September 3, 2016
Texas Ballroom A
1:30-1:55 pm

Effects of Interprofessional Pediatric End-of-Life Simulation
Jacqueline Stout-Aguilar, PhD, RN, Texas A & M University Health Science Center
The Effects of Interprofessional Pediatric End-of-Life Simulation on Communication and Role Understanding in Health Professions Students: Medical Perspective

Conflict of Interest

• Jacqueline Stout, PhD, RN and Alison Pittman, MSN, RN, CPN, College of Nursing, Regina Bentley, EdD, RN, CNE and Jerry Livingston, PhD, RN, College of Medicine, Bree Watzak Pharm. D. College of Pharmacy.

• No authors have any conflict of interest to declare.

Learning Objectives

• Describe the creation and conduction of a pediatric end-of-life simulation; employing technology to advance IPE

• Describe the TeamSTEPPS tools for evaluation of effective IPE and collaborative practice
Background

• **Accreditation**: Liaison Committee on Medical Education (LCME)

• **Standard 7.9 Interprofessional Collaborative Skills**
  - prepares medical students to function collaboratively on health care teams that include health professionals from other disciplines as they provide coordinated services to patients.
  - Simulation can be used to meet this standard

Background

• Simulation allows healthcare professionals to work and learn side by side as they do in actual patient-care situations.

• Previous studies have confirmed the effectiveness of high-fidelity simulation in improving nursing students’ and medical students’ knowledge and communication skills (Alinier et al., 2006).

Background

• Simulation has been deemed as an effective strategy for improving healthcare students’ knowledge and communication. Although noticeable increases in interprofessional approaches to medicine have been documented, most studies demonstrate these effects in isolation (Tofil et al., 2014).
**Purpose**

To analyze the impact of two interprofessional pediatric end-of-life simulations on medical students, nursing students, pharmacy students, and public health students.

**Specific Aims**

- **Aim 1**: Analyze the effects of an interprofessional pediatric end-of-life simulation on nursing, medical, pharmacy, and public health student's perception of roles and responsibilities of health care professionals.

- **Aim 2**: Analyze the effects of an interprofessional pediatric end-of-life simulation on interprofessional communication amongst nursing, medical, pharmacy, and public health students.

**Methods**

- Quasi experimental design
- Students were surveyed prior to the interprofessional pediatric end-of-life simulations
- The students participated in two separate simulations that included a prebrief and debrief for each simulation.
- Faculty completed an observation tool following each simulation.
High Fidelity Simulations

Prebrief and Debrief

Evaluation

- TeamSTEPPS® 2.0 Teamwork Perceptions Questionnaire (T-TPQ).
- TeamSTEPPS® 2.0 Teamwork Attitudes Questionnaire (T-TAQ).
- The TeamSTEPPS® 2.0 Team Performance Observation Tool.
Evaluation

TeamSTEPPS®

TeamSTEPPS Teamwork Perceptions Questionnaire (T-TPQ)
- Level II Learning and Level III Behavior
- Found in Tab F
- 20-item self-report tool
- Respondents rate their agreement with items on a 5-point Likert scale
- Measures staff perceptions of:
  - Team Structure
  - Leadership
  - Situation Monitoring
  - Mutual Support
  - Communication

TeamSTEPPS Materials and Tools

Evaluation

TeamSTEPPS®

TeamSTEPPS Teamwork Attitudes Questionnaire (T-TAQ)
- Level II Learning
- Found in Tab F
- 30-item self-report tool
- Respondents rate their agreement with items on a 5-point Likert scale
- Measures attitudes toward:
  - Team Structure
  - Leadership
  - Situation Monitoring
  - Mutual Support
  - Communication

TeamSTEPPS Materials and Tools

Evaluation

TeamSTEPPS®

Team Performance Observation Tool
- Level II Learning and Level III Behavior
- Found in Tab F
- Tool for observing team performance
  - Site assessment
  - Measure training effectiveness
  - Observers should practice using the tool
  - Can be adapted to a particular unit

TeamSTEPPS Materials and Tools
### Results

- **N= 41** (Nursing=15, Medicine=5, Pharmacy=9, and Public Health=1).
- TeamSTEPPS T-TAQ analysis indicated a significant difference in the mean pre and post scores (p=0.015).
- TeamSTEPPS T-TPQ analysis indicated a significant difference in the mean pre and post scores (p=0.028).
- TeamSTEPPS Team Performance Observation Tool indicated a statistically significant increase in observation scores between SIM 1 and SIM 2 (p<0.001, DF=18, R=0.8).

### Challenges (Medicine perspective)

- Currently we have to ask for volunteers to participate. It is not a part of the curriculum.
- Lack of Faculty Development in Interprofessional Education.
- Faculty are part-time clinical faculty whose time is very limited to spend with briefing and debriefing.

### Unanticipated outcomes

- TeamSTEPPS Fundamental training implemented for all M1 students
- Ready formed teams at Disaster Day
- Student driven IPE momentum
- Increased flexibility in excused absences for IPE efforts and include more M1-M4 students
Conclusions

- Interprofessional pediatric end-of-life simulations were significantly related to an increase in faculty observation scores, T-TAQ pre/post scores, and T-TPQ pre/post scores which leads us to conclude that:
  - the improvement in attitudes toward interprofessional teamwork and role clarity will transition into practice.
  - students will have a better understanding of the importance of collaboration in order to assure quality patient care.