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Interprofessional Healthcare Themes Derived Through Critical Discourse Analysis

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ABSTRACT

One of the four primary learning competencies of Interprofessional Education (IPE) is Interprofessional (IP) Communication. Rosalind Franklin University of Medicine and Science (RFUMS) partnered with the University of New England (UNE) to offer an IP Team Immersion (IPTI) telehealth simulation (tSIM). IPTI aims to provide opportunities for IP teams of students to increase the understanding of each other's roles, responsibilities, demonstrate teamwork principles and skills, and apply integrated communication skills for team-based, patient-centered practice in a simulated setting. We hypothesized that IPTI provides an opportunity for students to learn communication skills in an IP team setting and that Critical Discourse Analysis (CDA) can be used to identify incidences of verbal and non-verbal communication.

In this experience, groups of students formed IP teams and worked together to plan their approach to a standardized patient (SP) case. Nine student teams across two universities and ten health professions participated in the virtual sessions and simulations. At the end of the tSIM activities, IP student teams were given 45 minutes to debrief and discuss their performance during the tSIM.

CDA can be used to understand how communication among a team of IP healthcare students contributes to student learning in a simulated clinical environment. This study used CDA to analyze communication during the debrief sessions and the four main themes identified were Verbal Communication, Non-Verbal Communication, Working Relationships, and Telehealth.

Our results indicated that IPTI provided an opportunity for students working in a team to practice and learn communication skills used within an IP team.

Keywords: Telehealth, Interprofessional, Qualitative analysis, Communication, Education, Healthcare

Introduction

The WHO Framework for Action on Interprofessional Education and Collaborative Practice (2010), states that "Interprofessional education occurs when two or more professionals learn about, from and with each other to enable effective collaboration and improve health outcomes". Interprofessional education (IPE) is a necessary step to prepare a "collaborative practice-ready" healthcare workforce (Interprofessional Education Collaborative, 2016). Accrediting bodies representing health professions recognize the importance of training students to be competent in Interprofessional (IP) collaboration and require IPE to be included in curriculums (Health Professions Accreditors Collaborative and National Center, 2019). In February 2019, the Health Professions Accreditors Collaborative released a report to provide guidance to institutions on implementing uniform and quality IPE (Health Professions Accreditors Collaborative and National Center, 2019). Research has shown that IPE is more effective when principles of adult learning are used (e.g., problem-based learning), such as learning methods to reflect real world experiences (WHO, 2010). Health professional programs use simulated cases in their curricula to mimic real-world healthcare situations as active learning strategies. The World Health Organization defines a simulation (SIM) exercise as an educational activity that emulates a clinical environment to facilitate learning and enhance clinical preparedness. SIMs give students the opportunity to learn fundamental skills in a safe environment, to help them effectively transition to clinical healthcare settings (Xavier, & Brown, 2022)

The Interprofessional Team Immersion (IPTI) SIM is a developmental, longitudinal, and sustainable activity (Konrad, Cavanaugh, Rodriguez, Hall, & Pardue. 2017). IPTI is designed as a small group, interactive, cross-professional learning and teamwork experience, first developed at UNE in 2014. In 2020, the IPTI platform was moved from an in-person format to a remote, Zoom-based format. The broad objective for IPTI is based on behaviors cited in the Interprofessional Education Collaborative (IPEC) Core Competencies for Interprofessional Collaborative Practice (Interprofessional Education Collaborative, 2016). IPTI aims to provide opportunities for IP teams of students to increase understanding of each other's roles, responsibilities, demonstrate teamwork principles and skills, and apply integrated communication skills for team-based, patient-centered practice in a simulated setting.

Health profession students often graduate with little knowledge about or no experience with IP Communication, a core competency of IPE (Interprofessional Education Collaborative Expert Panel, 2011). IPEC defines this competency as communication with patients, families, communities, and professionals in health and other related fields. IP Communication emphasizes using respectful language, organizing and communicating information in an understandable form, using effective communication tools and techniques, and communicating effectively in difficult situations (Interprofessional Education Collaborative Expert Panel, 2011). This is a problem because Interprofessional Collaboration amongst healthcare professionals has demonstrated improved patient outcomes due to the value of patient care each member adds to the team (Esperat, Hust, Song, Garcia, & McMurry, 2023).

Critical Discourse Analysis (CDA) is a qualitative analytical method that addresses how transcripts of verbal interactions are initiated, maintained, reproduced, and transformed within specific contexts (Van Dijk, 1988). CDA has been utilized to examine shared IP collaboration discourse, medication communication between patients and health professionals, world views on nurse-physician collaboration, and many other discourses amongst groups of people (Haddara, & Lingard, 2013; Liu,

Manias, & Gerdtz, 2012; Henneman, 1995). Fairclough and Wodak (1997) state that discourse (language; communication) is a social action that allows us to make meaning in the construction of identity, experiences and events that are socially shaped, such as Interprofessional Practitioners. One of the purposes of IPE is to facilitate healthcare professionals in developing a collaborative identity that allows them to share a mental model of practice. Furthermore, Fairclough and Wodak (1997) argue that discourse allows us to turn abstract ideals into interactive concrete knowledge through communication. Discourse also helps us internalize and organize social norms, which impact how we communicate socially, as a community, and professionally (both as healthcare providers and patients). CDA is an impactful methodology for assessing IP education and practice because of its role in Critical Theory (Wodak & Meyer, 2009) which focuses on how self-reflection can overcome prejudice, power asymmetries and resources. This matches the goal of IPE, in which healthcare providers and patients are equal and are all part of the discourse.

Research has shown that the use of simulations for interprofessional training of health care professionals showed positive effects on teamwork and IP Communication due to the evident varying of medical terminology used amongst healthcare professions (Muñoz de Morales-Romero et al., 2021; Pence, Watkins, & Neubrander, 2023). We utilized CDA on debrief conversations after a telehealth IPE simulation to explore how students used language and communication to develop their collaborative skills and team identity.

Methods and Materials

Methods

A Critical Discourse Analysis was conducted on the data to assess communication style and meaning between IP teams of students in-order to analyze how students reflected and thought about team collaboration and teamwork during the SIM using CDA. This approach provides insight into how the students learn during an IP activity.

Design of "Telehealth" IPTI

The IPTI telehealth SIM (tSIM) used a remote telehealth-type format which allowed a collaboration between UNE and RFUMS. Learning objectives are shown in Table 1.

Table 1. IPTI Educational Objectives used to guide CDA

Communicate information with patients and health team members in a form that is understandable, avoiding discipline-specific terminology when possible.
Collectively express one's knowledge and perspective with team members (including patients) who are involved in patient care and population health improvement. Share with confidence, clarity, and respect, working to ensure common understanding of information, treatment, care decisions, and population health programs and policies.
Listen actively, encourage, and discuss ideas and opinions of other team members including patients.

Use respectful language appropriate for a given difficult situation, crucial conversation, or conflict with team and patient.
Recognize how one's uniqueness and empowerment (experience level, expertise, culture, power, and hierarchy within the health team) influences/impacts effective communication, conflict resolution, and positive interprofessional working relationships (University of Toronto, 2008).
Understand/communicate the importance of teamwork in patient-centered care.

IPTI was offered over a 7-month period between September 2020 to March 2021. Figure 1 describes the timeline of the sessions included in IPTI. The small team interactive experiences were provided in the remote format utilizing Zoom™ breakout rooms. After each simulation and the debrief session, surveys were distributed to the participants, facilitators, and SPs.

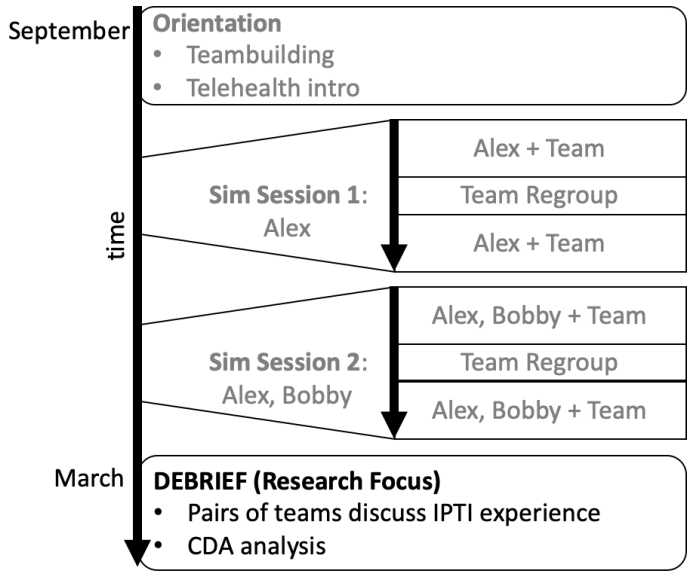


Figure 1. IPTI Timeline

Participants

IPTI facilitators created a recruitment email detailing the program and time commitment. This email was sent to students enrolled in a health professions program at UNE and RFUMS. Nine student teams across the two universities and ten health professions volunteered to participate in the virtual sessions and tSIM. A total of 69 students volunteered to participate in this activity: 10 students from RFUMS and 59 UNE students representing professional programs in Pharmacy, Physical Therapy, Occupational Therapy, Dental, Physician Assistant, Allopathic Medicine, Osteopathic Medicine, Social Work, Nursing, and Psychology. Students were only excluded if the program had too many students from a specific health profession that volunteered. Each student was required to attend motivational

interviewing and telehealth skills sessions to account for knowledge/exposure gaps from the participants.

Ethical Considerations

The participants were informed electronically of the program's nature and there were no ramifications if they decided to opt-out at any time. Participants consented to recordings of their interactions and discussions. Responses to surveys were completed and remained anonymous.

Ethical review board name: University of New England Internal Review Board (IRB) Project

Date of ethics review decision: Received Exempt determination on 11/11/2022.

Ethics assessment document issue number: Project # 111120-10-A

Research Team

The Research Team was composed of 18 health professions faculty (Nursing, Occupational Therapy, Dental Hygiene, Pharmacy, Public Health, and IP Research) and student facilitators from both Universities. Research Team meetings were held via Zoom to create "The IPTI Qualitative Analysis Coding Dictionary" (Coding Dictionary: see appendix) to adopt a uniform coding method based on IP competencies. Educational outcomes shown in Table 1 formed the basis of the Coding Dictionary.

Data Analysis

Analysis teams of 1 to 3 people were created to analyze and code videos of tSIM sessions and debrief transcripts using the Coding Dictionary (See Appendix 2). Analysis Teams conducted inter-rater reliability on coded transcripts to ensure data reliability and uniform coding. The larger Research Team reviewed coded transcripts for general agreement and consistency.

Simulation Scenario

Alex, a homeless 20-something year old person, is recommended to a community health clinic after a visit to a free dental clinic. Alex reported vertigo, decline in ability to take care of physical, mental health/appearance, possible depression and anxiety, as evidenced by fatigue, listlessness and patient's verbalizations of "feeling worthless". The IP Team and team Facilitators met with Alex for two 40-minute sessions. Each 40-minute session was broken into two 20-minute interactions. Alex's friend Bobbie joins the second session to help with the encounter and advocate for Alex. In the break between interactions, the IP Team met to plan and discuss hand-offs and debriefs after each interaction and between sessions. The sessions were recorded for later Conversational/Observational analysis. After each tSIM session, IPTI facilitators and SPs completed a survey rating the teams' performance after each encounter.

Debrief

After the telehealth sessions with Alex and Bobbie, IP student teams were paired with another team and their assigned Facilitators. Teams were given 45 minutes to debrief, and Facilitators offered prompts (shown in Table 2) to the teams for consideration and discussions. We focused on the data from the debriefs because this is where reflective learning took place. The transcripts from the debriefing sessions were transcribed using Panopto, edited for coherence, and distributed amongst the Research Team for distribution to the Analysis Teams for coding.

Table 2. Debriefing Prompts

Briefly describe your team's experience with Alex and Bobbie
Discuss how you and your team used each other's knowledge and strengths to develop your simulation plan. Did you consider all options to solve the problem and provide care?
What did you learn about yourself (assumptions, biases, strengths, style) during IPTI?
In what ways do you anticipate knowledge gained during IPTI will influence your future practice?
What was your greatest takeaway from IPTI?

Debrief Analysis

Analysis Teams used the Coding Dictionary to evaluate videos of debrief discussions of the tSIMs. Each Analysis Team analyzed the data to compare and discuss their designated codes to establish agreement and consistency.

Analysis Teams noted perceptions, agreement and disagreement of communication and discourse of discussion by the student participants during the tSIM. If at least 2 people from the Analysis Team agreed or validated a code, the code was accepted for the qualitative data set. The Analysis Team then discussed coding patterns and began to assign themes to the data set. An example is shown in Table 3, below:

Table 3. Transcript (lines 71 and 72)

Transcript content	Team member 1	Team member 2	Team member 3	Code validated	Theme	Sub-Theme	Notes
We really got into some of her social issues that she was dealing with and some of our familial	CC6	CC3, CC4	CC6*, CC2	CC6*	Verbal Communication	Patient Centered	Showing interest in the patient's past; safe space; building trust with patient;

problems that I've been holding in.	inviting the patient into the discussion

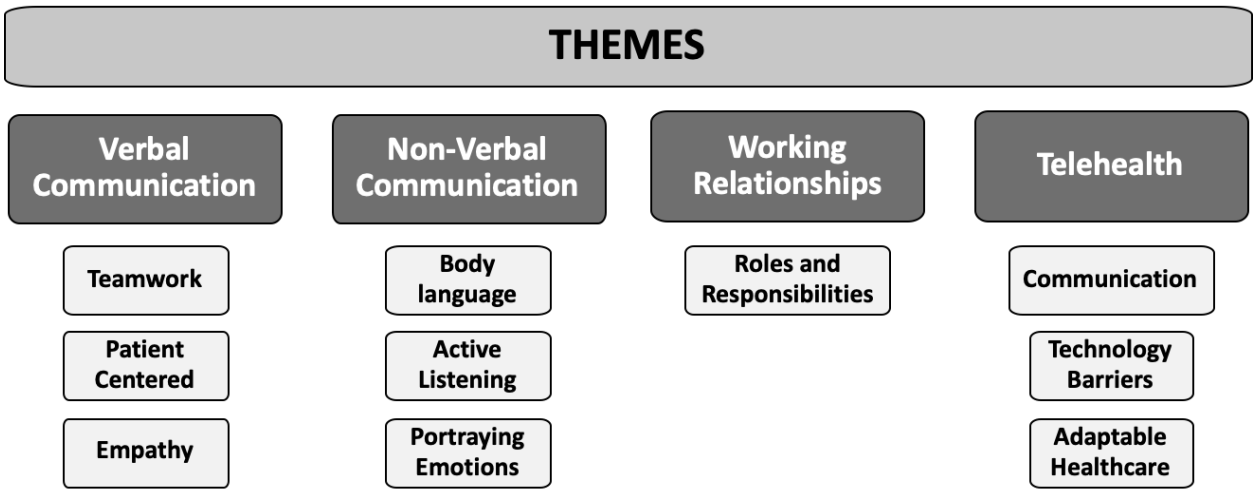
*CC6: Use respectful language appropriate for a given difficult situation, crucial conversation, or conflict with team and patient. See "Qualitative Coding Dictionary" in the appendix for additional codes.

Results

Qualitative Analysis

CDA was conducted on the data to analyze the interactions of IP Teams during the debrief. Four themes (Verbal Communication, Non-Verbal Communication, Working Relationships, Telehealth) emerged from the debrief transcripts (Figure 2).

Figure 2. Thematic Map



Verbal Communication

Subthemes are Teamwork, Patient-Centered, and Empathy. These sub-themes showcase the way the team communicated between each other and the patient.

- Teamwork: Statements in which the students communicated with each other to solve problems and used "we" statements.
- Patient-Centered communication: Statements in the transcript that showed the team communicating about specific needs of the patient.
- Empathy: Statements based on the team's ability to create a safe space (using verbal communication).

Non-Verbal Communication

Subthemes are Active Listening, Body Language, and Portraying Emotions. These subthemes focus on the way the team interacts with each other or the patient without using words. This is shown in the transcript when the team describes the non-verbal interactions during their debriefs and patient sessions.

- Active Listening: Statements showing that the team used active listening skills during their debrief and patient sessions.
- Body Language: Statements of how the team described the patients and/or their body language during their interactions.
- Portraying Emotions: Statements showing how the teams described the way the patient and/or team member portrayed emotions (laughing, looking sad, etc.)

Working Relationships

The Subtheme for Working Relationships is "Roles and Responsibilities". This Subtheme is based on how team members worked together interprofessionally (not how they communicated with each other).

- Roles and Responsibilities: statements showcasing each team member understanding their own roles and responsibilities on the team and those of their teammates.

Telehealth

Subthemes for Telehealth are Communication, Adaptable Healthcare, and Technology Barriers. These subthemes show how the team and the patient interacted with the telehealth format of the SIM.

- Communication: Statements indicating communication methods used and/or problems encountered that otherwise wouldn't have been encountered if not for the telehealth environment.
- Adaptable Healthcare: Statements relating to the team's ability to assess the patient's healthcare needs in a telehealth environment.
- Technology Barriers: Statements showing how the team performed despite technical issues (camera, audio, etc.).

Verbal Communication was recognized by statements which described how the team exchanged information amongst each other and with the patient. These interactions are highlighted by the sub-themes shown in Table 4: Patient Centered, Empathy and Teamwork. For example, Transcript Line #71 shows the Team's Patient-Centered communication facilitating the patient's opening up about problems which they had not been able to previously verbalize. Transcript Line #81 provides an example of how the team communicated with Empathy about a non-medical topic which facilitated open communication

about the health situation at hand. Transcript Line #111 highlights how the tSIM engaged the team to work collaboratively. Here they acknowledged their collaborative interactions.

Table 4. Theme 1: Verbal Communication

Teams	Transcript Line #	Line Content	Sub-Theme
1 and 2	71	We really got into some of her social issues that she was dealing with and some of our familial problems that I've been holding in.	Patient Centered
1 and 2	81	Because, like, it was that conversation about the guitar happened right before we had done on ask him some serious questions about his depression.	Empathy
1 and 2	97	Like one of my favorite questions that Eliza asked was just like, how do you feel about your smile?	Patient Centered
1 and 2	111	But it was nice that towards the end it was everyone was collaborating. Ask each other questions and really interactive.	Teamwork
1 and 2	146	And then when the person that was done and or when we felt like it was a good time to switch off, we did so.	Teamwork
1 and 2	178	I think we did have a really just solid group and really coherent inciting that made it really easy to work as a team.	Teamwork
1 and 2	182	We were kind of leading the discussion anywhere we wanted to, but we just had to get him to talk more so.	Teamwork
1 and 2	189	but then also really trying to, like, build that relationship with Alex to get them to open up.	Patient Centered
1 and 2	306	With smoking cessation, Alex mentioned he did want to quit and we ran out of time.	Teamwork
1 and 2	313	I understand what you're going through. And it's really hard. But I'm here to listen to you and I have any way I can help.	Empathy

Non-Verbal Communication was recognized by statements which described how the team interacts with each other or the patient without using words. These interactions are highlighted by the sub-themes shown in Table 5: Active Listening, Body Language and Portraying Emotions. For example, Transcript Line #63 shows Body Language and Portraying Emotions because the students described the patient “looking down”. Transcript line #324 shows Active Listening because the students talk about actively listening to decide when to pause in between conversations or to give the patient some time to respond.

Table 5. Theme 2: Non-verbal Communication

Teams	Transcript Line #	Line Content	Sub-Theme
1 and 2	63	He was kind of looking down, wasn't really responding much worse.	Body Language/Portraying Emotions
1 and 2	64	And then the second one, he was like looking up in his body language was more positive.	Body Language/Portraying Emotions
1 and 2	80	And he brought up playing the guitar. And after that, he was like smiling and laughing.	Body Language/Portraying Emotions
1 and 2	198	But I feel like we had a lot of laughs.	Portraying Emotions
3 and 4	235	And also, I think we talked about like body language is really hard to convey over the screen.	Body Language/Portraying Emotions
3 and 4	236	You know? It's just. Yeah, I think there's just a lot more, you know, in person, face to face, there's a lot more consciousness of yourself,	Body Language/Portraying Emotions
3 and 4	239	I would have to remind myself to be like, don't drink that poller because you're actually in a room with someone.	Body Language/Portraying Emotions
3 and 4	242	physical energy feedback that can really help you adjust or help me adjust myself.	Body Language/Portraying Emotions
1 and 2	318	And that's something that I think especially over telehealth is really hard because you can't kind of golf a body language and kind of see any of it.	Body Language/Portraying Emotions
1 and 2	324	Kind of like listening more and pausing and kind of seeing like if he would take a conversation elsewhere.	Active Listening

Working Relationships are recognized by statements indicating how the team members work interprofessionally. These interactions are highlighted by the sub-theme shown in Table 6: Roles and Responsibilities. For example, in Transcript Line #85 the students discuss how every discipline was able to help the patient in different ways and in Line 102 they discussed how well they did with collaborating with one another.

Table 6. Theme 3: Working Relationships

Teams	Transcript Line #	Line Content	Sub-Theme
3 and 4	73	I thought you were pretty individualize in your approach to asking questions with Alex related to your specific professional status.	Roles and Responsibilities
3 and 4	85	And it was really nice to be able to see how every discipline was able to help different aspects that were bothering the patient.	Roles and Responsibilities
1 and 2	87	one of my I realized that I think I had more biases about like other professions than I thought I had before this,	Roles and Responsibilities
1 and 2	91	and like has a lot more like a holistic approach than I originally thought.	Roles and Responsibilities
1 and 2	92	So that was really awesome to be able to see and kind of learn about other professions and also just hear, like, how similar our views could be.	Roles and Responsibilities
1 and 2	102	like our team really did work to collaborate and kind of see like, well, what other types of roles,	Roles and Responsibilities
1 and 2	168	I mean, from like hearing what she talks about, like I understand more of it,	Roles and Responsibilities
1 and 2	244	So those roles really overlap a lot. So we really made a point to, like, let Chantler kind of go in, because after the first man with it,	Roles and Responsibilities
3 and 4	249	Yeah, I really got a interesting overview of how all these different disciplines approach.	Roles and Responsibilities
1 and 2	270	So then I kind of after we went through that, I kind of actively tried to take a backseat,	Roles and Responsibilities

Telehealth is recognized by statements which describe how the team, and the patient interacts with the telehealth format of the SIM. These interactions are highlighted by the sub-themes shown in Table 7: Technology Barriers, Adaptable Healthcare, and Communication. For example, Transcript Line #193 shows Technology Barriers because the students discuss how it was hard to see the patient because the

patient was in a dark room. Transcript Line #213 shows Adaptable Healthcare because the student tried to teach the patient how to do the Epley Maneuver in a virtual setting. Transcript Line #333 highlights Communication because the students described how difficult it is to navigate awkward silences in a virtual setting.

Table 7. Theme 4: Telehealth

Teams	Transcript Line #	Line Content	Sub-Theme
1 and 2	69	I thought that was like what was going on. But then I ask her to lift up the camera and she did.	Technology Barriers
3 and 4	193	And I couldn't even tell because I couldn't see because it was dark and was in a room.	Technology Barriers
3 and 4	201	Like, how do you guys that doesn't probably wouldn't happen quite as often in a clinic setting,	Adaptable Healthcare
3 and 4	212	We were on a video chat and like a dental office we would be like taking X-rays and like looking inside of its mouth and trying to figure it out.	Adaptable Healthcare
3 and 4	223	Christian had a really good idea to actually try to teach Alex how to do the Eppley maneuver over Zoom, which was really cool.	Adaptable Healthcare
3 and 4	233	I can add one thing, I find it hard to just like look at the camera and not look at your screen.	Technology Barriers
1 and 2	331	One thing that I said to my team after was like, I don't have to deal with awkward pauses normally because I am working in someone's mouth.	Communication
1 and 2	333	So being on the screen and there being an awkward pause and like, I must fill it, like there cannot be any awkward pauses.	Communication
1 and 2	338	I was like, yeah, if we let him sit there a couple more seconds, like awkwardly, maybe he would have opened up like a little bit more.	Communication
1 and 2	351	Well, on Zoom. Something that we weren't taught is if there is an awkward pause to take a deep breath and then count to ten.	Communication

Table 8. Facilitator Comments

Facilitator or standardized patient?	Which SIM?	Team?	Please add any notes, thoughts, comments that you think would be helpful for the TEAM evaluation.	Theme
Standardized Patient	SIM 2	Team 1	I observed a lot of growth from the first session to tonight. Communication was much more fluid and balanced between the group tonight, with members passing the baton smoothly and more often.	Verbal Communication
Facilitator	SIM 1	Team 2	Very collaborative and supportive team.	Working Relationships
Standardized Patient	SIM 1	Team 3	The team did a great job of showing that they were listening and adjusting their questions according to the patient's input.	Non-Verbal Communication
Facilitator	SIM 2	Team 4	the telehealth aspect of the visit required the students to be a little more rigid in terms of who talks when so they don't talk over each other as much	Telehealth

Discussion

Collaborative learning curriculums at RFU and UNE are guided by competencies and behaviors outlined in the Core Competencies for Interprofessional Collaborative Practice Reports issued by the US IPE Expert Panel. (Interprofessional Education Collaborative, 2016). Past IPTI programs have shown statistically significant changes in students' perceptions of IPE and expanded their knowledge of the roles and responsibilities of other health care professionals (Mokler, Konrad, Hall, Rodriguez, Pierre, Thieme, & Deusen, J. van, 2020). The thematic map (shown above) highlights the main themes captured from the coded data set.

Themes

The four themes are: Verbal Communication, Non-verbal communication, Working Relationships, and Telehealth.

Verbal Communication

Verbal communication is associated with spoken words and is important in healthcare (Sibiya, 2018). This theme showcases the way the team communicated with each other and the patient. These interactions are highlighted by the sub-themes shown in Table 4: Patient Centered, Empathy and Teamwork. Effective verbal communication can lead to the following positive outcomes: improved flow of information, effective interventions, improved safety, increased patient and family satisfaction, and decreased lengths of hospital visits (Seago, 2008)

The statement in transcript line #97 of Table 4, expressed by a student who witnessed an interaction between an SP and one of their team members. The question "How do you feel about your smile?" is an excellent example of using verbal communication skills to get the patient's opinion to develop shared goals. Open-ended questions are a preferred therapeutic communication technique to allow the patient

to talk about their views on a subject (Sibiya, 2018). This technique is important to teamwork because it creates a space where every team member feels comfortable enough to share their opinions.

Hojat and colleagues' cross-sectional study reports a significant decline in empathy among medical students in the United States from the preclinical to clinical phases of education (Hojat, Shannon, DeSantis, Speicher, Bragan, & Calabrese, 2020). Empathy is associated with a number of positive outcomes in healthcare including greater patient satisfaction and better adherence to treatment plans (Kerasidou, Bærøe, Berger, & Caruso Brown, 2020). Barriers to empathy most often stated amongst healthcare professionals include inability to spend sufficient time with patients and increased pressure to meet operational targets (Kerasidou, Bærøe, Berger, & Caruso Brown, 2020). In the tSIM, students were given a short amount of time to interact with their patient, and the example in transcript line #313 of Table 4 showcases a student using this essential skill despite the barrier. This skill is important to teamwork because an empathetic person will analyze and listen to other opinions besides his or her own, which improves team efficiency and decision-making (Dalmau, 2022).

A report by the Institute of Medicine Committee on the Health Professions Education Summit highlighted teamwork as a core competency that all clinicians should possess regardless of discipline (Institute of Medicine, 2003; Rosen, DiazGranados, Dietz, Benishek, Thompson, Pronovost, & Weaver, 2018). IP teams provide quality care by developing creative solutions to complex problems because of their members' diverse backgrounds and experiences (Institute of Medicine, 2003). As shown in transcript line #111 of Table 4, this tSIM allowed students to develop and practice their teamwork skills before entering the workforce.

Non-verbal Communication

Non-verbal communication does not rely on words. It is communicated using one's body rather than through speech or writing (Sibiya, 2018). These interactions are highlighted by the sub-themes shown in Table 5: Active Listening, Body Language and Portraying Emotions. Non-verbal communication can override verbal communication when they contradict each other. For example, a patient and/or team member is less likely to believe a reassuring verbal comment if it's accompanied by facial expressions that contradicts the message (Silverman, & Kinnersley, P, 2010). Research has demonstrated the relationship between non-verbal communication with the following outcomes: patient satisfaction, patient understanding, and detection of emotional distress (Silverman, & Kinnersley, 2010).

The statement in transcript line #63 of Table 5 an example of a team member noticing non-verbal communication cues from the SP. Non-verbal behaviors represent our attitudes and emotions that are too difficult to communicate verbally. Noticing these behaviors are crucial to working with others because it affects team bonding, patient fluency, patient adherence, and productivity.

Active listening is based on being attentive to what a person is saying and listening carefully while showing interest, without interrupting. By actively listening to patients' concerns, care providers can identify patients' care needs, preferences, fears, and frustrations. Noted by the interaction in transcript line #324 of Table 5, people need time to explore their thoughts and feelings, so by being silent and actively listening, the speaker is allowed to continue speaking or looking for ideas without interruptions (Kohpeima Jahromi, Tabatabaee, Esmaeili Abdar, & Rajabi, 2016).

Working Relationships

Working Relationships are recognized by statements indicating how the team members work interprofessionally. These interactions are highlighted by the sub-theme shown in Table 6: Roles and Responsibilities. Collaboration in health care is defined as health care professionals with varying roles, working together, sharing responsibility for problem-solving, and making decisions to form and carry out plans for patient care (O'Daniel, & Rosenstein, 2008). Many negative patient outcomes (e.g., adverse events, poor quality care, and medical errors) can be traced back to poor collaboration due to lack of communication, leading to ineffective teamwork.

During the debrief, team members discussed how well they collaborated with one another and how they were able to witness different patient care approaches from each member of the team. It's important for healthcare students to be able to recognize and experience effective team collaboration before entering their career fields to prevent negative patient outcomes. In transcript line #85 of Table 6, a student expresses how it was "really nice" to witness patient care amongst other health professions students.

Telehealth

In 2020, the IPTI platform was moved from an in-person format to a remote, Zoom-based format. Telehealth is the use of digital information and communication to access and manage health care services remotely (Telehealth: Technology meets health care, 2022). Telehealth is recognized by statements which describe how the team, and the patient interacts with the telehealth format of the SIM. These interactions are highlighted by the sub-themes shown in Table 7: Technology Barriers, Adaptable Healthcare, and Communication. Telehealth was once limited only to rural or remote communities but is now increasingly used to expand the reach of health care services to lesser served areas (Gajarawala, & Pelkowski, 2021). Telehealth services improve access to healthcare and patient adherence.

As the use of telehealth increases, it's important for students to learn and experience how to communicate and provide quality patient care in a virtual environment (as shown by the actions of a team member in the example transcript line #224 of Table 7).

Enhancing communication skills during virtual visits has been described as vital to engage in effective telehealth encounters. The communication skills most effective include facial expressions, posture, the use of gestures, and navigating "awkward" pauses to enhance verbal communication and optimize the patient experience (Khan, Llinas, Danoff, Llinas, & Marsh, 2022). An example of this sub-theme is shown in transcript line #338 of Table 7.

Technology barriers and lack of computer literacy is a major issue in successfully implementing telehealth 9 (an example shown in transcript line #193 of Table 7). The major technology barriers that were reported in studies were slow connection speeds, poor video quality, and poorly designed interfaces (e.g., text sizes, color contrasts, or menu bars) (Lopez, Lam, & Thota, 2021). Due to the rise in telehealth, several studies have emphasized the importance of telehealth and its integration into the curricula for future medical professionals (Edirippulige, & Armfield, 2016; Wamsley, Cornejo, Kryzhanovskaya, Lin, Sullivan, Yoder, & Ziv, 2021). The telehealth skills explained above can be utilized in any setting. Understanding how to navigate any change of scenery, overcome barriers, and communicate information in any setting are important skills for medical professionals to adopt to care for diverse patient populations.

We utilized CDA to understand how communication among a team of IP healthcare students contributed to student learning in a simulated clinical environment. Our results indicated that IPTI provided an opportunity for students working in a team to learn communication skills required for an effective IP team. Statements from facilitators (Table 8) support these findings.

Limitations

CDA can also be used to analyze written texts and spoken words to reveal sources of power, hierarchy, dominance, inequality, and bias. The use of qualitative analysis for this research is a limitation due to the data being subjective. Another limitation to the data is that it was collected from 4 out of 9 teams, however qualitative analysis focuses on the quality of data and not the number needed to express significance.

Future Research

Future work should use quantitative analysis methods to support the research presented here and the use of IPE in healthcare. Another topic to examine is how power dynamics within IP teams affect learning outcomes.

Conclusion

Our results indicated that IPTI provided an opportunity for students working in a team to learn communication skills required for an effective IP team. Students expressed the importance of teamwork and how IPTI allowed them to understand and appreciate their role and the roles of other healthcare professionals. With this experience, students will be equipped with the necessary skills needed to navigate IP settings within various healthcare systems.

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