Simulation to Improve Patient-Centered Communication: Navigating Difficult Conversations and Teaching Cultural Competence

Johns Hopkins International Partners Forum

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Presentation Overview

- Define simulation and highlight its use as a training tool for communication skills in undergraduate and graduate medical education

- Demonstrate examples of using simulation to improve physician-patient relationships and promote patient-centric experiences in the areas of end-of-life care, breaking bad news, medical error disclosure, and cross-cultural encounters
Johns Hopkins Medicine Simulation Center (JHMSC)  
Baltimore, Maryland, USA
The 10,000 square-foot simulation center was designed to serve the needs of:

1) Johns Hopkins University School of Medicine
2) Johns Hopkins Hospital residency and fellowship programs
3) Training and patient safety initiatives for the JHH staff and faculty
4) Increasing engagement in international programs and partnerships
JHMSC Simulation Program

• Employs 160 standardized (simulated) patient actors (SPs)
• Has 23 human patient simulators (i.e. “mannequins”)
• Has 80 partial task trainers
• Has 4 virtual-reality simulators
JHMSC Simulation Program

The JHMSC supports 165 programs that serve 85 distinct learner groups.

In 2015, provided over 138,000 learner contact hours serving over 3,000 participants.
Simulation in graduate medical education at JHMSC

9 of 17 JHH residency programs and 14 JHH fellowship programs incorporate simulation center resources into their training.

There are 17 nursing groups and 12 different JHH staff groups that utilize JHMSC resources.
Use of Simulation in Medicine - Defining the Problem

Institute of Medicine (IOM) - 1999

“To Err is Human: Building a Safer Health System”

Estimated that medical error is 5th leading cause of death in U.S., often caused by communication breakdown

Specific recommendation by IOM to use simulation to identify deficiencies
Why is Simulation a valuable tool?

– Deliberate practice: Opportunity to repeat skills to mastery
– Specific learning opportunities → guaranteed
– Learning can be done at convenient times
– Performance can be observed/ recorded with personalized feedback given
– Opportunity to observe and practice both technical and non-technical skills
Types of Simulation

- Partial task trainers
- Computer/ screen based simulators
- Virtual Reality
- Integrated or whole body mannequins
- Standardized Patients
- Hybrid simulation
Sim-Man

- Touch pads for pulse checks
- Compressible sternum
- Intubatable trachea
- Arm for IV placement
- Monitor display
- Simulator Computer

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Sim-Man

Computer Monitor display

Arm for IV placement
Standardized Patients (SP)
Hybrid Simulation- combining SP and task trainer to teach procedural skills and communication
Inter-disciplinary Team Training

Anesthesia and Surgical teams practice together

Actual clinical equipment currently in use: defibrillator, anesthesia cart, etc...

Testing out new models

Anesthesia and Surgical teams practice together
Driving Forces of Simulation Based Education

- Society and patient expectations of competence
- Patient safety movement - awareness of adverse event management
- Changes in healthcare delivery - increasing acuity, breadth of settings
- Criticism of traditional methodologies - such as apprenticeship model
- New technology - brings new approaches
- Objective performance measures - paradigm shift to outcomes based education
Simulation is a rigorous method to assess clinical competence.

Miller’s Prism of Clinical Competence
(aka Miller’s Pyramid)

- **KNOWS**: Fact Gathering (e.g., traditional true/false MCQs)
- **KNOWS HOW**: Interpretation/Application (e.g., through case presentations, essays, extended matching type MCQs)
- **SHOWS**: Demonstration of Learning (e.g., via simulations, OSCEs)
- **DOES**: Performance Integrated Into Practice (e.g., through direct observation, workplace-based assessment)

Professional Authenticity

It is only in the “does” triangle that the doctor truly performs.
Using Standardized Patients to Improve Cultural Competence

• First year medical students
• Clinical Foundations in Medicine course
• Module on cross-cultural communication and cultural beliefs impacting patient care
• Use of interpreter for medical encounters with patients of different linguistic background
Simulation to Practice Difficult Conversations- End of Life Care

- Pediatric ICU fellows in 2nd year of training
- Use of standardized “parent” actor
- Discussions regarding brain death determination and withdrawal of life sustaining treatment
- Discussions regarding organ donation after cardiac death
- Done in collaboration with Maryland State “Living Legacy”- Organ Procurement Organization
Simulation to Enhance Communication in Difficult Patient Encounters

- Pediatric residents in Year 2 of training
- “Death and Bereavement” annual seminar
- Use of SPs to teach framework for difficult conversations and breaking bad news
- Residents learn strategies to help families in their grieving after their child has died and learn to partner with other disciplines (social work, nursing, chaplaincy/ spiritual support etc.)
Simulation to Teach Error Disclosure

• Year 4 medical students during “TRIPLE” course (transition to internship)
• Undergo high fidelity simulation to “treat” a patient with anaphylaxis secondary to a medical error in antibiotic administration
• Immediately following simulation, student must disclose the error to patient’s “wife” (standardized patient)
• Student must manage SP’s emotions and anger
Communication Training for International Partnerships

• On site training at Tawam Hospital in UAE June 2016
• Goal to establish hospital-wide guidelines and department-specific protocols for breaking bad news
• Establishing in-house SP program in partnership with UAEU College of Medicine and Health Sciences
• Attempts to contextualize to Arabic culture
Incorporating Communication and Teamwork Principles into Simulation

• Benefit of simulation is ability to teach and improve communication amongst team members
• Elements of teamwork and communication can be incorporated into design of each simulation scenario
• These elements can be focus of team learning objectives
Communication and Teamwork: Crisis Resource Management Principles

- Closed Loop Communication - readback
- Followership and Leadership
- Situational Awareness - understanding of environment
- Critical Language - patient safety prioritization when speaking to a superior/hierarchy
- Assertive Communication - value of input from all team members
Outcomes Associated with Simulation Based Medical Education

• Improved participant technical proficiency
• Reinforcement of desirable individual and team behaviors
• Identification of active and latent systems issues
• Catalyst for change in clinical care systems
• Identification of operational challenges in specific care environments
• Novice learners can reflect on self-assessed competence
Summary Points

• Simulation can be used to teach knowledge, skills and attitudes at all levels and improve communication.

• Simulation can identify cognitive barriers and performance gaps.

• Simulation can be used to remediate deficiencies for both novice and experienced providers.

• Simulation can be used to improve quality of patient care and patient safety.

• Long term goals: increase exposure to rare events, increase team preparedness, reduce medical errors, improve healthcare delivery → improve the patient experience.
Thank you!