PREPARING NURSING STUDENTS FOR INTERPROFESSIONAL COLLABORATION THROUGH HIGH-FIDELITY SIMULATION

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DISCLOSURES

Alison H. Davis & Heather G. Abadie (speakers) report no conflict of interest

- Louisiana State University Health Sciences Center New Orleans (LSUHSC-NO) School of Nursing

Tina P. Gunaldo and Helena F. Midkiff (co-authors) report no conflict of interest

- LSUHSC-NO Center for Interprofessional Education and Collaborative Practice and LSUHSC-NO Respiratory Therapy Program

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LEARNING OBJECTIVES

At the end of this presentation, learners will:

1. improve understanding of high-fidelity simulation versus interprofessional high-fidelity simulation
2. develop an understanding of interprofessional roles and responsibilities sub-competencies (IPEC)
3. develop an understanding of the presented research study methodology
BACKGROUND

- There is a need to improve and advance research in simulation and interprofessional education (IPE), both trending innovative solutions in healthcare education (Palaganas et al., 2016).

- Research suggests combining IPE with high-fidelity simulation (HF-Sim) has a positive impact on student interprofessional learning (Palaganas, et al., 2016).

- Difficult to identify the most important factors that impact IPE learning.

  ▪ Limited information and lack of innovative suggestions provided in the literature (Jeffries, Swoboda, & Akintade, 2016; Palaganas, et al., 2016).
The expanded Kirkpatrick Model is commonly used to evaluate the effectiveness of IPE training (Barr, Freeth, Hammick, Koppel, & Reeves, 2000)

<table>
<thead>
<tr>
<th>Level</th>
<th>Kirkpatrick Domain</th>
<th>Barr Modification</th>
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<tbody>
<tr>
<td>1</td>
<td>Reaction</td>
<td>No Change</td>
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</table>
| 2     | Learning          | 2a: Modification of attitudes/perceptions  
|       |                   | 2b: Acquisition of knowledge/skills       |
| 3     | Behavior          | No change         |
| 4     | Results           | 4a: Change in organizational practice  
|       |                   | 4b: Benefits to patients/clients           |
BACKGROUND

-IPE learning outcomes for this study:

- Reflective of two Interprofessional Education Collaborative (IPEC) roles and responsibilities (RR) sub-competencies (IPEC, 2016)

1. Communicate one’s roles and responsibilities clearly to other professionals (RR1)

2. Explain the roles and responsibilities of a nurse and respiratory therapist (RT) and how the team can work together to provide care and promote health based upon the maternal/infant case (RR4)
The purpose of this study was to evaluate the perceptions (Kirkpatrick 2a) and knowledge (Kirkpatrick 2b) of undergraduate nursing students of the RT role in the delivery of a high risk neonate.
METHODOLOGY

- Pre-post test, non-equivalent control group design
- Study approval was obtained through the Health Science Center's Institutional Review Board.
- High Fidelity-Simulation (HF-Sim) is a required component of the undergraduate nursing course
- Participation in the IPE research aspect of the study was voluntary
- Informed consent was obtained
METHODOLOGY

- Faculty developed two obstetrical emergency HF-Sims
  - Junior-level nursing and respiratory therapy students
- Three nursing groups were included in the study (n=21)
  - IPE HF-Sim and debriefing session
  - HF-Sim and debriefing session
  - No intervention
- Nursing students’ perceptions and knowledge of the RT role assessed through an electronic survey.
METHODOLOGY

-One week prior to the experience, the IPE HF-Sim group received an IPE session document

-IPE HF-Sim & HF-Sim groups:
  ▪ Pre-survey completed prior to rotating through two, 40 minute, HF-Sim scenarios
  ▪ Post-survey completed after a 60-minute debriefing session

-No intervention group
  ▪ Pre-survey completed prior to obstetric clinical experience
  ▪ Post-survey completed one-week after the obstetric clinical experience
INSTRUMENTS

Pre-post survey
- Quantitative questions
  - 5-point Likert scale
- Open-ended questions
  - RT faculty provided responses

Three quantitative questions:
- “I am able to communicate my roles and responsibilities clearly to other professionals”
- “I am able to explain the roles and responsibilities of a RT on an interprofessional team”
- “I am able to explain how the team can work together to provide care and promote maternal and infant health”

Open-ended question:
- “What is the role of a RT in the delivery of a high risk neonate?”

LSU Health NEW ORLEANS
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RESULTS

- All analyses performed using SAS 9.4; Wilcoxon signed-rank test (p < 0.05)
  - n=20

- IPE HF-Sim group had a statistical significant difference (p<.05) in post-survey scores for all three quantitative questions

- IPE HF-Sim group had a statistical significant difference (p<.05) in the post-pre difference survey scores
  - “I am able to communicate my roles and responsibilities clearly to other professionals”
  - “I am able to explain how the team can work together to provide care and promote maternal and infant health” as compared to the other two student groups.
RESULTS

- There was no differences noted in student written responses to the question “What is the role of a RT in the delivery of a high risk neonate?” (Kirkpatrick 2b)

- Responses were evaluated at the paired individual level and by the respective group level.
  - Individual students and students in all three groups described the roles of a RT similarly in the pre- and post-surveys.
CONCLUSION

- All three nursing student groups were able to accurately document in writing the role of a RT in the delivery of a high-risk neonate.

- There was a statistically significant difference in the self-perception ability to communicate the roles of a RT between student groups.
  - Students engaged in the IPE HF-Sim reported higher self-perceptions of their ability to communicate the roles of a RT.
- Using Kirkpatrick’s assessment model:
  - Nursing students increased their perceptions (level 2a) and demonstrated knowledge (level 2b) of the RT role.
  - Students who have a foundational understanding of other professional roles should be able to clinically integrate this knowledge into behaviors (level 3).
  - Behavioral change promoting interprofessional collaboration is essential to creating healthy work environments and optimizing patient outcomes.