IN PRACTICE

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OPIOID TOXICITY – CAN WARD-BASED SIMULATION INCREASE KNOWLEDGE AND CONFIDENCE IN ITS RECOGNITION AND MANAGEMENT: RESEARCH WORKS IN PRACTICE

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Introduction: Opioid analgesia remains a key pharmacological option for the management of post-operative pain [1]. Preventing and recognising adverse events associated with opioid analgesia is vital, due to the risk of life-threatening sedation and respiratory depression. Nurses play an important role in the recognition and initial management of these patients.

Simulation-based education (SBE) has been shown to have a significant positive effect as a training strategy for nurses [2]. Here, we aim to determine whether SBE, delivered in a ward environment, can increase nurses' knowledge and confidence in managing patients with opioid toxicity with respiratory compromise.

Methods: Over a period of five weeks SBE was delivered to nurses in their clinical areas using small group point-of-care (POC) simulation. The simulation included both a simulated participant and a task-trainer airway head to perform airway manoeuvres. Learners were provided with basic monitoring equipment, simple airway adjuncts and patient-specific paperwork. The scenario was facilitated and debriefed by experienced simulation faculty.

A feedback survey was carried out using a QR code immediately after the scenario. A follow-up survey was emailed to the participants two weeks after the final simulation. They comprised the same five questions: 1) knowledge of opioid toxicity (including theory and risk factors); 2) confidence in recognising opioid toxicity; 3) basic airway management; 4) managing opioid toxicity; 5) administering naloxone if prescribed appropriately. Candidates were asked to complete a five-point Likert scale before the simulation, immediately after the simulation and in the follow up survey.

Wilcoxon signed-rank test was performed on survey responses to each question to determine whether there were significant differences between: 1) before and after the simulation 2) before the simulation and follow-up.

Results: A total of seven registered nurses attended a simulation session over the five weeks. All attendees completed the survey immediately after the session and six at the follow-up questionnaire. The follow-up questionnaire was completed at two to six weeks after the simulation. The results are summarised in Table 1.

Discussion: Four out of five of the questions in the survey immediately after the session, and three out of five at follow-up, showed a significant increase in value. This shows the POC simulation increased knowledge and confidence in the recognition and management of opioid toxicity. Despite the benefits demonstrated, the limitations of this project included staff availability, the length of time the training could be offered and the number of survey responses.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable

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SUPPORTING DOCUMENTS – TABLE 1-A97

Table 1. Table of results. (* p<0.05 = statistical significance)

	Number of responses	Mean (range)	Standard deviation	z-value (compared to before)	p-value* (compared to before)
1) **Knowledge**					
Before	7	3.57 (3–5)	0.787	---	---
After	7	4.57 (4–5)	0.535	2.377	**0.0174**
Follow-up	6	4.17 (4–5)	0.408	2.236	**0.0253**
2) **Recognition**					
Before	7	3.57 (2–4)	0.787	---	---
After	7	4.71 (4–5)	0.488	2.53	**0.0114**
Follow-up	6	4.16 (3–5)	0.753	1.41	0.1585
3) **Airway management**					
Before	7	3.71 (2–5)	0.951	---	---
After	7	4.71 (4–5)	0.488	2.377	**0.0174**
Follow-up	6	4.33 (4–5)	0.516	1.964	**0.0495**
4) **Management**					
Before	7	3.71 (2–5)	0.951	---	---
After	7	4.42 (3–5)	0.787	1.673	0.0944
Follow-up	6	4.50 (4–5)	0.548	2.169	**0.0301**
5) **Naloxone**					
Before	7	3.86 (1–5)	1.345	---	---
After	7	4.86 (4–5)	0.378	1.976	**0.0482**
Follow-up	6	4.83 (4–5)	0.408	1.732	0.0833