Using Simulation-Based Education to Improve Quality of Care

 14^{th} Annual Touching the Future of Children Conference November 4, 2013





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Welcome



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Introductions

- What are your expectations for this workshop?
- What has been your prior experiences with simulation
- What has been your experiences with instructional design?



http://www.youtube.com/watch?fea ture=player_detailpage&v=Z9C0y VgTcbs



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Objectives

After participating in this workshop, learners will be able to:

- Participants will be able to explain what simulation-based education is.
- Participants will be able to describe areas of clinical practice where simulation can be incorporated.
- Participants will be able to outline a simulationbased education intervention in their own area of expertise.

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Definition

 Simulation is a situation or environment created to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions.

Cooper J, Taqueti V. Qual Saf Health Care 2004





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What about Healthcare Simulation?

- Representation of something real by imitation
- · Technique not a technology
- Goal is transfer of skills to patient care
- Can replace another method of teaching that might not have been effective

.... allows participants to engage in some aspect of medical care that they may **never** before have encountered without risk to actual patients.

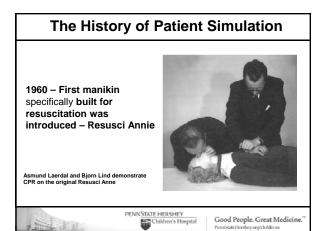
Cheng et al. Simulation in paediatrics: An educational revolution. Paediatr Child Health, 12(6):July/August 2007;465-468.

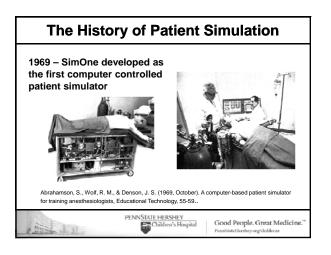




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The History of Patient Simulation First commercial manikin-based simulator was introduced in 1911 – Mrs. Chase PENNSTATE HERSHEY Good People. Great Medicine. PreasStatel kershey orgychildrens





The Patient Simulators of Today



- Palpable pulses
- Reactive pupils, realistic breath and heart sounds
- Place IV/IO, foley, CVL, chest tubes, ETT
- Defibrillation, pacing, CPR
- Reacts to medications, can sense when wrong one or dose is given.

No patient is harmed when mistakes are made!

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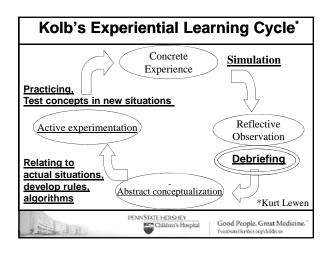
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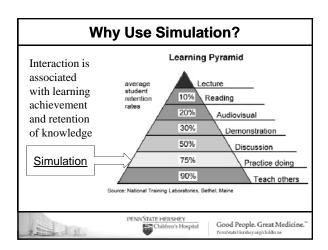
Traditional Training in HealthCare

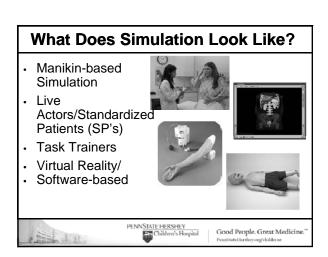
- Time-intensive "apprenticeship" model.
- Practice occurs on patients.
- Life threatening events/complications are rare.
- Focus is primarily on technical skills (vs. non-technical).
- Little emphasis on interdisciplinary training.

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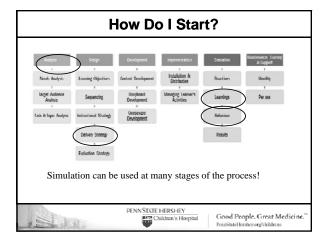
Clinical Simulation Clinical Simulation -Repetitive practice. -Explore different paths. -Experience consequence of errors. = SAFE ENVIRONMENT Feedback Rare Frequent Errors Patient harm, unethical Valuable to learning



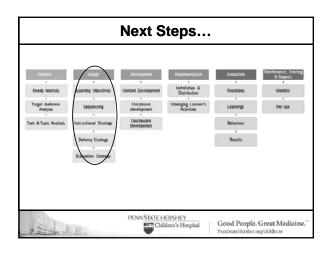


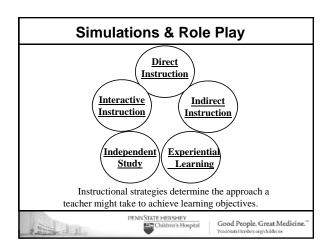






Simulation as Part of the Needs Analysis			
Needs Assessment is the process of identifying and measuring areas for improvement in a target; audience, and determining the methods to achieve improvement General Example: Specific competencies are outlined for a nursing student regarding the placement of an IO Identify the correct location Using blunt force place the IO in the bone Identify that the IO is in place Maintain the IO Targeted Example: My specific learners have > 10 years of experience placing an IO, but now with the easy IO gun they are struggling. They still know all of the above, but floading the IO gune Index the IO gune Targeting the IO gune	Need to find a video example of a situation where the learner keeps making the same mistake, until the teacher correctly identifies the learning gap and approaches it differently. Think major league baseball movie where the pitcher needs glasses		
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Creating the simulated experience takes attention to detail Consider the target audience, the overall goal, and the learning objectives

Simulation as the Teaching Strategy

Let's Break it Down



Break It Down

- What do you think were the objectives of the case?
- Why this simulator and why this setting?
- What were the key things to have in the room?

 How did the debriefing highlight the objectives? Simulation Demo with Baby Hal





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High Stakes- Summative Objectively structured clinical exam (OSCE) Maintenance of Certification (MOC) Pennistrate Hersher Did the students learn what I hoped I taught them? Did the behaviors on the unit change?

An Example...

- Insert a video of a post-test leadership session from Northwestern
- Describe the curriculum
- Describe the objectives
- Show the assessment video

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