

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 Jessee

Frontline Nursing:

Mike Woodard
Carol Jones
Jay Balint
Marlene Jaynes

Respiratory Therapy: Physicians:

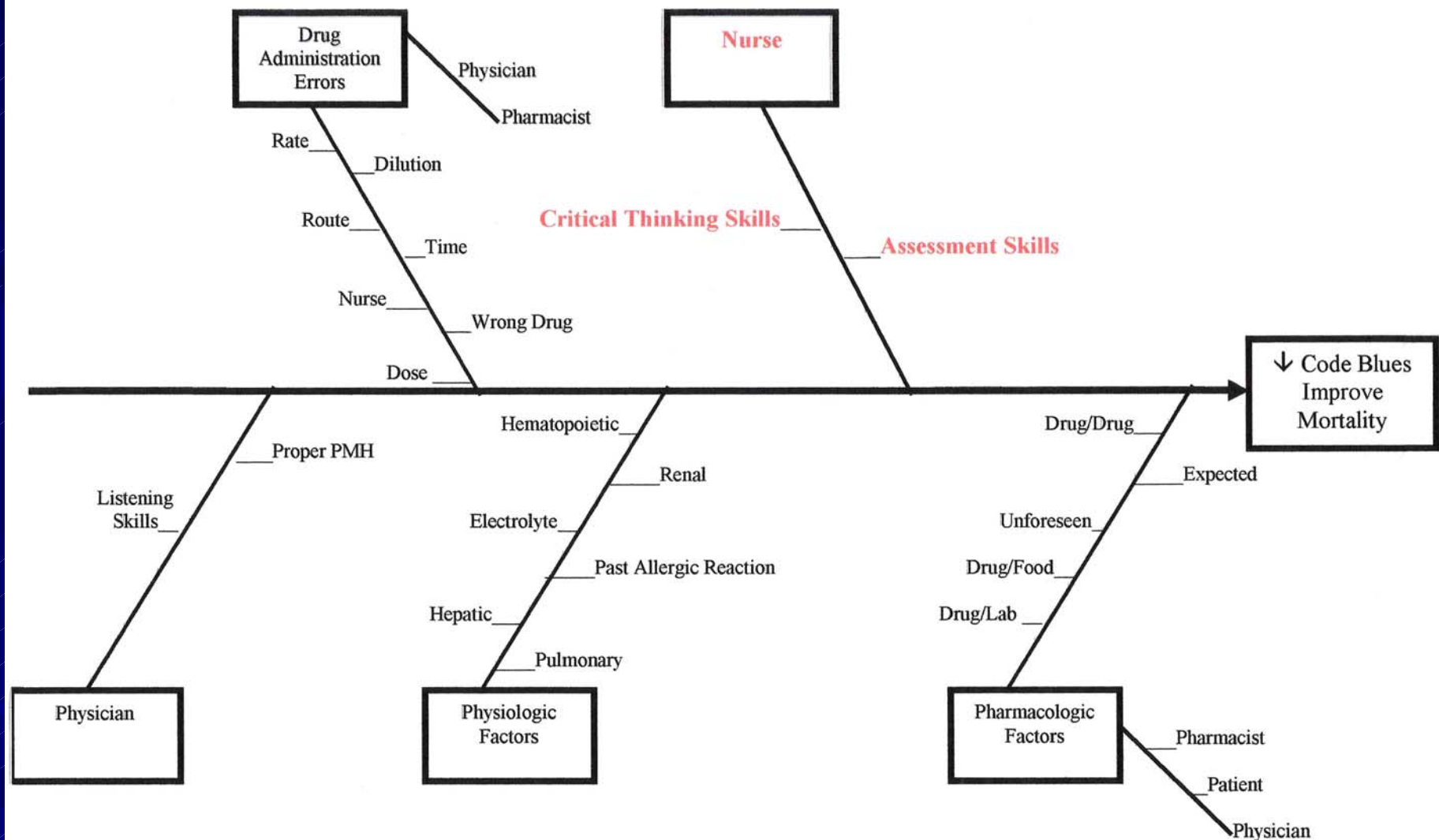
Bill Dykes
Amy Watson
Julie Dunn
Chief Resident, Ad Hoc

Customers

Physicians

Patients

Nursing staff



****RED = "HIGH LEVERAGE POINTS"**

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				
April, May, & June 2004				
		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	NIU (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
	Total	18	22	40

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 experienced 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

SBAR

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 ₂ 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
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12 hour post-event follow-up

Quality Improvement Project Abstract

Project Information- Code Rescue

Contact/Team Membership

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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