No





# Su Institución cuenta con equipos o sistemas de respuesta rápida ?

1. Si
2. No



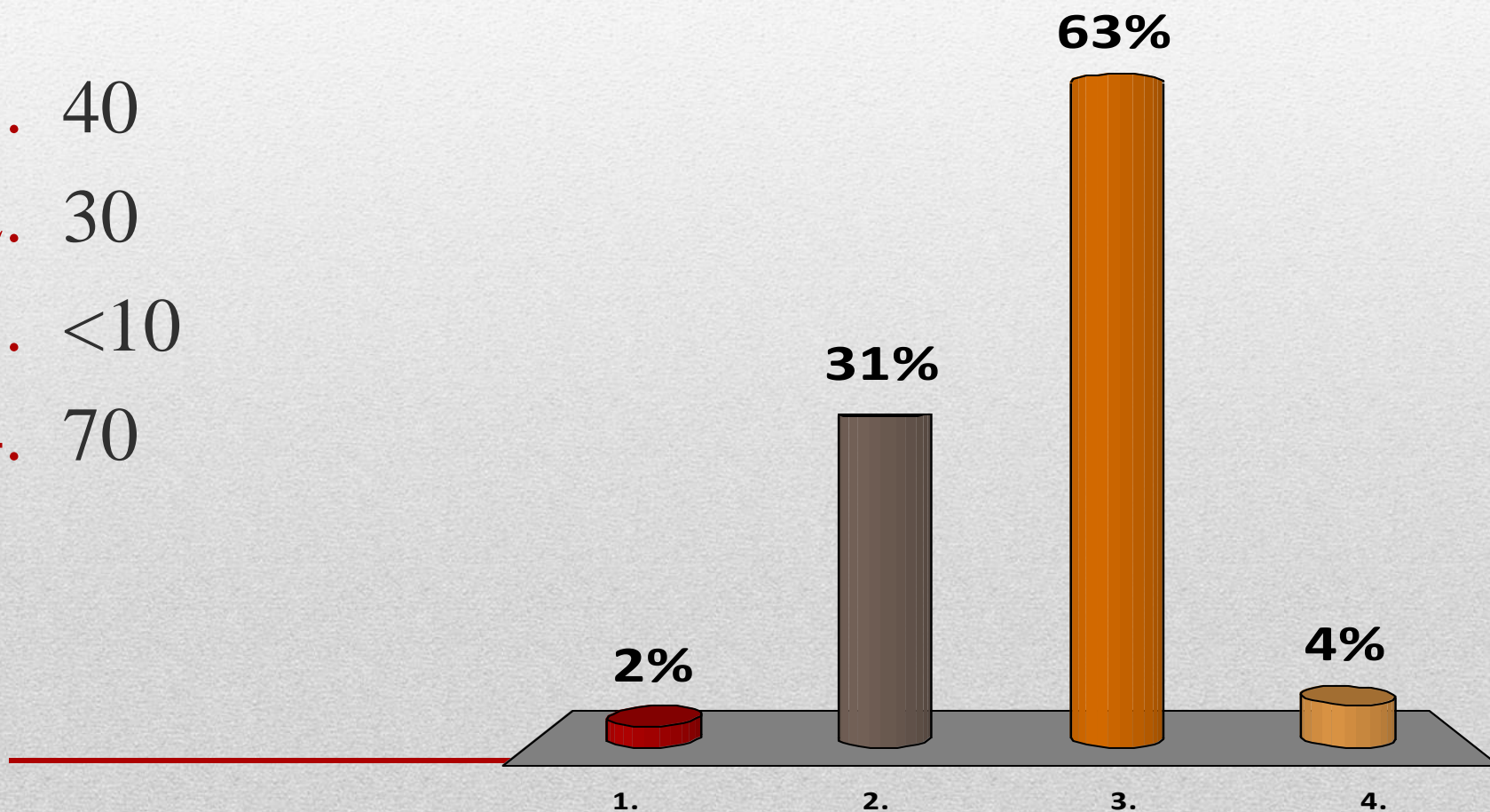
# Sabe el % de códigos azules de su Institucion ?

1. 40

2. 30

3. <10

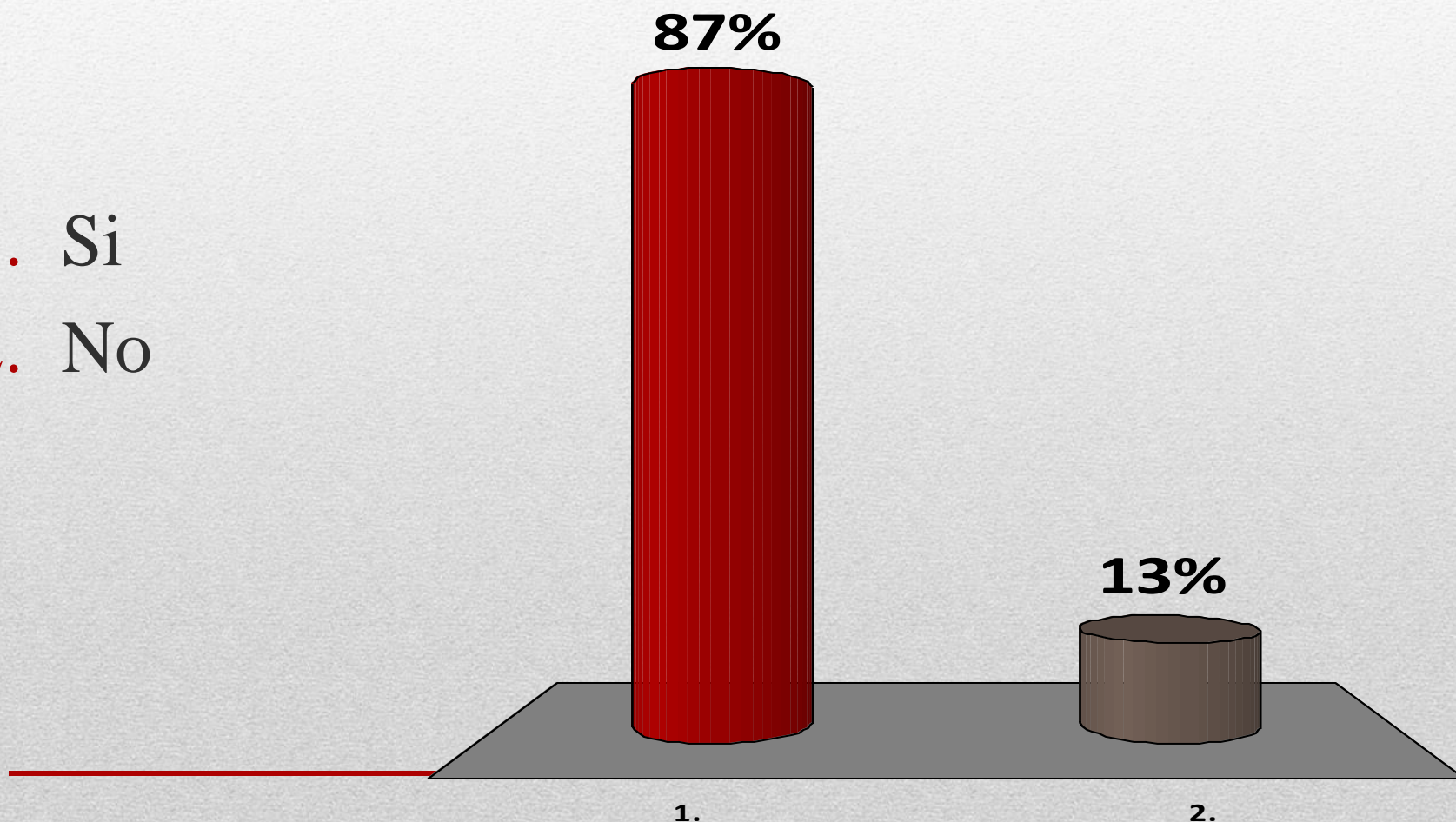
4. 70





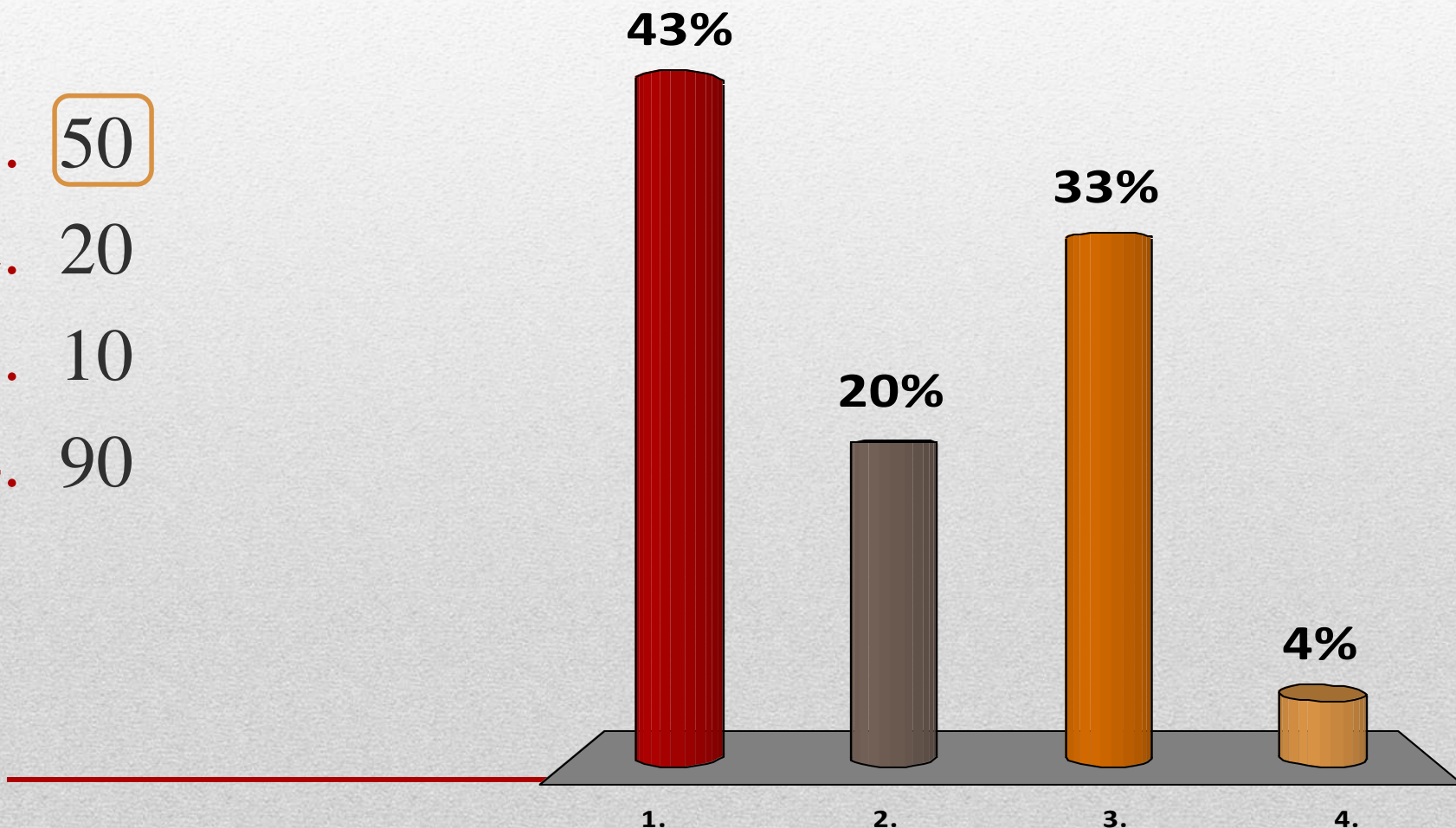
**Considera Usted que en su Institución se podrían prevenir de manera más efectiva los casos de códigos azules ?**

1. Si
2. No



# Cual es el porcentaje de exito del manejo de códigos azules que usted ha manejado a la hora ,?

1. 50
2. 20
3. 10
4. 90





# DISCLOSURE



**Non Financial Relationship**

---





2006 6 11

2006 6 11



# Overview RRT/ RRS

- Recognition and treatment of critical illness is often delayed or inadequate”
- Lack of effective institution wide systems to facilitate early recognitions and rapid best practice
- Central America and Caribbean there is no evidence of RRS/ RRT
- Puerto Rico and Panama are just beginning

# National Efforts to Recognize At-Risk Patients Sooner

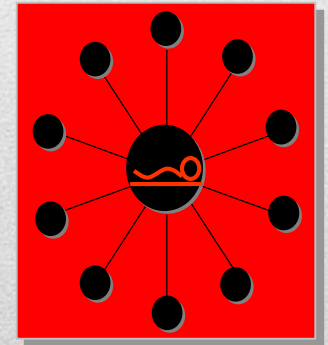
- Institute of Health Improvement (IHI)
    - Has assisted in instillation of rapid response systems (RRS) in 2,000 hospitals
    - Developed a RRS Implementation manual
  - Joint Commission will mandate RRS in all hospitals by 2008-2009
  - STaRRT is first of its kind
-



# ST<sub>a</sub>RRT

SHOCK TEAM and RAPID RESPONSE  
TEAM

From Shock to Start: A  
Multidisciplinary Approach to  
Implementing a  
Rapid Response System



# Do We Recognize Critical Illness Early?

- Cardiac arrests and/or serious clinical deterioration are commonly preceded by warning signs
- Airway, breathing, and circulation management before admission to ICU is frequently suboptimal

- Franklin C. *Crit Care Med.* 1994;22:244-247
- McQuillan P. *BMJ.* 1998;316:1853-1858
- Buist MD. *Med J Aust.* 1999;171:22-25
- Garrard C. *BMJ.* 1998;316:1841-1842
- Hillman KM. *Intern Med J.* 2001;31:343-348

**THESE DATA SHOW THAT WE DO NOT RECOGNIZE CRITICAL ILLNESS EARLY.**

---



# Why Implement an RRS?

A standardized and systematic approach to critical illness will lead to:

- Early Recognition
- Early Initiation of Best Practice

**Improved Outcomes!**

---

# Outcome of Early Recognition RRT Results in Postoperative Patients

Bellomo, Crit Care Med 2004;32:916-921. Prospective controlled trial of effect of medical emergency team on postoperative morbidity and mortality rates (1,369 operations\*)

- Adverse outcomes/1,000 surgical admissions
  - **Control 301**
  - **RRT 127**

\*From the Department of Intensive Care and Department of Medicine,  
Austin &  
Repatriation Medical Centre, Melbourne, Australia

---



# **Outcome of Early Recognition RRT Results in Postoperative Patients**

- Relative risk reduction, 57.8%;  $p < .0001$ 
    - Respiratory failure (RRR 79.1%;  $p < .0001$ )
    - Severe sepsis (RRR 74.3%;  $p = .0044$ )
    - Acute renal failure requiring renal replacement therapy (RRR 88.5%;  $p = 0.0001$ )
  - Significant decrease in the number of postoperative deaths (RRR 36.6%;  $p = .018$ )
-



# **Effect of Earlier Treatment of At-Risk Patients**

---



**Early and Rapid Administration of Respiratory Support, Fluid Administration and Goal Directed Hemodynamic Resuscitation**

# **The New England Journal of Medicine**

---

Copyright © 2001 by the Massachusetts Medical Center

---



---

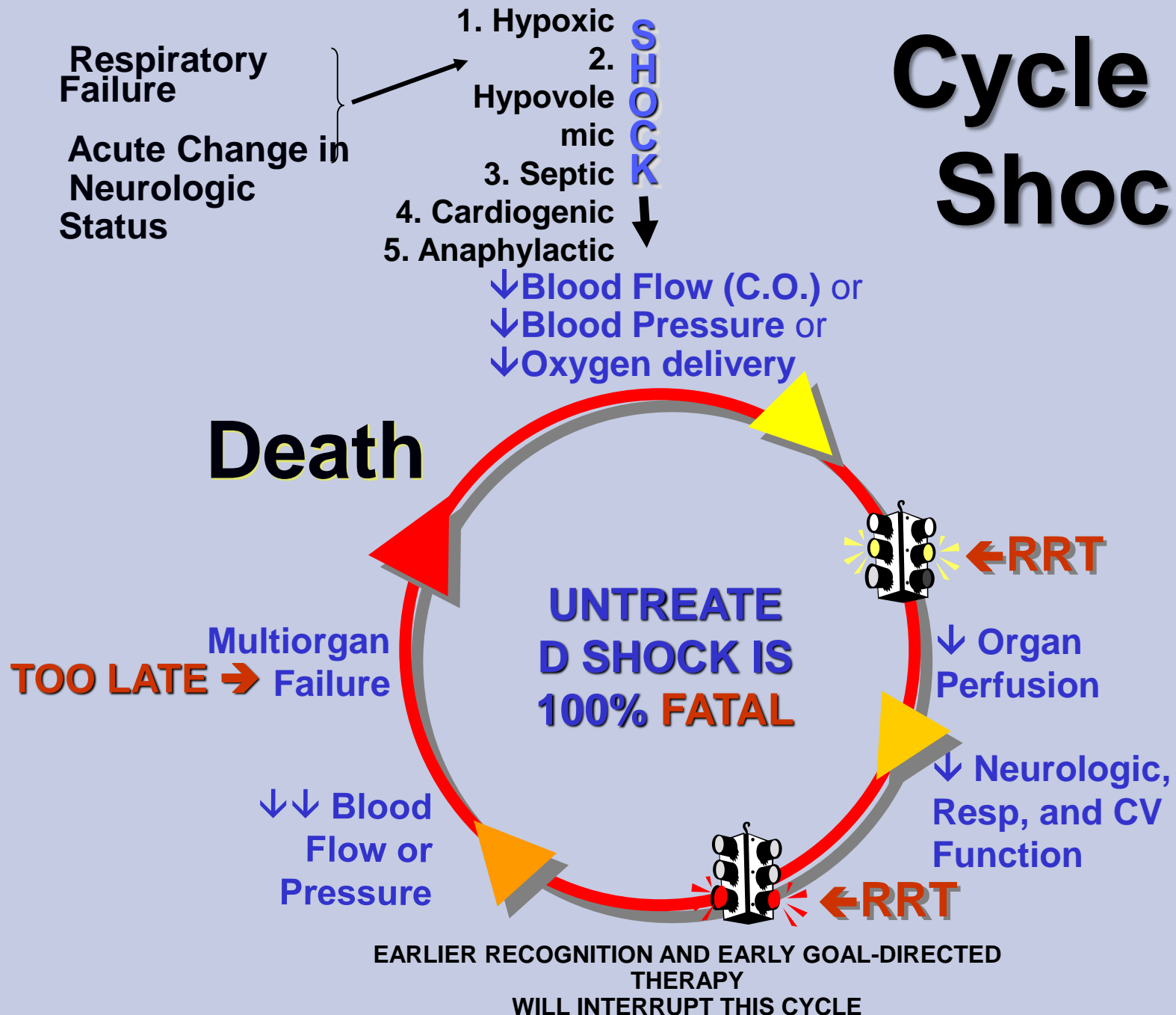
## **EARLY GOAL-DIRECTED THERAPY IN THE TREATMENT OF SEVERE SEPSIS AND SEPTIC SHOCK**

**Emanuel Rivers, M.D., M.P.H.**

---

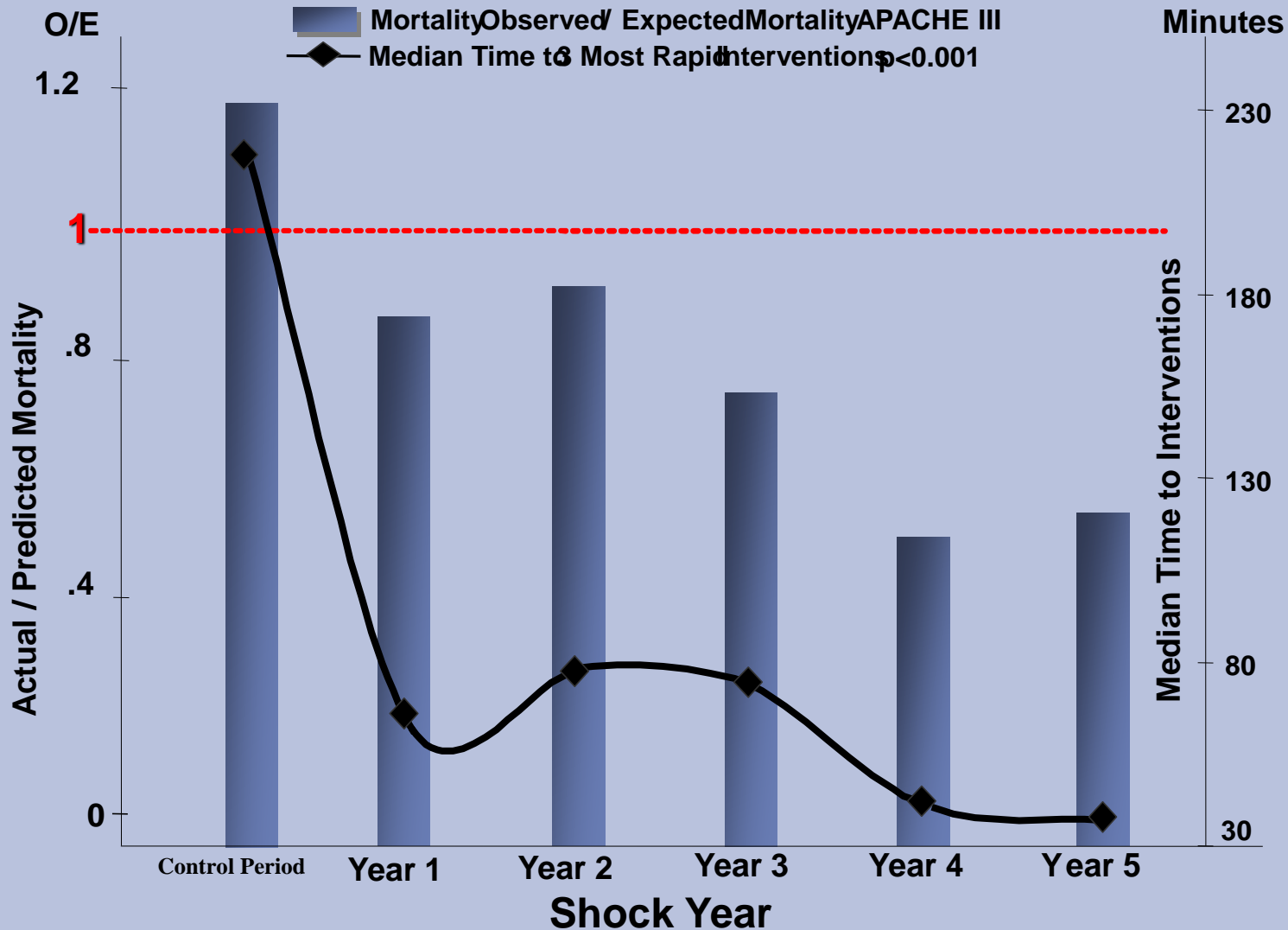
**Hospital mortality 46.5% decreased to 30.5% (p= 0.009)**

# Cycle of Shock



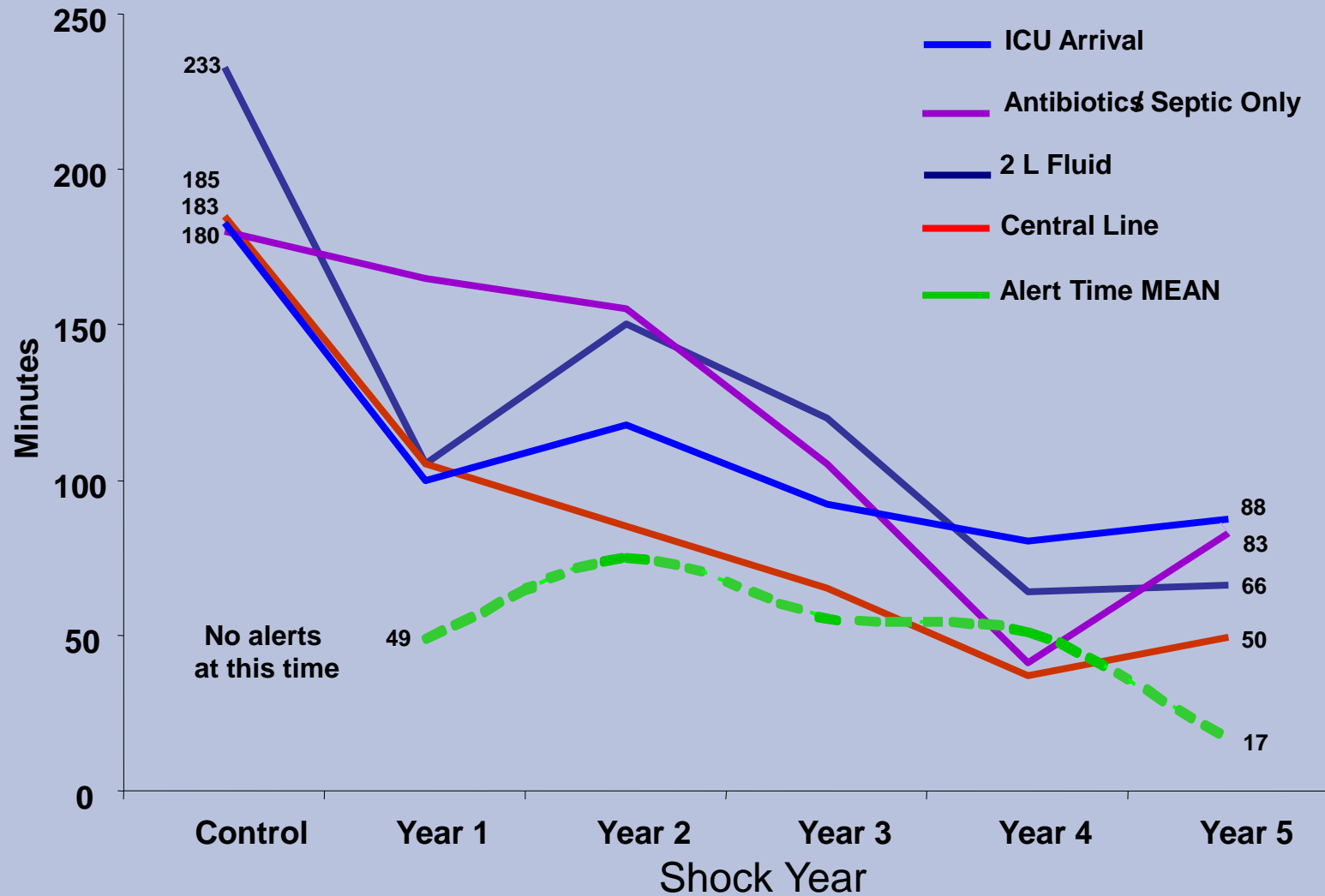


# Adjusted Hospital Mortality vs. Median Time to 3 Most Rapid Interventions



Observed (O) / Expected (E) mortality using Apache III predictions  
(O/E = 1 when observed mortality is equal to expected mortality)

# Median Treatment Intervals





# Goals RRT/ RRS

“A hospital wide programme that educates clinicians to identify early and rapidly treat life threatening conditions, with a team response and protocols based upon best practice guidelines will improve outcomes”

---

## Policy and Procedure

Department:  
Nursing

Effective Date:

Page 1 of 3

Subject/Title:

### Rapid Response System

Approved By and Title:

Dates of Review/Revision:

#### I. DEFINITION:

- A. A hospital-wide system for early recognition and intervention in patients at high risk for decompensation, i.e. patients developing cardiovascular, respiratory, or CNS instability
- B. RRS Structure
  - 1) Administration/Design Team: Oversees all functions
  - 2) Afferent: Event detection and response triggering
  - 3) Efferent: Crisis response, RRT/MET
  - 4) Quality Assurance: Data collection and analysis for process improvement

#### II. PURPOSE:

- A. To decrease morbidity or mortality rates among hospital patients
- B. To recognize early and stabilize quickly patients at risk for significant decompensation throughout the hospital, including ancillary departments, general wards, emergency department, recovery room and critical care units
- C. Establishment of an RRT made up of critical care-trained personnel who will be skilled in cardiovascular, respiratory, and neurologic assessment and emergency management

#### III. POLICY:

- A. **The RRT Alert** can be activated by any healthcare clinician who wishes to have his or her patient assessed by the RRT when the patient shows signs of instability as defined by the activation criteria. The RRT will be available 24 hours a day.
- B. **RRS Team Members:**
  - 1) ICU/CVICU RRT nurse
  - 2) Respiratory therapy staff member
  - 3) Clinical educator or clinical specialist or nursing supervisor
  - 4) Laboratory and radiology personnel
  - 5) MD (intensivist/hospitalist/ED-MD, as needed)
- C. **Bedside Nurses:** Will have completed 10 SOV/SBAR and RRS presentation and exams
- D. **RRT Nurse:** Will have completed 10 SOV/SBAR and RRS presentation and exams
- E. **RRT Respiratory Therapist:** Will have completed 10 SOV/SBAR and RRS presentations and exams, and anesthesia-supervised airway management and intubation skills



# Key Element of RRS

- Reggard
  - Design
  - Country Culture
  - Acceptance of RRS
  - Integrating RRS









# Key Element of RRS

## I. A. Administration/ Design Team

- ❖ Planning
- ❖ Physicians or Non physicians = **Leaders**  
(Education activities)

## B. RRS Phases

- ☐ Development
- ☐ Implementation
- ☐ Operations



# Team Members

- Critical Care RN
- Respiratory Therapist
- Lab and Radiology as needed
- Nursing Supervisor







# Terms in RRT/ RRS

- **ACLS** (Advance Cardiac Life Support)
  - **BLS** (Basic Life Support)
  - **ATLS** (Advance Trauma Life Support)
  - **FCCS** (Fundamental Critical Care Support)
  - **ENLS** (Emergency Neurologyc Life Support)
  - **MET** (Medical Emergency Team)
  - **RRT** (Rapid Respond Team)
-



# Key Element of RRS

- II. Event detection and Response Triggering  
The Afferent limb)

## “The Biggest Challenge”

- Calling Criteria
  - Softer Criteria
  - ✓ **Barrers: Culture and Technology**
-

# Activation

**Any healthcare clinician can  
activate the STaRRT Alert**  
and the team will be available  
24 hours a day

---



# Team Activation Process

- Healthcare professional by criteria or who is worried about the patient in consultation with the patient's nurse
  - Primary attending physician will be notified simultaneously with the activation
  - Call ext. 7500, give room and bed number
  - Once alert called, the care nurse will remain at the bedside and assist the team
-

# Key Points to STaRRT

- Early recognition algorithm – 10 SOV
  - Empowerment of frontline providers through education and protocol – AOV / VIPPS
  - ***“STaRRT Alert”*** rapid response by STaRRT Team
  - Goal-directed therapy and application of best practice
  - Code status clarified
  - Patient improved, remains on unit
  - Rapid transfer to ICU or OR
-



# Goals of the STaRRT Program

Earlier Identification of  
At-Risk Patients

**10 SOV**

---

# The Ten Signs of Vitality

- Temperature
- Pulse
- Respiratory rate
- Blood pressure
- Pain
- Level of consciousness
- Oxygen saturation
- Urine output
- Capillary refill
- ScvO<sub>2</sub> / SvO<sub>2</sub> or base deficit or lactic acid



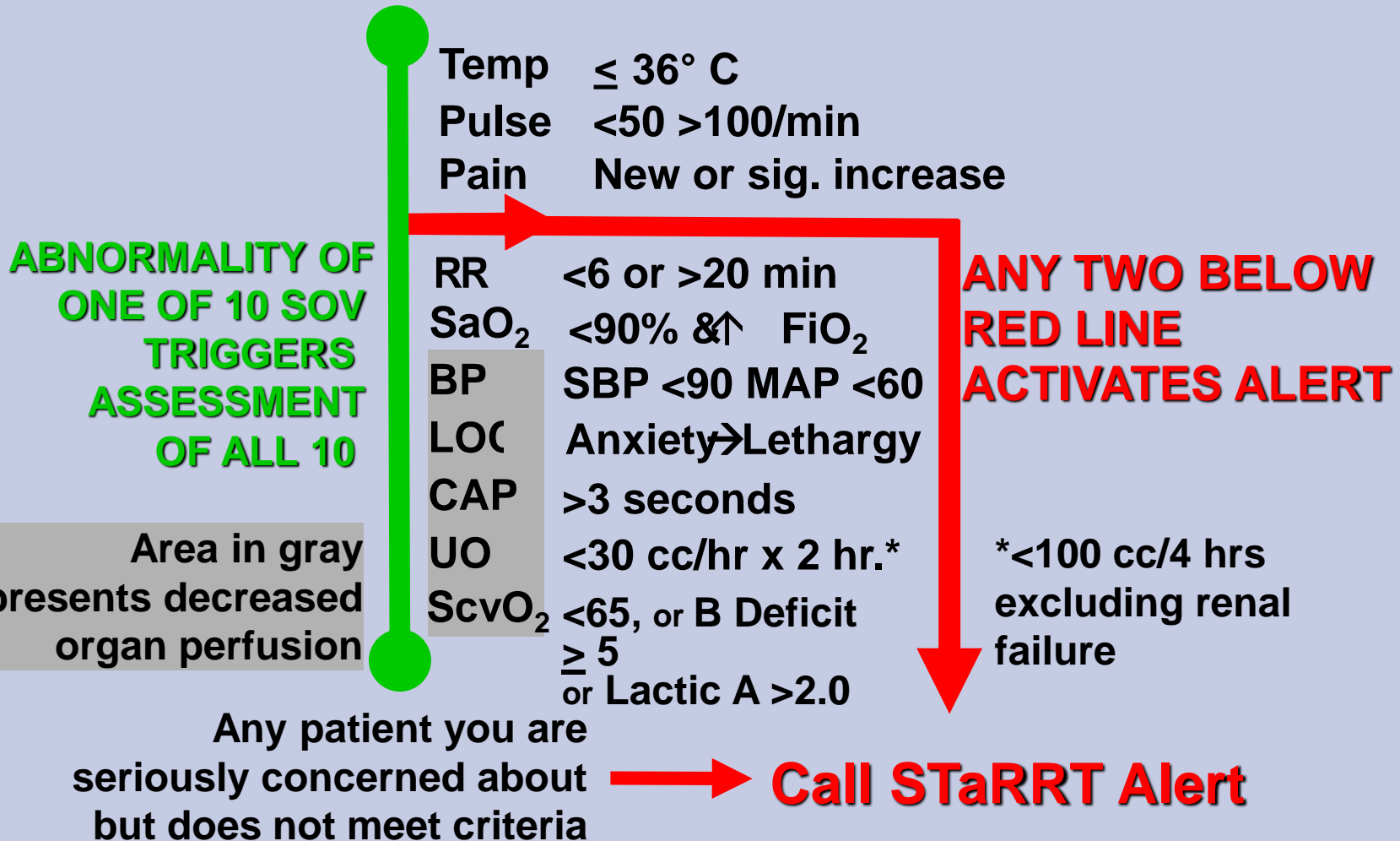
The "Lady-in-Chief,"  
Florence  
Nightingale

**Assessment Using 10 SOV : Results in Earlier  
Identification and Treatment of Critical Illness**

---



# Inclusion Criteria for Calling a STaRRT Alert



# Key Element of RRS

## III. Team Response and Intervention (The Efferent Line)

- ❑ Appropriated Personnel
- ❑ Appropriated Equipment

### ✓ Mandatory

- ❖ Training
- ❖ Experience
- ❖ Monitoring equipment
- ❖ Life saving intervention
- ❖ Triage





# Assessment and Treatment

- STaRRT nurse and respiratory therapist will assess the patient and mobilize other team members as needed
  - Nurse and RT responder will initiate STaRRT protocols as indicated
  - Team will use this opportunity to reinforce SBAR communication, 10 SOV assessment, and AOV and VIPPS interventions
  - STaRRT nurse and RT will document the assessment and treatment on the RRT record
-

# Standardized Best Practice

Weil MH, Shubin H. *JAMA*. 1969;207:337-340

**ACLS  
of Early  
Critical  
Illness/  
Shock**

**V**entilation/oxygenation

**I**nfusion of VOL

**P**ressors / Pump

**P**harmacy

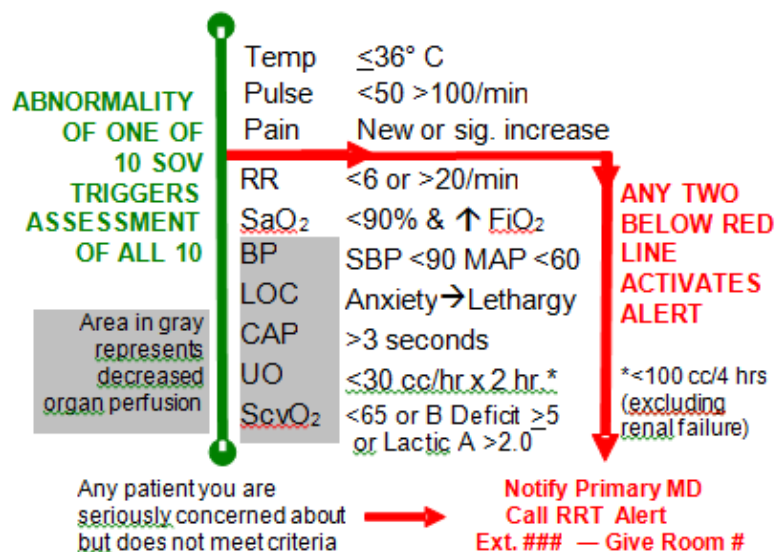
**S**pecific

---



## RRS PROGRAM

### 10 SIGNS OF VITALITY FOR CALLING RRT ALERT



### EXCLUSION CRITERIA

1. Trauma as cause of shock.
2. Patients who are not candidates for aggressive treatment by preexisting diagnosis, advanced directives or DNR.

### TO ACTIVATE A RRT ALERT

**Notify Primary Physician**  
**DIAL ### — Give Room #**

## RRS PROGRAM

### RRS PATIENT LAB

#### A FOR ALL PATIENTS

1. ABG.
2. Bedside H/H, Lytes.
3. 12 Lead EKG.
4. Chest x-ray.
5. If sepsis suspected or temp is  $< 36^{\circ}$  or  $> 38^{\circ}$ , or antibiotics to be started: CBC w/diff, 2 blood cultures, sputum GS/CS, U/A & urine GS/CS if  $>5 \text{ WBC/HPF}$ .

#### B FOR PATIENTS WITH DECREASED ORGAN PERFUSION

6. Serum lactate x 2, 4 hrs apart.
7. Metabolic & liver panel.
8. Type & screen.
9. D.I.C. screen.
8. Amylase / Lipase.
10. LDH, PO<sub>4</sub>.

# Follow Up / Debriefing

- STaRRT RN will conduct a de-briefing session:
    - With unit charge nurse and care nurse
    - Identification of opportunities for reward, improvement and education
    - Feedback will be forwarded to the Unit Supervisor, Director of Nursing, and Code Blue Committee
-



RRT **RN**  
Data Collection Tool  
1 of 2

ADDRESSOGRAPH



Please: (1) Address each item and explain any items with missing data (2) All time entries are to be in military time  
(3) Print legibly full names for all staff and physicians

Hospital: ☐ --- ☐ --- Unit: Room #:

RRT Alert Date: Time: Called by (full name):

RRT RN arrival time: RRT RT arrival time:

History / Situation:

Diagnosis on Admission: Primary MD:

☐ Primary MD or ☐ On Call MD notified Dr. Time: Called by:

Time On Call MD responded: ☐ Did not respond within 30 minutes

Intensivist called: ☐ Yes ☐ No Dr. Time: Response time:

**Inclusion Criteria**  
Check criteria met

<p>ABNORMALITY OF ONE OF 10 RSV TRIGGER 1 ASSESSMENT OF ALL 10</p> <p><input type="checkbox"/> Temp <math>\leq 36^\circ</math> C</p> <p><input type="checkbox"/> Pulse <math>&lt;50</math> <math>&gt;100</math>min</p> <p><input type="checkbox"/> Pain New or sig. increase</p> <p><input type="checkbox"/> RR <math>&lt;6</math> or <math>&gt;20</math>min</p> <p><input type="checkbox"/> SaO<sub>2</sub> <math>&lt;90\%</math> &amp; <math>\uparrow</math> FiO<sub>2</sub></p> <p><input type="checkbox"/> BP <math>\leq 90</math> MAP <math>\leq 60</math></p> <p><input type="checkbox"/> LOC Anxiety / Lethargy</p> <p><input type="checkbox"/> CAP <math>&gt;3</math> seconds</p> <p><input type="checkbox"/> UO <math>&lt;30</math> cc/hr x 2 hr</p> <p><input type="checkbox"/> SpO<sub>2</sub> <math>&lt;90\%</math> or <math>\leq 50</math> min <math>&gt;5</math> or Lactic A <math>&gt;2.0</math></p>	<p>ANY TWO BELOW RED LINE</p> <p>ACTIVATE V ALERT</p> <p><input type="checkbox"/> Does not meet above criteria, but identified to be at high risk for neurologic, respiratory or cardio vascular decompensation</p> <p><input type="checkbox"/> Acute Seizure</p> <p><input type="checkbox"/> Acute Stroke</p>
---	--

Vital Signs:	Time:	Pulse:	RR:	BP:	CAP refill:	sec	SaO <sub>2</sub> :	LOC:	UO:
Time:	Pulse:	RR:	BP:	CAP refill:	sec	SaO <sub>2</sub> :	LOC:	UO:	
Time:	Pulse:	RR:	BP:	CAP refill:	sec	SaO <sub>2</sub> :	LOC:	UO:	

FAX THIS COMPLETED FORM TO **### ASAP**

PUT ORIGINAL FORM IN BACK OF EKG/CARDIOLOGY SECTION OF PATIENT'S CHART

**RRT RN**  
Data Collection Tool  
2 of 2

ADDRESSOGRAPH



Glasgow Coma Score (required):		LOC/Sedation Scale (0-5)		0 = Awake / Alert, cooperative 1 = Anxious / Agitated 2 = Drowsy, but easy to arouse by verbal stimulation to a cooperative state		3 = Frequently drowsy, arouses to physical stimulation 4 = Somnolent, difficult to arouse 5 = Unarousable	
3-15	6	5	4	3	2	1	
EYES	N/A	N/A	Opens eyes spontaneously	Opens eyes in response to voice	Opens eyes in response to painful stimuli	Does not open eyes	
VERBAL	N/A	Oriented, converses normally	Confused, disoriented	Utters inappropriate words	Incomprehensible sounds	Makes no sounds	
MOTOR	Obeys command	Localizes painful stimuli	N/A	Flexion of extremities upon painful stimuli	Extension of extremities upon painful stimuli	No movement to pain	
<input type="checkbox"/> No <input type="checkbox"/> Yes Narcan given. Dose(s):				<input type="checkbox"/> ### Notified (required)			
<input type="checkbox"/> No <input type="checkbox"/> Yes Romazicon given. Dose(s):				<input type="checkbox"/> ### Notified (required)			
RRT Lab <input checked="" type="checkbox"/> A panel drawn		Date/Time:		<input type="checkbox"/> B panel drawn		Date/Time:	
Fluid bolus amt:		Date/Time:					
<input type="checkbox"/> Central line or <input type="checkbox"/> (2) 16 ga IVs				<input type="checkbox"/> 1 <sup>st</sup> Antibiotic given:			
Date/Time:				Date/Time:			
<input type="checkbox"/> ScvO <sub>2</sub> or <input type="checkbox"/> SvO <sub>2</sub>		% Sat		Time:			
<input type="checkbox"/> Levophed		Date/Time started:		<input type="checkbox"/> Dopamine		Date/Time started:	
<input type="checkbox"/> Epinephrine		Date/Time started:		<input type="checkbox"/> Dobutamine		Date/Time started:	
<input type="checkbox"/> Tridol		Date/Time started:		<input type="checkbox"/> Nipride		Date/Time started:	
I/O Prior 24 hours is: I=				O=			
Shock Type: <input type="checkbox"/> Hypoxic <input type="checkbox"/> Hypovolemic <input type="checkbox"/> Septic/Distributive <input type="checkbox"/> Cardiogenic <input type="checkbox"/> Obstructive <input type="checkbox"/> Anaphylactic							
<input type="checkbox"/> Other (describe) _____							
Patient <input type="checkbox"/> Coded <input type="checkbox"/> Resuscitation limited <input type="checkbox"/> Improved; remained on floor Transferred to <input type="checkbox"/> ICU / <input type="checkbox"/> OR Date/Time:							
RRT Alert time completed:				Alert called off by (full name):			
Family notified <input type="checkbox"/> Yes <input type="checkbox"/> No		Time:		Relationship:		Called by	
Event reviewed with unit staff <input type="checkbox"/> Yes <input type="checkbox"/> No							
Bedside Nurse (full name):				Charge RN (full name):			
RRT RN (full name):				RRT RT (full name):			
Exclusion criteria: <input type="checkbox"/> Trauma as cause of critical illness <input type="checkbox"/> Patients who are not candidates for aggressive treatment by pre-existing diagnosis, advanced directive or DNR.							
Comments:							



## RRT RT Data Collection Tool

ADDRESSOGRAPH



Please address each item and explain any items with missing data. All time entries are to be in military time.

RRT Alert Date: _____ Time: _____ Called by (full name): _____	
Hospital <input type="checkbox"/> --- <input type="checkbox"/> --- Unit: _____	Room #: _____
STaRRT RT arrival time: _____	Primary MD: _____
Bedside RN (full name): _____	Charge RN (full name): _____
RRT RN (full name): _____	RRT RT (full name): _____
Diagnosis on Admission: _____	
Respiratory therapy arrived time _____ O <sub>2</sub> SAT _____ <input type="checkbox"/> N/C <input checked="" type="checkbox"/> Vent Mask <input type="checkbox"/> Rebreather Mask	
Airway Open <input type="checkbox"/> Yes <input type="checkbox"/> No Airway placed _____	
Gag present <input type="checkbox"/> Yes <input type="checkbox"/> No Respiratory Pattern: <input type="checkbox"/> Regular <input type="checkbox"/> Irregular <input type="checkbox"/> Apnea <input type="checkbox"/> Prolonged expiration	
<input type="checkbox"/> Audible wheezing <input type="checkbox"/> Use of accessory muscles	
Cough <input type="checkbox"/> Non effective <input type="checkbox"/> Effective <input type="checkbox"/> Non productive <input type="checkbox"/> Productive sputum amount / Color _____	
Breath Sounds (R) _____ (L) _____	
O <sub>2</sub> by _____	
Respiratory Rx _____	
Ventilatory Support by _____ Time _____	
ABG O <sub>2</sub> SAT _____ PO <sub>2</sub> _____ PCO <sub>2</sub> _____ pH _____ Base Deficit _____ Time Drawn _____	
History / Situation	
Interventions / Medications	
Event reviewed with unit staff <input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:	



FAX THIS COMPLETED FORM TO **### ASAP**



PUT ORIGINAL FORM IN BACK OF EKG/CARDIOLOGY SECTION OF PATIENT'S CHART

PLEASE JOIN US

10 SOV ► SBAR ► RRS  
NURSING INITIATIVE MEETING

WEDNESDAY APRIL 11<sup>TH</sup> 2 – 4 PM  
HOSPITAL CONFERENCE ROOM

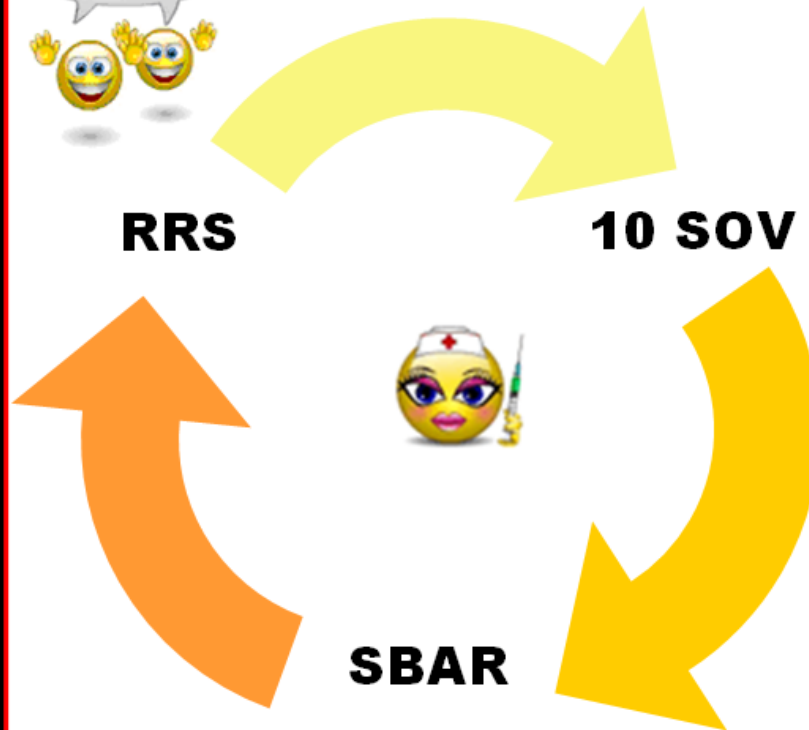


**RRS**

**10 SOV**



**SBAR**

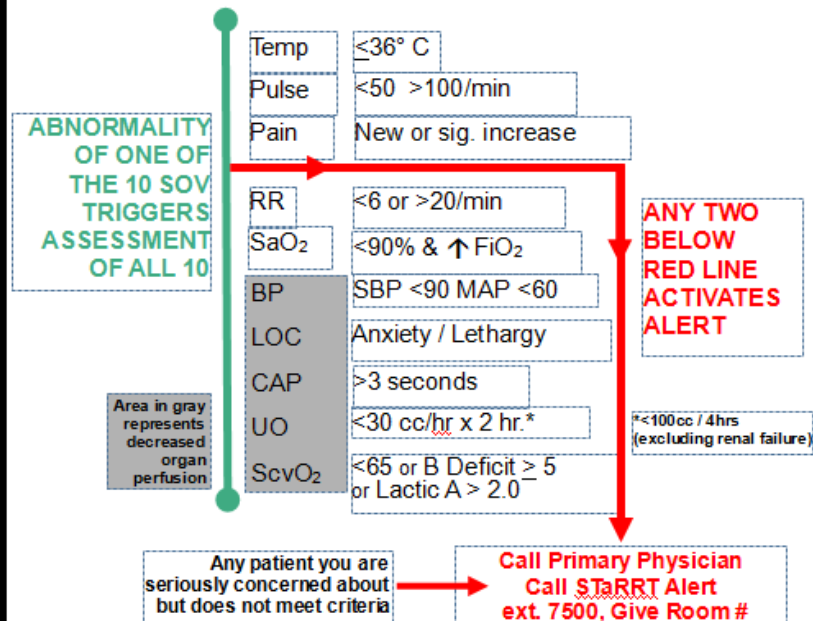




# Rapid Response System

## ACTIVATION CRITERIA FOR CALLING A

# RRT ALERT



## CRITERIA FOR MOBILIZATION OF RAPID RESPONSE TEAM

HOSPITAL  
LOGO

**RRT PROGRAM**  
HOSPITAL NAME



# SBAR COMMUNICATION

## SITUATION

- Acute problem
- Time of onset
- Patient's name
- Age / Gender
- Identify yourself / Location
- Current vital signs

## BACKGROUND

- Date / Reason for admit
- Code status / Resuscitation limits
- Diagnosis / PMHx
- I/O 24 hrs
- Meds

## ASSESSMENT

- 10 SOV / PEx
- New & pertinent old lab
- Your thoughts for possible cause of problem

## RECOMMENDATION

- Your suggested interventions
- Order sheet available

HOSPITAL  
LOGO

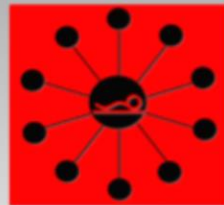
RRT PROGRAM  
HOSPITAL NAME



# COMING SOON

# RRS

RAPID RESPONSE SYSTEM



**AN INTEGRATED  
SYSTEM OF CARE FOR  
PATIENTS AT-RISK**

We are looking for RNs with 2 years minimum ICU experience and working 1 clinical shift per week to join us in training for the RRs Program

If you are interested, please contact:  
Critical Care Educator or Director

HOSPITAL  
LOGO

RRS PROGRAM  
HOSPITAL NAME

# RRT Activation Card Worn by Nursing Staff

## FRONT

**RRT ALERT / ACTIVATION CRITERIA**  
**10 Signs of Vitality**

Temp  $\leq 36^{\circ}$  C  
Pulse  $< 50$   $> 100$ /min  
Pain New or sig. increase  
RR  $< 6$  or  $> 20$ /min  
SaO<sub>2</sub>  $< 90\%$  &  $\uparrow$ FiO<sub>2</sub>  
BP SBP  $< 90$  MAP  $< 60$   
LOC Anxiety / Lethargy  
CAP  $> 3$  seconds  
UO  $< 30$  cc/hr x 2 hr \*  
ScvO<sub>2</sub>  $< 65$  or B Deficit  $> 5$   
or Lactic A  $> 2.0$

ABNORMALITY OF ONE OF 10 SOV TRIGGERS ASSESSMENT OF ALL 10

ANY TWO BELOW RED LINE ACTIVATES ALERT

Any patient you are seriously concerned about but does not meet criteria → Call Primary MD  
Call RRT Alert-ext. ###  
Give Room #

**SBAR COMMUNICATION**

<b>S</b> = Situation	Reason for call, acute problem
<b>B</b> = Background	Reason for adm, current Dx, Pmtx, I/O, meds, chart available
<b>A</b> = Assessment	10 SOV, PEx
<b>R</b> = Recommendation	Your suggested interventions. Order sheet available

## BACK

**AOV / VIPPS / RESUSCITATION**  
**Airway → Oxygen → Ventilation**  
Ventilate, assure adequate airway, oxygenate  
SaO<sub>2</sub>  $> 90\%$

**V**

**I** Rapidly infused crystalloid or colloid, except pulmonary edema

**P** Pressors MAP  $> 60$  & assess the pump. JVD/CVP, stethoscope, EKG, cardiac echo?

**P** Pharmacology, i.e., bronchodilators, steroids, antibiotics, anticoagulants, NTG, APC, etc.

**S** Specific interventions, endoscopy, surgical consult, etc.

**Decreased organ perfusion; resuscitation & lab**

**RRT PATIENT LAB**

<ul style="list-style-type: none"> <li>• ABG</li> <li>• H/H, Lytes STAT</li> <li>• 12 lead EKG</li> <li>• CXR</li> <li>• If sepsis suspected or temp is <math>&lt; 36^{\circ}</math> or <math>&gt; 38^{\circ}</math>, or antibiotics to be started: CBC w/diff, 2 blood cultures, sputum GS/CS, U/A &amp; urine GS/CS</li> </ul>	<ul style="list-style-type: none"> <li>• Serum lactate x 2, 4 hrs apart</li> <li>• Metabolic &amp; liver panel</li> <li>• Type and screen</li> <li>• CPK/Troponin</li> <li>• D.I.C. screen</li> <li>• Amylase / Lipase</li> <li>• LDH, PO<sub>4</sub></li> </ul>
--	--



RRT  
**Retrospective**  
Data Collection Tool  
1 of 1

ADDRESSOGRAPH



RRT Alert Date: _____ Time: _____		Called by (full name): _____	
Hospital <input type="checkbox"/> --- <input type="checkbox"/> --- Unit: _____		Room #: _____	
Bedside Nurse (full name): _____		Charge RN (full name): _____	
RRT RN (full name): _____		RRT RT (full name): _____	
Time Zero (on retrospective review-criteria met): _____		ER Triage Date / Time (if applicable): _____	
Diagnosis on Admission: _____			
Primary MD: _____			
<b>Worst vital sign in 24 hrs of patient first meeting criteria:</b>			
SaO <sub>2</sub> : _____	on FiO <sub>2</sub> : _____	P: _____	RR: _____ BP: _____ GCS: _____
<input type="checkbox"/> No <input type="checkbox"/> Yes Narcan given. Dose(s): _____			
<input type="checkbox"/> No <input type="checkbox"/> Yes Romazicon given. Dose(s): _____			
<input type="checkbox"/> No <input type="checkbox"/> Yes Verify RT form completed: _____			
If not, explanation: _____			
Confirmatory criteria met in first 24 hrs: <input type="checkbox"/> Romazicon or Narcan administered <input type="checkbox"/> Needed airway assistance i.e., oral/nasal airway or tracheal suction <input type="checkbox"/> Significant ↑ in FiO <sub>2</sub> requirement i.e., ≥5L N/C <input type="checkbox"/> Ventilatory assistance BiPAP or Ambu Bag <input type="checkbox"/> ≥500 cc of fluid in the first hr or ≥ 4 LF in first 24H		<input type="checkbox"/> Blood transfusion <input type="checkbox"/> Intravenous drug Rx or <b>electrocardioversion</b> for SVT or VT <input type="checkbox"/> Lactic acid > 2 or ScvO <sub>2</sub> <65 or B Deficit ≥ -5 <input type="checkbox"/> Death as a result of hemodynamic or respiratory instability <input type="checkbox"/> Patient code status changed to limited resuscitation <input type="checkbox"/> Transfer to ICU	
Shock Type: <input type="checkbox"/> Hypoxic <input type="checkbox"/> Hypovolemic <input type="checkbox"/> Septic/Distributive <input type="checkbox"/> Cardiogenic <input type="checkbox"/> Obstructive <input type="checkbox"/> Anaphylactic			
<input type="checkbox"/> Other (describe) _____			
<input type="checkbox"/> Request Medical Review (forward copy of this form to Quality Assurance)		<input type="checkbox"/> Patient is a readmission to ICU	
<b>During this admission:</b>			
<input type="checkbox"/> Code Blue Date/Time: _____ Outcome: _____			
<input type="checkbox"/> Mortality Date/Time: _____			
<input type="checkbox"/> Other: _____			
Comments: _____			
APACHE III score: _____		APACHE Diagnosis: _____ Date/Time: _____	
Form Completed by: _____		Date: _____	
All time entries are to be in military time.			

### Nursing Pre and Post Survey

#### SBAR Communication, 10 SOV, and Rapid Response Team Initiatives

To assist in assessing and improving nurse satisfaction and patient care, please respond to the following statements indicating your level of agreement using a scale from 1-5, with 1 indicating strong agreement and 5 indicating strong disagreement.

The majority of the time the following apply	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I believe I possess the necessary patient assessment skills to allow me to evaluate a patient who may be deteriorating clinically.	1	2	3	4	5
2. The majority of physicians feel that I perform patient assessments that are sufficient to address issues requiring physician contact	1	2	3	4	5
3. I believe I use effective communication skills when calling physicians about my patients.	1	2	3	4	5
4. I believe I have all pertinent information together and organized prior to calling a physician.	1	2	3	4	5
5. I am able to answer most questions related to the issue without asking the physician to wait.	1	2	3	4	5
6. I believe the majority of physicians appreciate it when I call them about my concerns related to their patients.	1	2	3	4	5
7. I believe I would benefit from more education related to assessment skills for at-risk patients	1	2	3	4	5
8. I believe I would benefit from more education regarding effective communication skills	1	2	3	4	5
9. I feel that I deliver good care to my patients.	1	2	3	4	5
10. I believe my input regarding patient care is valued by the physician.	1	2	3	4	5
11. I believe I am viewed by the majority of physicians as a valuable member of the patient care team	1	2	3	4	5
12. I generally work in the following unit(s): (may circle more than one): <div style="display: flex; justify-content: space-between;"> <div> a. Critical Care  b. Medical Unit  c. Surgical Unit  d. Cardiac Telemetry  e. Central/Nephrology Unit </div> <div> f. ER  g. Labor &amp; Delivery/  Postpartum  h. Pediatrics </div> </div>					

You will be re-surveyed after the program is fully operational. Your input is valued. Thank you.

**Suggestions/Comments:**

---



---



---



---



---



**Physician Pre and Post Survey**  
**SBAR Communication, 10 SOV, and Rapid Response Team Initiative**

In the interest of improving patient care in our hospitals, please respond to the following statements indicating your level of agreement using a scale from 1 to 5, with 1 indicating strong agreement and 5 indicating strong disagreement.



The majority of the time the following apply	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The majority of nursing staff possesses adequate assessment skills and uses these skills when caring for my sickest patients.	1	2	3	4	5
2. The majority of nurses have most pertinent information together and organized prior to calling me.	1	2	3	4	5
3. The majority of nurses are able to answer most of my questions regarding a patient whose clinical status has changed without substantial delay.	1	2	3	4	5
4. The majority of nursing staff are skilled in using effective communication when calling me about my sickest patients.	1	2	3	4	5
5. I encourage the nursing staff to call me about concerns related to my patients.	1	2	3	4	5
6. My sickest patients receive very timely and appropriate nursing assessment and care at our facility.	1	2	3	4	5
7. I generally have at any given time in the hospital: a. 0-1 patients/week b. 2-5 patients/week c. >5 patients/week					
8. I see the majority of my patients in the following units: (may circle more than one): a. Critical Care b. Medical Unit c. Surgical Unit d. Cardiac Telemetry e. Central/Nephrology Unit f. ER g. Labor & Delivery/ Postpartum h. Pediatrics					

You will be re-surveyed after the program is fully operational. Your input is valued. Thank you.

**Suggestions/Comments:**

---



---



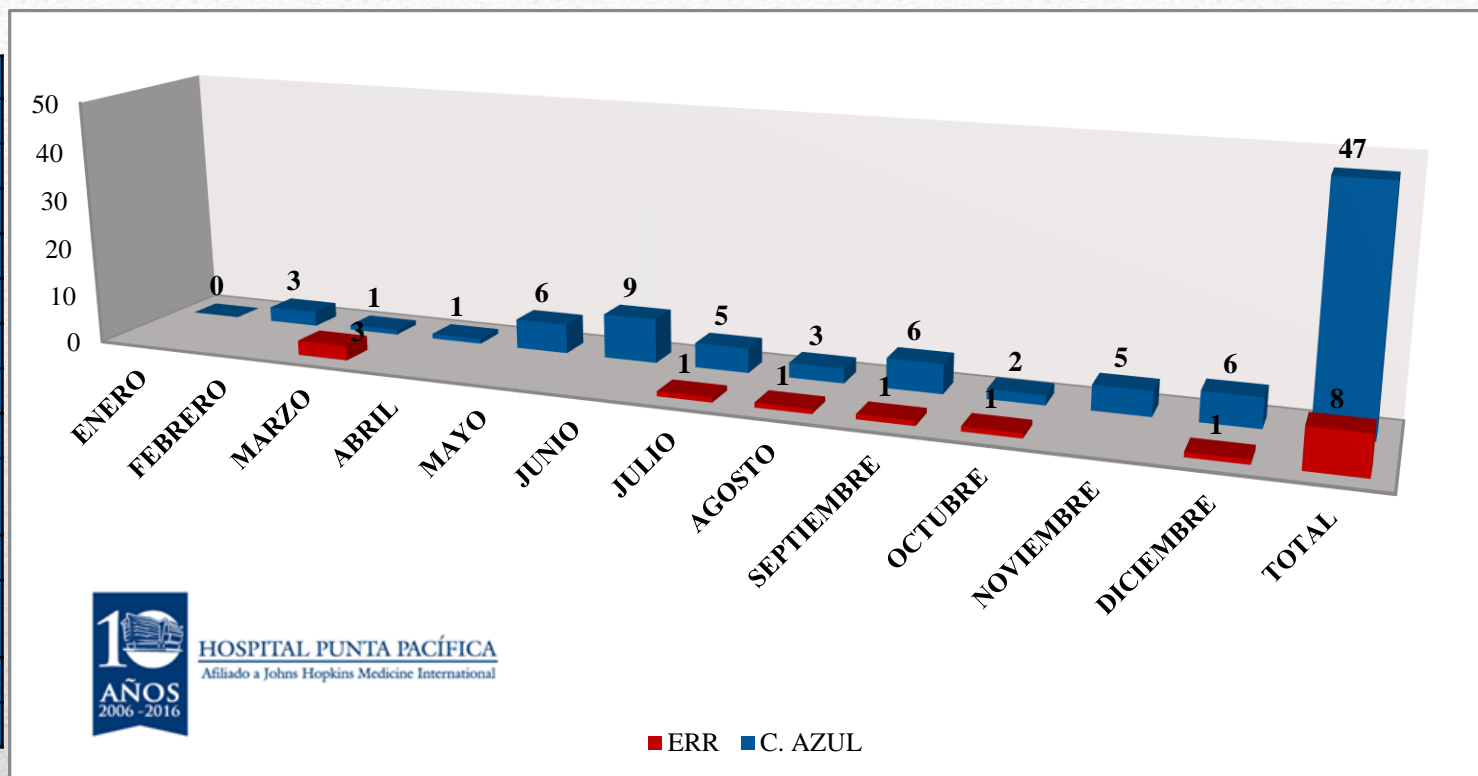
---



---

## RESUMEN DE CODIGOS ERR Y CODIGO AZUL DEL 2013-2016

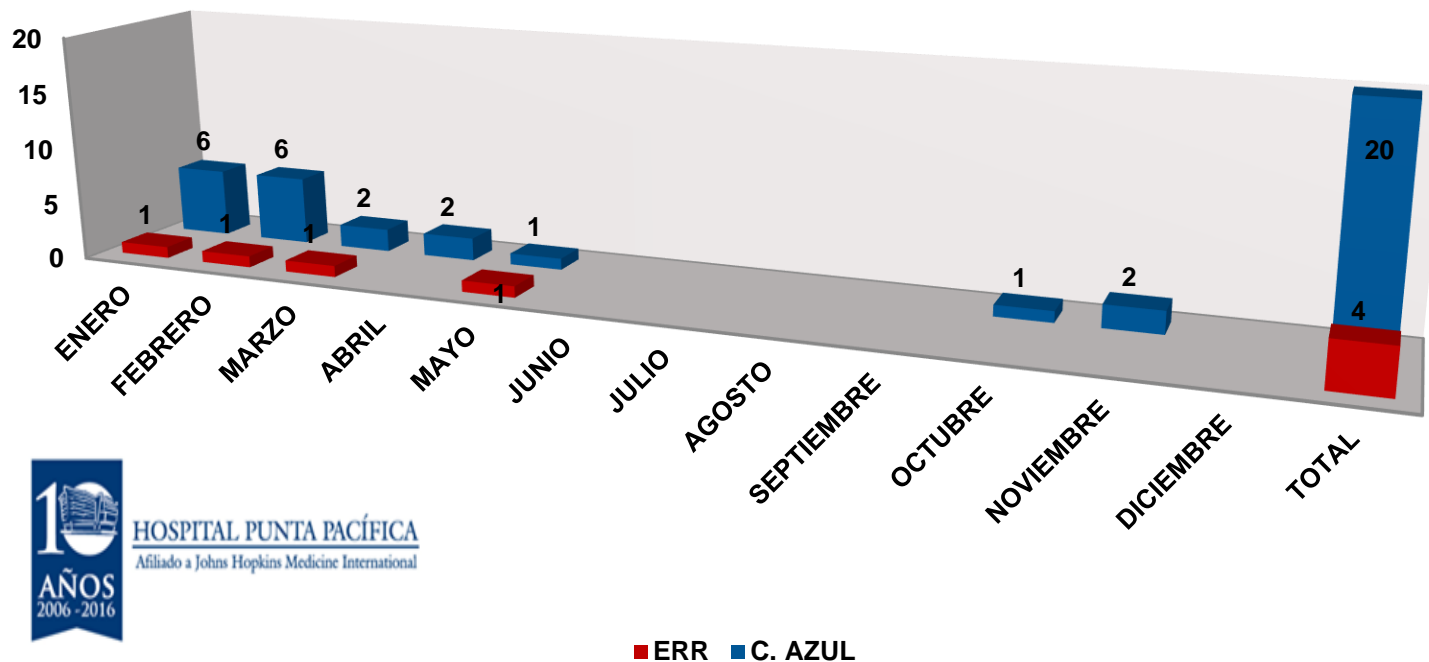
	AÑO 2103	ERR	C. AZUL
1	ENERO		0
2	FEBRERO		3
3	MARZO	3	1
4	ABRIL		1
5	MAYO		6
6	JUNIO		9
7	JULIO	1	5
8	AGOSTO	1	3
9	SEPTIEMBRE	1	6
10	OCTUBRE	1	2
11	NOVIEMBRE		5
12	DICIEMBRE	1	6
	TOTAL	8	47





## RESUMEN DE CODIGOS ERR Y CODIGO AZUL DEL 2013-2016

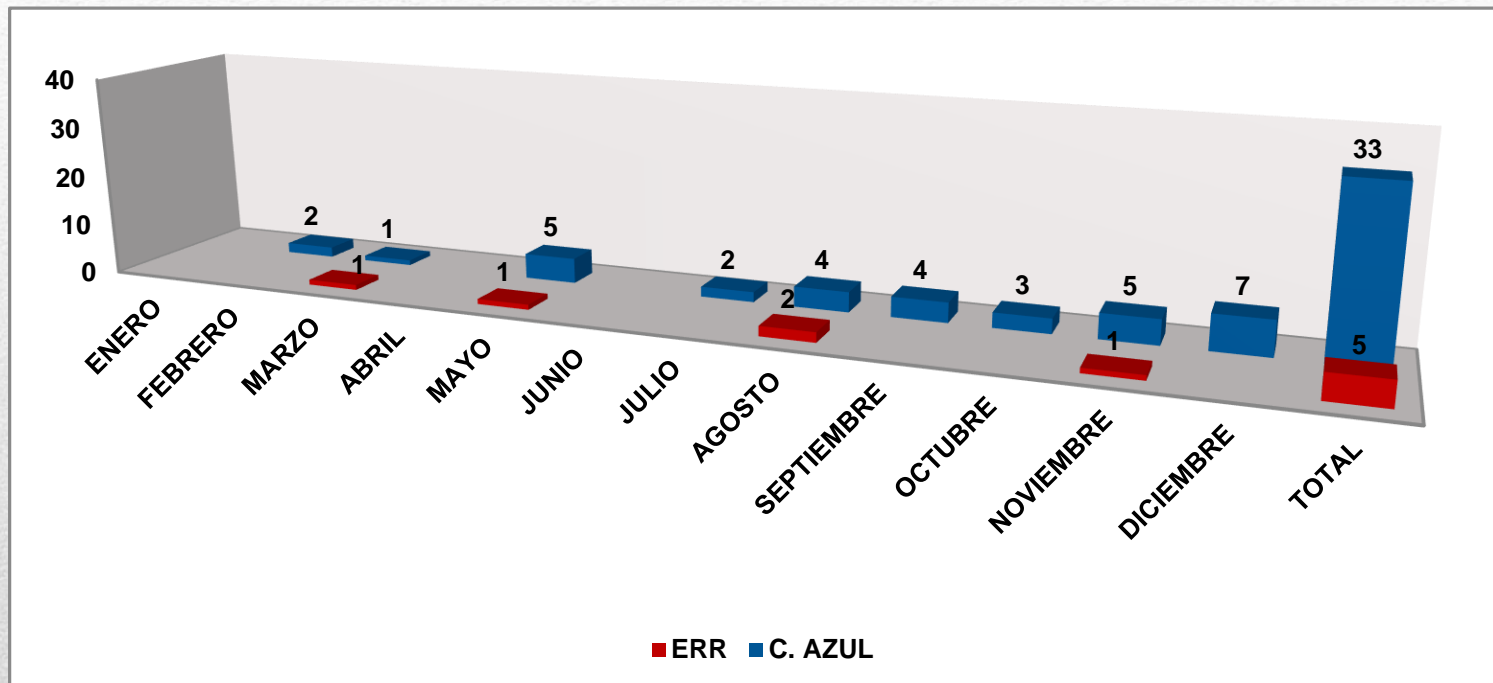
AÑO 2104	ERR	C. AZUL
ENERO	1	6
FEBRERO	1	6
MARZO	1	2
ABRIL		2
MAYO	1	1
JUNIO		
JULIO		
AGOSTO		
SEPTIEMBRE		
OCTUBRE		1
NOVIEMBRE		2
DICIEMBRE		
TOTAL	4	20



HOSPITAL PUNTA PACÍFICA  
Afiliado a Johns Hopkins Medicine International

## RESUMEN DE CODIGOS ERR Y CODIGO AZUL DEL 2013-2016

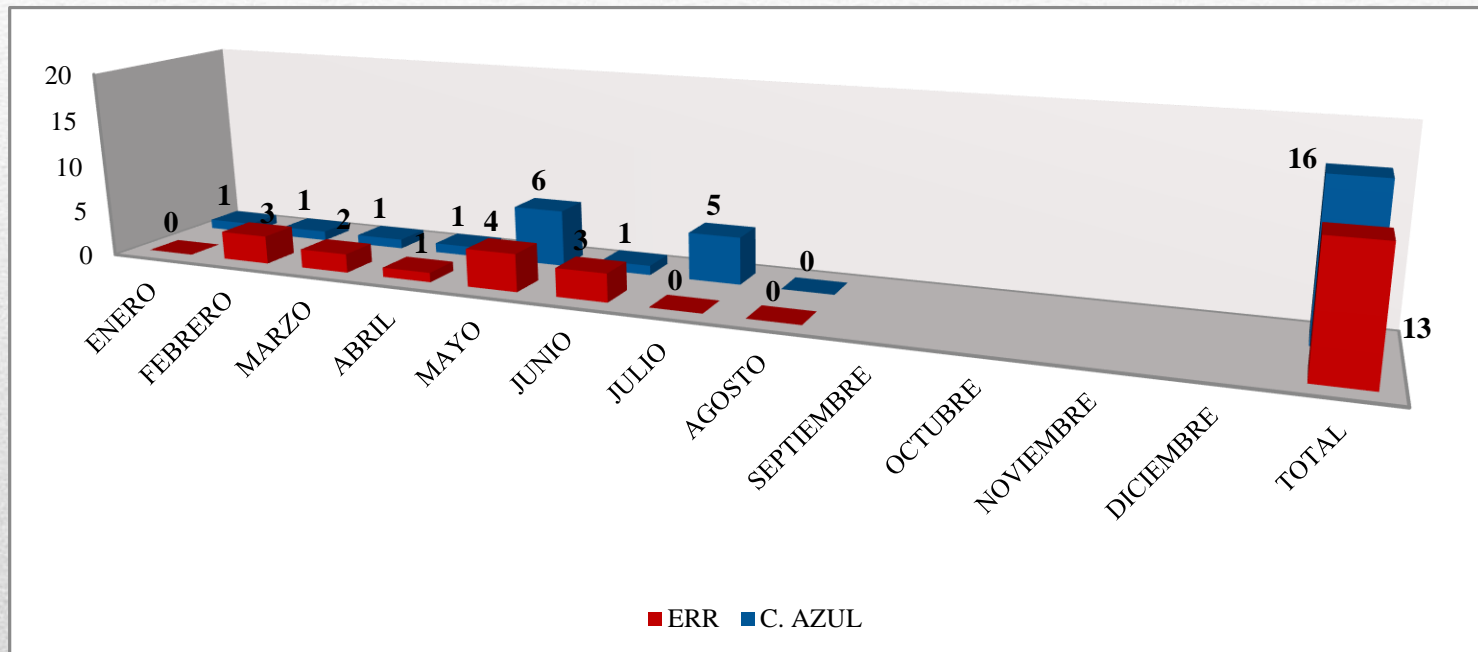
AÑO 2105	ERR	C. AZUL
ENERO		
FEBRERO		2
MARZO	1	1
ABRIL		
MAYO	1	5
JUNIO		
JULIO		2
AGOSTO	2	4
SEPTIEMBR E		4
OCTUBRE		3
NOVIEMBRE	1	5
DICIEMBRE		7
TOTAL	5	33





## RESUMEN DE CODIGOS ERR Y CODIGO AZUL DEL 2013-2016

AÑO 2106	ERR	C. AZUL
ENERO	0	1
FEBRERO	3	1
MARZO	2	1
ABRIL	1	1
MAYO	4	6
JUNIO	3	1
JULIO	0	5
AGOSTO	0	0
SEPTIEMBR E		
OCTUBRE		
NOVIEMBRE		
DICIEMBRE		
TOTAL	13	16



# Implementation of RRS

## Summary

- I. Pre implementation considerations
    - Stakeholder support (Securing)
  - II. Pre implementation data (Gathering)
  - III. Criteria for RRS activation (Identifying)
  - IV. RRS Team Composition (Design)
  - V. RRS Education Topics (Conducting education and training)
  - VI. Timeline for implementation (Establishing)
  - VII. Collecting data to monitoring the effectiveness of the RRS
-



# Implementation of RRS Summary

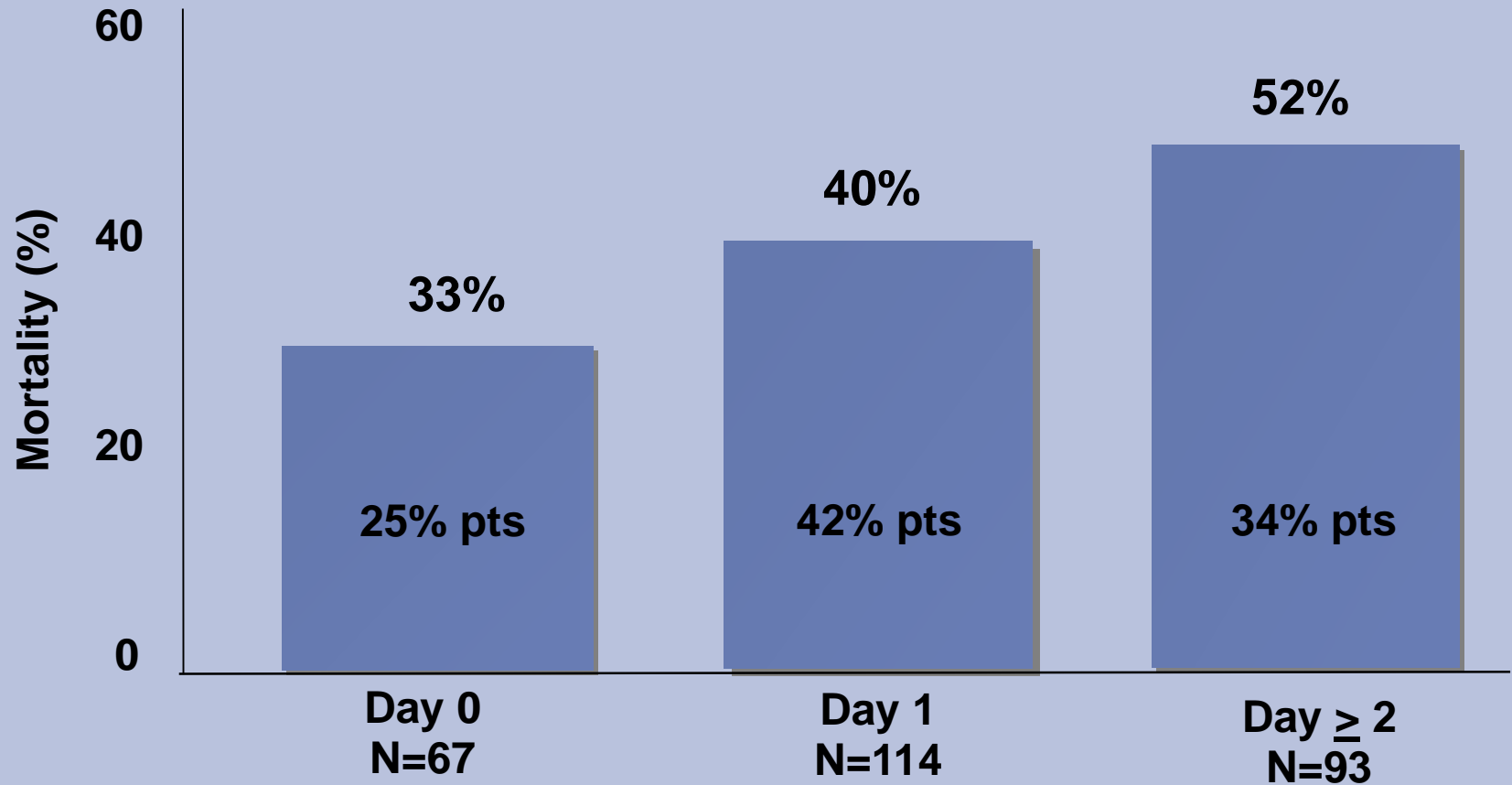


# “THANK YOU”





# Mortality / Timing of APC Administration in 274 patients



A post-marketing retrospective analysis



# **How Will the RRS Work at FRHG?**

---