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PERSPECTIVES

Optimizing Interprofessional Simulation with Intentional Pre-Briefing and Debriefing

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Abstract: The use of simulation and interprofessional education (IPE) has been shown to enhance healthcare student and provider confidence, strengthen teamwork, and improve patient outcomes. Although debriefing has been widely practiced and studied, the value of intentional pre-briefing has been recently recognized. At the University of the Incarnate Word (UIW), Doctor of Physical Therapy (DPT) and Bachelor of Science in Nursing (BSN) students engaged in a simulation with multiple acute care scenarios. The goal of this activity was to foster competence and confidence in coordinating care for patients with complex medical conditions while functioning as integral members of a team. Faculty members recognized an opportunity to practice interprofessional care coordination behaviors through this simulation. The activity was intentionally structured with three key components: (1) thorough advanced preparation, (2) a well-organized pre-briefing session encompassing pre-simulation orientation, and (3) a structured debrief that encouraged reflection on patient care prioritization. The simulation addressed the activity goals and provided students with opportunities for growth in the Interprofessional Education Collaborative (IPEC) core competencies.

Keywords: interprofessional education, collaborative practice, nursing, physical therapy, pre-briefing, debriefing, simulation

Introduction and Background

The use of simulation and interprofessional education (IPE) has been shown to enhance healthcare student and provider confidence, strengthen teamwork, and improve patient outcomes.[1–7] Although debriefing has been widely practiced and studied, the value of intentional pre-briefing has been recently recognized. In 2021, the International Association for Clinical Simulation and Learning (INACSL) added pre-briefing as a healthcare simulation standard of best practice.[8] The combination of pre-briefing, simulation, and debriefing helps students anticipate priorities, recognize and respond to changes in the client condition, and reflect about prioritization choices.[8–10] Therefore, the authors aim to:

- Emphasize the value of intentional pre-briefing and debriefing practices within interprofessional simulations.
- Provide guidance for health professions educators on the implementation of a simulation with multiple acute care scenarios using a round-robin approach.
- Describe the use of mindful interprofessional team reflection during simulation debriefing to enhance patient care prioritization.

The following sections will describe how intentional pre-briefing and debriefing can be used by health professions educators to optimize an acute care focused interprofessional simulation.

Interprofessional Simulation Design

At the University of the Incarnate Word (UIW), Doctor of Physical Therapy (DPT) and Bachelor of Science in Nursing (BSN) students engaged in a simulation with multiple acute care scenarios. Interprofessional student teams rotated through case-based activities in a simulated neuro/medical-surgical stepdown care setting with a large group pre-briefing

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and guided debriefing. Forty-four second year DPT students and 31 senior BSN students, all of whom had completed curriculum related to the care of patients with neurological injuries, participated in this activity. Both student groups had previous engagement with intraprofessional clinical simulation. This experience provided the students an opportunity to practice as an acute care interprofessional team.

Interprofessional Simulation Objectives

The goal of this activity was to foster competence and confidence in coordinating care for patients with complex medical conditions while functioning as integral members of a team. Each interprofessional student team had the following objectives: a) assess and establish care priorities of clients on a neuro/medical-surgical unit, b) recognize changes in patient status and promptly initiate appropriate corrective action, c) effectively manage unit resources to ensure the delivery of safe and efficient care, and d) communicate with patients, their family members, and team members in a therapeutic manner. These objectives aligned with Interprofessional Education Collaborative (IPEC) core competencies including:

1. Work with each other to maintain a climate of mutual respect and shared values. (Values/Ethics for Interprofessional Practice)
2. Use the knowledge of one's own professional role and collaborate with other health professionals to appropriately assess and address the healthcare needs of the patients to promote and advance health. (Roles/Responsibilities)
3. Communicate with patients, families, and each other in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the treatment of disease. (Interprofessional Communication)
4. Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient-centered care that is safe, timely, efficient, effective, and equitable. (Teams and Teamwork)[11]

Activity Description

This simulation focused on fostering interprofessional collaboration between nursing and physical therapy students to provide care for patients with neurological conditions in the neuro-acute hospital environment. The activity was allotted a two-hour time frame to include a 20-minute pre-briefing session, a 40-minute patient care experience, an approximately 10-minute buffer to transition between and reset stations, a 5-minute small group huddle, and a 45-minute debriefing session. Cases from the existing undergraduate nursing curriculum simulation scenario library were selected and adapted for this learning activity. None of the scenarios had been experienced by either student group.

Faculty developed the activity plan using an established simulation design template, which covered key aspects for objectives, prerequisites, staging, equipment and supplies, timelines, roles, and cues. Simulation center staff created acute care environments using mid-fidelity simulators, durable medical equipment, and necessary medical supplies. A pilot simulation was conducted with nursing and physical therapy faculty members who were not involved in the creation of the simulation to provide unbiased feedback. This provided an opportunity to identify and modify any areas requiring improvement. Feedback gathered from participating faculty revealed similarities in neurological content as taught in each school and facilitated the provision of appropriate cueing to guide students at each simulation station.

Pre-Briefing: Preparation and Briefing

Students were tasked with completing a pre-simulation written assignment designed to prepare them for the upcoming activity. This assignment also prompted the students to explore the patient care roles of nurses and physical therapists within the acute care setting, as well as to identify assessment and treatment priorities for clients with neurological conditions, including potential complications.

Prior to the presentation of the simulation cases, the students met as a large group to discuss the pre-simulation assignment and to collaboratively identify potential priorities for an anticipated interprofessional collaborative practice plan of care. Faculty facilitators used a pre-brief checklist to ensure consistent sharing of all simulation expectations.

Simulation Scenarios

Following the comprehensive discussion of the anticipated care plan, facilitators organized interprofessional teams, each comprised of four to six students. These teams worked collaboratively to assess and treat four simulated patients located in a neuro/medical-surgical stepdown unit. A round robin format was used, allowing 10 minutes at each station.

Each station was equipped with a brief client history and provided essential information that could not be demonstrated through staging. Various scenario roles were defined including patient, family member, observer, nurse, and physical therapist. Participants were provided badges to designate their respective roles, and scripted materials were provided to ensure consistent cues for students.

To promote a well-rounded learning experience, roles were rotated among the students as they transitioned between the individual stations. This approach ensured that each student had the opportunity to work within their professional scope of practice at least once. A faculty facilitator monitored each station, offering additional cues, such as changes in vital signs, heart and lung sounds, and alterations in level of consciousness, to assist students in identifying issues and addressing care priorities.

At each station, students encountered a complex unfolding clinical scenario that required them to assess the patient, communicate with team members, develop care priorities, intervene appropriately, and reassess. The stations were designed to provide unique opportunities for interprofessional practice, as described below:

- Station 1 – Cerebral vascular accident: The students were expected to recognize neurological changes, complete a timely neurological assessment, and activate a stroke alert protocol.
- Station 2 – Autonomic dysreflexia: The students were expected to recognize the signs and symptoms of autonomic dysreflexia, and effectively manage/provide corrective action within their scopes of practice.
- Station 3 – Pressure injury: The students were expected to recognize conditions that placed the patient at risk for pressure injury, identify the presence of a preexisting pressure injury, and take immediate steps to promote healing.
- Station 4 – Guillain–Barré syndrome: The students were expected to coordinate follow-up care in anticipation of transfer to a rehab facility, assist with patient transfer to bedside commode, provide patient and family education, and implement conflict resolution techniques when communicating with dissatisfied family members.

Debriefing

After completing the rotations, each interprofessional team huddled, without facilitator input, to reevaluate the interprofessional collaborative care plans and establish consensus regarding the care priorities of all patients. In a subsequent faculty-facilitated large group debrief, the interprofessional teams had the opportunity to compare and contrast their care plans and priorities. Participants were encouraged to self-identify any perceived gaps in knowledge, as well as any challenges they experienced working as a collaborative interprofessional team. At the end of the debrief, faculty offered feedback on the appropriateness, timeliness, and effectiveness of the plans of care, prioritization, and students' adherence to IPEC core competencies.

Discussion

The success of the activity was dependent on multiple interrelated components. The pilot simulation was valuable for the detection of potential challenges, and necessary modifications. The pre-briefing assignment introduced the students to the concepts. The briefing shared expectations for professional behavior and confidentiality, which helped provide a psychologically safe environment and maximized student participation. The faculty determined that the patient scenarios were highly effective in providing opportunities for collaboration, identifying gaps in knowledge, and facilitating skill acquisition in a safe environment for appropriate patient care.

- Station 1 – Cerebral vascular accident: Every interprofessional team identified that there was an impending emergency. For most teams, the nursing students called the stroke alert, but in one group, the physical therapy students called the stroke alert. The nursing students in that group reported that they were surprised by the physical therapy students as they did not think

calling a stroke alert was within the scope of practice for physical therapists. This facilitated recognition of shared scope of practice within the team and focused on patient safety and timely intervention.

- Station 2 – Autonomic dysreflexia (AD): The majority of the interprofessional teams were able to identify that the patient was experiencing AD and there was frequent debate regarding best intervention. In some teams, the nursing students wanted to get the provider involved for medication whereas the physical therapy students wanted to raise the head of the bed. In this situation, the students struggled to come to a consensus and sometimes failed to identify all the triggers for AD. In some instances, this resulted in ineffective intervention (ie, not raising the head of the bed high enough, not checking for multiple sources of noxious stimuli, such as twisted clothing), and they were not able to stabilize the patient. This scenario led to a facilitated discussion about having confidence in one's knowledge base, advocating assertively for the patient when they know they are correct, acknowledging personal limitations in mastery of evidence-based details, and respecting input from all interprofessional team members to optimize patient outcomes.
- Station 3 - Pressure injury: The students consistently introduced themselves and their professions to the family members. Although the patient was minimally responsive and nonverbal, the students consistently engaged in therapeutic communication with her throughout the scenario. The students prioritized the wound assessment over patient restlessness and discomfort, as reported by the mother and facilitator verbal cues. Some of the students reported that it was challenging to recognize that the patient was in immediate need because they were not actually receiving feedback (moaning, grimacing, and verbal reports) as they would with an actual patient. This interprofessional collaborative approach provided an opportunity for the nursing and the physical therapy students to acquire new knowledge on the scope of practice related to skin integrity assessment, prevention of injury, and intervention for their respective professions.
- Station 4 – Guillain–Barré syndrome: Students reported that they learned about the challenge of handling patient/family member concerns and competing demands of patient admissions, discharges, and resource management. They all acknowledged patient and family member frustration and were quick to try and ease frustration. This scenario also facilitated discussions about the need to engage additional team members. In teams that did not discuss area role overlap, team members were hesitant to perform gait and transfer training. Conversely, teams that communicated role overlap earlier in the scenario initiated patient care promptly.

The debriefing facilitated continued discussion and reflective practice as an interprofessional team. During the debriefing process, the students reported a heightened understanding of differences and similarities in scopes of practice within the acute care setting, recognition of gaps in their knowledge, motivating them to enhance their delivery of patient-centered care, improved team communication skills necessary to effectively prioritize patient care, greater confidence related to interprofessional collaborative capacity and patient advocacy, a shared sense of mutual respect for team members and enriched appreciation for the roles, responsibilities, and skills of other healthcare professionals.

The simulation provided a valuable opportunity for both the faculty facilitators and the students to identify gaps between didactic knowledge and clinical performance. Faculty facilitators observed that some students who were academically strong were not always highly confident or optimally responsive to time-sensitive situations in this simulated environment. Conversely, some students who had struggled with traditional exams were effective leaders as the scenarios evolved. Simulation provided an additional way for students to apply theoretical knowledge and demonstrate readiness for safe practice.

Conclusion

This learning experience provided an opportunity for nursing and physical therapy students to learn about, from, and with one another and centered on the four competency domains of interprofessional collaborative practice: values and ethics, roles and responsibilities, teams and teamwork, and interprofessional communication. The approach used in this interprofessional learning activity aligns with recent literature that supports the value of structured pre-briefing and debriefing. The faculty observations and learner feedback generated support for continued use and development of this activity design. The experience provided a foundation for further assessment with quantitative measures. In future iterations of this simulation, the students will utilize a formal assessment tool to measure pre- and post-activity interprofessional attitudes, behaviors, and confidence.

Position and Rationale

Intentional pre-briefing and debriefing are recognized standards of best practice for healthcare simulation and should be integrated into interprofessional health professions curricula. The authors maintain that interprofessional simulation, when accompanied by purposeful pre-briefing and debriefing, has the potential to boost confidence, elevate the quality of interprofessional collaboration, and refine the ability to effectively prioritize care during simultaneously unfolding scenarios. To substantiate this position, the authors discussed interprofessional simulation, including the critical phases of pre-briefing and debriefing, and presented a practical activity that could be easily implemented in health professions curricula.

Ethical Approval

The University of the Incarnate Word Institutional Review Board approved exempt protocol 12-08-003, based on HHS category 45 CFR 46.101(b)(1): Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

Disclosure

The authors report no conflicts of interest in this work.

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