

# The effectiveness of clinical simulation for Level 4 therapeutic radiography students: an analysis of skill development

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## SIMULATION PROJECT AIMS:

- To support students in their transition from academic learning to clinical practice
- Student skill development for preparedness to practice
- Development of professional values in line with the placement expectations





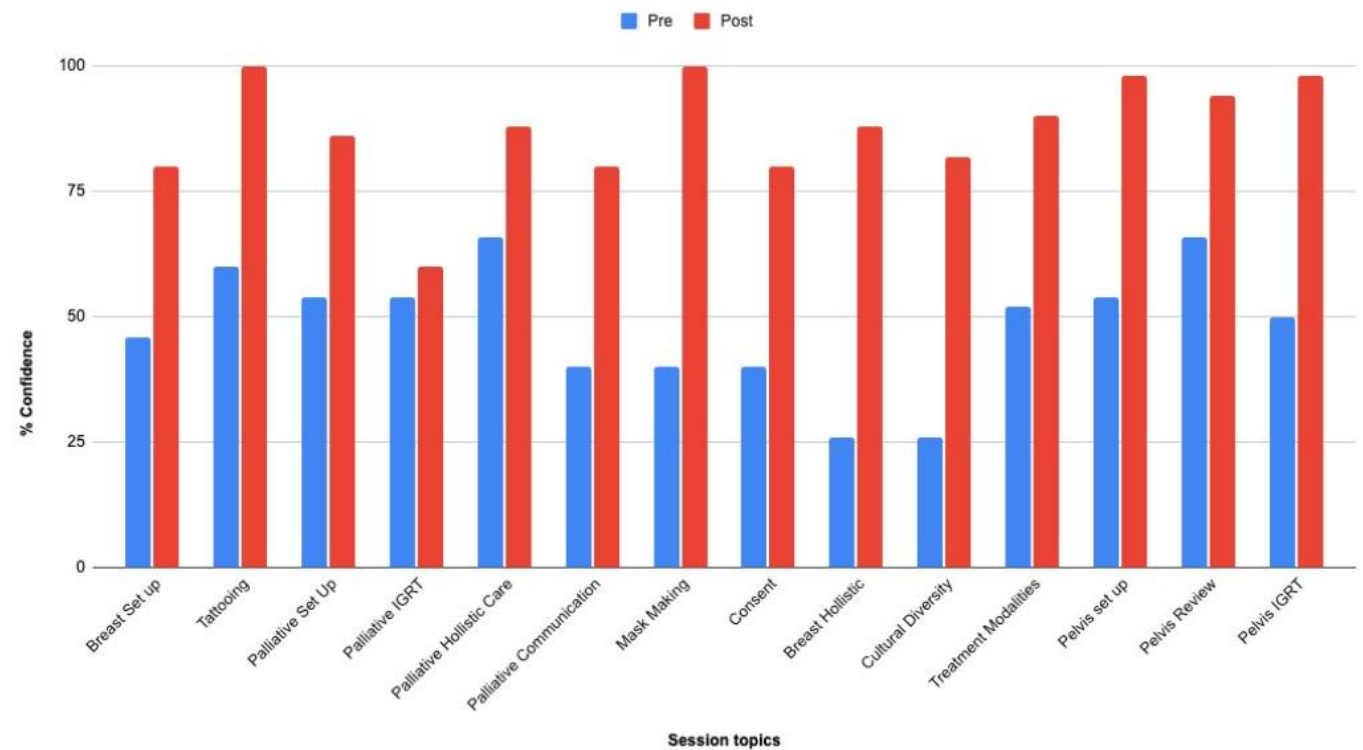
## METHOD:

- Simulation took place prior to the students first clinical placement (Feb 2024)
- The full cohort of students (n=56) took part in the simulation with 40 consenting to the project (89%)
- The simulated sessions were focussed around four oncological patient case studies
- Actors were employed to play the role of the patients
- Support was provided from the local departments to facilitate the sessions
- Professional values were assessed throughout
- All students were provided with a questionnaire, pre and post simulation, to assess confidence levels.
- After students had attended simulation and the first clinical placement block, a focus group was carried out to further explore the students' opinions

# CONFIDENCE LEVEL RESULTS

- Students identified an overall increase in confidence across all areas, irrespective of their starting levels.
- The greatest increases were shown from the more practical sessions such as mask making and patient set up simulation. Although there was a positive trend across all sessions.
- The least improvements were displayed within the palliative IGRT session, this is potentially due to lack of access to patient verification images; it was not possible to display a full array of imaging modalities connected with imaging verification.

Student Confidence levels Pre and Post simulated sessions



# FOCUS GROUP FEEDBACK

The main themes from the focus group included:

- Actors essential to the fidelity of the sessions
- Session focussed specifically on immobilisation
- More opportunities to interact with patients
- Increased complexity
- Reduced gaps between sessions
- Valued the input of third year students



# CHALLENGES

- **Staffing:** Due to the large cohort multiple sessions were required to improve experience and engagement
- **Room availability & resources:** the use of a purpose-built radiotherapy simulation room, including a radiotherapy treatment couch, surface guided radiotherapy and a number of immobilisation devices, has a small room capacity. To ensure students were able to have practical time with this, these sessions were repeated 8 times; this had a knock-on effect with grouping sizes and timings of other sessions, resulting in undesirable time gaps between sessions for students.
- **Cost:** large cost associated to using paid actors. Additional costs were also accumulated through resources required to run mask making sessions, tattooing and access to radiotherapy treatment planning and record and verify systems.

## WHAT'S NEXT

- Following the evaluation the value of simulation in preparedness to practice is evident
- We have adapted our simulation for the 2025 simulation and plan to re evaluate
- For our 2025 evaluation we plan to include the views of therapeutic radiographers working with the students on their first placement



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# ACKNOWLEDGEMENTS

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With thanks to the students who were involved in the project and our partnership departments who supported the simulation activity.



# ANY QUESTIONS?

## ■ Palliative set up

"Enjoyed having other students who shared tips about how to make aligning tattoos easier."

## ■ Palliative IGRT

"I enjoyed looking at the actual images rather than just a slide talking about it, helped understand more visually."

## ■ Mask making

"I really enjoyed getting a mask made to see how patients feel during the process. I now have experienced what patients may be feeling having gone through the same process and now understand how to properly support them during this stressful time to make the process a little easier for them."

"Learnt a lot and got a feel of how the patient would feel during the process of making a mask on them, as well as the factors that affect it"

## ■ Cultural diversity

"I really enjoyed being able to analyse case studies with my classmates, as they had interesting things to say and allowed me to consider various points of views. I also enjoyed that we could ask the guest speaker questions about patient care but also possible career pathways."

## ■ Pelvis set up

"The third-year student was very helpful with his feedback"

"Great as the actor introduced issues or problems more and asked questions. More realistic to what we will see in practice"