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Ethical approval/Institutional Review Board (IRB) statement This quality improvement project was approved by The Head of Quality and Patient Safety Department at Aisha Bint Hamad Al-Attiyah Hospital, Doha, Qatar.

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GROUP-BASED REFLECTIVE LEARNING CONVERSATIONS MODEL FOR CLINICAL REASONING SKILLS OPTIMIZATION IN MULTICULTURAL SIMULATED LEARNING ENVIRONMENTS: A MIXED METHODS COMPARATIVE STUDY

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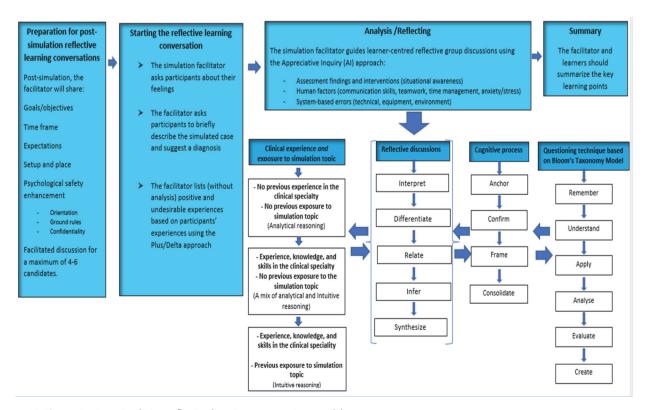
Background Simulation-based education effectively immerses healthcare professionals in scenarios that mimic clinical situations, mitigate patient safety risks, and practice with focused learning opportunities.<sup>1</sup> Debriefing is an essential part of a

simulation and Reflective Learning Conversations (RLC) is a form of simulation debriefing that incorporates empathic, active, and reflective discussions shared between a small group of participants. The RLC is facilitated by a trained/competent facilitator to enhance clinical reasoning skills, hence, improving patients' outcomes.<sup>2</sup> The impact of group-based RLC on clinical reasoning levels, especially with contributing factors of scenario complexity, learners' experiences, seniority, backgrounds, and competence levels in a multicultural learning environment has not been previously investigated.<sup>3</sup> This abstract describes the development and validation of a simulation RLC model in consideration of different influencing and contributing factors to optimize clinical reasoning while attending group-based RLC.

Methods The research team (N=18) included doctors, nurses, researchers, educators, and patients who developed the RLC model through a theoretical-driven and conceptual analysis framework. The model's reliability and validity were evaluated and confirmed through a mixed methods quasi-experimental pre-test-post-test design. Data were collected by survey, direct observations, and focus group. Descriptive and inferential statistical analyses of quantitative data were conducted using SPSS and thematic analysis was conducted for qualitative data.

Results The new model was successfully developed incorporating process pathways and scripted examples (figures 1 and 2). The model was deemed valid and reliable with Cronbach alpha and Intraclass Correlation Coefficient (ICC) ( $\alpha$ =0.973, ICC=.973).

Conclusion Optimizing clinical reasoning skills while attending simulation group-based RLC in a multicultural learning environment could challenge healthcare educators. To overcome that challenge, the RLC model was developed and validated in consideration of different contributing and influencing



Abstract 48 Figure 1 Post-simulation reflective learning conversations model

## Preparation for post-simulation reflective learning conversations

### The facilitator and co-facilitator should prepare the setting and introduce the ground rules:

Thank you for attending the simulation activity. We believe you are all knowledgeable, capable, and will aim to do your own best to improve and develop.

We are going to take part in a reflective conversation to discuss your simulation activity experience. The purpose of this reflective conversation is to learn from your experiences, improve or consolidate, and not blame any of you. It is a safe learning environment where you are your free to share your feelings, thoughts, and experiences.

We (myself and the co-facilitator) will be facilitating the conversation but primarily you will be leading the discussion with our support, but we may contribute at some point, if needed.

We will be asking purposeful reflective questions and all of you are expected to contribute to the conversation, and we will ensure that you all have an equal chance to participate.

The conversation should take around 45-60 minutes. However, we can extend by a few minutes if needed.

Everything discussed here is confidential and will remain within this place, and we expect the same commitment from you.

At some point myself or the co-facilitator will summarize in writing what went well and what is needed for further improvement based on your experiences. We will also add our observations as facilitators as this will guide us and ensure our reflective conversations are organized and objective.

Once we finish this conversation, we will move to the next simulation activity based on your schedule.

Before we start our conversation, do you have any concerns or questions? Are you comfortable with the setting and environment? Are there any distracting factors?

# Starting the reflective learning conversations

The facilitator and/or co-facilitator begin the reflective learning conversation process as follows:

At first and before we move on to the details of your experience, we would like to ask all of you; how was(were) your feeling(s) during the simulation experience? and what caused that feeling (s)?

We would like to hear a brief description of the case and an overview of what happened during the simulation experience from each of you.

Now, we would like to ask each of you to share what went well and what is needed for improvement based on your individual and team-based experience. While this happens, the co-facilitator will take notes to summarize and categorize what you say as either good experiences, undesirable experiences, and/or potential for improvement.

### Analysis /Reflecting

We will now go through the good experiences, the undesirable experiences, and the potential areas for improvement, and have detailed reflective conversations around each of these categories.

It has been mentioned that There was a delay in managing tachycardia. Let us explore why this happened and how we could avoid this next time:

- 1) We would request from each of you to define tachycardia and list causes of tachycardia. (knowledge focus)
- I observed that during the simulation your patient had tachycardia, and that tachycardia can be caused by many
  pathologies, but I wonder how you interpreted the cause of tachycardia in this instance? (understanding focus)
- 3) It was observed during the simulation that there was a delay in solving/treating the tachycardia, and I know this might provoke dysrhythmias, therefore, I wonder what was in your mind at the time about how to solve/treat the tachycardia? -(applying focus)
- 4) It was observed that you treated the tachycardia thinking it was caused by sepsis, and we know that sepsis has a special treatment protocol, but I wonder why you related tachycardia to sepsis and not to any other cause? Can you elaborate more about this and explain what was in your mind? - (analysing-synthesis focus)
- 5) All of you agreed to relate the tachycardia to sepsis and decided to give IV fluids and oxygen which as we know falls within the sepsis management strategy, but I wonder how you inferred and evaluated that what you did was an appropriate intervention and management strategy? Can you elaborate more on this? (evaluation focus)
- 6) Moving forward, despite the fact that you were able to intervene and take treatment decisions, there was a delay in managing the tachycardia and the patient deteriorated rapidly. As we know time is critical in this case, I wonder how you developed the treatment plan? Can you elaborate more on what was in your mind at that time? – (creation and metacognition focus)

Based on our analysis and reflective conversation around sepsis related tachycardia, how do think early recognition of sepsis related tachycardia can be managed effectively and in a timely manner?

## Summary

Thank you for your inputs, contributions, and active engagement throughout the reflective learning conversation.

We would request each of you to summarize and conclude the learning points arising from this reflective learning conversation.

We as facilitators would like to add that .....

Do you have any questions? Would you like to add anything before we move to the next simulation activity

Abstract 48 Figure 2 Scripts of the post-simulation reflective learning conversations

factors and is deemed valid and reliable to be used for groupbased simulation-based healthcare education.

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Ethical Approval/IRB Statement The study was approved by the Institutional Review Board (IRB) of Hamad Medical Corporation (MRC-01-22-117) and the University of Hertfordshire (HSK/PGR/UH/04728).

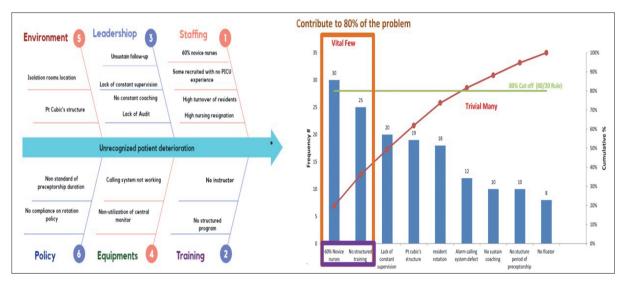
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49 ENHANCING THE EFFICIENCY OF NOVICE NURSES
THROUGH THE INTEGRATION OF MODIFIED
SIMULATION TRAINING AND A ROTATION PROGRAM
FOR PAEDIATRIC CRITICAL CARE NURSES

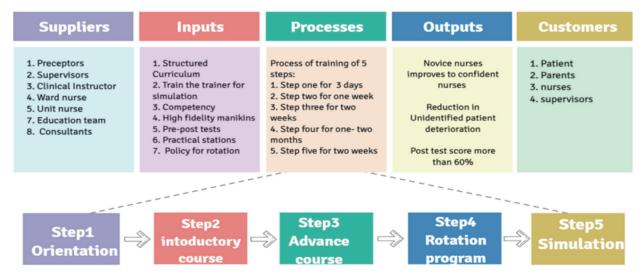
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Background Following the COVID-19 pandemic, a global shortage of critical care nurses led organizations to revamp training resulting in a 60% nurse resignation rate at our tertiary institution.<sup>1</sup> This led to high rates of life-threatening events, unrecognized deteriorations, and delays in management. The aim was to enhance novice nurse efficiency by reducing average response time to procedures and patient management by 20%, achieved through simulation-based training (SBT) starting September 2023. Simultaneously, we



Abstract 49 Figure 1 Underlying causes leading to unrecognized deterioration and interpreting a pareto chart to depict contributing factors in the system problems related to recurrent responses for unrecognized patients in the PICU



Abstract 49 Figure 2 SIPOC (suppliers, inputs, process, outputs, customers) diagram of training process