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What can be Achieved with an Interprofessional Class?

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Abstract

Introduction Recently, educators advocated for interprofessional education to better prepare entry-level healthcare workers for efficient, effective, and respectful teamwork to lower the cost of healthcare and improve the delivery of collaborative quality patient care. This article describes the results of an educational program evaluation of an interprofessional class (IPC) taught over a five-year period between nursing and occupational therapy (OT) departments at a small private university. **Methods** During the IPC sessions, a small group of nursing and OT students observed a simulated patient care scenario in which a nursing and an OT student provided care related to their respective discipline. Faculty-guided group discussions and post-debriefing deepened students' learning. **Results** Data collected from the IPC post-session evaluation forms revealed immediate improvement in knowledge of overlapping and distinct roles of the two disciplines, and a deeper appreciation of ways to respectfully communicate with patients and healthcare workers to reduce duplication of efforts and facilitate continuity in patient care.

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Introduction

The continuous rise in healthcare costs and yet under-performance in safe and coordinated care raises a red flag in the healthcare industry (Davis, Stremikis, Squires, & Schoen, 2014). Both the Triple Aim Initiative and value-based care aim to improve the reformed health care system with better collaborative interprofessional and patient-centered care (Berwick, Nolan, & Whittington, 2016; Burwell, 2015; Whittington, Nolan, Lewis, & Torres, 2015). To prepare students in the healthcare industry for efficient and effective teamwork in the workforce, educational programs around the nation introduce interprofessional education into their curriculum, which soon becomes one of the educational standards for various healthcare disciplines such as nursing and occupational therapy.

Literature Review

The Triple Aim Initiative and the term *value-based care* are both familiar to healthcare educators. In 2008, the Institute for Healthcare Improvement introduced the Triple Aim Initiative to simultaneously improve individual patients' experience of care and the health of the population and reduce per capita cost in health care (Berwick et al., 2008; Whittington et al., 2015). Subsequently, in an effort to further improve performance and ensure accountability, value-based care, which measures the quality of patient health outcomes per dollar spent, was introduced in healthcare to further augment the Triple Aim Initiative with the ultimate goals of providing better care at lower costs through greater teamwork, while harnessing the power of digital information for better coordination of care across settings (Burwell, 2015; Porter, 2009; Whittington et al., 2015). To support these two initiatives, the urgent need for an interprofessional team approach to improve patient care and lower costs becomes apparent.

Interprofessional education (IPE) has existed for about 40 years (Brandt, 2018; Treadwell & Havenga, 2013). According to the World Health Organization (WHO), IPE is “*when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes*” (WHO, 2010, p. 13). In 2010, the WHO called for action for interprofessional collaboration in education as “an innovative strategy . . . [and] a necessary step in preparing a ‘collaborative

practice-ready’ health workforce” (p. 7). Health professions tend to work in silos (Newhouse & Spring, 2012), and therefore, interprofessional experiences should be embedded in the academic curriculum for effective coordinated care to occur in healthcare settings. In a call to action, Brandt (2018) and others (Brandt, Lutfiyya, King, & Chioreso, 2014; INACSL, 2016) asserted that health professions educators should use adult learning principles and educational theories in IPE curricular development, and engage in much needed systematic research to influence health and systems outcomes.

The importance of interprofessional collaboration is further emphasized by the work of the Interprofessional Education Collaborative (IPEC). The IPEC is a working group with broad representation from associations of schools of the health professions. In 2016, the IPEC updated their core competencies for interprofessional collaboration:

1. Work with individuals of other professions to maintain a climate of mutual respect and shared values.
2. Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations.
3. Communicate with patients, families, communities and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease.
4. Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs that are safe, timely, efficient, effective and equitable (IPEC, 2016, p. 10).

Thus, the core competencies serve as the quintessential objectives for IPE, with crucial goals that foster teamwork among entry-level healthcare professionals, and augment the overall care experiences of patients in collaborative, effective, and efficient health settings.

All of these changes in the healthcare industry are further captured in the new 2019 standards from the Commission on Collegiate Nursing Education (CCNE)

and the 2018 standards from the Accreditation Council for Occupational Therapy Education (ACOTE®). Under standard III, curriculum and teaching-learning practices, element III-H states, “The curriculum includes planned practice experiences that . . . foster interprofessional collaborative practice” (CCNE, 2018, p. 16). Similarly, the newly passed ACOTE standards, effective in July 2020, stipulate that “A graduate from an ACOTE-accredited . . . occupational therapy program must . . . be prepared to effectively communicate and work interprofessionally with all who provide services and programs for persons, groups and populations” (ACOTE®, 2018, pp. 1–2). Hence, educators responsible for the future nursing and occupational therapy (OT) workforce are investing in interprofessional education pedagogy.

The use of high-fidelity and low-fidelity simulations in teaching-learning pedagogy for IPE is well documented (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011; Costello et al., 2017; Lee, Pais, Kelling, & Anderson, 2018). Costello et al. (2017) found that interprofessional simulation education was effective in teaching teamwork, team communication, and collaboration. In a controlled trial of a case-based learning skills simulation between RN and OT students, researchers found a change in overall knowledge across disciplines (Spencer, Taff, & Chen, 2019). In contrast to these findings, a systematic review of interprofessional education in medical curricula indicate a need for effective curricular and research designs in interprofessional education (Vuurberg, Vos, Christoph, & de Vos, 2019). Nonetheless, the researchers concluded that interprofessional education is a promising approach to attitudinal change and learning (Vuurberg et al., 2019). Within the simulation fidelity continuum, the use of high-fidelity simulation does not necessarily yield more effective learning outcomes than low-fidelity simulation (Foronda, Liu, & Bauman, 2013; Munshi, Lababidi, & Alyousef, 2015). Factors that guide decision in the use of high- versus low-fidelity simulations include learners’ level, learner level (novice versus advanced), intended learning goals, and resources and cost (Munshi et al., 2015). While the use of high-fidelity simulation may influence self-confidence and clinical competence in nursing students, low-fidelity simulation has shown promising results in promoting teamwork, enhancing professional identity and role differentiation, and increasing awareness of the importance of

collaboration for patients’ safety (Bridges et al., 2011; Costello et al., 2017; Foronda et al., 2013; Munshi et al., 2015). Moreover, a scoping review found two of the key components that support the pedagogy in the use of simulation in IPE, whether it is high or low fidelity, are use of a realistic case that reflects the knowledge of each of the professions, and guided debriefing (Lee et al., 2018). Such findings help substantiate best practice standards for interprofessional education (INACSL, 2016).

This article describes the results of an educational program evaluation of an interprofessional class taught over a five-year period in a school of health and natural sciences. Dominican University of California (DUC), a small, private university, offers a Baccalaureate of Science in Nursing (BSN) program and two Master of Science in Occupational Therapy (MSOT) programs. One of the OT programs is an accelerated program where students enter the major at their junior year to earn a Bachelor of Science in Health Science and continue for an additional year to obtain a master’s degree. The other OT program is a three-year graduate program. Both programs have parallel courses and lead to the same degree and qualification for the National Board Examination in OT. Despite the close working relationship between nurses and occupational therapists in various healthcare and community settings, nursing and OT students at DUC have few opportunities to interact.

The purpose of this ongoing project is to develop and evaluate, over time, an interprofessional class (IPC) situated in the nursing program’s “Foundations of Gerontological Nursing” course and the OT course “Occupations of Adults and Seniors.” Both nursing and OT students in these courses participate in a joint class session every semester. The tenured faculty who consistently teach these classes are highly experienced practitioners in their respective fields, and have a combined teaching experience of 31 years in both academic and healthcare settings. The overarching goals of the IPC sessions are to foster interprofessional collaboration and a mutual appreciation of each discipline through simulation and guided debriefing. Ultimately, it is the hope of the faculty that entry-level nurses and occupational therapists from DUC will enter the workforce with skilled preparation to model and lead teamwork.

Methods

The School of Health and Natural Sciences (SHNS) where the Nursing and OT programs reside has a Clinical Simulation Center that provides multiple simulation laboratory spaces. The center has a full-time director and a full-time simulation technician who coordinate all simulation activities among different health science programs. The director has a key role in faculty development to ensure that learning activities, whether high, mid, or low fidelity, integrate best practice standards for simulation. The director, a nationally certified Healthcare Simulation Educator with master's-level preparation in physical therapy and nursing, provides helpful information and support for the design of the simulation scenario, postsimulation debriefing discussion questions, and evaluative feedback on faculty facilitation. In addition, the director reinforces the application of the IPEC's Core Competencies (IPEC, 2016) as the framework for interprofessional activities within the SHNS.

Students

The IPC session was integrated as part of the required core classes taken respectively by nursing and OT students. Nursing students were sophomores enrolled in a standalone course in the nursing curriculum titled "Foundations of Gerontological Nursing." This course includes theory and clinical laboratory components. Thus, nursing students were nearing the completion of their sophomore year, which includes clinical patient care rotations with older adults.

Occupational therapy students were either undergraduate senior students or second-year master's-level students who were enrolled in the second course of a three-course series titled "Occupations in Adults and Seniors." These three courses prepare OT students to practice in physical rehabilitation and include both theory classes (three semesters) and clinical laboratory components (two semesters). At the time of the IPC sessions, all OT students, regardless of undergraduate or graduate status, had completed a 40-hour level I fieldwork and a community practice laboratory experience where they were exposed to observation in various medical settings, and guided hands-on experiences in a community program working with older adults. Hence, OT students had not yet had direct patient care experi-

ence in traditional healthcare settings.

Activity Design

The IPCs were scheduled toward the end of the semester so that students from both programs would have foundational knowledge in their respective fields prior to participation in the interprofessional experience. Each semester, faculty-led cohorts of students from nursing (50–60) and OT (20–25) are divided equally into four group sessions, two in the morning and two in the afternoon. Each faculty had both nursing and OT students in their groups.

Pre-briefing. In preparation for the sessions, students were informed of the learning outcomes:

1. Reinforce interprofessional communication between OT and nursing professions;
2. Explore scope of practice for appropriate interdisciplinary referral;
3. Promote interprofessional teamwork/delegation/communication;
4. Develop a comprehensive care plan to support safe swallowing and oral hygiene.

Additionally, students were given a brief overview of the patient scenario that included events leading to the patient's present condition, medical diagnosis, past medical history, prescribed and over-the-counter medications, and social history. Students were also provided with a debriefing discussion guide to direct their attention toward key observations to be made while the simulation was underway. Occupational therapy students were also provided with a copy of the Kayser Jones Brief Oral Health Status Examination (Hartford Institute for Geriatric Nursing, 2012) to familiarize themselves with the nursing actions demonstrated in the simulation.

Volunteer patient actors, either current or previous students in the nursing and OT programs or the OT department's instructor resource coordinator, were used in the simulations. Every semester, faculty prepared the patient actors by providing and reviewing a detailed script (Table 1). The patient actor's role included a left-sided hemiparesis, dysphagia, and impaired communication and speech. The patient actors donned clothing and props to simulate a realistic patient care encounter in an acute care environment.

Name of Patient: Jamie Lopez

Presenting Complaint:

You suffered a stroke two days ago, leaving your left side paralyzed. As a result of the stroke, you have difficulty in speaking, understanding language and swallowing.

Diagnosis: Stroke resulting in paralysis of the left side.

Demographics: Male or female. DOB: July 4th 1934

Dress/Simulation:

You will be in a gown, and sitting in a wheelchair/chair next to the hospital bed. There will be an IV, foley catheter and a nasal canula for oxygen. You will be slouching and sitting on the chair with your head down when the nurse approaches you. Your left leg, left arm, and the left side of your face will be paralyzed. Your limited speech will be slurred, usually only single word and not clear. And you have a difficult time in understanding spoken language, especially if there are multiple steps.

During the simulation the nursing student will take your vital signs and the OT student will assist you with feeding, which is difficult for you given your dysphagia, left hemiplegia, and difficulty understanding spoken language.

Overview of Case:

Two days ago, when picking up your morning mug of coffee, you noticed that the mug seemed “heavier” than usual. As you got up and walked to the bathroom, you stumbled a few times and then fell. Your speech was slurred and you were not able to get up from the floor yourself. Your spouse summoned 911 and you were transported to the emergency dept. where you were found to have diminished sensation on your left side along with left-side paralysis. An MRI confirmed the stroke diagnosis. You have also been experiencing shortness of breath and are receiving oxygen, and are having some swallowing difficulties.

Scenario:

Nursing student will “enter” your room and introduce himself/herself. He/she will take your vital signs. You are somewhat cooperative but have difficulty in following instruction, especially if it is long, complex, given too quickly or with voice too soft. After taking the vital signs, the nursing student will do a quick Oral Health Examination in which he/she will look at your teeth, gum, tongue, etc. to determine the health status of your oral cavity.

The OT student will then walk in with a food tray: Pudding and thickened liquid, and plan to work with you on your swallowing. He/she will make sure that you are sitting upright on the chair and not slouching. And when you start feeding yourself (using your R hand only), he/she will put a non-skid mat to stabilize the bowl for you when you try to scoot up the pudding. There will also be a built-up handle on the spoon. You will drink the thickened liquid using a special cup. You have a tendency to scoot a full spoonful of pudding to put into your mouth and the OT student is going to try to educate you to put only small spoonful of pudding into your mouth. When you open your mouth, you have difficulty in opening widely on the left side. When you swallow, you will cough and the OT student will ask you to put your head down (chin tuck) and turn your head to left to swallow. If you don’t remember to swallow with head down and turning your head to left, you will cough violently after you swallow. The OT/nursing student will need to intervene to remind you on the technique.

After eating, they will ask you to open your mouth to check and see if you have any food remaining in the mouth, especially to the left side of the cheek. You have difficulty in understanding what they are asking you to do and cannot open the mouth widely for them to check. Nursing student will perform an oral hygiene assessment and will use a swap to help clean up your oral cavity, getting any residual food particle in the mouth.

Throughout the scenario, your verbal response is limited to single words occasionally such as “Tired,” “Yes,” ”No.” Sometimes, you can’t even say the word clearly. Your understanding of what they have ask you to do is also not accurate; especially if the instruction is long and complex, you do not know what to do. Please keep in mind that the whole scenario is about 20 minutes long from start to end.

Table 1. *Interprofessional Education Lab - simulation script for patient actor*

While seated in a wheelchair, props included a patient identification band, an intravenous line attached to a volumetric pump, and a Foley catheter and bag with tubing looped at the side of the wheelchair. The actor's slouched posture and leaning to his/her left side, and intentional placement of the props were also cues for students to identify and assess during the simulation encounter.

In each scenario, a nursing student and an OT student participated directly in preparation for their respective professional roles. They were informed about what each would be doing, but were not prompted about how they were to interact with each other during the simulation.

Simulation. A round of introductions of students and faculty, including an overview of the class, and stated learning outcomes, preceded the actual simulation. The two students, a nursing student and an OT student, were then being instructed to enact their respective professional roles in response to the patient actor's actions. The nursing student took vital signs and completed an oral health assessment guided by the Kayser Jones Brief Oral Health Status Examination (Hartford Institute for Geriatric Nursing, 2012). Subsequently, an OT student entered the simulation with a tray of adaptive equipment, as well as food and liquids with modified consistency to conduct a swallowing and feeding trial. The remainder of the students were directed to closely observe and note the patient care encounter. The simulation evolved for about 20 minutes without any faculty interruption, interference, or commentary. Therefore, the faculty were able to devote full attention to the evolving simulation itself without performing other roles or functions.

Post-Simulation Debriefing. Debriefing and its facilitation in a trusting and nonjudgmental environment is a critical aspect of simulation (INACSL, 2016; Treadwell & Havenga, 2013). To foster reflection and open communication, students were asked to gather in small groups, consisting of a representation from both disciplines, to share and discuss their observations for about 10–15 minutes. After this first group activity, the faculty facilitated the class discussion soliciting responses from each group. Patient actors were also asked to reflect on the care they received during the simulation encounter. For example, "Did

you feel intimidated by the professional language? Or did you feel included and supported?"

During the debriefing, students were asked to evaluate the encounter through open-ended questions (Table 2). Faculty acknowledged and clarified students' contributions by writing the responses on a large white board and prompted further discussion with questions such as "Tell me more about that" or "Can you provide an example?," which further stimulated contributions, engaged discussion, and allowed the faculty to map and/or identify group commonalities and distinctions. The whole IPC session took about one hour, including the simulation, small group discussions, and guided debriefing at the end.

Analysis of Activity

Student Evaluation of Activity

Students were given an evaluation form at the end of each IPC session. Content validity of the evaluation form was established by a panel of experts who consisted of a nationally certified simulation educator, a tenure-track faculty experienced in clinical practice, education, and simulation development, and doctorate-level clinical adjunct faculty. The evaluation form was developed specifically for this IPC session to evaluate students' assimilation of the concept in interprofessional collaboration and to document students' main takeaway messages. Students were asked to respond to six questions, using a five-point scale for each, ranging from "strongly disagree" (1) to "strongly agree" (5). Two open-ended questions were included, asking students to list at least one takeaway applicable to their clinical practice, as well as any other comments (Table 3). Anonymity was maintained in the evaluation process, and students were reminded not to include their names on the evaluation form.

Data were collected each semester through the evaluation form and were entered into Microsoft Excel (2016) spreadsheets for each semester. Missing responses for each simulation session were noted. Across all semesters, only one case of an absent response to one of the six questions occurred. Otherwise, all students responded to all quantitative questions in the evaluation form. In addition, commentary responses from the two open-ended questions were visually inspected

What are the roles of nursing? What are the roles of occupational therapists? What role differentiation did you observe in the simulation? What are some of the similarities between the two disciplines?

What are some of the opportunities for a collaborative relationship between the two disciplines in their care of this patient?

For nursing students: What are some of the feeding adaptive equipment observed in use during the simulation? Why are these used? How are they helpful in feeding? What are some of the reasons to refer to occupational therapy?

For OT students: What are some of the findings in OT session that should be reported to nurses? What are some of the collaboration opportunities for nurses to carry out in the absence of OT (remember, OT usually work with patient no more than an hour, but nurses have the patient 24/7)

What are some of the nursing diagnoses?

What should OT input in the careplan?

During the interprofessional communication, is the environment supportive or intimidating? How can the patient be included as part of the team while communicating with other disciplines?

What are the roles of nursing? What are the roles of occupational therapists? What role differentiation did you observe in the simulation? What are some of the similarities between the two disciplines?

What are some of the opportunities for a collaborative relationship between the two disciplines in their care of this patient?

For OT students: What are some of the findings in OT session that should be reported to nurses? What are some of the collaboration opportunities for nurses to carry out in the absence of OT (remember, OT usually work with patient no more than an hour, but nurses have the patient 24/7)

What are some of the nursing diagnoses?

What should OT input in the careplan?

During the interprofessional communication, is the environment supportive or intimidating? How can the patient be included as part of the team while communicating with other disciplines?

Table 2. *Postsimulation debrief discussion guide*

Please place a mark next to your response:

I took part in the morning session

I took part in the afternoon session

I am a nursing student

I am an OT student

Please place a mark next to the response that best represents your evaluation of this session:

I have a better understanding of the importance of inter-professional communication between nursing and occupational therapy:

strongly agree agree neither agree or disagree disagree strongly disagree

I have a better understanding of when it is appropriate to initiate a referral to another discipline:

strongly agree agree neither agree or disagree disagree strongly disagree

Teamwork and communication are important in the health professions:

strongly agree agree neither agree or disagree disagree strongly disagree

4. I am more informed of interventions that support safe swallowing and oral hygiene:

strongly agree agree neither agree or disagree disagree strongly disagree

5. The debriefing session was helpful to me:

strongly agree agree neither agree or disagree disagree strongly disagree

6. There is value in having an inter-professional class such as this one:

strongly agree agree neither agree or disagree disagree strongly disagree

List at least one thing that you will be able to apply to future clinical practice:

Do you have any suggestion(s) to improve this inter-professional class?

Other comments (use the reverse side as needed):

Table 3. *Interprofessional class evaluation*

for common themes.

Results

A total of 623 students representing DUC nursing and OT programs participated in the IPC sessions over nine consecutive semesters, April 2014 through May 2018.

The nursing to OT student ratio was approximately 2:1, with 61.8% nursing students and 30.6% OT students, and 7.6% of the students failed to identify the programs they were affiliated with (Table 4). Mean ratings and standard deviations for each of the evaluation questions are shown in Table 5.

Semester	Class Date	Total Students	Nursing	Occupational Therapy	No Indication
1 (Spring)	4/29/2014	70	47	21	2
2 (Fall)	11/11/2014	62	45	17	0
3 (Spring)	5/5/2015	71	40	26	5
4 (Fall)	11/24/2015	69	41	18	10
5 (Spring)	4/26/2016	74	43	24	7
6 (Fall)	11/29/2016	61	34	21	6
7 (Spring)	5/2/2017	81	52	21	8
8 (Fall)	11/28/2017	49	24	19	6
9 (Spring)	5/1/2018	86	59	24	3
Totals		623	385	191	47

Table 4. Total student participants by semester and program

Semester	Year	Question 1 Understanding (SD)	Question 2 Initiate Referral (SD)	Question 3 Teamwork and Communication (SD)	Question 4 Interventions (SD)	Question 5 Debriefing (SD)	Question 6 Value (SD)
1 Spring	2014	4.55 (0.65)	4.32 (0.63)	4.80 (0.59)	4.54 (0.69)	4.57 (0.67)	4.70 (0.64)
2 Fall	2014	4.46 (0.59)	4.25 (0.70)	4.91 (0.27)	4.37 (0.63)	4.46 (0.80)	4.61 (0.55)
3 Spring	2015	4.35 (0.72)	4.00 (0.81)	4.88 (0.52)	4.22 (0.80)	4.23 (0.78)	4.60 (0.69)
4 Fall	2015	4.30 (0.74)	4.17 (0.66)	4.86 (0.33)	4.27 (0.64)	4.42 (0.69)	4.60 (0.55)
5 Spring	2016	4.50 (0.51)	4.32 (0.72)	4.87 (0.25)	4.43 (0.56)	4.47 (0.56)	4.67 (0.46)
6 Fall	2016	4.65 (0.50)	4.38 (0.67)	4.93 (0.30)	4.57 (0.49)	4.57 (0.61)	4.77 (0.46)
7 Spring	2017	4.65 (0.43)	4.34 (0.62)	4.90 (0.20)	4.61 (0.49)	4.54 (0.45)	4.71 (0.31)
8 Fall	2017	4.75 (0.57)	4.53 (0.73)	4.95 (0.15)	4.73 (0.63)	4.79 (0.59)	4.89 (0.48)
9 Spring	2018	4.55 (0.60)	4.32 (0.59)	4.97 (0.34)	4.44 (0.68)	4.55 (0.60)	4.76 (0.52)
Total mean value (SD)	4.53 (0.15)	4.29 (0.15)	4.90 (0.05)	4.46 (0.16)	4.51 (0.15)	4.70 (0.10)	

Table 5. Mean and standard deviations for responses by semester (N=623). SD = Standard deviations

From the most frequent open-ended comments from students, five main thematic categories related to the open-ended question of applicability in their respective clinical practice emerged:

- Collaboration,
- Respectful communication,
- Assessment and evaluative tools used by each discipline,
- Specific swallowing interventions for patients with dysphagia resulting from a stroke, and
- The value of contributions of both disciplines toward patient safety, independence, and health outcomes.

In response to the opportunity for providing overall comments, the three major thematic categories included:

- An appreciation for the scope of practice and unique skill sets and resources each discipline brings to patient care;
- A desire to have more frequent IPCs throughout the semester with more complex simulations, multiple patient diagnoses requiring interventions, and the involvement of other health professionals;
- A high value placed on providing an opportunity for directly engaging more student participation in multiple and varied simulations for reinforcement of learning.

Statements expressing the hallmarks of interprofessional collaboration that the faculty sought to achieve included “I will be able to confidently utilize my resources and be able to work with other professions because everyone plays an essential role in promoting the independence of a patient”; “The importance of spending time to collaborate with all members of [the] interprofessional team for providing the best quality of care”; and “Since both professions have similar goals-we can consult [with] one another and share info[-mation] to better treat the client. Treating patients is a collaborative process that requires communication with all health professionals.”

Discussion

As it has become increasingly important in improving patient care, facilitating care coordination and collaboration, and lowering costs, interprofessional education that occurs during the training of health professionals enhances the team problem-solving approach and minimizes professional silos (McGettigan & McKendree, 2015; Newhouse & Spring, 2010). In fact, students who were trained in IPE are more likely to show respect and have positive attitudes toward one another in collaborative teamwork (McGettigan & McKendree, 2015; Morphet et al., 2014). Hence, in response to the need to break away from siloed practice and respond to the call for collaborative interprofessional teamwork in the healthcare industry, one class session per semester was dedicated to an IPE experience in the nursing and OT curricula. Overall, students who participated in the IPC had a positive experience. The evaluation results indicate that the IPCs provided valuable learning experiences to students from nursing and OT programs. Furthermore, the current IPC structure facilitates achievement of the learning objectives of the class and fulfills the four Core Competencies of the IPEC (IPEC, 2016), albeit at an introductory level.

Two of the IPC’s learning objectives are to reinforce interprofessional communication and to promote interprofessional teamwork and delegation through respectful communication. These two objectives match with the IPEC’s Core Competencies on communications, and effective and efficient team roles among healthcare professionals. As revealed from the results of the IPC evaluation, students unequivocally “strongly agreed” with the importance of communication and

teamwork in interprofessional interactions. Through participation or observation of the simulation enactment and the guided debriefing, nursing and OT students drew the same conclusion that communication and teamwork facilitate continuity of care between the two disciplines, enhance a patient’s experience, and ultimately augment the quality of care to all patients. Furthermore, through the IPC experience, nursing and OT students gained an appreciation of the interrelated and interdependent roles of the two disciplines. From the nursing students’ standpoint, statements such as “I am now more aware of occupational therapist’s scope of practice, so I know who to refer to for certain orders and implementations I need to address for [the] patient” and “I will be able to confidently utilize my resources and be able to work with other professions” clearly exemplify the value of IPE. As healthcare professionals do not work in silos, early student exposure to topics of professional role blurring and delineation will only improve teamwork and collaboration in their future practice. Similarly, more knowledge of the scope of practices between nursing and OT disciplines not only enhances communication but also generates appropriate interdisciplinary referrals to improve patient care, as stated by a nursing student: “[I now understand] when to involve/refer OT, work with OT, understand what OT actually does, collaborate with OT.”

On the other hand, the assumption that healthcare professionals are cognizant of one another’s roles can be detrimental to the value-based system, as available resources are not being utilized appropriately, and duplication of effort may fragment team collaboration. For example, through the IPC classes, OT students also came to realize the importance of advocating for their own profession for the benefits of patient care. OT students articulated, “[I am] able to [provide] education [to] nursing staff in assessment and evaluation; I didn’t realize they had very little exposure to it,” and “I will be able to describe what OT is to nursing staff better, and describe our roles in pt[patient] care.”

The detailed script provided to the patient actor during simulation, describing the condition of a post-CVA patient with left-sided hemiplegia, dysphagia, and language and communication deficits, was chosen to illustrate the importance of positioning, use of adaptive equipment, proper oral examination and hygiene, and compensatory swallowing techniques to maximize

patient participation and safety in self-feeding. Through simulation observation and guided debriefing, nursing and OT students shared with each other their care plans for the patient. While nursing students gained knowledge of upright posture and different head positions for safe swallowing, OT students acquired more appreciation of the comprehensive roles of nursing in ensuring continuity of care and prevention of complications. Thus, nursing and OT students began to develop awareness of how to plan and deliver an interprofessional health program that is safe, timely, efficient, effective, equitable, and executed within one's own professional role (IPEC, 2016).

Most importantly, the IPC experience strengthened the mutual respect between the two disciplines. Recognition remarks from students included "better understanding of nursing expertise in this area . . . will bring this appreciat[ion] to my clinical practice"; and "Respect for OT and using their knowledge as a reference." In fact, comments on great appreciation and respect for the each other's discipline among nursing and OT students were noted countless times in the open-ended questions. Furthermore, a comment concerning "how the OT and nurse can collaborate to make the patient feel included and more confident" also illustrates the fundamental spirit of patient-centered care. Thus, exposing the nursing and OT students early in their academic training to IPE prepares them as a "collaborative practice-ready" workforce to deliver the highest quality of care (WHO, 2010). It is notable and observable on DUC's small campus, with high enrollments of first-generation college students of ethnically diverse backgrounds, that students begin to seek and explore their own professional identities through positive relationships outside of their respective majors. Hence, the development of interprofessional relationships may go beyond one IPC session.

Having an IPE at a small university, with only two accredited health professional programs at the time, had its advantages and disadvantages. Most notable strengths of this project were the integration of the interprofessional simulation class within the respective nursing and occupational therapy courses, the ongoing faculty improvement in facilitating and engaging the students through open discussion, the use of small group discussions inclusive of both nursing and occupational therapy students, and the development of a

faculty debriefing guide. As with any simulation, a critical aspect of learning is debriefing. The debriefing guide listed the most salient points to address after each simulation and allowed both nursing and occupational therapy faculty to be consistent in providing meaningful student feedback in spite of having four different small groups every semester. Of note, despite using a debriefing guide, students were reticent during the initial classes to voice observations. This was likely due to the students' lack of understanding of each other's disciplines, and possibly the differences in master's and undergraduate levels of study. However, presenting the debriefing guide to students in advance alleviated this hesitancy in subsequent classes.

Another strength of this class is the demonstration that IPE can be accomplished with low-fidelity and inexpensive supplies. In fact, the low-fidelity sessions may have further contributed to the higher level of student engagement, interactions, and discussions during debriefing, as mid- and high-fidelity equipment can be a distraction at times. Selected nursing and OT students were prepped for the respective roles as patient actor/actress, nurse, and occupational therapist in the simulation. During debriefing, students who were acting as patient actors/actresses were able to share their insights as patients with limited communication abilities being cared for by a member of the interprofessional team. Furthermore, logistically, dividing the class into four smaller groups made productive discussions feasible and manageable. The smaller group arrangements allowed students to freely participate and contribute to the debriefing discussions, whereas keeping the whole group of 60–70 students together might have caused intimidation and low participation.

Unique to this learning activity is its adaptability to numbers and levels of students in any given school with any number of professional programs. Additionally, the implementation of an interprofessional class as detailed in this article need not be resource intensive or use high-fidelity technology; it is more critical that it be applicable to expected interprofessional encounters in various healthcare settings. Highly relevant clinical scenarios grounded in the patient experience and evidence-based practices can be created and continuously evaluated by faculty to address IPEC core competencies and student-learning outcomes.

The fact that the IPC is only a single class offered in one semester throughout the whole curricula of the two professional programs is a disadvantage of the project; there is no effective reinforcement or measure of student learning, retention, and application to clinical practice over time. Building on the success of this single class, planning is underway for more interprofessional learning opportunities such as the application of an interprofessional passport framework (East Michigan University, n.d., University of British Columbia, n.d.). Other limitations of this project involved issues beyond immediate faculty control, such as scheduled testing in other courses, timing of the class, space constraints, and the use of student/staff actors instead of standardized patients. The IPCs were intentionally scheduled near the end of the semester when students had the opportunity to learn concepts and acquire necessary knowledge in their respective majors. However, some of the nursing students remarked that competing priorities, such as tests in other courses on the same day as the IPC, weakened full participation. Furthermore, to accommodate a group of 15–20 students jointly from the two disciplines, the simulation occurred in the two large multipurpose simulation laboratories. An arrangement that reduced the realism of a simulated acute care environment. Last, both nursing and OT students took on the roles of volunteer patients and professionals from their respective disciplines in the simulations. Some students took well to this and were prepared, whereas others approached the simulations with uncertainty even when coached beforehand by faculty. Thus, their hesitancy further distracted from the authenticity of the simulation.

Conclusions

The overarching goal of the IPC sessions is to foster interprofessional student learning through simulation in achieving improved health outcomes and optimal healthcare. Intersections of learning that are hallmarks of interprofessional collaboration are teamwork, appreciation of roles and responsibilities, listening and communication, critical reflection, effective relationships, and valuing and acknowledging views of others (WHO, 2010). This collaborative effort between accredited health professional programs at DUC, nursing and occupational therapy, sought to integrate these hallmarks into a simulation pedagogy. Clearly, across semesters, students have found the IPC sessions mean-

ingful and valuable. Students have particularly indicated that teamwork and communication are vital. After all, as one of the students stated, “Everything is about the patient, it is not about the disciplines.” The aggregate data provided across nine consecutive semesters in five academic years also provides evidence that an IPC such as this one, which utilizes existing programs and resources, can be effective in student learning.

For further development, having representation of other health professionals in the simulation could further enrich learning. Thus, involving the perspectives of professionals in social work, speech pathology, physical therapy, rehabilitation medicine, physician assistants, pharmacy, and/or healthcare administration, for example, would raise the quality and level of interaction, and application of skills, knowledge, and expertise in an IPE experience. Evaluating the effectiveness, long-term impact, and transference of knowledge as graduates enter practice is an important next step. Furthermore, as simulation best practices continue to evolve, the results from the evaluation data substantiate the need for continued research, as well as the development and implementation of interprofessional learning and the evaluation of its impact on patient care outcomes.

Implications for Interprofessional Practice

New educational standards for accredited nursing and occupational therapy programs are being introduced and will be effective in 2019 and 2020, respectively. In these new accreditation standards, interprofessional education is highlighted as an essential component for accredited education programs when preparing for future collaborative healthcare industry professionals. This article describes the teaching process and evaluation of an interprofessional class in the geriatric curriculum between nursing and occupational therapy programs in a small private university. The evaluation data lays the foundation for further development of interprofessional class content and supports a small-scale interprofessional education model, even with limited resources.

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