Disclosures

I have no disclosures

Permission to use Pictures but not to copy
What Will We Learn?

• Brief overview of simulation.
• Options . . .
  – Creating simulations?
  – Evaluating simulations?
  – Testing the effectiveness of simulations?
  – Debriefing?
Definition of Simulation
Gaba 2004

“Simulation is a technique—not a technology—to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner.”
Simulations Can Be

• **Formative**
  – Skill acquisition
  – Critical thinking
  – Competency building

• **Summative**
  – Competency testing
  – Testing the safety of a system

• **Practice and Life Changing**
Knowles Assumptions of Adult Learning Theory

• Adults need to know the reason for learning something.
• Experience (including errors) is the best teacher.
• Adults need to be responsible for their decisions and education and want to be involved in the planning and evaluation of instruction.
• Most interested in subjects with immediate relevancy.
• Learning is problem-centered rather than content oriented.
• Respond better to internal versus external motivation.
It is not about the man behind the curtain or the teacher.

Goals and Objectives
Simulation Assessment Plan

1. What's the overall purpose of the simulation?

1. What are the specific student learning outcomes you hope to accomplish?

3. What is the prerequisite knowledge and skills the students should have before participating in the simulation experience.

4. Briefly design an assessment plan to collect feedback about student learning after the simulation experience.
How often is Simulation used in your Hospital

1. > than 10 times a week
2. > 5 times a week
3. < 3 times a week
How often do you use simulation?

1. 1 time a week
2. 1 time every 2 weeks
3. 1 time a month
4. 4 times a year
What type of Simulation do you use?

1. Static mannequins
2. Low fidelity
3. High fidelity
4. Combination
What area of Simulation

1. Adult
2. Pediatric
3. Neonate
4. OB
5. More than one
6. All of the above
What do you use the simulators for?

1. NRP
2. CPR
3. Skill Labs
4. Mega Codes
5. Assessments
6. All of the above
Do you provide education outside the hospital or simulation lab?
Apprenticeship Model of Education

• Every person and location is dependent!
• Variable (and often insufficient) exposure to rare or infrequent events (low volume high-risk) that are associated with high morbidity/mortality.
• Fewer opportunities during training
• Too much information, too little time
• Hard to create high reliability performers with a random training model.
Why use Simulation?

Every person and location is different

Learners see cues and consequences just like real life

Learners progressively build competence through deliberate practice and feedback

Team training- work and communicate more effectively

Development of protocols and guidelines

Cultural change

Improved outcomes for our patients
Effective Learning

• Providing feedback
• Repetitive practice
• Curriculum integration
• Range of difficulty
• Multiple learning strategies
• Wide variety of clinical conditions
• Controlled environment
• Individualized learning
• Defined learning outcomes and measures
Do you see a difference since you started using Simulation?

1. YES
2. NO
Does management in your hospital support Simulation?

1. YES
2. NO
Have you ever worked in a rural hospital?

1. Yes
2. No
Do you remember the quote about walking a mile is someone’s shoes?

SOOO...Do I remember working in the rural hospital and wring my hands because of the type of delivery that is coming?

YOU BET!!!!!!!
Remember…..babies history starts with MOM

• Slow down, use your time wisely
• Team and family communication important
• Rehearse rare events so you have the skills, equipment, supplies, communication tools, and personnel necessary to handle them well
• This is often an unexpected event
Neonatal Resuscitation Program

- Most newborn babies are Vigorous.
- ~10% need some assistance
- ~1% need major resuscitative measures
- Completion of the program does not imply that an individual has the competence to perform neonatal resuscitation.
Team Members Need Skills From 3 Very Different Domains

- Cognitive
- Technical
- Behavioral
“Train in teams those who are expected to work in teams”

Organizations recommending increased emphasis on teamwork

• Institute of Medicine (IOM) 2000 Report “To Err is Human”
• IOM 2001 Report Crossing the Quality Chasm
• JCAHO, ACGME, AACN
Components of Teamwork
Source: Team STEPPS

1. Leadership
2. Communication
3. Situation monitoring / awareness
4. Mutual support
5. Culture of cross-checks
Cultivating Team Competence

What is it?

• Competence is the combination of skills, knowledge, attitudes, values and abilities that underpin effective individual AND team performance.

• Team members need to learn to lead, and learn to follow, and have the insight to know when each role is called for.
The Golden Hour Defined

• Term “borrowed” from adult trauma care

• Effort to FOCUS on the convergence of complex care practices in the 1st hour of life that have the impact of a lifetime!
CHECKLIST FUNCTION 1 – ROLES
– Assign team members’ roles / responsibilities
– Review history – “what do we know?”
– Don’t forget the recorder
– Team huddle with scenario-specific considerations
– “Sterile” cock-pit mentality
– Structured language and responses

CHECKLIST FUNCTION 2 – EQUIPMENT TEST
• Checklists limit variability
• Avoid memory lapses
Impact of the “Preflight” Checklist

• Check operating room temperature
• Check resuscitation room temperature
  – Remedy BEFORE the baby is born
The locations for education is limited to your imagination
Decide what your goals are
Courage

It is all about having the courage to do something

OK, SO HOW DO I GET HER COURAGE?
WOW!!!

• It is little-- what do we do with this thing.
• First things first
• Delivery room--Jump Box or Crash Cart
• Air way
• Heart rate
• Circulation
Madame du Coudray to Louis XV 1756
New Problem?

• “The course no sooner finished, [these] young surgeons and women, rushing to benefit from a profession they know only superficially. But when difficulties arise they are absolutely unskilled, and until long experience instructs them they are the witness or the cause of many misfortunes, of which the least terrible is the death of the mother or the child and even both.”

• Madame du Coudray to Louis XV 1756
M du Coudray 1756

- Obstetric Machine
Limbs and Things: PROMPT
• Sim Mom
• Noelle
Mama Natalie
Do you remember your last Shoulder Dystocia Delivery

13 pounds 4 ounces
Large for gestational age.
Shoulder Dystocia

- Delivery requiring additional obstetrical maneuvers following failure of gentle downward traction on the fetal head to effect delivery of the shoulders
Management Of Shoulder Dystocia

• Be Prepared:
  – Educate staff on policy
  – Team drills
  – Practice maneuvers with manikin
  – Proper equipment (stepstool)
  – Proper positioning to avoid staff injury
McRobert’s Maneuver

- Hyperflex the thighs & abduct hips
- Flattens lumbar spine Cephalad rotation of symphysis pubis
- Accomplishes delivery in 42 % cases

Gherman, Obstet Gynecol, 1997; 176:656
Suprapubic Pressure

- Assistant using stepstool
- Pushes shoulder below symphysis
- Direct vs. Lateral pressure: Note head position
Gaskin Maneuver

• Patient in all fours position on hands and knees
• Should have no significant motor blockade
• Described by Ida May Gaskin, The Farm Midwifery Center in Tennessee
Umbilical Cord Prolapse

• Be Prepared:
  – Educate staff on policy
  – Team drills
  – Practice maneuvers with manikin
  – Proper equipment
  – Proper positioning to avoid staff injury
Key Behavioral Skills

• Know your environment
• Anticipate and plan
• Assume the leadership role
• Communicate effectively
• Delegate workload optimally
Key Behavioral Skills

- Allocate attention wisely
- Use all available information
- Use all available resources
- Call for help when needed
- Maintain professional behavior
CODE OF CONDUCT

• Program will start on time please be prompt so that you will be able to take advantage of all learning opportunities
• Please turn off all pagers and cell phones unless absolutely necessary (on call)
• Cell phones are not to be used while inside the simulation area and no outside conversations
CODE OF CONDUCT

• All discussions within the Simulation Area will be respectful, constructive while others are speaking.
• The goal of simulation is to understand our strength and weaknesses so that we can improve the care that we provide to our patients.
• Laughing or inappropriate behavior that detracts from learning will not be tolerated.
Simulation

Low-Medium-High Fidelity

- Funding
- Space
- Staff
- Computer vs No Computer
- Hospital base vs Regional education
- Be creative
- Be willing to try something new
- Be willing to learn and participate
- Be willing to try new methods
- Be willing to get that manikin messy
Do you need new equipment?

- Maybe --- Maybe not
- FIRST --- Have objectives
- SECOND --- Have a plan --- Check inventory
- THIRD --- If yes, phase it into the budget
- Dedicate specific manikins for messy/wet work
- Scavenge from others
- Debriefing is key to the methodology: filming the simulation helps—video from a beneficial viewpoint
Lay the foundation for good teamwork

- Orient members to each other
- Orient to supplies
- Orient to simulator – provide hands on before simulation
- Let them play work together
- Tell learners that the facilitator ends the scenario
Should you film simulation and debriefing?

- Video shows all views of scenario
  - Lay out of the room
  - How Team worked together
  - How procedures were performed
  - Communication
- Video is objective
- Video helps learners recall what happened and sort out the sequence of interventions
- Filming and debriefing the debriefer builds skill
Guidelines for debriefers

- Simulation is always like VEGAS – maintain confidentiality
- For every minute of simulation equals 2 minutes of debriefing
- Set a time limit for debrief – do it as soon as possible
- Remember the objectives for the simulation
- Enable self-discovery. This is not feedback or lecturing time
- Silence is acceptable-allow 5-10 seconds after question
- Keep group actively thinking. Pose question to the group, call on someone
- Allow participants to link scenario to real experiences
- Start and stop tape for discussion
- Conclude session with a “take home” point from each participant
Sample debriefing questions

- In ten words or less what was this simulation about.
- What was the first thing you noticed when you entered the room?
- As a second responder what information were you given upon entering the room?
- What made the communication effective or less effective?
- What are the standards for this procedure/event? What helped or prevented achieving the standard?
- What cues were you picking up?
Sample debriefing questions

- How did you make that critical decision?
- What were the pros and cons of your action?
- Who was the leader of the drill at this time?
- Why did the leadership role change at this time in the drill?
- Would you do anything different next time?
Sample Course Agenda

Tailor agenda to meet needs of the learners

- Introduction to the day
- Introduction to simulation & debriefing
- Ground rules (participate, confidentiality)
- Skills review
- Integrated skills station (Mega code)
- Simulation and debriefing (teams of 2-4 for 10 – 15 minutes)
- Consider multidisciplinary teams scheduled by appointment
How will instructors get ready for simulation and debriefing?

- Film and learn from your courses
- Practice and look to improve
- Use tools and notes
- Ask for feedback from the team
- Use your strengths draw from others strengths
Improve your debriefing skills

- Film your debrief and get input.
- Practice and make notes on how to improve on flow of debriefing.
- It’s okay to use notes. Keep objectives and hints in hand.
- Keep on track and on time.
- Use your strengths. Not everyone will be a great debriefer. There’s a role for you.
Simulation is worth the effort

- Students enjoy learning and retain more
- Instructors and students are more engaged in learning together
- Students can encounter new experiences, problem-solve in safety, trouble shoot an error, learn new skills, institute new polices
- Improve on assessment skills, communication, and Team performances
Simulation and Debriefing

- Use of realistic, challenging scenarios from simple to complex based on learning objectives
- Visual, auditory and tactile cues creating “real” rather than “pretend” setting. **WE DO NOT USE THE “P” word**
  - Bloody fluid, vernex, meconium, cyanosis, heart rate,
  - APGAR timer
  - Scrubs/ gown and gloves rather than street clothes
- Actual or simulated clinical setting, if possible (L&D, NICU, ER)
Simulation
↑ Productivity
↑ skill level
↑ quality of outcomes
And
↓ in Hospital Days
Clinical Nurse Specialist

February 9th 2009
Started working with The SimNewB
We have seen 15,000 staff (1/1/2013) 5 babies a week

3,900,000 Pediatric Nurses
6 countries
14 states
A new Pediatric Residents Program

MCJCH NICU
Regional Hospitals 37
19 have no OB Services

Students NNP, MW, RN’s RT, EMT,
CPM’S VRAN Hospitals

Physician Outreach Program
NNP’s

Hospitals outside Our Region
Simulation Education

- Neonatal Resuscitation Program
- STABLE
- Intubation Labs
- Chest tube labs
- MOCK Codes
- CCRN Review Class
- NICU Orientation—both Residents and Nurses
- Assessment and Decision making skills
- Communication Skills
- Building Effective Teams
- Skill Labs-both in house and off site
- X-ray evaluation and treatment
- Emergency Room-(Peds and adult)
- Pediatrics
- Operating Room Staff
- Anastasia
- Simulation Education
- Head Cooling Education
Success is not Final,
Failure is not fatal;
It is the courage to continue that counts.

Winston Churchill
Put a little magic in your simulation and make it real

Which will you treat real
Mary Lee and Isabel

Have baby will travel
Mary Lee Lemley, RN, MSN
Division of Neonatology
Monroe Carell Jr. Children’s Hospital at Vanderbilt

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