Mock Code Training Using Interdisciplinary Group Dynamics

AGH Participant Guidebook

Instructor: Dr. Andrew Adams

Revised June, 2011
Course Overview

DESCRIPTION

Human Patient Simulation has been shown to be an effective tool to teach mock code training using interdisciplinary group dynamics when health care professionals were randomly assigned roles. However, these randomly assigned positions may not be where the participants typically work in their careers. The usefulness of this approach with existing group members in their true roles has yet to be discovered. Therefore, this training method was administered to the staff of the West Penn Allegheny Health System (WPAHS) at The Simulation Teaching and Academic Research (STAR) Center.

This course is designed to provide a comprehensive exploration of the importance of group dynamics in an emergency situation. Standards and principles needed to ensure positive clinical outcomes for the safe, effective delivery of healthcare will be practiced and perfected using didactic and hands-on clinical practice as well as through reflective learning in a simulated clinical environment. Units of content will focus on group dynamics, role clarity and accountability, communication, and critical thinking. Principles in effective qualities of behaviors required in effective group dynamics will also be identified. The overall goal of this course is to provide the participant with the essential skills necessary to function within the context of a group during an emergency situation.

PURPOSE

The purpose of the Mock Code Training course is to:

1. Provide faculty-led simulated crisis training
2. Teach early identification of emergency situations
3. Effectively implement and evaluate appropriate interventions utilized
4. Determine the effectiveness of simulation training in early identification of emergency situations
5. Implement the proper use of the Chain of Group Dynamic Model in ACLS care
6. To train inter-professional healthcare team members on appropriate hand-off communication
EDUCATIONAL OBJECTIVES

At the completion of the Mock Code training, participants are expected to competently demonstrate the following skills:

1. Recognize emergency situations
2. Perform the essential measures to treat the patient
3. Utilize the Chain of Group Dynamics Model in code training
4. Define their role in a code situation
5. Demonstrate the ability to clearly provide effective hand-off communication to other healthcare team members

EQUIPMENT UTILIZED

- Laerdal SimMan Mannequin
- Patient Monitor with Vital Signs Display (Temperature, Pulse, Blood Pressure, Respirations, Oximetry Saturation)
- Patient Chart
- Oxygen Administration Supplies – Face Mask, Oxygen Tubing
- Airway Management Supplies – Laryngeal Mask Airway, Bag-Valve Mask, Oral Airway, Intubation Equipment
- IV Pole, IV Fluids, IV Tubing
- Defibrillator
- Crash Cart

COURSE SCHEDULE

- Simulation orientation
- Pre-course survey to assess knowledge
- Didactic lecture
- Hands-on practice through simulation scenarios
- Debriefing sessions
- Post-course survey to assess knowledge
- Post-course evaluations
Course Instructor
Andrew Adams, MD FACP

Biography

Andrew Adams, MD FACP is an attending physician at West Penn Hospital (WPH) where he serves as an Assistant Professor of Medicine with Temple University; Clerkship Director and Associate Program Director for Internal Medicine; and the Lead Instructor for Internal Medicine at STAR simulation center. Dr. Adams is a graduate of the Temple University School of Medicine and he completed his residency in Internal Medicine at WPH, where he was also the Chief Medical Resident. He is certified by the American Board of Internal Medicine. Dr. Adams awards include Outstanding Intern, WPH; Outstanding Teacher, Temple University Clinical Campus at WPH and Outstanding Teacher, Internal Medicine Residency at WPH. Dr. Adams is the principal investigator in several research studies involving simulation and resident education.

A Note From the Instructor

I am pleased to present this exciting course: Mock Code Training Using Interdisciplinary Group Dynamics. This course has been developed in collaboration with the Simulation, Teaching and Academic Research (STAR) Center at West Penn Allegheny Health System (WPAHS). This course provides you with the essential skills needed to function effectively as a group member in an emergency situation.

The focus of this course is on the importance of group dynamics and assessment, critical thinking, and participatory decision making to ensure positive patient outcomes.

The unique group dynamics model presented in this course allows interdisciplinary health care members to function in their designated roles as they would on the actual clinical unit. I believe this course is an innovative step toward developing best practices in simulation as a teaching and learning tool. The consolidation of disciplines allows us the opportunity to better serve our patients and provide high quality patient-centered care.

I believe that this course Mock Code Training Using Interdisciplinary Group Dynamics not only goes beyond state-of-the-art technology and the latest techniques in simulation, but also serves as a means of providing care with compassion, knowledge, and understanding. I hope that you will find this course a valuable asset to your clinical career.
The Group Dynamics Model

Visual Perception of Events

Critical Thinking Skills

Effective Communication Skills

Effective Problem Solving Ability

Effective Treatment of the Patient
Group Dynamic Model for Patient-Centered Care in a Crisis Situation:

**Rapid Response Team (RRT)**

<table>
<thead>
<tr>
<th>Number</th>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Respiratory Therapist</td>
<td>Provides ventilatory support and airway management as needed</td>
</tr>
<tr>
<td>2</td>
<td>ICU RN</td>
<td>Brings house arrest cart. Leads team if physician not present.</td>
</tr>
<tr>
<td>3</td>
<td>ICU RN</td>
<td>Brings house arrest cart. Leads team if physician not present.</td>
</tr>
<tr>
<td>4</td>
<td>ICU Documentation RN</td>
<td>Documents on the RRT record.</td>
</tr>
<tr>
<td>5</td>
<td>Bedside RN</td>
<td>Identifies patient with significant change in status, informs charge nurse of condition, and collaborates on appropriate actions.</td>
</tr>
<tr>
<td>6</td>
<td>Hospitalist Physician</td>
<td>Leads the team.</td>
</tr>
<tr>
<td>7</td>
<td>Senior Medicine Resident</td>
<td>Performs line placement and other invasive procedures.</td>
</tr>
<tr>
<td>8</td>
<td>IV Team RN</td>
<td>Assesses adequacy of intravenous line. Inserts additional IV as needed.</td>
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</table>
SUBJECT: RAPID RESPONSE TEAM (RRT)

DATE: June 15, 2011

This policy rescinds any previous publication covering the same material.

I. POLICY

All medical emergencies at Allegheny General Hospital Main Campus will generate an emergency response from the appropriate response team. Response is activated by dialing x1111 by the hospital operator. A need for 911 Service for areas outside the scope of internal response teams may be communicated via the phone operators.

This policy pertains to Allegheny General Hospital Main Campus.

Review of this policy is part of the orientation of hospital personnel.

II. PURPOSE

The purpose of this policy is to provide guidance to healthcare providers regarding activation of and procedures specifically pertaining to the Rapid Response Team (RRT). The RRT responds, when called, to non-ICU adult patients experiencing a significant change in condition from stable to unstable. Criteria herein described, serve as guidance for staff to activate a RRT.

The RRT does not replace the Code Blue Team, the ED Away Response Team, and the Pediatric Code Blue Team on the Main Campus.

These specified response teams are designed for patients experiencing either Respiratory or Cardiac Arrest. In these circumstances, the Hospital Response to Campus Medical Emergencies (Policy Manual #6510) applies.

III. DEFINITIONS

A. Rapid Response Team (RRT) responds to change in condition for non-ICU adult patients. The team consists of an attending hospitalist physician,
2 ICU nurses, One ICU documentation nurse, the bedside nurse, IV team, one senior medicine resident and the respiratory therapist.

B. Unstable Patient: A patient may be considered to be unstable if they meet any of the following criteria. A change in condition from stable to unstable may lead to cardiac or respiratory arrest. A RRT is designed to identify and treat conditions such as those listed below. These criteria provide guidance for staff to initiate a RRT activation.

☐ STAFF IS WORRIED ABOUT THE PATIENT
☐ CHANGES IN VITAL SIGNS
  Â Respiratory
    Rate < 8 or > 28 or new onset difficulty breathing Acute change in saturation < 90% despite O2
  Â Heart Rate
    < 50 or > 120 with new symptoms or any rate > 160
  Â Blood Pressure
    < 80 or > 200 systolic or 110 diastolic with symptoms (neurologic change, chest pain, difficulty breathing)

☐ ACUTE NEUROLOGIC CHANGE
  Â Acute loss of consciousness
  Â New onset lethargy, difficulty waking
  Â Change in speech or vision
  Â Sudden collapse
  Â Seizure (outside of seizure monitoring unit)
  Â Sudden loss of movement (or weakness) of face, arm or leg

☐ OTHER
  Â Patient complaint of (cardiac) chest pain, (unresponsive to NTG), or MD unavailable
  Â Color change (of patient extremity): Pale, dusky, gray or blue
  Â Unexplained agitation more than 10 minutes
  Â Acute significant bleeding
  Â NARCAN use without immediate response

C. Response Teams Available for Specific Circumstances

The following response teams have been developed to address emergency response to patients and visitors in crisis. These individual teams are described in detail in hospital policy (#6500, 6505, 6510, 6516 and 6530) but are referenced here to provide context for the MET.
1. **Code Blue Team (Main Campus)** responds to adult patients in cardiac or respiratory arrest on the Main Campus (Snyder, South Tower). It is comprised of CCM attending, senior CCU resident, MICU resident, Medicine teaching resident, Surgery resident, 2 ICU Nurse, ICU documentation nurse, Anesthesia, respiratory therapy, and bedside nurse.

2. **ED Away Response Team (Main Campus)** responds to visitors in crisis and patients in Professional Building, East Wing, parking garage or other areas outside South Tower and Snyder Pavilion. It includes an MD, RN, paramedic and security personnel.

3. **Pediatric Code Blue Team (Main Campus)** responds to pediatric patients in cardiac or respiratory arrest.

4. **911 Activation**
   a. **Main Campus:**
      - At the request of the ED Away Response Team
      - Parking garage and Professional Building
   b. **Suburban Campus:** clinics/ offices activate 911.

IV **POLICY**

A. The RRT team will be called to assist staff members in assessing and stabilizing a patient who is experiencing a serious change in condition on the main campus.

B. The RRT team will be activated for adult non-ICU inpatients on the main campus

V. **PROCEDURE**

A. The RRT may be called for adult non-ICU patients experiencing a change in condition. The criteria for an unstable patient should serve as guidance for serious changes in condition that may lead to a Code if not identified, treated and resolved. (See definition above.)

B. Any healthcare professional can activate the RRT by calling x1111.
   - Please send the RRT to Room xxxx, Unit xxxx.

C. Hospital operator will page the following RRT team members to notify them of the location of the MET.
D. Team Member Responsibilities

1. Bedside Nurse
   - Identifies patient with significant change in status or deterioration in condition and informs charge nurse of change in condition and collaborates on appropriate actions.
   - Activates RRT and/or informs physician of change in status or may be done by Charge Nurse if more appropriate.
   - Informs RRT of patient assessment/problem using "SAMPLE."
     - S - Situation: why the patient is in the hospital, any significant findings.
     - A - Allergies
     - M - Medications: current medications from the MAR.
     - P - Past medical History: describe the patient’s past medical history or other conditions.
     - L - Last meal and Labs (significant): time the patient ate last.
     - E - Event: describe what happened or how the patient was found that caused you to call the RRT.
   - Assists with implementation of orders received from physician.
   - Obtains vital signs during RRT response and reports results to Team.
   - Documents RRT activation and actions taken in Medical record.

2. ICU Nurse
   - Brings House Arrest Cart.
   - If arrives before physician, leads the team.
   - Collaborates with patient’s nurse, respiratory therapy and physician on plan of care.
   - Assists with implementation of orders, including administration of medications.
   - Places leads and monitors cardiac activity.
   - Documentation on the RRT Record

NOTE: In an emergency situation a professional nurse may administer any IV medication upon order from and in presence of a physician.

3. Physician
   - Leads the team.
   - Obtains information and requests additional information.
   - Medical decision-making, development and implementation of treatment plan.
   - Communicates with patients attending physician.
Documents MET activation and actions taken in Medical record as appropriate.

- Contact Family or significant other at completion of the RRT

4. Respiratory Therapist
   - Performs patient assessment.
   - Provides ventilatory support and airway management as needed.
   - Documents assessment and interventions.
   - Assures that oxygen is being delivered.
   - Monitors pulse oximetry

5. IV Team RN
   - Assesses adequacy of intravenous line
   - Inserts addition peripheral IV as needed

E. Other Staff Responsibilities

1. Charge Nurse
   - Assures RRT is activated.
   - Assures crash cart is in room.
   - Assures RRT meds are brought to room.
   - Directs removal of crash cart when house arrest cart arrives.
   - Assists with phone calls informing physician of changes in status.
   - Prompt the resident, attending or RRT physician to contact the family/significant other.
   - Has computer on wheels and chart brought to bedside by unit staff.

2. Manager of Hospital Operations (when available)
   - Provides administrative support.
   - May assist with notification of physicians and need for other ancillary services.
   - Addresses staffing issues created by need for transfer to higher level of care.

3. Unit Secretary (when available)
   - May activate the RRT
   - Calls the attending and resident, etc.
   - Prints labs from last 24-48 hours.

VI. DOCUMENTATION

Documentation of the RRT activation, actions taken and communications will be made and/ or placed in the medical record. Staff will use the documentation form available on the emergency response cart. At the conclusion of the event, the physician and nurse will review the documentation and sign the cardiopulmonary resuscitation record.

At the completion of the RRT, the physician will determine if the patient will need to be transferred to a higher level of care or if the patient is stable and to remain in his/her
current location. The Charge nurse, bedside nurse, ICU nurse or MHO will facilitate the transfer to a higher level of care if appropriate.

VII. EVALUATION

Evaluation of the RRT Team will be performed regularly and reported to the Resuscitation Committee and the Quality Management Committee. Examples of areas for review include, but are not limited to, operations issues (day of week, time of day, location, response time, resource utilization, duration of response, Non-ICU Code), reason(s) for activating the RRT (per criteria); patient outcomes (mortality, transfer to a higher level of care, evolution to Code, LOS in ICU) and any other analysis as requested or needed.

VIII: TELECOMMUNICATIONS

The telephone operators will notify the appropriate team and security as per telecommunications policies. The paging system will be tested daily by the telecommunications department at the Main Campus. Page returns will be assessed by MICU staff to evaluate for paging malfunction.

Approved By: [Signature]

Duke Rupert
Senior Vice President and Chief Operating Officer, AGH
**Group Dynamic Model for Patient-Centered Care in a Crisis Situation:**

**Code Blue Team**

1 – Anesthesia

- Performs airway assessment. Establishes patent airway.

2 – Respiratory Therapist

- Provides ventilatory support and airway management as needed.

3 – ICU RN

- Brings house arrest cart. Leads team if physician not present.

4 – ICU RN

- Brings house arrest cart. Leads team if physician not present.

5 – ICU RN

- Brings house arrest cart. Leads team if physician not present.

6 – Bedside RN

- Identifies patient with significant change in status, informs charge nurse of condition, and collaborates on appropriate actions.

7 – Senior Resident on CCU Service

- Leads the team.

8 – Surgical Resident

- Performs line placement and other invasive procedures.

9 – MICU Resident

- Assist with code as needed.

10 – Medicine Resident on Teaching

- Assist with code as needed.
SUBJECT: HOSPITAL RESPONSE TO CAMPUS MEDICAL EMERGENCIES

DATE: August 13, 2010

This policy rescinds any previous publication covering the same material

I. POLICY

All medical emergencies occurring at Allegheny General Hospital will generate an emergency response from the appropriate response team. Emergency Response is activated by dialing 1111 via the hospital telephone system and/or activating Pittsburgh Emergency Medical Services (EMS) via local phone line utilizing 911 service. Particular Response Team will be determined based on location of emergency and victim requiring response.

All teams when paged will respond on receipt of page. In the event that the response would be more adequately covered by another team, the first response team will assume care while mobilizing the next team. Care responsibilities will be relinquished to the requested team on arrival. (i.e. Code Blue called on a visitor-code team will respond and call ED response team for further care).

Personnel present in each patient care area will respond to the emergency within the scope of their abilities while notifying Telecommunications via 1111. A need for 911 service for areas outside the reach of internal response teams may be communicated via the emergency phone operators.

Specific mention of this policy is made as a part of the orientation of hospital personnel to the duties and responsibilities of the teams and emergency responses available.
II. PROCEDURE

Allegheny General Hospital Main Campus: Snyder Pavilion, South Tower, and connecting areas:

A. Emergency calls for unresponsive patients or patients in cardiopulmonary arrest:

1. Personnel discovering victim in crisis will call for help, establish unresponsiveness and institute Basic Life support. Assistive person responding to call for help will dial “1111” to activate hospital emergency response and assist in rescue care, including obtaining emergency response cart, until the team arrives.

2. Phone call to 1111 should specify Code Blue and location of occurrence.

3. If the victim is a child, a pediatric code blue should be specified.

4. Code Blue Team will be activated for adults, Pediatric Code Blue Team will be activated for children.

5. The Code Blue Team assumes responsibility for managing the resuscitation. The code team consists of:

   - Senior Resident on CCU Service
   - MICU resident
   - Medicine resident on teaching
   - Surgery Resident
   - 3 ICU RNs
   - Anesthesia
   - Respiratory Therapy
   - Bedside RN

   NOTE: In an emergency situation, a professional nurse may administer any IV medication upon order from, and in presence of a physician.

The Code team remains in charge of the patient until care is transferred to the receiving department, receiving team of health care professionals.

6. Documentation will be initiated by the Code Team RN utilizing the documentation form located on all emergency response carts.

   Documentation becomes a part of the permanent chart and is placed under the flow sheet tab of the medical record when completed.
7. Upon completion of the emergency event the code blue team MD leader and documenting RN will review and sign the Cardiopulmonary resuscitation record. MD signature verifies orders and administration of all meds, events and treatments documented.

B. Emergency calls for **Non-ICU Adult Patients in Snyder or South Tower with significant change in condition from stable to unstable**:

1. Personnel discovering victim in crisis will call for help, institute Basic Life support as needed. Assistive person responding to call for help will **dial “1111” to activate the Rapid Response (RRT Team)** and assist in rescue care, including obtaining emergency response cart, until the team arrives.

2. Phone call to **1111** should specify **RRT Team to … location of occurrence.**

3. The RRT Team consists of an attending Hospitalist physician, Respiratory Therapist, ICU RN and the patient’s bedside RN.

4. Documentation will be completed by the RRT Team RN utilizing the documentation form located on all emergency response carts. Documentation becomes a part of the permanent chart and is placed under the flow sheet tab of the medical record when completed.

5. Upon completion of the emergency event the RRT MD leader and documenting bedside RN will review and sign the record. MD signature verifies orders and administration of all meds, events and treatments documented.

6. See Rapid Response Team Policy for further specifics regarding RRT.

C. Emergency calls for **Visitors in crisis and Patients in Professional Building, East Wing, Parking Garage or other areas outside South Tower and Snyder Pavilion**. The parking garage and Professional Building are to access the Pittsburgh Emergency Medical Services (EMS) via 911 in addition to ED away team. All main campus buildings not physically connected to the main hospital should call 911 (EMS).

1. Personnel discovering victim in crisis will call for help, establish unresponsiveness or need for emergent care and institute Basic Life support. Assistive person responding to call for help will dial **1111** to activate hospital emergency response and assist in rescue care, including obtaining emergency response cart as available, until the team arrives.

2. Phone call to **1111** should specify Visitor emergency, or Visitor code, or Code Blue and need for ED Away Team and location of occurrence. Telephone operators will dispatch teams based on location stated.

3. The Emergency Department Team (ED Away Team) assumes
responsibility for managing the emergency. The ED team remains in
care of the patient until care is transferred to the receiving department
or receiving team of health care professionals or patient is transported to
the emergency department.

4. The ED Away Team for emergencies will include appropriate MD,
   RN, paramedic and security personnel.

5. At the request of the ED Away Team, The Pittsburgh EMS may be
called via 911 to assist in the resuscitation and/or transport of the victim
to the Emergency Department.

6. The ED Away Team assumes responsibility for managing the patient
   and remains in charge of the patient during their transportation to the
   Emergency Department or until care is transferred to the receiving
   Pittsburgh EMS unit.

D. Emergency calls for patients at Federal North Building should be made
depending on patient need. Access the Pittsburgh Emergency Medical Services
(EMS) via 911, however, if EMS cannot respond within a reasonable amount of
time, call 6556 for ambulance transport to the AGH Emergency Department
E.  Allegheny General Hospital Suburban Campus

Emergency calls for unresponsive patients/visitors/employees or patients/visitors/employees in cardiopulmonary arrest:

1. Personnel discovering victim in crisis will call out for help then dial 1111 and institute Basic Life support until help arrives. Assistive person responding will obtain emergency response cart, and care will be provider at the level of the care giver present until the Emergency Medical Services arrives.

2. Phone call to 1111 should specify type of emergency and location of occurrence.

3. The 1111 Operator will notify 911 and AGH fire alarm office.

4. The AGH fire alarm operator will notify suburban campus security and facilities personnel and urgent care staff when open.

5. Urgent care staff will notify security officer if available to respond.

6. Documentation will be initiated by the staff involved on appropriate documentation forms and by completion of an Occurrence Report on the facility online Patient Safety Reporting System.

Approved By:  

Duke Rupert  
Senior Vice President and  
Chief Operating Officer, AGH
Learning Objectives

1. Recognize emergency situations
2. Perform the essential measures to treat the patient
3. Utilize the Group Dynamics Model in code training
4. Define roles in a code situation
5. Demonstrate the ability to clearly provide effective hand-off communication to other healthcare team members
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Course Goals

1. Simultaneously train all disciplines in emergency response situations
2. Clarify and streamline emergency response
3. Better follow WPAHS protocols to improve patient outcomes
4. Train interprofessional healthcare team members on appropriate hand-off communication

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Course Purposes

1. Provide faculty-led simulated crisis training
2. Teach early identification of emergency situations
3. Implement appropriate interventions and evaluate the effectiveness of these interventions
4. Determine the effectiveness of simulation training in early identification of emergency situations
5. Implement the proper use of the Group Dynamics Model in emergency patient care
6. Implement proper hand-off communication

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STAR Group Dynamics Model

- Goal
- Task
- Technology
- Roles
- Leadership
- Relationships
- Communication
Introduction

Allegheny General Hospital (AGH) has two levels of in-house adult emergency response:

1. Rapid Response Team
   - Responds to unstable non-ICU adult patients
   - Standardized Code - Rapid Response Team

2. Code Blue Team
   - Responds to adult patients in cardiac or respiratory arrest
   - Alert - Code Blue
   - Both are activated by dialing 1111 by the hospital operator

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Rapid Response Team

The AGH Rapid Response Team is comprised of professionals from multiple disciplines:
- Hospitalist Physician
- Senior Medicine Resident
- Respiratory Therapy
- ICU RNs (2)
- ICU Documentation RN
- Bedside RN
- IV Team RN

Allegheny General Hospital Policy Manual No. 6515; Rapid Response Team (2017)

Code Blue Team

The AGH Code Blue Team is also comprised of professionals from multiple disciplines:
- Senior Resident on CCU Service
- MICU Resident
- Anesthesia
- Respiratory Therapy
- MICU RNs (3)
- Bedside RN
- Surgical Resident
- Medicine Resident on Teaching

Allegheny General Hospital Policy Manual No. 6510; Hospital Response to Campus Medical Emergencies
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Emergency Response History

- In the past, all of these disciplines have been trained independently to perform their roles in emergency situations (i.e., Cardiac Arrest)
- There has been no overlap in training
- Most team members are ACLS certified and thus the potential exists for confusion between roles

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This Course

- This course provides each member of the Rapid Response Team and the Code Blue Team the opportunity to be trained together as a group
- Statistical data gathered from this course indicates that the training received during this course has greatly improved group dynamics during an emergency situation
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What is a group?

- Two or more individuals working to plan, problem solve, and carry-out safe, quality care across a population of patients within the context of a high stress, high-stakes environment
  - Examples:
    - Rapid Response Team (RRT)
    - Code Blue Team

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Healthcare Delivery

Despite the best interventions of dedicated professionals, we are constantly reminded of the perils of significant errors in reported sentinel events.

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Sentinel Event Causes

- Research has shown that most sentinel events occur due to:
  - Ineffective communication
  - Inadequate hand-offs
  - Healthcare provider fatigue

Agency for Healthcare Research and Quality (AHRQ), 2006.
Across healthcare, group dynamics is a critical element for effective patient care and positive clinical outcomes. Reports reviewing the effectiveness of healthcare group processes have consistently supported the saying that "a group of experts does not necessarily constitute an expert group."

### Four Principles of Effective Group Dynamics in a Crisis Situation

**Principle #1 ~ Task Identification**
- Identify the task to be trained
  - Communication, Coordination, Cooperation, Teamwork

**Principle #2 ~ Practice**
- Provide opportunities for guided group dynamics practice
  - Practice must focus on a specific skill
  - Guidance must be provided to ensure the skill is accurately developed

**Principle #3 ~ Measurement / Diagnoses**
- Measure group performance
- Diagnose group strengths
- Diagnose group areas for needed improvement

**Principle #4 ~ Debriefing / Feedback**
- Develop robust debriefing protocols
- Link feedback to learning outcomes
Specific Group Behaviors

- In high-stakes situations where patients’ lives are at stake:
  - Maintain group structure and climate
  - Plan and problem solve
  - Communicate with group
  - Role clarity
  - Role accountability
  - Respect

Mock Code Training

- Human Patient Simulation has been shown to be an effective tool to teach mock code training when health care professionals were randomly assigned roles.
  - However, these roles may not have been where participants typically work in their careers.

- The educational approach of training group members in their true roles has yet to be discovered.

STAR

- This advanced simulation center creates the ability to train all of these individuals concurrently.
  - Allowing both differentiation of roles as well as integration of the team approach to cardiopulmonary arrest situations.
  - Leading to less uncertainty as well as smoother and more calm arrest situations.
  - Possibly improving patient outcomes.
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**Group Roles for the RRT**

1. Respiratory Therapist
2. Bedside RN
3. ICU RN
4. ICU Documentation RN
5. Hospitalist Physician
6. IV Team RN
7. Senior Medicine Resident
8. House Arrest Cart

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11. Respiratory Therapist

- Positioned at the head of the bed
- Responsibilities:
  - Performs patient assessment
  - Provides ventilatory support and airway management as needed
  - Documents assessment and interventions
  - Assures that oxygen is being delivered
  - Monitors pulse oximetry

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2. and 3. ICU RNs

- Positioned at the patient’s upper left and right sides
- Responsibilities:
  - Brings House Arrest Cart
  - Leads the team if physician is not present
  - Collaborates with the patient’s nurse, respiratory therapist, and physician on plan of care
  - Places leads and monitors cardiac activity
ICU Documentation Nurse

- Positioned at the foot of the bed
- Responsibilities:
  - Documents on the RRT record

Bedside Nurse

- Positioned at the patient’s right or left side
- Responsibilities:
  - Identifies patient with significant change in status, informs charge nurse of condition, and collaborates on appropriate actions
  - Activates RRT and informs RRT of patient assessment/problem
  - Assists with implementation of orders received from physician
  - Obtains vital signs during RRT response and reports results to the team
  - Documents RRT activation and actions taken in patient’s medical record

Hospitlist Physician

- Positioned at the foot of the bed
- Responsibilities:
  - Leads the team
  - Obtains information and requests additional information
  - Provides medical decision-making along with development and implementation of treatment plan
  - Communicates with patient’s attending physician
  - Documents RRT activation and actions taken in the patient’s medical record as appropriate
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**Senior Medicine Resident**

- Positioned at the patient’s middle left or right side
- Responsibilities:
  - Perform line placement and other invasive procedures as needed

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**IV Team Nurse**

- Positioned at the patient’s left or right side
- Responsibilities:
  - Assesses adequacy of intravenous line
  - Inserts additional peripheral IV as needed

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**Group Roles for the Code Blue Team**

1. Anesthesia
2. Respiratory Therapist
3. ICU Nurse
4. ICU Nurse
5. MICU Resident
6. Medicine Resident on Teaching
7. Senior Resident on CCU Service
8. Surgical Resident
9. Senior Medicine Resident
10. Medicine Resident on Teaching
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11 Anesthesia

- Positioned at the head of the bed

- Responsibilities:
  - Performs airway assessment
  - Establishes patent airway
  - Provides ventilatory support
  - Documents assessment and interventions
  - Assures that oxygen is being delivered
  - Monitors pulse oximetry

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21 Respiratory Therapist

- Positioned at the patient’s upper left or right side

- Responsibilities:
  - Assist anesthesia as needed
  - Provides ventilatory support and airway management as needed
  - Documents interventions
  - Assures that oxygen is being delivered
  - Monitors pulse oximetry

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3, 4 and 5 ICU RNs

- Positioned at the patient’s upper left and right sides

- Responsibilities:
  - Brings House Arrest Cart
  - Leads the team if physician is not present
  - Collaborates with the patient’s nurse, respiratory therapist, and physician on plan of care
  - Places leads and monitors cardiac activity
  - Documents on emergency response form all pertinent aspects of the code
61. **Bedside Nurse**

- Positioned at the patient’s right or left side
- Responsibilities:
  - Identifies patient with significant change in status, informs charge nurse of condition, and collaborates on appropriate actions
  - Activates Code Blue Team
  - Informs Code Blue Team of patient assessment problem
  - Assists with implementation of orders received from physician
  - Obtains vital signs during Code Blue Team response and reports results to the team
  - Documents Code Blue Team activation and actions taken in patient’s medical record

---

71. **Senior Resident on CCU Service**

- Positioned at the foot of the bed
- Responsibilities:
  - Leads the team
  - Provides medical decision-making along with development and implementation of treatment plan
  - Communicates with patient’s attending physician
  - Documents Code Blue Team activation and actions taken in the patient’s medical record as appropriate

---

81. **Surgical Resident**

- Positioned at the patient’s lower left or right side
- Responsibilities:
  - Performs line placement and other invasive procedures as needed
Slide 36
9.1 MICU Resident
- Positioned at the foot of the bed
- Responsibilities:
  - Assist with code as needed

Slide 37
10.1 Medicine Resident on Teaching
- Positioned at the foot of the bed
- Responsibilities:
  - Assist with code as needed

Slide 38
Communication
Having a standardized form of communication ensures delivery of vital information in maintaining appropriate patient care.
Error Prevention Strategies

- Effective communication between healthcare providers results in a clear transfer of information

- An essential communication tool includes:
  1. Call-Out
  2. Check-Back

Agency for Healthcare Research and Quality [AHRQ], 2006.

Call-Out

- A strategy used to communicate important or critical information
  - Informs all team members simultaneously during emergent situations
  - Helps team members anticipate the next steps
  - Important to direct responsibility to a specific individual responsible for carrying out the task

Agency for Healthcare Research and Quality [AHRQ], 2006.

Example:
- Leader: "Airway status?"
  - Resident: "Airway clear."
- Leader: "Breath sounds?"
  - Resident: "Breath sounds decreased on right."
- Leader: "Blood pressure?"
  - Resident: "Blood pressure is 96/62."

Agency for Healthcare Research and Quality [AHRQ], 2006.
**Slide 42**

**Check-Back**

- Process of employing closed-loop communication to ensure that information conveyed by the sender is understood by the receiver as intended.

1. Sender initiates the message
2. Receiver accepts the message and provides feedback
3. Sender double checks to ensure that the message was received.

**Example:**
- Dr. Smith: “Please give John Doe 25mg Benadryl IV push.”
- Nurse Nancy: “25mg Benadryl IV push.”
- Dr. Smith: “That’s correct, thanks.”

Agency for Healthcare Research and Quality (AHRQ), 2006.

**Slide 43**

**Handoff**

- The transfer of information (along with authority and responsibility) during transitions in care across the continuum.

- Providing opportunities to:
  - Ask questions
  - Clarify
  - Confirm

- Examples of transitions in care:
  - Shift changes
  - Physicians transferring complete responsibility
  - Patient transfers

Agency for Healthcare Research and Quality (AHRQ), 2006.

**Slide 44**

**SBAR Communication Tool**

- A communication tool such as SBAR has been endorsed by the Institute for Healthcare Improvement (IHI) to increase positive patient outcomes.

- SBAR: A technique for communicating critical information that requires immediate attention and action concerning a patient’s condition.

- **Situation**
- **Background**
- **Assessment**
- **Recommendation**

Agency for Healthcare Research and Quality (AHRQ), 2006.
SBAR Example

**SITUATION:** What is going on with the patient?
- I am calling about Mrs. Joseph in room 251. Chief complaint is shortness of breath of new onset.

**BACKGROUND:** What is the clinical background or context?
- Patient is a 62 year old female post-op day one from abdominal surgery. No prior history of cardiac or lung disease.

**ASSESSMENT:** What do I think the problem is?
- Breath sounds are decreased on the right side with acknowledgement of pain. Would like to rule-out pneumothorax.

**RECOMMENDATION:** What would I do to correct it?
- I feel strongly the patient should be assessed now. Are you available to come in?

SBAR Interactive Exercise

You are the nurse caring for Kelli Klutz who is a 75 year old female admitted for right hip fracture due to a recent fall. She had surgery 48 hours ago and has been stable since surgery. She has hypertension and takes 10 mg lisinopril daily. You’ve been caring for her for the past 8 hours of your 12 hour shift.
Upon entering the room, you notice that Mrs. Klutz appears to have labored breathing and says, "I think I’m going to die!" You check her vital signs which are 37.0°C, 126 bpm, 30 l/min, 166/88 and her SpO2 is 90% on 2LPM NC. Bilateral lung sounds are clear. Her surgical site is clean and intact. She has no complaints of pain anywhere.

You quickly increase her oxygen to 6 LPM NC which increases her SpO2 to 92%. You decide to call her physician.

Exercise:
Provide a report using the SBAR format.

Situation: What is going on with the patient?
Dr. Barnes, this is (your name). I am the nurse caring for Kelli Klutz in room 111. Approximately 3 minutes ago, Mrs. Klutz started having moderate labored breathing and began stating that she thinks she is going to die.
**Slide 51**

**SBAR Interactive Exercise**

**BACKGROUND: What is the clinical background or context?**
- Mrs. Klutz was admitted two days ago for surgical repair of a right hip fracture due to a recent fall. She has been stable since her surgery 48 hours ago. She has a past medical history of hypertension and is treated with lisinopril 10 mg daily.

**Slide 52**

**SBAR Interactive Exercise**

**ASSESSMENT: What do I think the problem is?**
- Currently Mrs. Klutz is sitting up in bed exhibiting moderate labored breathing. Her vital signs are 37.0°C - 126 | 30 | 166/88 and her SpO2 is 90% on 2LPM NC. I increased her oxygen to 6LPM NC and her SpO2 increased to 92% with no change in her blood pressure, pulse, or respiration rates. Would you like to rule out Pulmonary Embolus by ordering a Chest x-ray and CT scan?

**Slide 53**

**SBAR Interactive Exercise**

**RECOMMENDATION: What would I do to correct it?**
- Do you want me to contact the Hospitalist, to assess Mrs. Klutz now?
Thank you!
Your participation is invaluable!

References


Course Evaluation

Mock Code Training: Using the Interdisciplinary Group Dynamics - Post-Simulation Team Evaluation

1. How many, if any, Mock Code training courses have you taken in the past? ____________________

2. Before this course, have you ever taken a course where you functioned in your designated professional role as you do in the actual, clinical setting? YES NO

3. Approximately how many years of experience do you have working with codes? ________________

<table>
<thead>
<tr>
<th>Participant Perception</th>
<th>Extremely Poorly</th>
<th>Extremely Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well/poorly were the course objectives communicated?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>How well/poorly did the simulation scenarios meet the course’s stated objectives?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>How well/poorly did the simulation scenarios match clinical experience?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>If you identified an error, how well/poorly was it addressed?</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Greatly Decreased</th>
<th>Did not Change</th>
<th>Greatly Increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did this training change the amount of self-confidence you have in your ability to perform your role?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did this training change your clinical skills level?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Nothing at all</th>
<th>Moderate amt.</th>
<th>Extremely large amt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much did you learn from this course?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Extremely Low</th>
<th>Extremely High</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you rate your current self-confidence level in your ability to perform your role?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>How would you rate your current clinical skills level?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Please rate the following statements on the scales to the right and circle your response.

<table>
<thead>
<tr>
<th>Communication</th>
<th>Extremely Disagree</th>
<th>Extremely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants introduced themselves to the patient.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Participants introduced themselves to other group members.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Participants communicated important information regarding the patient’s condition to each other effectively.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Participants informed the patient what procedures were being performed on him/her.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Participants answered the patient’s questions adequately.</td>
<td>1 2 3 4 5 6 7  NA</td>
<td></td>
</tr>
<tr>
<td>There were no issues of miscommunication.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The transference of information among team members was better than what I usually experience in the clinical setting.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teamwork</th>
<th>Extremely Disagree</th>
<th>Extremely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The team worked well together.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Participants functioned well in their designated roles.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The team atmosphere was positive.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The team atmosphere was energetic.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The team followed proper hospital policies and procedures.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The team used appropriate equipment on the patient.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The team completed their tasks in an appropriate amt. of time.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The team provided the patient with quality healthcare.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respect</th>
<th>Extremely Disagree</th>
<th>Extremely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants treated the patient with respect.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Participants treated each other with respect.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

What obstacles, if any, hindered team members from providing quality care to the patient?

_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
Please rate the following statements on the agreement scale to the right and circle your response.

<table>
<thead>
<tr>
<th>Debriefing Session Evaluation</th>
<th>Extremely Disagree</th>
<th>Extremely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The debriefing objectives were clearly stated.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The debriefing was structured in an organized manner.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The atmosphere was respectful of students’ emotions and thoughts.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The discussion was engaging.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The discussion was enhanced with examples and/or demonstrations.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I was encouraged to share my thoughts and reactions.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>There was ample time for questions.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>My confidence levels in performing this task increased after the debriefing.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I understand my strengths more thoroughly.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I understand my weaknesses more thoroughly.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I learned something new during the debriefing session.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I understand the important points of this simulation activity.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I understand what I could have done better.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The video play-back aided in my learning.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Criticisms were provided in a constructive, polite way.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feedback provided was helpful.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The debriefing objectives were fulfilled.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Mayo High Performance Teamwork Scale

### TABLE 1. Mayo High Performance Teamwork Scale

Use the following scale to rate the team on each dimension:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never or rarely</td>
<td>Inconsistently</td>
<td>Consistently</td>
</tr>
</tbody>
</table>

Please rate conservatively. Most teams that have not worked extensively together do not consistently demonstrate many of the qualities described in the scale.

Always rate items 1–8.

1. A leader is clearly recognized by all team members.
2. The team leader assures maintenance of an appropriate balance between command authority and team member participation.
3. Each team member demonstrates a clear understanding of his or her role.
4. The team prompts each other to attend to all significant clinical indicators throughout the procedure/intervention.
5. When team members are actively involved with the patient, they verbalize their activities aloud.
6. Team members repeat back or paraphrase instructions and clarifications to indicate that they heard them correctly.
7. Team members refer to established protocols and checklists for the procedure/intervention.
8. All members of the team are appropriately involved and participate in the activity.

Items 9–16 may be marked “NA (not applicable)” if no situations occurred in which these types of responses were required.

9. Disagreements or conflicts among team members are addressed without a loss of situation awareness.
10. When appropriate, roles are shifted to address urgent or emergent events.
11. When directions are unclear, team members acknowledge their lack of understanding and ask for repetition and clarification.
12. Team members acknowledge—in a positive manner—statements directed at avoiding or containing errors or seeking clarification.
13. Team members call attention to actions that they feel could cause errors or complications.
14. Team members respond to potential errors or complications with procedures that avoid the error or complication.
15. When statements directed at avoiding or containing errors or complications do not elicit a response to avoid or contain the error, team members persist in seeking a response.
16. Team members ask each other for assistance prior to or during periods of task overload.
