Nurse as First Responder
Roles & Expectations During Critical Events
Presenters
UCSF Medical Center staff members
No disclosures

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Course overview

- Background of course development
- Case Study – Mr. H.
- Preparation for adverse events
- Early recognition of patient at risk for deterioration
- First responder interventions
- Resuscitation best-practices
- Post-event processing
Learning Objectives

• Identify most common clinical conditions that may result in patient deterioration
• Describe key behaviors in the first three minutes of a Code Blue
• Implement time saving steps that promote resuscitation efforts
• List three changes to your practice regarding recognition of patient deterioration and resuscitation
UCSF Health

- Includes UCSF Medical Center, UCSF Benioff Children’s Hospitals in San Francisco and Oakland, and Langley Porter Psychiatric Hospital and Clinics
- UCSF Medical Center ranked #1 hospital in California by US News & World Report (2017-18)
10 years of Rapid Response at UCSF

24/7 Dedicated RN and RT
Support
Assess
Facilitate
Educate
Resource

Code Blue
Code Sepsis
Patent Safety Resource
Clinical Education Support
Clinical deterioration

8697 Encounters in 2017
UCSF Code Blue Event Data

- Events at Parnassus campus for inpatient acute care and TCU areas only
- All CPA events required CPR &/or defib
- ME events include:
  - Seizure
  - Syncope
  - Anaphylaxis
  - AMS/Narcotic overuse
  - Acute hemorrhage

- Cardiopulmonary Arrest (CPA)
- Acute Respiratory Compromise/distress (ARC)
- Medical Emergency (ME)
UCSF Code Blue training for nurses

2015: USCF Rapid RRT RNs partnered with Nursing Education staff to develop code blue education specifically for nurses

- Focus on initial response and review of roles
- Group discussion and hands-on simulation
- Lead by experienced RRT nurses
- Class size max 15

Class design is based on:
- Rapid Response data
- Direct observation
- Specific staff requests
Pt introduction: Mr H.

- 65y M admitted to Medicine team with CAP, on IV Abx. PMH includes ESRD of HD MWF, former smoker, laryngeal CA, laryngectomy with long term trach, HME at home.
- VS: T 36.7, P 94 NSR, R 18, 96% on 40% TCM, BP 92/63
- Cont pulse Ox monitoring (not on tele), strong productive cough, thick tan secretions, getting nebs PRN
- Per PM RN family at bedside, pt “slept well all night,” follows commands
- Clear liquids ok
- Anuric, plan for HD later today
- IV access 20g L AC, R forearm AVF
Be Prepared

• Confirm CODE STATUS and goals of care
• Complete and document safety checks every shift
  - Critical for patients with advanced airways or with increased O2 requirement (High Flow NC)
• Anticipate possible adverse events
  - Suction set up for patient with high aspiration risk
• Timely and accurate documentation of vital signs
  - Chart desaturations and low BP even when transient as it may show trends
  - With EMR, providers may “check on” patient without RN knowledge
• Use clear language when paging providers
  - “Advise: BP 70/40, pt c/o dizziness” vs “pt’s BP low please call”
Mr H – Shift assessment

- Neuro: arouses to verbal stim, lethargic, follows commands (GCS = 13)
- Family reports pt “sleeping since we got here yesterday”
- BP 84/50, HR 105, spO2 92% on 40%, RR 22
- MD paged - continue to monitor for now, will discuss on rounds
- spO2 96% after increased to 50% fiO2
Silent Slow Burn

80% CPA events show “Slow deterioration” in recorded clinical signs (Chaboyer, et al, 2008)

How often are you checking VS?
• Frequent calls from telemetry tech
• You haven’t seen your other patients all shift
• Pt is suddenly getting lots of STAT orders for interventions/labs/tests/meds
• Pt doesn’t look good but “has been like this for days”
• Trust your instincts!!!!
Patients at Risk for Adverse Events

- High pulse: >110 beats/min (x2 more likely)
- Abnormal respiratory rates: <10/min or ≥25/min (x3 more likely)
- Low oxygen saturation: <90%
- Abnormal serum levels of potassium
- A decrease in score on the Glasgow Coma Scale of 2 or more points
- Length of stay
- Recent or recurrent ICU stay
- Poor Nutrition (<50% goal intake)

(Mathukia, et al, 2015)
Early Warning System

<table>
<thead>
<tr>
<th>Modified Early Warning System (MEWS)</th>
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<tbody>
<tr>
<td><strong>Respiratory rate per minute</strong></td>
</tr>
<tr>
<td>Less than 8</td>
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<tr>
<td><strong>Heart rate per minute</strong></td>
</tr>
<tr>
<td>Less than 40</td>
</tr>
<tr>
<td><strong>Systolic blood pressure</strong></td>
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<tr>
<td><strong>Conscious level (AVPU)</strong></td>
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<tr>
<td><strong>Temperature</strong></td>
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</tbody>
</table>

Source: Kathy D. Duncan RN; Christine McMullan MPA; Barbara M. Mills DNP, PNP, RN, ACNPC, ANPC, CCRN, PCCN – Nursing February 2012

System used at some facilities to identify patients at risk for clinical deterioration (4)
Mr. H – 2 hours after shift assessment

• Tele called for spO2 reading 88%
• RN assessment/interventions:
  - Noted RR 24, coarse BS, more lethargic (GCS =11)
  - HR 115, BP 80/42- change BP cuff and got new machine
  - Called RT to come to bedside for assist
  - Pt suctioned, RT giving neb tx
Escalation: Know your resources

• Do not be afraid to use the chain of command
• Involve the Charge RN
• Utilize RRT team if your institution has one

• Acute change in vital signs
  • HR <40 or >130 bpm
  • SBP <90 mmHg
  • RR <8 or > 30 b/min
  • Acute drop in SpO2: <90% despite O2 delivery

• Active Bleeding
  • New Arrhythmias
  • Acute mental status changes
  • Decreased in U.O. < 50 mL over 4 hours
  • Significant concern about patients condition
Mr. H – shortly after RT intervention

- RT at bedside suctioning pt
- Telemetry calls UTA O2 sat
- HR 140’s, unable to obtain O2 Sat, BP machine reading “failed”
- Pt now pale, minimally responsive, no longer following commands (GCS = 8)
- RN paging primary team, getting another BP device
- RT attempt to hand ventilate
When should I call a Code Blue?

What to do before the code team arrives?
First Responder Assessment

- Check the patient!
- If monitored, check the patient, not the monitor
- Check level of responsiveness
- Check for a pulse

*SPO2 and BP don’t exist without a pulse, don’t assume the equipment failed, check a pulse*

When to call a Code Blue...
- Pulselessness (CPA)
- Acute respiratory compromise/distress (ARC)
- Medical emergency (ME)
Mr H. Needs Help

- Pt becoming cyanotic, now unresponsive
- Unable to palpate pulses
- CODE BLUE activated
First Responder Considerations

Communicate Code Status to others
For CPA start CPR and get Defibrillator
• Most important intervention is quality chest compressions
• Start early
• Stay on the chest
• Quality compressions with full recoil
• Don’t try to take on any other role at this time
• Rotate every 2 minute cycle of CPR to stay fresh
  - Even if you think you’re ok – rotate anyway
Chest compressions

Perfusion During Cardiac Arrest with Chest Compressions

A

Perfusion Pressure

Compressions Initiate

Compressions Resume

Compressions Halt

B

Perfusion Pressure

Compressions Initiate

Compressions Continue without Interruption

Compressions Halt

(http://rebelem.com/beyond-acls-cpr-defibrillation-and-epinephrine/)
First 3 minutes of the event - Priorities

All hands on deck!!
- Start CPR
- Crash cart
- Defibrillator/AED
- Back board
- Keep time & Document
- IV access & labs
- Blood gas is crucial and quick
- Glucose check

Also remember to:
- Remove unnecessary obstacles i.e. furniture, equipment
- Attend to visitors and other patients
- Family presence encouraged (unless disruptive)
Family presence

- Recognized by AACN, AHA, and ENA guidelines as an important aspect of resuscitation (Mureau-Haines, et al. 2017)

- Being present may help the family:
  - Understand the severity of ones condition or grasp the reality of death
  - Opportunity for a last goodbye or a sense of closure
  - Set realistic expectations of resuscitation efforts
  - Understand that everything possible is being done to save loved one (Jabre, et al. 2013)
  - Reduce post-event symptoms of anxiety, depression, and PTSD (AACN. 2016)

- Best practice to have written policy and designated person with crisis training (Chaplin or social worker) as member of code team (AACN. 2016)
Nurse has critical role

**STAY with the patient!**
Primary nurse is key resource for valuable information

- Events leading up to code?
- Recent medications, treatments, activities?
- IV access available/needs?
- Goals of care discussions in progress?
- Best method for contacting DPOA/family?
- May help facilitate family presence
Mr H: outcome

• After 30 minutes of resuscitation ROSC achieved
• Pt transferred to ICU on monitor
• CXR revealed R lung collapse (likely d/t mucus plugging)
What to do after the code? Transfer and Debrief
Post Event Process

Have equipment ready for complete VS check once ROSC is achieved
Transfer to higher level of care
Anticipate bedside report
Post-Code Debriefing at UCSF

- Lead by RRT RN
- Includes all parties involved in the code
- Non-punitive fact finding discussion
- Ensure safe environment for constructive feedback and education
- Good time to acknowledge standout performances
- IR’s filed for every Code Blue
  - Used for tracking data
  - Allows for insight and process improvement
  - Leads to practice change, institutional policy change and identifies educational gaps
Pearls for Prevention

- Be proactive
- Know and utilize your resources
- Ask questions – clarify, communicate
- Escalate when appropriate
- Trust your GUT!!!

- Ultimate Goal: be empowered to recognize the deteriorating patient, communicate this information to the right people, and initiate appropriate and timely interventions.
Be aware of the “Second Victim” phenomenon
Who is a second victim?

Defined as: clinicians who experience considerable emotional distress, shame, and self-doubt after being involved in an adverse event, unexpected patient decline, medical error, or stressful patient care experience. (Cox, et al. 2008)

Approximately 50% of clinicians are involved in an adverse event each year, which leads to decreased morale and lack of productivity—the “second victim” phenomenon (https://caringforthe caregiver.ucsf.edu)

Second victims often
- Feel personally responsible for the patient outcome
- Feel as though they have failed the patient
- Second-guess their clinical skills and knowledge base

(Scott, et al. 2009)
# Common Reactions to Stressful Patient Care Events

<table>
<thead>
<tr>
<th>Reaction</th>
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<tbody>
<tr>
<td>Sleep disturbance</td>
<td>Fear</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>Grief</td>
</tr>
<tr>
<td>Eating disturbance</td>
<td>Uncomfortable returning to work</td>
</tr>
<tr>
<td>Headache</td>
<td>Anger</td>
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<tr>
<td>Fatigue</td>
<td>Depression</td>
</tr>
<tr>
<td>Palpitations</td>
<td>Self-doubt</td>
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<tr>
<td>Feelings of isolation</td>
<td>Flashbacks</td>
</tr>
<tr>
<td>Frustration</td>
<td></td>
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</table>
Importance of Self-care

- Drink water!
- Give yourself permission to react; don’t try to hide your feelings
- “Suck it up and carry on” can lead to post traumatic stress
- Charge RN facilitate time and support for individual to break and process
- May be helpful to talk with facility Chaplin or spiritual care provider regarding personal feelings of event
- Conversation promotes healthy coping strategies
- Caring for the Caregiver (UCSF)
- Code Lavender (Cleveland Clinic)
Bibliography


Bibliography continued


Thank you for all you do!

Med/Surg Nursing

What society thinks I do.
What my mom thinks I do.
What my family thinks I do.
What my boss thinks I do.
What I think I do.
What I actually do.