



Training Interprofessional Teamwork in Palliative Care: A Pilot Study of Online Simulation Activity for Registered Nurses and Nursing Associates

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1 Learning Interprofessional Teamwork in Palliative Care Education

Successful interprofessional teamwork is essential in palliative care to achieve quality in patient care. During their education, the students need to train and gain knowledge about the different professions they are going to cooperate with [1]. Taking an interprofessional approach to palliative care education has been found to be effective in the live setting [2]. It is stated that “Palliative care is, by the nature of its practice, collaborative” [3]. Previous studies have used live standardized patient simulation to teach interprofessional teamwork with a focus on palliative care topics and communication [4]. Interprofessional simulation in palliative care study programmes often takes place within the faculty and focuses on cooperation with other professional groups such as doctors, occupational therapists and physiotherapists. Nursing associates educated in educational institutions outside academia are a professional group that is often part of the palliative care team. So far, we have not found studies where the cooperation of a registered nurse (RN) with a nursing associate (NA) is in focus.

Addressing didactical questions about how to enable students to train and achieve interprofessional competency during education is an ongoing process. Learning using simulation activity offers such possibilities. As teachers in a postgraduate study programme in palliative care, we have tried out simulation as a learning approach with success both from the teachers’ and students’ point of view. They report that they value such training and claim it is an efficient way to learn. Several challenges and questions have been raised as to how to facilitate simulation activity to achieve collaborative, student-centred, experimental and clinical practice-based

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learning. In higher education, student-active learning is also emphasized—this entails challenging the students emotionally, cognitively and in action [5].

To achieve quality in the learning process using simulation activity, the International Nursing Association for Clinical Simulation and Learning (INACSL) Standards Committee has prepared recommendations on how simulation activity can be implemented. This is published as INACSL Standards of Best Practice: Simulation SM [6]. The standards describe recommendations for the required criteria and elements in all aspects and phases of simulation activity. It is emphasized that the expected outcomes must be determined and constructed and should be specific, measurable, achievable and realistic. Moreover, time-phased objectives must be given based on expected outcomes. In developing learning outcomes related to technical skills in palliative care, these criteria seem to be appropriate. However, such criteria are quite challenging when it comes to identified core competencies in palliative care such as “Respond to the challenges of clinical and ethical decision-making in palliative care”, “Develop interpersonal and communication skills appropriate to palliative care” or “Practice self-awareness and undergo continuing professional development” [7]. Students need training to be aware of the need to develop competency in handling a situation based on their ability to continuously explore the situation from different perspectives. Learning to use simulation activity offers such possibilities. However, the INACSL’s criteria for learning outcomes might be inexpedient and challenging to fulfil.

1.1 Simulation Activity Based on Learning Outcomes as Themes

We have tried out simulation activity as a setting based on a theme and not on predetermined, measurable, specific learning outcomes as recommended. About a week before the simulation activity day, the students are challenged to write down situations retrieved from their clinical practice that illustrate the selected theme for the simulation activity. The facilitator transfers the situations to scenarios. When the students gather for the simulation activity day, short extracts from the scenarios are presented, and the students decide jointly which one to use. The student who has ownership of the scenario describes it and conveys their lived experiences from the situation to the others. The students join learning groups and decide how each role in the scenario will be played out. This means that when one student takes a role, it is on behalf of the group. The scenario is prepared and implemented, and sometimes the owner of the scenario participates or sometimes it is implemented by other students.

The debriefing includes a discussion and reflection session based on what the students perceive as important for their learning, alternative problem-solving, fellow students’ own experiences from similar situations and the perspective of the different roles in the scenario. We use a structure for debriefing which emphasizes and facilitates for student engagement, activity and responsibility for giving feedback. This structure is briefly described below. New questions and challenges are raised (“what if...”), leading to the creation and implementation of a new scenario.

With intermittent debriefing, the simulation activity evolves during the day as a dynamic process based on the students' needs for learning, ideas, proposed solutions, exploration and experimenting with different solutions. These perspectives are transferred into new scenarios developed by the students.

The facilitator role is to facilitate, be a group leader, pay attention to the group dynamics, contribute questions and subject input and help keep focus.

The students evaluate this type of simulation activity as very instructive, directly relevant to clinical practice, challenging and engaging. Since they are continually involved both emotionally, cognitively and actively, it is also exhausting.

2 Background for Piloting the Online Simulation Activity Project

A vocational college in Norway received external funding for establishing simulation projects, including the programme in palliative care for nursing associates. On this basis, the vocational college invited students in the postgraduate study programme in palliative care at Norwegian University of Science and Technology (NTNU) to take part in a collaborative project. Although these two professional groups have close cooperation in their everyday clinical work, the two educational institutions have not collaborated in a simulation project like this before.

The primary collaborators included four faculty members, two from the vocational college and two from NTNU, and a researcher who was an educationalist specialized in simulation activity as a learning approach.

The project was approved by the Norwegian Social Science Data Services (NSD), and both educational institutions gave permission. The students received written and oral information. Confidentiality and voluntariness were emphasized. The students gave written consent to participate in the filming.

In spring 2020, as was the case worldwide, we went into lockdown due to the COVID-19 pandemic. Physical presence of students and teachers in the Simulation Centre was impossible. To meet online was the only option, and we decided to try transferring simulation activity to an online setting. Because of the pandemic, students and teachers were already familiar with online lecturing and discussions, but not across the degree programmes. How could we implement our previous simulation activity experiences in an online format? Different challenges and decisions had to be made to organize this new situation.

In the following, we will describe how we conducted online simulation activity and how we transferred student involvement to an online setting.

2.1 The Participants and the Setting

Two groups of students participated in the project; one group consisted of 17 nursing associates who were taking part in a study programme in cancer care and palliative care at a vocational college part-time over 2 years (NA). The second group was

composed of 28 registered nurses, a social worker and a learning disability nurse, all postgraduate bachelor's degree students in a part-time interdisciplinary postgraduate programme in palliative care on a master's level (RN).

Because both study programmes are part-time, all the participants were experienced clinicians, working bedside in parallel with education.

3 Implementation

The simulation activity process was divided into three phases (Table 1).

3.1 Phase 1 Developing Narratives

The first phase was a preparation phase that provided a basis for online simulation activity. Both groups of students received information about the transformation of physically implemented simulation activity to online implementation.

Interdisciplinary teamwork in palliative care/end-of-life care was the focus for this project and should be reflected in the scenarios. The NA students were asked to share their experiences concerning this focus through narratives. They brought three different stories/cases to the table. The following was chosen by the students:

Table 1 The online simulation process

Phase	Activity	Participants
1. Developing narratives	Sharing narratives based on clinical experiences	All students
	Selecting a narrative for simulation activity	
2. Developing scenarios for a learning resource bank for online activity	Implementation of simulation activity in the Simulation Centre (Film 1)	Five students
	Identifying main issues	
	Developing scenarios based on identified main issues	
	Simulation activity (Film 2, 3, 4, 5, 6, 7)	
3. Simulation activity online	Watching the introduction scenario (Film 1)	All students (47)
	Monoprofessional and interdisciplinary group discussions	
	Plenary discussions	
	Identifying main issues	
	Choosing relevant issues for further exploration	
	Watching Film 3 and 6 including group and plenary discussions	

The patient, Jim, in his 50s with incurable lung cancer, is on a short-term stay in the local nursing home to recover after his last hospital chemotherapy treatment. His cancer treatment has been ongoing for years, and it has been a long, complicated and difficult journey. The side effects of treatment and the burden of his disease have been enormous.

Jim is married and a father of 2 boys, 15 and 19 years old. He has started to talk openly about his situation to some members of the nursing staff, but he says it is difficult to talk with his wife and sons.

He has lost his appetite and does not want any nutritional supplements. It is difficult for the young, newly employed registered nurse to accept this. She thinks there is more that can be done. A much older and more experienced nursing associate perceives that Jim's decision has to be accepted. These different perspectives cause a negatively charged conflict in the team.

We challenged the students in both groups to come to the Simulation Centre to develop relevant and practical scenarios that could be taped and used as a learning resource bank for online activity.

3.2 Phase 2 Developing a Learning Resource Bank for Online Activity

Five students (three from the vocational college and two from NTNU) volunteered to come to the Simulation Centre to videotape scenarios. Necessary infection control measures were safeguarded.

The session started with a group discussion about the content of the chosen case. After exploring this case, the students decided to make a scenario focusing on the conversation bedside with the patient where the RN and the NA participated (Film 1). The students were divided into three two-person group, one from each faculty. In these groups, they discussed how the characters should act and who was going to play the roles in the scenario.

After a short briefing (opportunities and limitations in the physical learning environment), the scenario was implemented, streamed to a room where the rest of the students (respondents) watched and video-taped (Film 1).

The reflection and discussion was conducted immediately after, inspired by the Critical Response Process structure [8], which includes a four-step method as presented in Fig. 1.



Fig. 1 Critical response process' four phases

The various actors' choice of solutions in the situation was freely and openly discussed. Each actor had acted in the role in accordance with what was decided in the small groups.

Various issues were identified:

The patient, acted by a RN student, struggled with the young nurse's eagerness to intervene.

The experienced NA had concerns for the patient's state of mind after the conversation.

The young inexperienced RN struggled with her feelings of insecurity.

Everybody was familiar with the feeling of being young and inexperienced in challenging situations.

As a result of the discussion and experiences from the scenario, further exploration of the situation was suggested by developing a new scenario, focusing on a conversation with the patient, listening to his story and his struggle and investigating what then happens.

The students followed the same procedure as described above, and a new scenario was implemented (Film 2). In the debriefing, the reflections were categorized into two themes:

How to prepare the upcoming family conversation.

How to handle the RN-NA conflict.

A new scenario was developed and implemented that focused on a situation where the two colleagues meet and had time and space for a discussion (Film 3). A debriefing followed.

Based on the comments and suggestions in the debriefing, a new version of the RN-NA conversation was implemented in a scenario (Film 4).

In the debriefing, there was a long discussion with many reflections on the difficulties of addressing conflicts and tensions in an interprofessional team. This roundtable discussion formed the basis of three new scenarios which were implemented:

Film 5: A pre-conference between the physician at the nursing home, the RN and the NA.

Film 6: A conversation with the patient and his wife, together with the RN, the NA and the physician.

In addition, follow-up conversations with the actors after the debriefing where they shared their thoughts and feelings about seeing this situation from their role's perspective were videotaped (Film 7).

Each simulation activity session lasted approximately 60 min: 20 min. Preparation, 10–15 min. Scenario and 15–20 min. Reflection and discussion. All the scenarios were videotaped and safely stored in NTNU's archives with the specific security procedure that is needed for privacy reasons (Table 2).

Table 2 The content of the films

Film 1	A conversation bedside with the patient where the registered nurse and the nurse associate participated
Film 2	A nurse associate–patient follow-up conversation
Film 3	A conversation where the two colleagues met and had time and space for a discussion
Film 4	An alternative version of the conversation between the two colleagues based on the discussion after Film 3
Film 5	A pre-conference between the physician at the nursing home, the registered nurse and the nurse associate before a family conversation with the patient and his wife
Film 6	The conversation with the patient and his wife, together with the registered nurse, the nurse associate and the physician
Film 7	A follow-up conversation with the actors after the debriefing where they shared their thoughts and feelings about seeing this situation from their role perspective

3.3 Phase 3: Simulation Activity Online

A total of 47 students participated in the online simulation activity day, 30 post-graduate students (RNs) from the NTNU programme and 17 vocational college students (NAs), together with 4 teachers and 1 researcher. All the students had participated in Phase 1 and had taken part in the choice of the narrative which should illustrate the theme inter-disciplinary teamwork in palliative care/end-of-life care. The online simulation activity was meant to be a common learning process by using scenarios from the learning resource bank as a basis for interprofessional learning. As teachers, we were very excited about whether the recorded scenarios would cover the issues and reflections that the students would now identify. By having many recorded scenarios to choose from, this proved to be possible. In the following, we describe how the day was organized rather than placing emphasis on the content of reflections and discussions.

The students were divided in advance into eight monoprofessional groups. The RN students use group work throughout the educational process, and they attended their groups, while the NA students were divided into four groups for this occasion.

We started with a brief presentation and introduction and provided information on how this day would be conducted.

First, in plenary, we all watched the introduction scenario (Film 1): The RN and the NA bedside conversation with the patient. After that, the students participated in a three-step process:

First step: the students attended their monoprofessional group in breakout rooms to discuss what they had observed (about 15 min).

Second step: the students went directly into a new breakout room with a mixed group of RN and NA students (15 min) to exchange the results from the monoprofessional discussion and to decide what issues and reflections they wanted to bring up.

Third step: All met in the plenary room for a common summary and exchange of the main issues in the discussions. The identified issues provided the basis for a joint discussion and choice of issues that were relevant for further exploration in a new scenario.

The choice they made could be exemplified as the scenario in Film 3, which was shown in the plenary room after a short break. This time they went through a two-step process:

During the first step, the students attended breakout rooms for interprofessional reflections and discussions (15 min). We skipped the discussion in the monoprofessional groups because the students had already got to know each other in the previous session.

As in the previous session, the second step was attendance in the plenary summary. The relevant and current issues were discussed, and the students developed and chose a focus in a new scenario. The choice coincided with what could be exemplified and illustrated by scenario 6 (Film 6).

The same process for discussion and reflection as in the latter followed.

Three films with subsequent discussions and reflections were completed in 7 h, including breaks. The day was summed up, and the students gave their spontaneous feedback about how they had experienced the online simulation activity and organization of their learning.

4 Reflections on the Pros and Cons of Online Simulation Activities

It is a prerequisite for success that both teachers and students get used to online communication and interaction. In relation to the online simulation activity day, we as teachers were happy that we had pre-recorded videos and that we were not dependent on the scenario being played live online. Technology causes a lot of stress and great irritation if it does not work out/function.

Simulation activity also requires simulation competency. In several studies, simulation activity is reported to be a learning situation with “A rollercoaster of emotions” [9]. To achieve learning, it is of importance that the learner can handle the feelings that appear in the setting [10]. Being an actor in the scenario means being exposed and can easily lead to feeling overloaded and vulnerable [11, 12]. It can easily end up with the actor being pushed far out from their comfort zone and into what can be called the discomfort zone [13]. In this zone, no learning is achieved when overloaded by feelings and stress. Defensiveness and self-protection might occur, meaning poor learning conditions with feedback not being timely given to support learning [8, 10, 14]. Against this background, we have tried in this project to facilitate a learning climate that promotes experimental learning, guided by participants’ needs, and downplays individual performance. We want to highlight some aspects and tools that have been used in this online simulation activity setting that are equally relevant and can be transferred to simulation activity in general.

To summarize, both groups were satisfied with the online simulation activity. They all valued having time and space and the opportunity to meet and reflect together in a setting like this. There was a common perception of the importance of carrying out RN-NA simulation training regularly. Online simulation activity might increase the possibility for more frequent meetings. The students stated that the

online simulation worked “surprisingly well” and claimed that an online simulation activity for an interdisciplinary group such as theirs can be an effective and resource-saving way of learning. However, they pointed out that it depends on detailed and specific planning and organization. The information provided to the participants beforehand must be clear and concrete so they know the schedule, everybody’s role and what is expected from each and everyone. A timeline and organization of breakout rooms must be published. The students expressed a need for a designated leader who knows the intention of the reflection and discussion part of the debrief before going to the breakout rooms. It saves time and increases the efficiency of group work. If possible, they would prefer that a teacher could visit the breakout room and facilitate the conversation. These statements have support in the literature and research; in building a community for learning, the students need to know/develop/build understanding, rules and agreement on how to communicate, the value of discussion and diverse viewpoints [11, 15].

The students emphasized the importance of being involved in developing the scenarios and that it was fellow students who performed in the scenarios. It made the focused themes directly relevant to their clinical practice, and it increased their involvement and engagement—highlighted in the literature as important factors for simulation competency [15]. The students reported having achieved an increased awareness about similar situations which often occur in their clinical daily life. Later one student exemplified her increased awareness by describing a meeting with a young RN with little clinical experience. She (the NA) was more active in supporting the RN. She described how important this cooperation was for both.

However, several of the NA students in particular pointed to the lack of face-to-face connection when online simulation activity is implemented. On the other hand, several students described online meeting as a “mental space” leading to a situation that made it easier to take the floor and participate in the discussions than when they all are present in the same room. Group dynamics and hierarchy between professions seem to be an obstacle for some students. This may prevent them from taking the floor and speaking out. As one NA student expressed: “There would be too much tension in the room”. Online simulation activity seemed to facilitate the reduction of this tension. One of the students expressed this as follows:

Maybe it is easier to share the space – to bring more balance in the discussion online because we are more aware of bringing everybody’s voice into the group. In a situation with physical presence, the challenge is often that the groups are unbalanced when it comes to who is verbally active or not.

In the online simulation activity setting, the video filming of the scenarios was carried out just by those involved and without an audience. A short debriefing was implemented focusing on how the students perceived the scenario and the setting, including a debriefing related to the performer’s feelings. About a week passed between the recording of the film and the online presentation. One of the performers said that this break between implementing the scenario and the online simulation activity day was valuable for his learning. He said:

I was one of the persons who took part in the taped scenario. Online simulation made it easier for me to achieve the necessary distance for being a part of the debriefing/reflection. In a live simulation situation, this would be more difficult.

The “break” between being an active actor in the scenario, which is a stressful exercise, and then after some days viewing oneself on screen is probably expedient. The performers had time to gather their thoughts and take control, which enabled them to learn and receive feedback [10, 14].

When a student was designated as an actor in the scenario, they acted on behalf of a group that had discussed and decided how this role should be played. This reduces the focus on individual performance, choice and behaviour and contributes to a learning community with more open discussions and less need for defensiveness and considerations about personal vulnerability.

Student involvement in the development of cases and scenarios made simulation activity learner centred. The facilitation of exploration of what they consider relevant issues in new scenarios was experimental and practice oriented. Being responsible for determining focus and exploring solutions reduced stress.

We had many scenario options that were developed together with the students, which led us to believe that they were relevant learning resources. This way of carrying out the simulation’s activity can give the facilitator a feeling of lack of control, uncertainty about what is happening and challenges in maintaining focus and keeping to the time framework. However, we believe that facilitating such an experimental process of learning results in a greater degree of learning in this context than when everything is predetermined and teacher directed.

5 Conclusion

This pilot project involved transferring simulation activity from physical meetings of the participants in a simulation centre to simulation activity as online learning. The possibilities physical meetings (face to face) provide for spontaneity, nonverbal communication and eye contact are difficult to replace in an online setting. However, based on the students’ and teachers’ evaluations, it seems that such a learning approach can be an effective and rational way of learning. Nevertheless, this requires thorough preparation, well-thought-out organization and detailed information for everyone involved. When the students are videotaped in the scenarios, further use requires the student’s consent and an awareness of the necessity to protect students’ privacy. The dependence on the technology makes the setting vulnerable and requires for everybody involved habituation and cooping.

These preconditions are well known from recommendations about simulation activity in general and do not differ significantly when simulation activity is used in physical meetings. However, the online setting increases their significance when students cannot see each other’s faces and/or who is joining “the room”.

Based on our experiences, online simulation activity can be used as an effective and rational way of learning in addition to simulation activity in the form of physical meetings.

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