UCSF Obstetric and Neonatal Simulation Training

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However, we’re not even counting this – medical errors is not recorded on US death certificates
How Errors Occur

Defenses
- Culture
- Policies
- Resources
- Training
- Communication

Safeguards
- Stop the line
- Standard work

Flexible staffing
- Self-checks

Harm
Sentinel Event Analysis

Root Causes

- **Communication** (72%)
- Staff competency (47%)
- Orientation and training (40%)
- Inadequate fetal monitoring (34%)
- Unavailable monitoring equipment/drugs (30%)
- Credentialing/Privileging/Supervising MD CNM (30%)
- Staffing issues (25%)
- Physician unavailable or delayed (19%)
- Unavailable prenatal information (11%)
“Finding good players is easy. Getting them to play as a team is another story”

Casey Stengel
So Why Simulation?

- No potential harm
- Errors can be allowed to occur
- Practice crisis skills not often used
- Uncover system issues
- Ability to Debrief
The Crown Jewel: The Debrief

• Confidential – safe forum for disclosure
• Provides a clear representation of the scenario
• Encourages the participants to take the situation seriously
• Allows staff the rare opportunity to see how they practice with each other
• Reveals team performance behaviors
• Uncovers system issues
• Promotes an improved work environment
The Principles of Crew Resource Management (aka NRP Behavioral Skills)

- Know your environment
- Utilize all available information
- Anticipate and plan
- Identify a team leader
- Communicate effectively

- Distribute work load optimally
- Allocate attention Wisely
- Utilize all available resources
- Call for help early enough
- Maintain professional behavior
Know Your Environment

- Sounds simple but it’s not!
- Perform equipment checks (oxygen masks, air tanks, suction)
- Emergency equipment rarely used
  - Arm boards, stirrups, rapid infuser, code carts, stopcocks
- Know how to call for help (and who comes!)
- Know how to get emergency blood
- Equipment and supplies move
Utilize all Available Information

- Know the prenatal and intrapartum history
  - Maternal complications?
  - Medications?
  - Ask the OB provider the 4 pre-birth questions (Term? Multiple? Fluid? Risk factors?)
  - Ask 3 questions after birth (Term? Tone? Breathing or crying?)

- Utilization Strategies
  - Sharing a mental model
  - Think out loud
Anticipate and Plan for Crisis

- Ensure you have the right people (and enough) for the risk factors identified
- Perform a team briefing before the birth
- Assign a leader, roles & responsibilities (who applies pulse ox? Who auscultates?)
- Discuss action plan based on risk factors
  - Acute blood loss? Severe compromise? Start prepping for a UVC, epinephrine and fluid
  - Chest compressions? Start to prepare for emergency vascular access and Epi
- Plan where resuscitation will occur
  - Stay in mom’s room? What if she is sick? Transfer to nursery? When?
- Recognize rapidly what babies may be therapeutic cooling candidates
- Situational Awareness
  - Don’t sleep on the job - Risk assess
- Know the department standards and guidelines
- Have a back up plan for your back up plan
Identify a Team Leader

- Assume the leadership role!
  - (Yes you, the primary nurse)

- Identify the leader BEFORE the birth

- What happens when the provider enters the scenario?

- The leader:
  - Articulates goals, delegates tasks, includes team in assessment and planning, thinks “out loud”, maintains situational awareness, hands over leadership if involved in a procedure
Communicate Effectively

- Are there tools/strategies to promote effective communication?
  - Use names
  - Share information
  - Order medication by name, dose, route
  - When giving instruction – direct the request to a specific person
  - Coordinate compressions (and count out loud)
  - Used closed loop communication
  - Perform debriefs after resuscitation
Communicate Clearly!

- With all members of the team
- If you are asking for help, tell them why and what they can do to help
  - This is what is happening…
  - This is what I need…
  - This is what you can do…
- If you are the help… Announce your arrival!
  - “RT is here!”
Closed Loop Communication

- When possible assign a specific task to a specific person
- If possible make eye contact & use the person’s name

“Val, draw up 3ml Epinephrine to give through the ETT”
“I will draw up 3ml Epi to give through the ETT”
“Here is 3mL Epi for the ETT”
“3mL Epi given at 1800”
Distribute Work Load Optimally

- Avoid the “one woman band” delegate!
- Utilize staff in the area of expertise
  - Change task assignments based on skill set
    - Respiratory Therapists – airway,
    - Nursing Supervisor – recorder
- Predefine roles & responsibilities
- Change task assignments based on skill set
- Don’t allow one person to become overloaded
- Don’t allow the team to become fixated
Allocate Attention Wisely

- Maintain situational awareness
  - Scan and reassess the situation frequently

- Monitor each other’s skill performance
  - Compressions, ETT depth, Epinephrine dose

- Neonatal intubation
  - Time sensitive
  - Avoid fixation errors

- Avoid flitting

- Finish assigned tasks
Use Available Resources

- Know what personnel are available
- Know what additional supplies may be needed
- Allow team members to use their unique skills
- Develop a plan for deliveries outside of L&D (ED, bathroom)
Call for Help Early

- What is the culture - is it safe?
- Anticipate the need for additional help needed based on risk factors.
- Call for help if you’re alone and starting PPV
- Call for help in a timely manner!
- Know how to call for help and the process of getting the right assistance
  - Every hospital system is unique
    - How exactly does the staff call for help?
    - Variations on shifts and weekends
- What language is used to convey urgency
Call for Help Early

- Who responds?
  - Rapid Response Team?
    - What is the SBAR?
    - What is their role?
    - Who is leader?

Gee...she looks pretty good to me...

I wonder why we were called?
Maintain professional behavior

- Use respectful communication
- If correction is required, make a clear, calm, directed statement
- Actively seek and offer assistance
- Support and promote teamwork
- Respect and value your team
The Schedule

- Brief
- Familiarization with mannequins and equipment (all participants for both scenarios)
- Scenario #1
  - ‘5 Minute’ Mini Debrief #1 at bedside
    - (please return supplies so we can reuse for next scenario)
  - Facilitated Debrief (back in this room)
- Break
- Scenario #2
  - Mini Debrief #2
  - Debrief #2
What You Can Expect From Us

- Professionalism
- Clear direction
- Orientation to equipment and how you will get information on the patient(s)
- Challenging scenarios
- No tricks
- A positive learning environment
What We Expect From You

- Professionalism
- Teamwork and communication
- Suspend disbelief
- Act as you would in a real situation
  - Open packages, draw up the Epinephrine, start the IV, program the Magnesium bolus!
- Think out loud, ask questions if something is unclear
- Avoid negativity & perfectionism

All information about scenarios and performances are strictly confidential
Enhance Realism

- Use gloves
- Turn on tanks
- Start IVs
- Listen
- Open meds
Suspend disbelief

There will be simulation artifact
No spectators!
The Wardrobe
Drill Outcomes

- Staff empowered to improve work environment
- Data for Patient Safety and Risk Management

Outcomes from recent simulations:

- Hemorrhage carts implemented
- Implemented emergency epinephrine supply bundle
- Identified warmer without Apgar timer
- Identified warmer without ability to lower siderails
- Notified pharmacy HEPARIN syringes placed in neonatal code cart where flushes are placed
- Recognized oxygen masks in unsafe location in labor room
- Staff determined changes to room layout necessary
Thank You!

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