

Introducing a Simulation Week into the First-Year Diagnostic Radiography Clinical Programme

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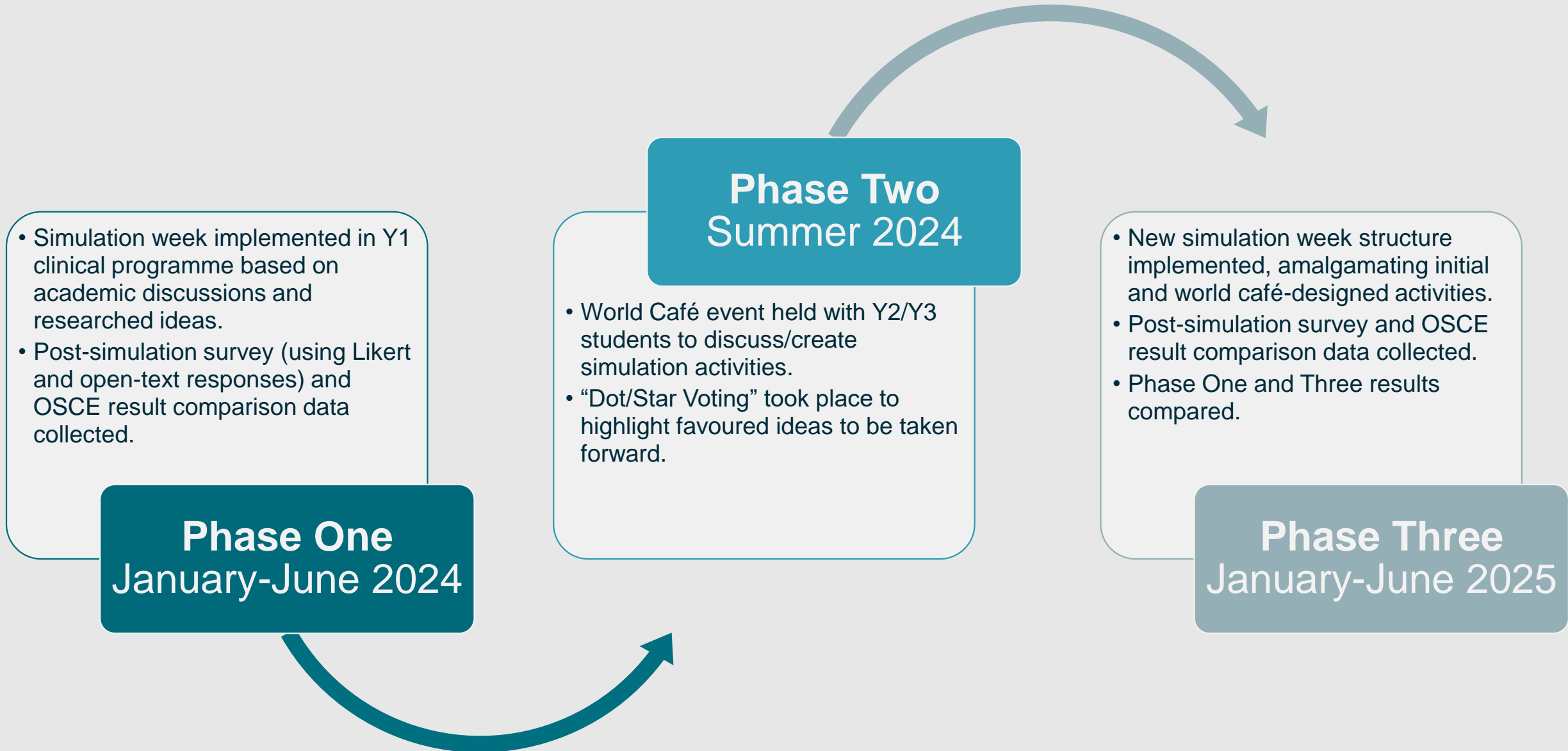
- Placement capacity challenges- how can we meet demand?
- Designed in response to student and coordinator feedback relating to existing placement experience.
- SBE replacing part of clinical placement blocks used in AHP courses elsewhere (Partner *et al.*, 2022; Ketterer *et al.*, 2020; Imms *et al.*, 2018).
- Student co-creation a useful tool in designing curriculum in other spheres (O'Hara, 2023)- can this be harnessed in planning simulation?

“Most of the staff were helpful but there were too many students, and it was difficult to get proficiencies signed.”

“Too many students at the same time which discouraged independent learning and carrying out imaging exams.”



Approach to Research/ Implementation of Weeks



First Iteration of Simulation Week

Day	Morning Activity	Afternoon Activity
Mon	<p>Introduction to Simulation Session Introducing the concepts of simulation, revisiting Shaderware, outline timetable for the week and required tasks.</p>	<p>Dedicated Communication Workshop Critical discussion of healthcare communication in media, and exploration of patients with additional communication needs.</p>
Tues	<p>Virtual Simulation Session via Shaderware- Upper Extremity Patients Sessions have integrated “worklists” for students to justify request forms, undertake simulated images and image critique.</p>	<p>Virtual Simulation Session via Shaderware- Lower Extremity Phantoms/Patients Sessions have integrated “worklists” for students to justify request forms, undertake simulated images and image critique.</p>
Weds	<p>Virtual Simulation Session via Shaderware- Chest Radiography All produced images to be uploaded to Canvas VLE following completion of Shaderware simulation sessions.</p>	<p>Image Evaluation “Audit” Activity Students to review image bank submitted and 'peer mark' via PLATECANN criterion set up on Canvas VLE.</p>
Thurs	<p>Image Evaluation “Audit” Group Review Student’s images and uploaded critiques are presented to the whole group. Peer feedback and coaching provided on principles of radiation protection and image evaluation.</p>	<p>Practical Lab Simulations Session Initial scenarios devised from anecdotally “challenging” scenarios students have experienced in Year 1 of placement, with the inclusion of distractor roles/incidents and workload prioritisation activities. <i>Patient Group 1: A&E/GP Scaphoid Series</i> <i>Patient Group 2: AP Supine Chest</i> <i>Patient Group 3: A&E Trauma knee</i></p>
Fri	<p>Reflection Write a reflective cycle based on an incident which the student feels is meaningful and transformative towards their future practice.</p>	<p>Reflection/Debrief via Teams Debrief to discuss week overall and reflections, provide/receive feedback and action planning for rest of placement.</p>

4.4

- Relevant to clinical practice.
- Saw value in participating in simulation.
- Objectives of the week were “clearly defined” and met.

4.3

- More confident in understanding “key skills” and performing them on return to placement.

4.2

- Simulation enhanced preparation for future clinical placements.
- Simulation week perceived to have had positive effect on student confidence.

5

- Image Evaluation
- Consent
- Justification

4

- Technical Practice (e.g. patient positioning)
- Communication and Information

3

- Radiation Protection

(1= "Reduced confidence significantly", 3= "Did not affect confidence", 5= "Increased confidence significantly")

- Enthusiasm about undertaking simulated placement weeks in the future.
- Preferred “hands-on” activities (e.g. in-lab simulation and IE group critique) vs. virtual simulation activities.
- Improvements included more practical sessions, dedicated CXR critique banks.
- No significant difference in OSCE performance of pre-OSCE simulation weeks and post-OSCE simulation weeks (small sample size)

“Learning how to multitask and work under pressure...will influence my future practice as it will allow me to use these skills while working on placement and when I'm qualified”

“I understand the importance of informing and communicating with carers during an x-ray so I will take more consideration in acknowledging them and telling them the appropriate information“

“Be able to acknowledge what went wrong but then also how to improve from that”

World Café Results- Ideas/Activities Suggested

Communication and Consent

Produce video recordings of “best practice” communication/examples of poor communication. Role play through scenarios

Radiation Protection and Justification

Designing “radiation protection” and justification-based issues/errors within practical scenarios to highlight if students can rectify/challenge concerns.

Image Evaluation

Incorporate additional time following simulations to PLATECANN images taken on anthropomorphic phantom, as well as existing activity- enabling instantaneous feedback.

Technical Practice

Reduce the number of “distracting” roles in the simulation and divide into mobile x-ray and A&E/trolley x-ray groups.

Next Steps- Acting on World Café/Surveys

- Restructuring of simulation week to increase use of higher-fidelity environments (split into General and A&E worklists).
- Scripts created and recorded for radiography-based communication scenarios for “role play” activity.
- Integration of radiation protection-based concerns into all aspects of simulation week, with dedicated feedback opportunities.



- Comparison of feedback on co-created simulation week vs initial structure.
- Placement provider feedback.
- Introducing simulated placement weeks in Year 2/3 of programme- establishing learning priorities and capacity.
- Integrating other simulation resources across other modalities (e.g. Medscape.ca for theatre imaging)



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