Strengthening Code Blue Response Through Simulation

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Background

A Code Blue event is a critical situation wherein timely intervention is vital for patient survival. This project addressed the need to optimize rapid response strategies by integrating evidence-based practices into clinical workflow. The simulation-based education aimed to enhance organizational performance, promote patient safety, and improve healthcare delivery leveraging the magnet nursing culture and science-based innovations.

Goal

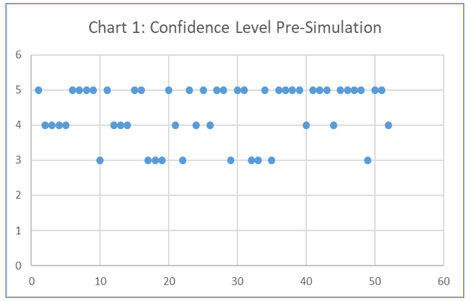
Feedback from nurses indicated a lack of confidence in Code Blue situations. The project's goal is to enhance healthcare teams' preparedness for medical emergencies by improving response skills, teamwork, and confidence, ensuring effective management of critical events and better patient outcomes.

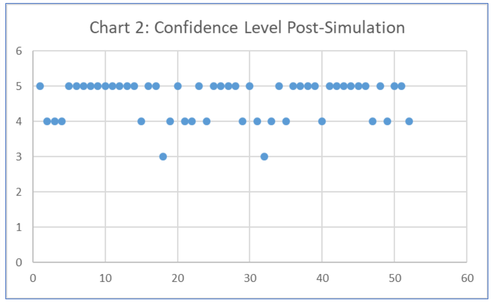
Methodology

Each simulation session includes realistic scenarios, mock crash cart hands-on with sim box , algorithm review, and various learning methods like Elsevier modules, tests, and Q&A sessions. Simulations help staff stay current with guidelines, understand action sequences, and the rationale behind each step. Focus is also placed on team dynamics, communication, and decision-making, improving staff performance and teamwork during Code Blue situations.

Analysis

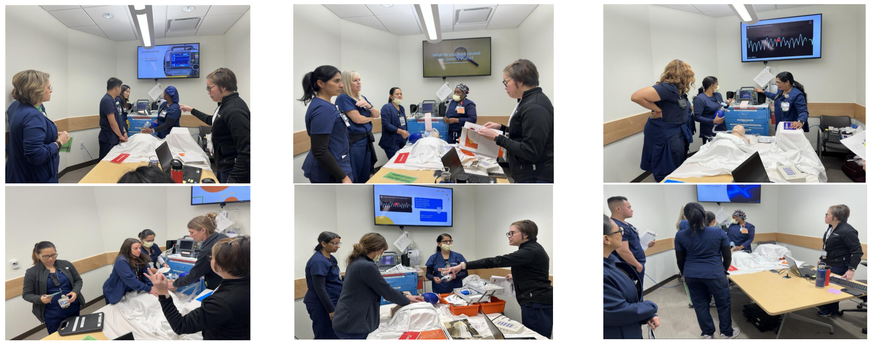
The mean pre-simulation confidence level of 4.37 (SD=0.80) increased to 4.62 (SD= 0.56) after Code Blue simulation which supports a study on the impact of mock code simulations in pediatrics (Nord, 2015). Both projects acknowledged that mock code simulation increases the overall comfort level of registered nurses. PACU is a critical care environment where nurses are expected to heavily use critical thinking skills to recognize subtle changes on the patient's condition and be able to respond in a timely manner. And simulation-based learning has proved to enhance the technical skills of the responders (Rindt, 2012). Eighteen percent of the nurses rated themselves 3 out of 5 on their confidence level before the simulation, as shown in Chart 1. After the simulation, only 3% of them rated themselves at 3, as shown in Chart 2, which is a compelling evidence that simulation equipped nurses the response skills and confidence to respond to a medical emergency. The questionnaire was anonymous which limited the authors to assess the learning needs of the 3%.





Interventions

To accommodate varying schedules and ensure equitable participation, an electronic signup system was implemented alongside a pre-survey to gauge nurses' initial confidence and knowledge regarding emergency protocols. Each nurse was assigned a role during the simulations to encourage active engagement and foster collaboration. The training featured an in-depth review of a crash cart, borrowed from logistics, allowing participants to gain hands-on experience with its contents and master the operation of the Lifepak15 defibrillator. Realistic mock Code Blue scenarios were created using simulator, providing a controlled and immersive environment for skill-building, supported by knowledge checks to reinforce learning. Emphasis was placed on team dynamics to enhance communication, coordination, and efficiency in high-pressure situations. This comprehensive simulation-based approach not only strengthened practical skills and confidence but also deepened the nurses' understanding of emergency procedures. A post-training survey captured confidence levels, rated from 0 (not confident) to 5 (very confident), offering invaluable insights into the training's impact and opportunities for further refinement. The simulations were conducted on the following dates: March 3, 2024, March 14, 2024, April 2, 2024, May 15, 2024, and June 28, 2024.



Results

The Code Blue simulation effectively increased nurses' confidence levels and preparedness for emergencies. Pre-simulation confidence level averaged 4.37, and post-simulation confidence rose to 4.62 out of 5. Ninety-eight percent of the nurses understood the learning objectives, found the course materials essential, and valued the facilitator's knowledge. One hundred percent felt they could apply what they learned. Key lessons stated by the nurses included staying calm and understanding team dynamics, highlighting the training's significant impact on preparedness and response skills

Conclusions

The findings underscore that simulation improves nurses' confidence levels and emergency preparedness. The implications for practice suggest a need for integrating regular code simulation into nursing practice to achieve optimal confidence among nurses in responding to medical emergencies and to promote patient safety.

References

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