Embedding simulation-based learning in a capstone undergraduate nursing subject to develop clinical reasoning skills

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Disclosure

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Objectives

By the end of this presentation, participants will be able to:

• identify the simulation based activities utilised to develop clinical reasoning skills in nursing students;

• identify the six-steps in the validated Debriefing for Meaningful Learning© (Dreifuerst, 2010) debriefing framework.
Context, Drivers, Opportunity

- **Context:** School of Nursing, Midwifery and Paramedicine
- **Use of simulation**
- **Existing capstone unit was 100% online**
- **Opportunity for change**
- **Simulation as a strategy to enhance clinical reasoning skills**
Strategy

- Project Team
- Conceptual model
- Alignment
- Coordination

- Funding
- Resource development
- Program development
- Staff development
Clinical reasoning cycle

1. **Describe or list facts, context, objects or people.**
2. **Review current information (e.g., handover reports, patient history, patient charts, results of investigations and nursing/medical assessments previously undertaken).**
3. **Gather new information (e.g., undertake patient assessment).**
4. **Recall knowledge (e.g., physiology, pathophysiology, pharmacology, epidemiology, therapeutics, context of care, ethics, law, etc.).**
5. **Collect cues/information.**
6. **Identify problems/issues.**
7. **Establish goal/s.**
8. **Synthesise facts and inferences to make a definitive diagnosis of the patient's problem.**
9. **Interpret: analyse data to come to an understanding of signs or symptoms. Compare normal vs abnormal.**
10. **Discriminate: distinguish relevant from irrelevant information; recognise inconsistencies, narrow down the information to what is most important and recognise gaps in cues collected.**
11. **Relate: discover new relationships or patterns; cluster cues together to identify relationships between them.**
12. **Inter: make deductions or form opinions that follow logically by interpreting subjective and objective cues; consider alternatives and consequences.**
13. **Match current situation to past situations or current patient to past patients (usually an expert thought process).**
14. **Predict an outcome (usually an expert thought process).**
15. **Take action.**
16. **Evaluate outcomes.**
17. **Evaluate the effectiveness of actions and outcomes. Ask: “has the situation improved now?”**
18. **Reflect on process and new learning.**
19. **Contemplate what you have learnt from this process and what you would do differently next time.**

# Clinical Reasoning Cycle

## Case One
- Interprofessional communication
- ISBAR (Identify, Situation, Background, Action, Response)

## Case Two
- Interpersonal skills
- Rapport
- Maintain dignity

## Case Three
- Ethical decision making

## Case Four
- Patient allocation
- Prioritisation
- Delegation

### Identification of the deteriorating patient.
Fluid and electrolytes

### Empathic communication.
Challenging patient

### Dignity and vulnerability.
Refusal of treatment

### Prioritisation and delegation.
“Ward for a day”

### Methods
- Manikin based
- Actor based
- Video based
- Game based
### Frame 1
- **Patient Story**
  - (5 mins)

### Frame 2
- **Focussing in on Key Problem**
  - (20 mins)

### Frame 3
- **Desired Client Outcome (Goal)**
  - (5 mins)

### Frame 4
- **Nursing Interventions and Patient Responses**
  - What worked towards the agreed goal?
  - What did not work towards the agreed goal?
  - (10 mins)

### Frame 5
- **What would you do differently and Why?**
  - (10 mins)

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<table>
<thead>
<tr>
<th>Name</th>
<th>Demographics</th>
<th>Past Hx</th>
<th>What did you find out?</th>
<th>Further Hx</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

**Purpose of this frame is to facilitate student-focused discussion with the outcome being a mutual understanding of the problem/s.**

End-point should be 1-2 problems that all students agree on.

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**Dot-points only.**

Document every problem identified by participants.

As a facilitator, seek clarification if a student’s statement is ambiguous.

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**Dot-points.**

Detailed exploration of dot points.

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**Statement.**

- Now a mutual understanding and consensus about the problem has been established...what does the group determine should be the desired outcome?
- Now you have had the debrief, how might this problem be approached next time?
<table>
<thead>
<tr>
<th>Frame 6</th>
<th>Frame 7</th>
<th>Frame 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(DML P4)</strong></td>
<td><strong>(DML P4)</strong></td>
<td><strong>(DML P4)</strong></td>
</tr>
<tr>
<td><strong>Thinking-In-Action (5 mins)</strong></td>
<td><strong>Thinking-On-Action (5 mins)</strong></td>
<td><strong>Thinking-beyond-Action (5 mins)</strong></td>
</tr>
<tr>
<td>Thinking-in-action focuses on the motivators and rationale that informed their reasoning, judgement and actions.</td>
<td>Thinking-on-action provides an opportunity for the group to now reflect on the entire scenario as it happened.</td>
<td>Extend learner thinking/reasoning by verbally providing a scenario that uses the same principles but in a different context.</td>
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<tr>
<td>Here you are asking why the participants did what they did and why, making visible the students’ thought processes.</td>
<td>This is where theory, other information (lab results, documentation, practice guidelines) come in.</td>
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<tr>
<td>It is important that this section covers both what went well and what could be improved. Incorrect assumptions or misunderstandings are to be addressed here.</td>
<td>Thinking-on-action involves the consolidation of the debriefing so far and draws it down to “the 5 critical things” to consider in terms of the learning outcomes.</td>
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<tr>
<td>This frame must not become accusatory.</td>
<td>This stage may be focused on one or several areas of the Clinical Reasoning Cycle, depending on where the greatest need for learning may be (such as collecting data, communication, documentation and so on).</td>
<td></td>
</tr>
<tr>
<td>Dot-points only.</td>
<td>Dot-points.</td>
<td>LEO Discussion Forum.</td>
</tr>
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</table>
Student Feedback

• “They were interactive and facilitated so much discussion and debate. It really helped to see how far we've come in three years.”

• “I appreciated the clinical reasoning classes, they were very effective in building my critical thinking and clinical reasoning skills.”
“The pracs made me start to look at the way I work and look at the process of everything I do while attending to the care of my patients everyday at work.

I believe that these classes have been the best learning this year. It really brings everything we have done together. These pracs help me to realise how important it is to ask questions, evaluate all information and to debrief issues with co-workers as we all have different ideas.”
Staff Feedback

• “The level of student engagement was far beyond any other class I have taught in this curriculum.”

• “I felt that the journey for the students was consistent and invested in their professional identities.”
• “I actually saw the interest levels change in the students, beginning at a mentality of attending to ‘get it over with’ to looking forward to the next sessions and being able to voice their thoughts and opinions. 

I also personally felt very involved in the scenarios and personas within the scenarios which were clinically relevant.”
Where to from here?

- Evaluating the effectiveness of an innovative simulation program designed to enhance clinical reasoning skills in final semester nursing students.
References

