

# **Code Rescue**

**Judy Ingala, R.N.  
Julie Dunn, M. D.**

**Mountain States Health Alliance  
Johnson City Medical Center**

# Johnson City Medical Center

- 470 bed hospital
- 38 ICU beds; expanding to 49 beds by December 1, 2004
- Level I Trauma Center
- Organ transplant program
- Busiest regional open heart surgery program
- NACHRI accredited Children's Hospital
- Teaching hospital affiliated with Quillen College of Medicine at East Tennessee State University



# **Scope of the Problem**

**In the current environment of high nursing turnover, increasing proportion of new graduates vs. experienced nurses, decreased nurse:patient ratios, higher acuity patients, in a teaching institution, deterioration of patient status was not always fully appreciated until a code situation evolved.**

# Aim Statement

- **To examine over a twelve month period the impact of a medical response team on the clinical outcomes of patients who suffer respiratory decline which results in a “Code Blue” situation. This team will be called by frontline nursing personnel to assess and intervene earlier in the course of the patient’s deterioration on all adult inpatient care areas.**

# Stretch Goal

To reduce “code blues” called for pre-events by 50%.

# Target Population

All adult care areas,  
excluding Women's and  
Children's Center

# **Team Members**

**Nursing Management:**

**Judy Ingala  
Rhonda Gentry  
Misty Spano  
Deborrah Foster  
Myra Jones  
Kim Jesse  
Mike Woodard  
Carol Jones  
Jay Balint  
Marlene Jaynes**

**Frontline Nursing:**

**Bill Dykes  
Amy Watson  
Julie Dunn  
Chief Resident, Ad Hoc**

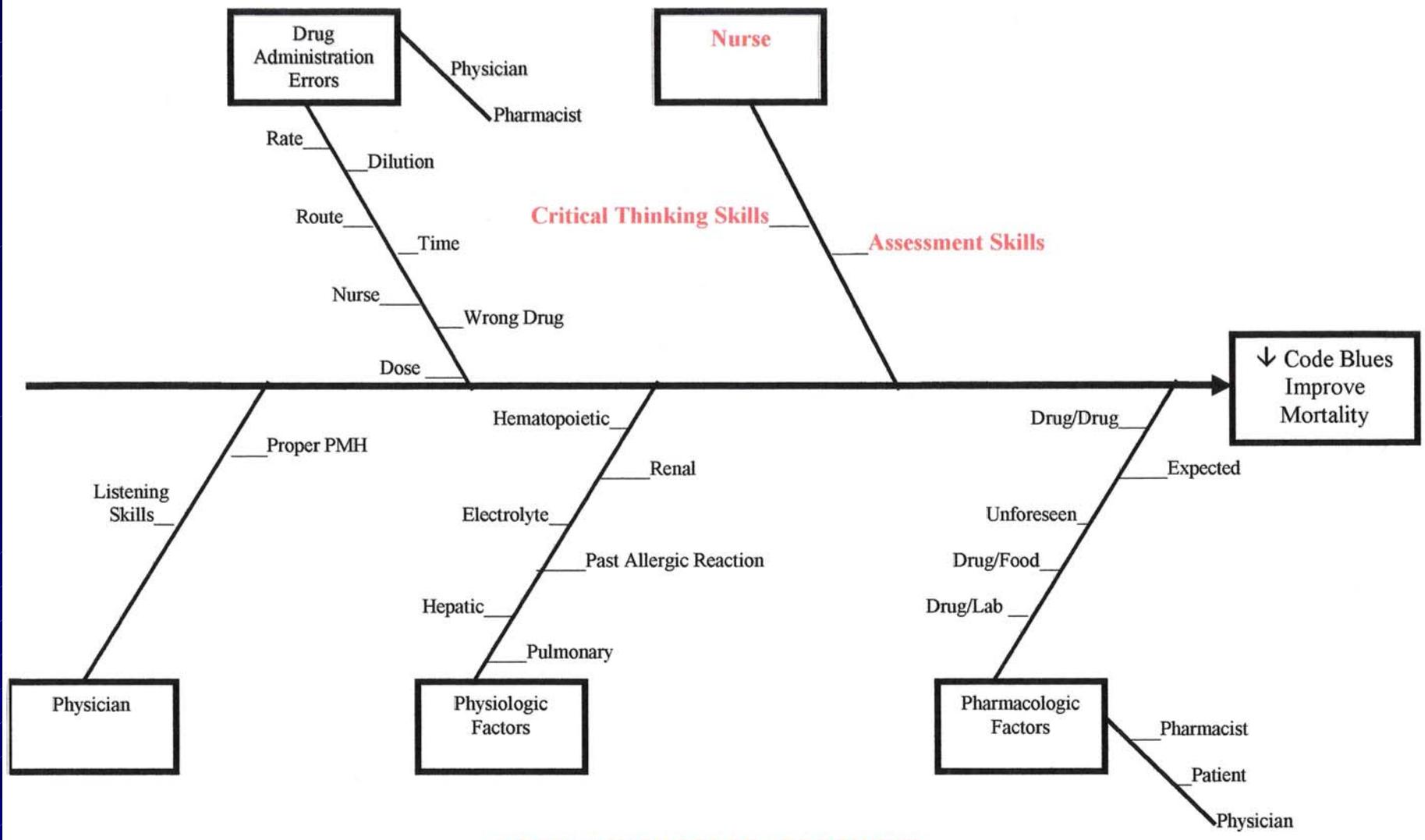
**Respiratory Therapy:  
Physicians:**

# Customers

## Physicians

## Patients

## Nursing staff



# **High Leverage Area**

**Nursing:**  
**Critical thinking skills**  
**Assessment skills**

# Factors that Impact Critical Thinking and Assessment Skills

- Educational preparation
- Skill mix on the nursing unit
- Staffing ratio
- Patient acuity

Linda Aiken  
UPenn

# Improving Physician-Nurse Communication

Paul G. Sperry  
IHC Central Region

- Nurses don't have the necessary information when they call
- Nurses call about issues in which physicians don't want to be bothered with at night

# Back to Customers

Untoward events can be decreased by assisting with and improving critical thinking skills. This will enhance both *physician* and *nurse* satisfaction and improve communication

# Back to Customers

***Patients*** will benefit by having improved outcomes, avoiding a code situation, and decreased cost of care, reducing the number of admissions and re-admissions to the ICU

# Initial Data

Location & Type of Code Blue Events			
	Resp	Cardiac	Total
2100	1	6	7
2200	2	2	4
2300	1		1
2400			
2500		2	2
2600	7	5	12
3200			
3300			
3400			
3500			
4200	1		1
4300			
4300 B	NICU (2)	1	3
4400			
4500			
5200			
5300		1	1
5400	2		2
5500		1	1
6200		1	1
6300		2	2
6400	1		1
6500			
cath lab		1	1
radiology	1		1
<b>Total</b>	<b>18</b>	<b>22</b>	<b>40</b>

# Chart Review Tool

Patient Data	Triggers
MR #:	Heart Rate:
Date of Event:	Blood Pressure:
Date of Admit:	Oxygen Sat:
Date of Discharge:	Change in LOC:
Admit Diagnosis:	Change in BS:
Discharge Diagnosis	Staff worried:
Nursing Unit:	Other:

## Procedures

Intubated  
Vasoactive drips  
Fluid bolus  
IVP lasix  
Narcan  
Atropine  
Cath Lab  
Blood  
ABG  
Code Blue  
Other

## Brief Narrative:

Assignable Cause:  
 Unpreventable  
 Critical thinking  
 Staffing concerns  
 MD response concerns

# Chart Data

- 2/3 – Critical thinking skills or multi-factorial issues.
- 1/3 - Unpreventable

# Initial Conclusions

- A certain number of codes called for “respiratory” events were unavoidable.
- Data collection should not be confined to respiratory events.
- In several cases, recognition of a change in physiologic status was not recognized or was not relayed appropriately to the physician call team.

# Conclusions

- Evaluating a change in status could be assisted by a Medical Emergency Team, consisting of respiratory therapy and an experience critical care nurse.
- This team could make initial recommendations or interventions and fill out a “Call Record.”
- With all the salient information at hand (SBAR\*), this data would be relayed to the physician call team so that any additional action could be undertaken PRIOR to a code event.

\*Michael Leonard, M.D.  
Kaiser Permanente of Colorado  
Evergreen, CO

S  
B  
A  
R

MEDICAL EMERGENCY TEAM CALL RECORD						
Event Date:	Code Status:					
Admit Date:	Time Called:					
Arrival Time:	End Time:					
Staff Responding:						
Primary Reason for MET Activation						
Respiratory Status Change	Change in Heart Rate	Change in Mental Status	Change in Blood Pressure	Staff Worried	Chest Pain	Fluid Status
SOB RR < 12 or >28 O <sub>2</sub> sat	>130 <40 Irregular Rhythm	Lethargic Confused Agitated Restless Unresponsive	< 90 >170 Undetectable	Doesn't look right MD not available	New Recurring	I>O Wet lungs UOP < 50 cc/4hr
Situation						
Background						
Assessment						
Recommendations/Interventions						
Outcome:	Stayed on Unit	Transfer to ICU	Code Blue	Survived	Expired	
12 hour post-event follow-up						

## **Quality Improvement Project Abstract**

### Project Information- Code Rescue

#### Contact/Team Membership

Mountain States Health Alliance

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### Project Description

To examine the impact of early intervention by a medical response team on the clinical outcomes of patients who suffer physiologic decline resulting in a “Code Blue” situation.

The team will be activated by frontline caregivers to assess and intervene earlier preventing deterioration to Code Blue status and admission to the ICU. Assessment of nurses’ critical thinking skills and education strategies for developing those skills will be nurse specific outcomes. Linda Aiken’s research on failure to rescue will be used to maximize nurse specific outcomes.

Evaluating a change in physiologic status could be assisted by a MET (Medical Emergency Team) and outcomes (admission to the ICU and mortality) could be improved. Using SBAR Technique for communication can expedite response by providers of care.

Key words:

Rescue Team

Critical Thinking

Early Medical Intervention

SBAR Communication Model