Peer Teaching During an Interprofessional Simulation Experience

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Learning Objectives

- Participants will recognize the positive influence a peer led interprofessional simulation experience can have on student attitudes toward interprofessional collaboration.

- Participants will understand the importance of faculty guidance to optimize peer teaching in a simulation environment.

- Participants will appreciate the impact of assigning students to authentic roles during experiential learning.
Background

• There is consensus that simulation should be utilized with interprofessional education. 1-6
  – improved teamwork
  – increased communication
  – increased collaboration
  – increased student self-efficacy

• Interprofessional peer teaching 7-10
  – effective for increasing communication
  – increased understanding of other professions’ roles
The purpose of this study was to investigate the effects of combining interprofessional simulation and peer teaching on students’ attitudes, values, and beliefs regarding interprofessional collaboration.
Research Design

- IRB approval
- Pre-test / post-test design
- Performance Assessment Communication and Teamwork Tool (PACT) delivered using Qualtrics before and after the simulation experience (70% response rate).\textsuperscript{11,12}
- After reverse coding negatively worded statements, the sum of scores for each content area of the PACT were analyzed using mixed model ANOVAs.
- A p value $\leq 0.05$ was considered significant.
With faculty guidance and assistance: Nursing students (n=51) developed, implemented, and participated in 4 simulation scenarios designed to replicate an acute-care setting.

Nursing students were also responsible for equipment management, pre-briefing, running the simulation scenarios, and de-briefing.

Faculty led the final debriefing session.
Equipment Scenario

- Patient who is critically ill
- Patient with decreased level of arousal
- Patient with limited mobility
This hands-on learning station included examples of equipment used in acute care settings. Students examined the equipment and discuss ways to maximize patient safety during care.
The OT and PT students will:

• Identify and manipulate equipment used in acute care settings.
• Describe the purpose of each piece of equipment.
• Discuss ways to maximize patient safety in the acute care setting.

The Nursing student will:

• Facilitate identification and manipulation of equipment.
• Describe the purpose and proper use of equipment.
• Discuss ways to maximize patient safety in the acute care setting.
During the next 3 stations PT (n=53) and OT (n=48) students worked together to co-treat the patients while consulting with the nursing student role-playing the staff nurse.

Simulation Mannequins were used for stations 1 & 3.

A nursing student played the role of a patient in the 2nd station.
Assisting the Patient with Limited Mobility

• This station included a scenario in which the OT & PT students assisted a patient with severe left-sided weakness from a stroke attempt dressing, ambulate a short distance to a sink, and perform grooming activities. The patient had an indwelling urinary catheter and a continuous IV infusion.
• A Nursing student played the role of the patient.
The PT student will:

- Assist the acutely ill patient to a bedside chair.
- Assist the acutely ill patient to ambulate a short distance.
- Maintain patient safety and equipment integrity at all times.

The OT student will:

- Assist the acutely ill patient in dressing while sitting (chair or edge of bed).
- Assist the acutely ill patient in grooming while standing at the sink.
- Maintain patient safety and equipment integrity at all times.

The Nursing student will:

- Facilitate the required mobility activities of an acutely ill patient.
- Maintain patient safety and equipment integrity at all times.
Patient with limited mobility
Maintaining Mobility in the Patient with a Decreased Level of Consciousness

- This station included a scenario in which the OT & PT students performed interventions on a patient with TBI (RANCHO III). The goal was to have the patient sit on the side of the bed, transfer to a chair, and perform basic ADLS. The patient was receiving supplemental oxygen, continuous enteral feedings, and continuous IV fluids. The patient also had an indwelling urinary catheter and drainage tubes.
Pt with decreased LOC: Objectives

The PT student will:

• Perform appropriate mobility exercises for an acutely ill patient.
• Maintain patient safety and equipment integrity at all times.

The OT student will:

• Attempt to engage patient in basic ADL tasks.
• Provide coma stimulation to multiple senses.
• Maintain patient safety and equipment integrity at all times.

The Nursing student will:

• Facilitate the required mobility activities of an unconscious, acutely ill patient.
• Maintain patient safety and equipment integrity at all times.
Patient with decreased LOC
Maintaining Mobility in the Patient who is Critically Ill

- This station included a scenario in which the OT & PT students performed interventions on a semiconscious, critically ill patient with acute respiratory failure (ARF). The patient was hemodynamically stable and was receiving mechanical ventilation, intermittent gastric suctioning, arterial pressure monitoring, and continuous IV fluids via a central venous line. The patient also has an indwelling urinary catheter, a chest tube, and wound dressings.
The PT student will:
- Perform appropriate mobility exercises
- Perform appropriate secondary prevention interventions.
- Maintain patient safety and equipment integrity at all times.

The OT student will:
- Perform functional mobility through appropriate range of motion
- Address secondary prevention interventions as appropriate
- Maintain patient safety and equipment integrity at all times.

The Nursing student will:
- Facilitate the required mobility activities of an unconscious, critically ill patient.
- Maintain patient safety and equipment integrity at all times.
Patient who is critically ill
All students, regardless of profession, demonstrated a statistically significant increase from pre-test to post-test scores.

Ceiling effect for the content areas that did not demonstrate a significant change
- mean of 4.38 for all questions on a 1-5 scale

<table>
<thead>
<tr>
<th>PACT Content Area</th>
<th>p value</th>
</tr>
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<tbody>
<tr>
<td>Familiarity working and training in teams</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Satisfaction with IP training</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Learning and Performance</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Skills</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mutual Support</td>
<td>&lt;0.017</td>
</tr>
</tbody>
</table>
PACT mean pre and post-test scores for skill and mutual support

- **Skill**
  - Pre: 30, 31, 32, 33, 34
  - Post: 31, 32, 33, 34, 35

- **Mutual Support**
  - Nursing
  - OT
  - PT
  - Combined
  - Pre: 25, 25.5, 26, 26.5, 27
  - Post: 25.5, 26, 26.5, 27, 27.5
Four main themes emerged:

1. The need for teamwork and collaboration for effective patient care
2. The importance of communication to develop a plan of care
3. Increased understanding of the roles of other professions
4. The importance of respect and trust in interprofessional teams.
Comparison of Themes with IPEC Model

Teamwork and Collaboration

Communication

Respect and Trust

Roles of other professions

Community and Population Oriented

Interprofessional Teamwork and Team-Based Practice

Interprofessional Communication Practices

Values/Ethics for Interprofessional Practice

Roles and Responsibilities for Collaborative Practice

Patient and Family Centered

The Learning Continuum pre-licensure through practice trajectory

(IPEC, 2016)
Discussion

• Importance of faculty involvement and planning

• Fidelity of the experience is key

• Importance of faculty oversight during debriefing

• Anecdotal changes observed in students as stations progressed
Discussion

• Nursing students were in a Leadership and Management course.
• The role nursing students played during the experience was consistent with the course objectives.
• Nursing students frequently stated they did not feel comfortable "teaching" PT and OT students.
• Peer teaching is not the same as classroom or clinical instruction, and we plan to include this differentiation in the future.
The experience had similar effects on students’ perceptions of IPE regardless of whether they participated in the peer-teaching role and/or the simulation participant role.

Combining IP simulation and peer teaching was an effective way to improve student attitudes and beliefs regarding interprofessional collaboration.

This experiential learning method increased student understanding of other professions roles in an acute-care environment.
While the IP simulation experience is intended to help bridge the gap between education and practice we have no longitudinal evidence to see if there is an effect.

- Assessment of Behavior changes
  - Sociogram
- What is the optimal “dose” of IP simulation experiences
  - One time event
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uca.edu

2. Scherer YK, Myers J, O'Connor TD, Haskins M. Interprofessional Simulation to Foster Collaboration between Nursing and Medical Students. Clinical Simulation In Nursing. 9(11):e497-e505.


