



Interprofessional Education: Future Nurses and Physicians Learning Together

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Interprofessional education (IPE) brings students from various healthcare professions together for shared learning experiences. The goal of IPE is to prepare the healthcare force to work together collaboratively towards a more safe, patient-centered, and community-oriented health care system.¹ While new to medical and nursing school education, there is evidence that student attitudes toward interprofessional collaboration and communication may be enhanced through IPE.² Participating in interdisciplinary teams also gives students a better understanding of the role each discipline has in the health care system and its delivery.³ These factors would result in efficient and effective patient care through improved clinical decision-making.

In 2003, the Institute of Medicine urged educators as well as accrediting, licensing, and certifying organizations to insure that students develop and maintain proficiency in working as part of interdisciplinary teams.⁴ A recent report by the Interprofessional Education Collaborative (IPEC) Expert Panel recommended four interprofessional competencies:¹

Values/Ethics for Interprofessional Practice

Work with individuals of other professions to maintain a climate of mutual respect and shared values. Encompassed in this competency are issues such as maintaining confidentiality, embracing cultural diversity, respecting unique cultures, managing ethical dilemmas specific to interprofessional care situations, and acting with honesty and integrity in relationship with other team members.

Roles/Responsibilities

Use knowledge of one's role and those of other professions to assess and address appropriately the healthcare needs of the patients and populations served. It involves recognizing one's limitations and engaging diverse healthcare professionals to complement one's professional expertise.

Interprofessional Communication

Communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease. It also includes giving feedback, responding respectfully, resolving conflict, and encouraging input from others.

Teams and Teamwork

Application of relationship-building values and the principles of team dynamics to perform effectively in different team roles including the planning and delivery of patient care that is safe, timely, effective, and equitable.

In response to these national recommendations and with the encouragement of the leadership of each school, the John A. Burns School of Medicine and the School of Nursing and Dental Hygiene at the University of Hawai'i at Manoa implemented three collaborative learning experiences for first-year medical and nursing students. Several principles were essential in the creation of these experiences. First, the sessions were designed and delivered by faculty members from both schools. Second, the learning objectives were chosen to be reflective of core competencies from both programs. Finally, active learning methods that required and illustrated the value of interprofessional interaction were utilized, since educational planners believe that physicians and nurses should understand the role each plays and value the unique contribution made by both professions to the care of patients and their families.

The following describes the objectives, instructional methods, and student feedback from the first year. The series consisted of three four-hour sessions on Interprofessional Communication, Patient Safety, and Clinical Ethics. A preliminary look at future interprofessional learning experiences planned through this partnership is also provided.

First Session: Interprofessional Communication

The first session was held early in the Fall semester of the first-year of training for both the medical and nursing students. To provide patient-centered care through teamwork, students were introduced to basic skills essential for communication with other healthcare providers, patients, and their families.

Learning Objectives

1. With a patient or patient's family, use understandable language, avoiding unnecessary terminology when possible.
2. With other members involved in patient care, share knowledge and opinions with confidence, clarity, and respect to ensure a common understanding of the information, treatment, and health care decisions.

3. With other members involved in patient care, listen actively and encourage the ideas and opinions of other team members.
4. Communicate regularly the importance of teamwork in patient-centered care.

Table 1. Interprofessional Communication Session Content and Instructional Methods	
Activity	Instructional Method
Welcome and Introduction	
"Getting to know you" ice-breaker	Small group activity
Collaborative Communication Part 1 • Sharing our knowledge with respect • Using understandable language • Listening actively • Encouraging ideas from others	Large group interactive lecture and videos
Communication activity 1	Small group role-play and discussion
Collaborative communication skills Part 2 • Cultural and social issues • Non-verbal communication • Pitfalls to avoid	Large group interactive lecture and demonstrations
Communication activity 2	Small group role-play and discussion
Closing, Evaluation, and Lunch	

The most important outcome of the first session was that the students from both schools recognize and respect each other's professional roles. The day began with an opportunity for the students to meet and introduce themselves in groups of 10-12 students. They spent the day in the same groups to deepen this working relationship through shared tasks and scenarios. Students also enjoyed lunch together at the conclusion of the session.

The small group communication activities emphasized inter-professional communication. Students were given scenarios and communication tasks to role-play as doctors and nurses. Topics for discussion were provided which allowed for reflection on the importance of culture and social issues in communication. Student feedback (Table 2) was very positive.

Table 2. Selected Results from the Interprofessional Session on Communication					
Statement		Number of Respondents and (Percent)			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	This session improved my understanding of interprofessional education.	71 (74%)	24 (25%)	1 (1%)	-
2	I believe there is value in medical students and nursing students training together on selected topics.	109 (96%)	5 (4%)	-	-

Student comments from the session included the following:

"It was amazing working together! I feel like it broke a lot of our pre-conceived notions about our fields... We all just came together as students and worked together as a team, and that was awesome!"

"We should do this again... building a bond with our future colleagues is valuable and will be helpful when time comes for working."

"I learned that we are all knowledgeable about different things and we will be able to work together to provide the best care possible."

Second Session: Patient Safety

The second joint session occurred in the latter part of the Fall semester. This session introduced basic concepts and emphasized the importance of working as interprofessional teams to minimize medical error and maximize patient safety. (See Table 3 for content and instructional methods)

Learning Objectives

1. Define patient safety.
2. Discuss the scope of patient safety issues in healthcare.
3. Identify basic factors contributing to errors.
4. Describe Reason's Swiss Cheese Error Model.
5. List common contributing causes of errors and recommended safety practices for prevention.
6. Explain strategies used by high performing teams to improve patient safety in healthcare.

Special features of the patient safety session included a ball toss activity during which small groups of medical and nursing students tossed a ball back and forth to each other. The toss of the ball represented a "hand-off" of a patient to another team member. A drop of a ball represented an error. The number of balls students needed to keep in constant motion was gradually increased. Students were removed from the group and added to the group to simulate an emergency, a sick member, a holiday, or other events that can disrupt the number and integration of the members of a team. Students appreciated the sometimes chaotic nature of the clinical environment and the potential for errors.

In addition, students had the opportunity to discuss in interdisciplinary groups, a variety of scenarios, some on video and others written on paper, which challenged them to identify errors, determine contributing causes, and strategies to avoid these errors in the future. Community experts were recruited to act as content matter facilitators for group activities. Student feedback (Table 4) was very positive.

Student comments from the session included the following:

"The materials and methods were great today –realistic, effective, engaging. Fantastic facilitators!"

"By fostering a 'culture of safety' and simply being aware, honest, and always approaching every situation with good intentions, the world of healthcare would be a lot safer and effective for all."

Activity	Instructional Method
Welcome and Introduction	
Ball Toss Activity	Small group activity
Patient Safety: The Reality <ul style="list-style-type: none"> • Why it's important • What it means • How we're doing Scenario illustrating errors that occur during the care of a pregnant woman	Large group interactive lecture and video
Patient Safety activity 1: Review of video scenario	Small group discussion with faculty facilitators
Patient Safety: Error Causation and Contributing Factors <ul style="list-style-type: none"> • Dangers inherent in health care • Factors contributing to errors • Organizational systems and processes • Complicated technology • The clinical environment • Complex human behavior 	Large group interactive lecture
Swiss cheese error model (Slices of swiss cheese are successive layers of defense, with holes being opportunities for a process to fail)	
Introduction to case scenarios	
Patient Safety activity 2: Review of multiple case scenarios, including contributing factors and prevention strategies	Small group discussion with faculty facilitators
Patient Safety: A Team Sport <ul style="list-style-type: none"> • Characteristics of High Performing Teams • Team Strategies to Prevent Errors <ul style="list-style-type: none"> • Leadership • Communication • Practice Together Create Situational Awareness	Large group interactive lecture
Closing, Evaluation, and Lunch	

Third Session: Clinical Ethics

The third interprofessional session was held in the latter part of the Spring semester. This session introduced concepts in clinical ethics, important ethical considerations in serving as healthcare professionals, and emphasized the importance of working as interprofessional teams to honor patients' wishes in end-of-life care.

Learning Objectives

1. Recognize individual values that impact personal thoughts and actions.
2. Describe the basic concepts and principles of clinical ethics.
3. Utilize the 4 Box Framework for ethical analysis of a case study.
4. Develop a collaborative recommendation guided by ethical principles and concepts.

Statement	Number of Respondents and (percent)				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1 The objectives for this program were met.	77 (66%)	36 (31%)	3 (3%)	1 (1%)	-
2 The teaching methods used in this simulation were effective.	68 (58%)	41 (35%)	7 (6%)	1 (1%)	-
3 The facilitators supported the group in the learning process.	85 (73%)	28 (24%)	3 (3%)	-	-
4 I am confident this simulation covered critical content areas necessary for the development of my professional roles and responsibilities.	73 (62%)	40 (34%)	4 (4%)	-	-

Activity	Instructional Method
Welcome and Introduction	
Who lives? Who dies? Activity	Small group activity
Concepts in Clinical Ethics <ul style="list-style-type: none"> • Autonomy • Beneficence • Nonmaleficence • Justice • Confidentiality • Informed consent • Competence • Capacity Treatment options/alternatives Decision makers and decision-making The law and ethics Dilemmas Common issues in clinical ethics After the decision – next steps	Large group interactive lecture and videos
Clinical ethics case analysis framework: The "Four Boxes" (A method that takes into account medical indications, patient preferences, quality of life, and other contextual features that aid in decision-making when faced with an ethical dilemma)	Large group interactive lecture
Case study	Small group activity
Case study debriefing	Large group discussion
Closing, Evaluation, and Lunch	

The session began with students discussing a scenario about people on an island about to be hit by an approaching tsunami. They were asked to determine who would and would not be saved by a rescue helicopter with limited seating. This served as an opportunity for all participants to examine their values. Students then watched an episode of a medical television show that highlighted various ethical issues. This was followed by interactive lectures and videos that covered major concepts in clinical ethics. Finally, after learning the “Four Boxes” model for analyzing ethics cases, students applied this method in small groups to a new scenario, developing recommendations for the case that they shared in a large group debriefing session. Community experts were recruited to act as content matter facilitators for group activities.

Student feedback (Table 6) was generally positive.

Statement	Number of Respondents and (percent)				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1 The objectives for this program were met.	29 (45%)	27 (42%)	8 (12%)	-	1 (1%)
2 The teaching methods used in this simulation were effective.	26 (39%)	28 (42%)	9 (14%)	3 (5%)	-
3 I understand the foundational principles of ethics.	37 (56%)	25 (38%)	4 (6%)	-	-
4 I have a better awareness of the common ethical issues in patient care.	31 (47%)	30 (45%)	3 (5%)	2 (3%)	-

Student comments from the session included the following:

“I enjoyed this session and look forward to the next one.”

“I would like to learn more! But I did learn a great deal today.”

“Not enough time working together,” and “More small group activities.” was a common comment that will be addressed for future sessions.

Student comments about the interprofessional sessions in general included the following:

“Enjoy these seminars – great opportunity.”

“I love interacting with people I may be working with in the future.”

“Workshops are very helpful in guiding and building communication between nurses and physicians.”

“It’s nice to interact with med students. To see how they are developing as health providers is interesting as compared to developing nurses. I like to see the similarities and differences. It creates a sense of “team” which is important and will benefit patients later on when we are all working in the health care field.”

The current first-year classes from both schools will have additional sessions together in future years. The three sessions described here will be repeated for incoming first-year students at both institutions. Faculty are also considering expanding participation in these sessions to students in other healthcare fields, such as social work and pharmacy. Also in consideration is the use of hi-fidelity manikin simulations as a collaborative learning model.⁵ Both schools are also considering IPE that takes place in the hospital and clinics, where many healthcare fields work together. Finally, these simulations and/or standardized patient experiences may be used to directly measure and evaluate interprofessional competence to insure that future healthcare providers learn that a collaborative approach will enhance patient care.

The theoretical underpinnings of IPE emphasizes that we learn through interactions with others. Learners engaging with other professionals gain a better understanding of their roles, beliefs, values, and culture. Interdisciplinary problem-solving and active, collaborative tasks deepen this understanding and lead to shared patient care goals.⁶ Students in such activities have increased their perceived interprofessional competence and developed a better understanding of the role of communication, teamwork, and collaboration in patient care.⁷ The John A. Burns School of Medicine and the School of Nursing and Dental Hygiene at the University of Hawai‘i believe that shared learning experiences between their students will encourage them to work collaboratively and deliberately together in their future roles.

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