Clinical Simulation for Immersive Learning

CAS Interdisciplinary Innovation Forum
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Clinical Simulation

“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.”


Video

http://www.youtube.com/watch?v=9bADCN-EfVA
Immersive Simulation
How hazardous is health care?

![Graph showing the comparison between hazardous, regulated, and ultra-safe activities.]

- **DANGEROUS (>1/1000)**: Health Care, Driving, Mountain Climbing, Bungee Jumping, Chartered Flights, Chemical Manufacturing
- **REGULATED (<1/100K)**: Scheduled Airlines, European Railroads, Nuclear Power
- **ULTRA-SAFE (<1/100K)**

**Note:** both dimensions are logarithmic scales

c/o Dr. Rene Amalberti
SAFETY FIRST
Adult Learning

Learning Pyramid

- Lecture: 10%
- Reading
- Audiovisual: 20%
- Demonstration: 30%
- Discussion: 50%
- Practice doing: 75%
- Teach others: 90%

Source: National Training Laboratories, Bethel, Maine
Deliberate Practice
What’s the Evidence?

“Technology-enhanced simulation training in health professions education is consistently associated with large effects for outcomes of knowledge, skills and behaviors and moderate effects for patient related outcomes.”

Cook et. al. JAMA 7 September 2011 306:9, 978-988
Simulation Sites at UAB

Children’s Hospital Pediatric Simulation Center:
5,123 learners (2011)
4,089 learners (so far in 2012)

Quarterback Tower Patient Safety Medical Simulation Center:
2,044 visits (so far in 2012)

Learning Resource Center Skills & Simulation Lab:
15,046 scheduled visits (2011)
Examples of Interprofessional Simulation

- “Mock” Codes – physicians, nurses, pharmacists, respiratory therapists, chaplains
- Patient assessment and care: Medical and Nursing students
- Management of patients in the PICU - physicians, nurses
More Interprofessional Simulation
Feedback from Learners

- “Simulation is so effective and worthwhile – learning to communicate better with colleagues”  (Mock Codes, July 2012)

- “Where are the nurses? We had them in the Internal Medicine Clerkship.”  (Children’s Hospital May, 2012)

- “I learned the importance of setting up roles and utilizing doctors and nurses and other staff.”  (Mock codes, July 2012)
Faculty Training

- 2012 Summer Simulation Series
  - What is simulation?
  - Active/experiential learning
  - Creating scenarios
  - “De-briefing” with learners

- “Shadowing” experiences

- Formal training programs
Clinical Simulation at UAB: Our Future

- 2011: Task Force
- 2012: Creation of Office of Interprofessional Simulation for Innovative Clinical Practice
- 2013-2015: Creation of a Center for Clinical Simulation
  - Serving the university and health system/hospital
  - Providing services to include instructional design for creation of learning experiences, technical support, implementation support (debriefing, “confederates”).
For assistance please contact us:

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