Increasing Realism and Fidelity in Simulation

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What is Simulation?

• Simulation is an attempt at replicating reality. In healthcare education, simulation tries to replicate some of the essential aspects of a clinical situation so that the situation may be more readily understood and managed when it occurs in clinical practice.
What is Fidelity?

• Fidelity refers to how closely a simulation imitates reality. Examples of levels of fidelity:
• **Low fidelity simulation**: simulations in this category feel the least real to the learner such as static models, 2 dimensional displays or task trainers.
• **Mid-fidelity simulation**: these simulations are more real. Examples would be the vital sims that mimic patients by having breath sounds, bowel sounds heart sounds and allow students to perform procedures such as IV insertions, Injections, NG tube insertion, tracheostomy suctioning and Foley catheter insertions.
• **High fidelity simulation**: these simulation are the most realistic and maximum interaction of learners in an environment that closely resembles reality.
What is Moulage?

• A French word for “casting or molding” is the art of creating lifelike substances (injuries, wounds or fluids) to assist in providing shock desensitization, realism, and training techniques to simulation.
Why Make it Seem Real?

• Scenarios are designed to work with the physiology and moulage is used to make the students experience more real.

• Because so much of nursing assessment is based on sensory experiences- what is felt, seen, heard and smelled, increased realism provides the missing link to the story.
But This Is NOT Real

- Student’s know it is going to be a patient in a hospital (not real)
- Student’s know the patient (not real) is sick
- Student’s know the patient will experience “something” during the simulation
- Student’s know they are going to “Fix” the patient
- Student’s know we are going to talk about what happened

Where is the surprise?
Can We Learn Lesson’s for the Theater?

• We know the story
• We know where it takes place
• We know the characters
  We know Oz is not a real place
• We know animals can’t really talk
• We know people are not really green
• We know how it ends

• Where is the surprise?
Setting the Stage

“Clinical simulation is not fakery. It is clinical theatrics with full contact audience participation” (Kyle, Murray)
Costumes and Make Up

“The skill of converting observation to words that can transmit information to others is such a vital skill for any Health Care Provider and we MUST Find a way to convey this to students” (Kyle, Murray)
If You Think You Are There... You Are

If you are able to convince your mind you are somewhere, Your body reacts as though you were there.
Smells, Lights and Sounds

If it is night, make it dark

If it is loud in real life, make it loud in simulation

If there is a burn, make it smell like

There has been a fire
Tattoos, Piercings and Facial Hair
The Script—Everyone Has a Role

- **Primary Nurse**
  - Review chart and orders
  - Obtain orders from health care provider
  - Monitor Lab results
  - Communication with family members
  - Performs skills and procedures ordered by health care provider as needed

- **Second Nurse/Assessment Nurse**
  - Head to toe assessment/report to team members any abnormalities
  - Therapeutic communication with patient
  - Assisting members of the team as needed
  - Patient teaching

- **Medication Nurse**
  - Review patient chart, medications and treatments
  - Administer medications and document
  - Maintain patient rights of medication administration
  - Patient education related to medication
  - Evaluation of medication actions related to scenario. Ex: follow up on pain medication administered earlier/documentation

- **Documentation Nurse**
  - Documentation of simulation events
  - Follow SBAR format
  - Assist with orders when needed

- **Family Member**
  - Provide patient history and advocate for the patient
  - Prompt teammates to gather assessment data, patient teaching by using questions that a family member might ask.
The Script—Everyone Has a Role

- **Observer-Safety**
  - Note how team members achieved a safe environment by providing and directing care that protects the patients, family and team members.
  - Provide specific examples of safety concerns related to the objectives of the scenario.
  - Note any safety concerns
- **Observer-Teamwork and Collaboration**
  - Note how participants functioned effectively as team members to provide care to patient
  - Give examples of effective collaboration and areas for improvement.
- **Observer-Patient Centered Care**
  - Note how team members recognize the patient and/or family member as a partner in providing compassionate care
  - Note if the team promotes and supports the emotional, mental and social wellbeing of the patient and family.
  - Give examples
- **Observer-Communication**
  - Note how team members use effective communication to communicate with patient, family and each other.
  - Note if the team directs nursing care of the patient and family that incorporates teaching of prevention and/or early detection of health problems
  - Give examples
- **Observer-Infection Control**
  - Note how team members are using universal precautions
  - Note how team members are adhering to infection prevention standards such as isolation protocols, using sterile technique when appropriate, etc.
  - Give examples
Things to Know

• It is important to protect the integrity of the simulators by always using a barrier.

• Never put untested material directly on the simulators skin.
Barriers

• **Hard barriers** - plastic wrap, wax paper, press and seal wrap, condoms, aluminum foil, tegaderms, clear tape

• **Soft barriers** - petroleum jelly, cold cream, baby oil, “skin” or rubber cement.
Stick on Wounds
Nose Discharge- Clear and Colored

Clear
½ teaspoon baby powder
1 teaspoon lubricating jelly

Colored
½ teaspoon baby powder
1 teaspoon lubricating jelly
1 teaspoon cream of chicken soup
1 teaspoon split pea soup
3 drops baby oil

Mix well, store in a 20 cc syringe and Store in refrigerator indefinitely
Instant Diarrhea

1-2 Tablespoons coco powder
1 Tablespoon oatmeal
1 tablespoon cereal
1 teaspoon rice
½ teaspoon dried corn
1 Fun size Snickers broken into pieces
½ raisons
Empty cup
Instant Emesis

1 Tablespoon oatmeal  
1 Tablespoon cereal  
1 Tablespoon grits  
¼ teaspoon lemonade Kool-Aid  
Sprinkle of lime Kool-Aid  
Empty cup

Optional  
Dehydrated baby food
Make a Bruise

Ben Nye
CK-1
Bruises
Make a Scrape
Make a Burn

Ben Nye CK5
Burns and Blisters
Pre-Purchased Wounds
Putting Together Your Kit
Clean-Up

- Baby wipes
- Alcohol
- Baby Oil
- Cold Cream
- Soap and Water

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References

• Ben Nye @ http://bennye.com/
• Gasper, M. & Dillon, P. (2011) Clinical Simulations for Nursing Education
• Merica, B. (2012) Medical Moulage, How to Make Your Simulations Come Alive