SESSION PRESENTERS

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PRACTICING IN HEALTHCARE IS COMPLEX

- Health and Medicine Division (IOM)
  - To Err is Human
    - 1999 up to 98,000 people die each year due to medical errors
    - This number is now 440,000 deaths per year
  - Improving Diagnosis in Healthcare
    - Firm recommendation to increase collaboration among medical professionals to decrease diagnostic error
  - Health Professions Education: A Bridge to Quality
    - Recognizes the impact of interprofessional teams in education
  - Medical Errors are the 3rd leading cause of death
  - Growing body of literature focusing on teamwork and communication

COMMUNICATION AND TEAMWORK

- High quality healthcare is not delivered in silos.
  - Victoria Brazil – tribalism
  - Dress, language, tribal pride

- Professionals with varying areas of expertise must all work together to provide care.

- Ineffective or insufficient communication among team members is a significant contributing factor to adverse events.

IMPORTANCE OF COMMUNICATION

- Joint Commission data continues to demonstrate the importance of communication in patient safety
  - 1995 - 2005: Ineffective communication identified as root cause for nearly 66 % of all reported sentinel events*
  - 2010 - 2013: Ineffective communication among top 3 root causes of sentinel events reported**
  - 80% of serious medical errors are due to communication

** (JC Sentinel Event Data (Root Causes by Event Type) 2004-2012)
WHAT DOES THIS MEAN FOR ME AS AN EDUCATOR?

- What is your responsibility now that you have this information?
- How can you make an impact?

WHY SIMULATION?

The Cone of Learning

Interprofessional education is when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes.

World Health Organization, 2010

Simulation allows persons to experience a representation of a real event for the purpose of practicing, learning, evaluating, testing or gaining understanding of systems or human actions.

Eppich, 2006

IPE & SIMULATION

SIMULATION MODALITIES

- Mannequin (or manikin)
  - Human-like simulator
- Task Trainer
  - A model, part of a mannequin, or other jigs used to reproduce components of a task
  - Practice a skill
  - i.e. Procedural training
BASIC SIMULATION TERMINOLOGY (CONT’D)

- **Fidelity**
  - The degree to which a simulated experience approaches reality (↑fidelity, ↑realism)
  - **Low**: non-computerized mannequins or task trainers
  - **Mid**: standardized patients, computer programs or video games
  - **High**: computerized mannequins

SIMULATION MODALITIES

- In the illustrious words of Dr. Gaba, simulation is “a technique, not a technology”
- There are multiple types (or ways) to carry out simulations
  - **Low-Fidelity**
    - Paper or computer-based
    - Pros: Less expensive to implement and easy to transport
    - Cons: May feel the least real for learners
  - **High-Fidelity**
    - Usually dependent on use of computerized mannequin
    - Pros: Increased level of realism for learners
    - Cons: Increased costs, sophistication

SIMULATION MODALITIES (CONT’D)

- **Standardized Patients**
  - May be used as part of a high-fidelity sim
  - Pros: Learners engage in mock conversations, adds realism
  - Cons: Increased costs, screening of participants

SIMULATION MODALITIES (CONT’D)

- **Desktop (or virtual) simulations**
  - Run on a desktop computer
  - Pros: Allows for multiple learners to interact with each other and other members of the healthcare team
  - Cons: Accessibility to adequate equipment

IN SIM VS. IN SITU

IMMERSIVE PHASES OF SIMULATION

- Prebrief
- Scenario
- Debrief
ASSESSMENT

- **Formative**
  - Observation of learner’s actions
  - Observations help the educator determine the degree to which the learner’s educational needs are being met by the simulation activity

- **Summative**
  - Measurement of knowledge, skills or abilities
  - Usually in a high-stakes evaluation
  - Use of data to determine learner’s competency level

TECHNICAL SKILLS

TEAMWORK

COMMUNICATION

PUTTING THE LAB IN COLLABORATION

- **Soft skills**
- **Communication**
- **Roles** – No one knows what we do. We shouldn’t assume they do. This is a great opportunity for exposure.
- **Body of Knowledge**
- **Recommendations... Can we do it? OF COURSE WE CAN!**

INTERPROFESSIONAL VS. INTERDISCIPLINARY

- **Interprofessional** – 2 or more health care professions.
- **Interdisciplinary** – 2 or more individuals of the same health care profession but different specialties (or “disciplines”).
  - A surgeon and an internist
  - A Blood bank MLS and a hematology MLS.
  - A critical care nurse and a oncology nurse.

IPEC – INTERPROFESSIONAL EDUCATION COLLABORATIVE

- **4 Competencies**
  - Values and Ethics
  - Roles/Responsibilities
  - Interprofessional Communication
  - Teams and Teamwork

TEAMSTEPPS®

- **Team Strategies and Tools to Enhance Performance and Patient Safety**
  - **5 key principles:**
    - Team Structure
    - Communication
    - Leadership
    - Situation Monitoring
    - Mutual Support

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TeamSTEPPS® Key Principles

<table>
<thead>
<tr>
<th>Team Structure</th>
<th>Identification of the components of a multi-team system that must work together effectively to ensure patient safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Ability to maximize the activities of team members by ensuring that team actions are understood, changes in information are shared, and team members have the necessary resources</td>
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<tr>
<td>Situation Monitoring</td>
<td>Process of actively scanning and assessing situational elements to gain information or understanding, or to maintain awareness to support team functioning</td>
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<tr>
<td>Mutual Support</td>
<td>Ability to anticipate and support team members’ needs through accurate knowledge about their responsibilities and workload</td>
</tr>
<tr>
<td>Communication</td>
<td>Structured process by which information is clearly and accurately exchanged among team members</td>
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COMMUNICATION TOOLS

- **TeamSTEPPS® Communication tools**
  - **SBAR or iSBARR**
    - Identity, situation, background, assessment, recommendation, readback
  - **CUS**
    - Concerned, Uncomfortable, Safety Issue
  - **Huddles**
  - **Closed loop communication**
    - Call outs
    - Check backs

What other healthcare students are saying about CLS

- I learned that the clinical laboratory scientist (CLS) is doing a lot of things for me as an RT like behind the scenes that I never knew they did! — RT student
- I learned the training and function of the 'behind the scenes' professions such as lab technicians and tech students, CLS and other roles. — student (profession unknown)
- I will apply what I learned about CLS and how important the information they give is to the health of our patients. — Nursing student

KUMC EXAMPLES – FIPC PROGRAM

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>LEARN</th>
<th>APPLY</th>
<th>DEMONSTRATE</th>
<th>IMPLEMENT</th>
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<tr>
<td>LEVEL 1</td>
<td>foundations of interprofessional collaboration</td>
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<td>LEVEL 2</td>
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<td>LEVEL 3</td>
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<td>GOAL</td>
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What CLS students are saying about IPE

- “The better the different professions communicate and the more they are connected has a direct affect patient care.” — CLS student
- “I was able to realize the importance of the clinical lab and the different professions when it comes to looking at a patient’s case study.” — CLS student
- “It’s quite amazing how greatly each and every profession overlaps but people only focus on the differences.” — CLS student

CODE BLUE TRAINING SIMULATIONS

Here a CLS student consults with the healthcare team on what tests to order for the aim patient during a code blue training exercise.
Fall 2017 Simulation IPE Event
This event launch required the support of SOM, SON, and SHP faculty in partnership with the Zamierowski Institute for Experiential Learning (ZIEL) education and simulation delivery team.

Purpose of Simulation Event
To integrate CLS program students into a longitudinal simulation curriculum structured to practice interprofessional collaboration in the management of patient cases requiring urgent and/or emergent patient care.

Guidance for Best Practices
INACSL Standards of Best Practice: Simulation-Enhanced Interprofessional Education (Sim-IPE)
- Provides a collaborative approach for development of interprofessional practice competencies
- Mastery of interprofessional communication
- “Knowledge sharing”
- CLSI Standard for Antimicrobial Susceptibility Testing
  - Collection of blood and/or urine cultures prior to the start of antibiotic therapy

Event Schedule
- Welcome/Introductions
- Workshop: Care for Patients with Urgent and Emergent Conditions
- Pre-brief for Patient Cases
  - Sepsis Overview
- Two Patient Cases and Debrief
  - Patient #1: Cellulitis
  - Patient #2: UTI
- Post Event Survey

CLS Case STEM: ISBARR
- Deliver laboratory results using an effective communication tool such as ISBARR

| ISBARR Communication Report to a Provider |
|-----------------|-----------------|
| I | Identify |
| S | Situation |
| B | Background |
| A | Assessment |
| R | Recommendation |
| R | Read-Back or Recap |

ISBARR Workshop for CLS Students
- Identify = Identify yourself, your title, and your team?
- Situation = I am calling about Patrick Smith in room 4210. The problem I am calling about is related to a critical lactic acid result of 4.5 mmol/L. I believe this is an emergent situation.
- Background = Are you familiar with the patient?
- Assessment = The patient had MRSA isolated from his wound culture. I am concerned about this patient.
- Recommendation = The antimicrobial susceptibility test (AST) shows that the organism is sensitive to vancomycin.
- Read-back or Recap = Please repeat back the critical lab value to me for clarity.
The presence of CLS learners added to the “realism” of the Sim-IPE event

Opportunities for longitudinal studies with participation from CLS learners

The practice of interprofessional communication will prepare interdisciplinary learners for potential interactions in the clinical environment

OUTCOMES OF SIMULATION EVENT

Location
• Full ICU in Quarterback Tower, Volker Hall, Jefferson Tower Procedural Center, LRC/SON, Pediatric Sim Center
• Does not need to be in a simulation facility

Equipment
• Discordant curricula

I WANT TO START IPE AND SIMULATION, BUT WHAT ABOUT.....

Observe IP simulations
Ask questions
Build partnerships
Reflect

HOW UAB CLS GOT INVOLVED

Transfusion Medicine Rounds
Coordinated with Physician Assistants and Nurses
Students given a case study
• Serological review and recommendations
• Clinical review and recommendations

Start Small - Classroom IP Simulation

Big picture, non-technical language with provider

DIVE IN - ICU SIMULATION

Perform in former ICU
• 6 patients - 4 manikins and 2 SPs
• Students from 7 health professions
• CLS, NMT, RT, RN, MD, PA, PT
• 2 labs, stat lab on location and the student lab
• 45 min sim, 3 levels of debriefing in 1 hour
• Months of planning, strong institutional support

WHAT HAPPENED NEXT...

CLS was ASKED to participate in an IP simulation
CLS was the hot commodity that others wanted
MOCK RESUSCITATION IP SIMULATIONS

- Converted classrooms for sim
- Coordinated with Nursing, Respiratory Therapy, and PA students
- Two patient cases run simultaneously
  - 15 min sim, 30 min debriefing
  - MVA, massive transfusion
  - Septic shock
- Face to face and phone conversations

FIRST SEMESTER BSN/CLS SIM

- 20 minute simulation, 30 minute debriefing
- Focuses on specimen acceptability criteria – BSN students delivery specimens to the laboratory and CLS students receive them while the BSN students wait
  - Name, MR, initials, date, time
  - Order of draw
  - Correct tube for test ordered
- Laboratory set up includes the basic tests the students have learned to use
  - UA
  - Gram stain
  - Rapid tests
- Face to face and phone conversations

SAFE CONTAINER

Simulation is like Vegas: What happens here, stays here.

BASIC ASSUMPTION

We believe that everyone participating today is intelligent, capable, cares about doing their best, is a valuable part of the healthcare team and wants to learn how to provide the best quality and safest patient care possible.

YOUR TURN!

- SBAR Simulation
  - Demonstrating a low risk simulation with a “Facilitator”
  - Pair up with the person next to you
  - Take a few minutes to read the next slide and form an ISBARR to your partner.
  - Allow ~5 minutes to practice with partner
  - Ask for a volunteer or 2 to share theirs
  - De-brief ~ 5 minutes – just an example doesn’t need to go into every possible debrief opportunity here.

ISBAR

- Identification
  - Your name and team.
- Situation
  - What situation are you calling about?
- Background
  - What is the clinical background?
- Assessment
  - What do you think the complication is?
- Recommendation
  - What do you recommend in order to move forward?
SHould these 2 slides - the safe container and basic assumption be closer to the actual "SBAR Sim" I got a little confused in the transition to UAB.

So I moved them behind the UAB discussion and right before the set up for practice.

Renee Hodgkins, 1/25/2018
HOW DO YOU GET INVOLVED?

Moving Forward

- Health and Medicine Division of The Academies recommends
  - Early use of interprofessional education
  - Sustained use of interprofessional education throughout curriculum
  - Measuring impact of IPE on patient outcomes
- Seek opportunities for IPE and IPS
- Join regional and national simulation organizations
- Assess impact of simulation on practice

Simulation Resources

- Society for Simulation in Healthcare
  - Website: www.ssih.org
- The International Nursing Association for Clinical Simulation and Learning (INACSL)
  - Website: www.inacsl.org
  - INACSL Standards of Best Practice: Simulation-Enhanced Interprofessional Education (Sim-IPE)
- National Council for State Boards of Nursing
- NCSBN Simulation Faculty Preparation Checklist
- Patient safety and family engagement – Sue Sheridan video
  - https://www.youtube.com/watch?v=Hgug-Shp0s
- Center for Interprofessional Practice Education and Research (CIPER)
  - http://www.kumc.edu/center-for-interprofessional-practice-education-and-research/students/foundational-program-level-1.html
  - http://www.kumc.edu/center-for-interprofessional-practice-education-and-research/students/foundational-program-level-2.html
  - http://www.kumc.edu/center-for-interprofessional-practice-education-and-research/students/foundational-program-level-3.html
- Zamierowski Institute for Experiential Learning (ZIEL)
  - http://www.kumc.edu/ziel.html
- Health Education Building (HEB)
  - http://www.kumc.edu/heb.html

UAB Simulation Resources

- Office of Interprofessional Simulation for Innovative Clinical Practice
  - www.uab.edu/simulation
- Healthcare Simulation Master’s Program
  - www.uab.edu/healthcaresimulation

In Summary, We

- Defined interprofessional simulation
- Discussed communication strategies, call outs, check backs, huddles, and CUS
- Determined how simulation could be used to practice interprofessional communication and teamwork
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