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Short Communication

Synchronous virtual interprofessional education focused on discharge planning

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ABSTRACT

COVID-19 required innovative approaches to educating health professions students who could no longer attend in-person classes or clinical rotations. Interprofessional education (IPE) activities were similarly impacted. To replace an in-person IPE activity slated for this spring, nursing and medical students with similar levels of clinical experience came together to attend a synchronous virtual session focused on discharge planning. The class objectives focused on the IPEC competencies of Role/Responsibility and Interprofessional Communication. Discussion revolved around the discharge planning process for an elderly patient with multiple medical problems, as this is a time when interprofessional collaboration has a clear benefit to patients.

Twenty-eight nursing students and eleven medical students attended a 90 min session via Zoom. Students received pre-readings, the day's agenda, learning objectives, and discussion questions in advance. The session had three sections: introduction/welcome, breakout sessions, and debrief and evaluation. Four faculty leaders and four students who participated in a similar in-person session in the past served as facilitators. They received a supplemental facilitator guide for use if students were not able to sustain their discussions for the allotted time. Materials can be accessed by contacting the corresponding author (BR).

Students completed a post-session survey, and qualitative analysis demonstrated that they had addressed the two relevant IPEC competencies in their groups and showed evidence of touching on the additional two IPEC competencies as well. Overall, they enjoyed the experience. This virtual experience made scheduling simpler than planning an in-person session and allowed this activity to occur despite restrictions secondary to the pandemic. This might remain a useful format for similar sessions in the future.

Format

After completing pre-reading, learners attended a synchronous session hosted via the Zoom platform (Zoom Video Communications Inc, 2018) consisting of a large group introduction, facilitated small group case discussions following a structured discussion guide, and large group debrief.

Target audience

Participants included students in their fourth and final semester of an

accelerated Bachelor of Nursing program and medical students in their core clinical year. At the time of the session, students were registered in three separate courses and came together for this *ad hoc* IPE opportunity created by their respective faculty. All participants had previously attended a half-day Interprofessional Team Training Day that included large group didactics followed by small group case-based discussions. In addition, the nursing students had participated with third year medical students in a case-based interprofessional Root Cause Analysis simulation during their first semester. The four student facilitators had participated in the in-person IPE activity from which this virtual class was derived.

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Measurable objectives and relation to the IPEC core competencies:

We identified two learning objectives for this session, and linked each of them to one of the Interprofessional Education Collaborative (IPEC) Core Competences¹:

1. Describe the roles, responsibilities, and shared goals of nurses, physicians and others in planning a patient's transition of care from hospital to home or other facility (Roles and Responsibilities)
2. Discuss the connection between transitions of care and patient outcomes, and how communication and coordination between disciplines bridges these connections (Interprofessional Communication)

Activity description

One faculty leader (CM) served as session host. The faculty leader of each course that participated ensured that their students received the Zoom link and pre-activity reading materials either via email or through the school's learning management system. For security reasons, students were required to register for the session in advance.

One faculty leader (BR) spent the first 10 min orienting the students to the agenda for the session and the context and objectives of the exercise and introduced the other faculty leaders. Another faculty (NS) then summarized the case and provided instructions for the activity to follow. The case involved a 78 year-old male with coronary artery disease and several co-morbidities who was ready to be discharged from the hospital; it included the history of present illness, baseline functional status, hospital course, medications, social situation and lifestyle issues.

The host created virtual breakout rooms and assigned 4–5 students and one facilitator to each. Each group included a mix of nursing and medical students. Course faculty and students who had previous experience with in-person IPE events acted as facilitators.

Following the introduction, breakout groups spent 40 min discussing the case. They followed a guide that instructed them to introduce themselves with name, field of study, and career interests, then to identify a recorder and a reporter. As an ice-breaker, teams were asked to create a name for their team for report out purposes. The participants then discussed the case and answered these specific questions: 1) What are the concerns or questions you have about the patient's readiness for discharge; 2) What other team members or resources may be able to help address these concerns; 3) What are the tasks or interventions that each health professional (nurse, physician, etc.) may need to do in the discharge process; and 4) With whom should care be coordinated upon transition to the next setting?

At the end of the breakout activity the host brought all participants back together and the reporters summarized their group's discussion. The faculty facilitators provided comments and emphasized the most important learning points. This took 30 min.

The session wrap-up took 10 min; students asked any remaining questions and received instructions on completing an anonymous post-session survey. Each faculty leader provided the survey to their learners.

Assessment

Assessment of the students' experience was done through an online survey, created in SurveyMonkey.² The survey contained 6 items: three closed-ended questions to obtain descriptive data about the students (school, age, and gender) and three open-ended questions to evaluate whether the students achieved the session's stated objectives. An additional open question was used for course evaluation.

We wrote questions 1 and 2 below to elicit students' holistic thoughts about interprofessional collaboration; we chose not to directly ask students whether they had met the stated learning objectives of the session as we did not want to present leading questions to which students might give what they understood to be the expected responses. We analyzed their comments, as described below, to identify to what degree the objectives had been met.

The three open-ended assessment questions were as follows:

1. Reflecting on this experience, what one thing will most influence how you practice as a nurse/physician?
2. What has changed in your understanding of the roles/responsibilities of different professionals as a result of participating in this learning activity?
3. Anything else you would like to tell us?

One of the investigators (JS) uploaded responses to the free text questions using MAXQDA 2020 (VERBI Software, 2019).³ Students entered 44 unique comments. Two of the investigators (BR, CM) then independently mapped those comments to one of the IPEC competencies, consolidating comments into core themes. A third investigator (NS) also reviewed the comments and served as a tie breaker where there was disagreement.

Thirty-nine of the 42 students enrolled in the three participating courses attended the session – 11 of the 12 medical students and 28 of the 30 nursing students. Overall, twenty-two students (56%) completed the survey; the response rate was 58% for medicals students and 54% for nursing students. Seventy-three percent of the respondents were female and the most (68%) were aged 25–34.

Overall, there were 44 unique comments, however, the majority could be grouped into 11 themes related to Roles/Responsibilities (5) and IP Communication (6). Three additional comments reflected the Teamwork competency although that was not an explicit objective of the session. Representative comments are shown in Table 1. Values and Ethics was not the sole focus of any comment but was implied in several. For example, one student wrote, "I have gained a greater appreciation for how detrimental it can be to act in silos," which was coded as relating to teamwork, but clearly includes an element of professional values.

Evaluation

To gain insight into the strengths and challenges of the session itself, we reviewed student comments on one additional question on the post-session survey: Reflect on this virtual experience; describe what went well during the session and what could be improved. We also asked for verbal feedback from the four student facilitators, and one of the organizers reviewed the content of the group report-outs.

Participants' written comments were mostly positive, with a majority focused on the usefulness of interacting with students from the other profession in a low-stakes environment. One student wrote, "Everyone was engaged, which made for a good conversation." The most common challenges noted were having an uneven number of nursing and medical students in the breakout groups and, in some groups, poor participation by one or more group members. One student commented that "Overall, I think the virtual experience was good! I think it could be improved by asking everyone in the breakout rooms to say at least one thing (and possibly ask them to show video)". Another student suggested that, "it would have been more beneficial to have more experienced medical students." Five student comments related to the virtual platform or the flow of communication in general; four of those were positive. One other noted that "As with most virtual simulations, the brunt of the work fell on two participants."

Student facilitators provided overwhelmingly positive verbal feedback. They stated that they liked the event, the participants were engaged, and the conversation flowed nicely. They shared that there was mutual learning about roles and responsibilities in the discharge planning process as well as what should be included in the plan of care. One student reported, "I really enjoyed facilitating the discharge discussion. My group was very engaged and I appreciated the mix of nursing students and medical students. The nursing students had a lot of clinical experience, which was helpful in providing more insight the discussion. The only suggestion I have is maybe increasing the group size from 5 to 7–8 or decreasing the time slightly, since our group got a bit burnt out

Table 1
Learning objectives, IPEC competencies, and representative student comments.

Learning Objective	IPEC Competency	Representative Student Comments
Describe the roles, responsibilities, and shared goals of nurses, physicians and others in planning a patient's transition of care from hospital to home or other facility	Roles/ Responsibilities	<p>"It will help to ensure that job roles and responsibilities are communicated clearly within a team."</p> <p>"How variations in roles can be misunderstood between professions, leading to unclear communication with patients."</p> <p>"I have gained a greater appreciation for how detrimental it can be to act in silos."</p> <p>"Understanding discharge process from other team members point of view, understanding their roles and responsibilities "</p> <p>"I often forget the pharmacy exists to help work with us. I will utilize their knowledge and expertise to help solve problems."</p>
Discuss the connection between transitions of care and poor patient outcomes, and how communication and coordination between disciplines bridges these connections.	Communication	<p>"It will make me think more about communication within the healthcare team & between the team & the patient."</p> <p>"I liked being able to talk openly about our experiences on our units and how we felt we could improve communication with physicians, and how they felt they could improve communication with nurses."</p> <p>"I now have a better understanding of how frustrating it can be for doctors (especially new doctors) to get in touch with nursing staff and find appropriate means of communicating"</p> <p>"Introducing myself to other professionals on the unit allowing others to feel more comfortable reaching out to me with questions or concerns as well as just knowing who the patient's nurse is and how to contact me "</p> <p>"The importance of communicating with other members of the patient's team prior to discharge about what needs to happen and who will be responsible for each aspect of the discharge."</p> <p>"Importance of communication and willingness to engage the entire team"</p>
N/A	Team Work	<p>"Ensuring that I am engaging with all the different healthcare specialties to facilitate patient care"</p> <p>"Coordinated care among team members"</p> <p>"Really acknowledging and highlighting the strengths of all team members so that</p>

Table 1 (continued)

Learning Objective	IPEC Competency	Representative Student Comments
		everyone is empowered to play their role as well as possible."

and repetitive in our discussion towards the end."

On review of the oral group report-outs at the end of the session, it was clear that the session met its stated objectives. Students reported discussing all of the challenges to discharging a complex geriatric patient. They considered the important roles of physical therapy, home health, social work, pharmacy, nutrition, and palliative care providers and the need for clear communication among them. The most common theme in the discussion was the importance of communication and interdisciplinary collaboration as essential for a successful discharge.

Impact

This single session, conducted during a unique moment in time when neither nursing nor medical students were permitted to be in clinical learning settings, provided an opportunity for students from both professions to consider a realistic case scenario, work through it together, and reflect on how interprofessional teamwork and communication can enhance real patient experiences. The student responses to the session demonstrate its effectiveness in prompting reflection, and the student facilitator feedback supports the conclusion that the session was constructive. The small group discussions, although designed to focus on roles, responsibilities, and communication, touched on all of the IPEC competencies as a natural extension of the case they were considering. This is not surprising, considering that knowing about the roles and responsibilities of all team members requires good communication, leads to better teamwork, and is supported by strong values and ethics that require interprofessional collaboration in order to provide outstanding patient care.

As a bonus, preparing the session on short notice prompted an interprofessional group of faculty educators to enact the IPEC competencies themselves. We clarified each person's role and responsibilities, communicated well and acted as a team. As a group of individuals, each with previous IPE experience, we brought the values and ethics to make the session a success with us and were able to create a successful learning activity for our students.

In practical terms, the lack of clinical activities allowed students to be available for this pilot session without the usual scheduling difficulties, and the evidence that it was impactful supports using a virtual platform in the future which could simplify scheduling even when usual educational schedules resume. Zoom proved to be easy to use, and observation by facilitators in small groups and comments by students themselves supported the conclusion that students were engaged with each other and the case.

The case and supporting materials we used were easily identified and provided to students; this format could be easily adapted for use with a different case and with learners from different professions. A virtual exercise can be a nice way to bring students who are not normally in the same place at the same time together and engage in meaningful discussion and can be a useful to prepare learners for face-to-face interactions that are so much more difficult to arrange and standardize.

Required materials (available by request from corresponding author):

1. Pre-reading:
 - a. Overview of discharge planning⁴ – Overview article outlining the important aspects of the discharge planning process.

- b. Perspective article on discharge planning⁵ – First person account of a nurse’s experience with care transitions for her husband following a stroke.
2. Agenda for session, learning objectives, and discussion questions to provide to students in advance
3. Case Example (adapted from Creighton University)⁶
4. Facilitators guide – developed by authors, available on request

CRedit authorship contribution statement

Bethany Robertson: Conceptualization, Formal analysis, Writing - original draft, Supervision, Visualization, Data curation. **Carrie McDermott:** Conceptualization, Software, Formal analysis, Writing - review & editing, Supervision, Data curation. **Jessica Star:** Formal analysis, Writing - review & editing, Project administration, Visualization, Data curation. **Linda Orkin Lewin:** Conceptualization, Writing - review & editing, Project administration, Formal analysis, Investigation. **Nathan Spell:** Conceptualization, Formal analysis, Writing - review & editing, Project administration, Visualization.

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