The recent development of a Post-Anesthesia Care Unit (PACU) Nurse Residency Program is placing new graduate nurse residents in the PACU. The program is designed to provide comprehensive training in critical care concepts beyond observational critical care shifts during the nurse residency.

**PROBLEM**

A literature review demonstrated that nurse residents are unable to apply clinical knowledge to their nursing practice and lack of knowledge and skills in caring for higher level patients, indicating a need for additional training in critical care concepts beyond observational critical care shifts during the nurse residency.

**PURPOSE/OBJECTIVES**

Critical care competencies are a national top priority for all PACU nurses. The purpose of this project is to develop nurse residents’ knowledge and skills in:

- Clinical decision-making for the critical care patients in the PACU
- Monitoring hemodynamic, oxygenation, blood chemistry and acid base balance of the critically ill patient
- Initiating and titrating high risk IV drip medications

**METHODS**

A needs assessment revealed a need for further critical care education for PACU nurse residents. Recommendations by professional organizations denote that critical care patients in the PACU must receive the same level of care as in ICU.

A literature review demonstrated that nurse residents are unable to apply clinical knowledge to their nursing practice and have lower confidence levels compared to experienced nurses. The need for a program that concentrates on critical care concepts in the PACU was evident. Those concepts included:

- Monitoring hemodynamic, oxygenation, blood chemistry and acid base balance of the critically ill patient
- Initiating and titrating high risk IV drip medications

The program compared didactic instruction versus didactic and simulation instruction. The high-fidelity simulation allowed for the residents to apply concepts specifically taught in the didactic lesson.

Realistic simulation-based teaching methodologies can serve as a bridge between the acquisition and application of clinical skills and knowledge.

Knowledge in both groups were measured pre- and post-intervention using critical care certification review questions related to the concepts taught in the didactic lesson.

**RESULTS**

The results indicated that the high-fidelity simulation group had the greatest increase in knowledge assessment score. Simulation increased knowledge levels in all of the topics covered in this course except for ventilator management. The score difference between the simulation group and the didactic only group are highlighted in the table on the right.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Simulation Group</th>
<th>Didactic Only Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABG Interpretation</td>
<td>64.91%</td>
<td>43.16%</td>
</tr>
<tr>
<td>Ventilator Management</td>
<td>70.8%</td>
<td>61.8%</td>
</tr>
<tr>
<td>Hemodynamics</td>
<td>84%</td>
<td>84%</td>
</tr>
<tr>
<td>Drips</td>
<td>72.7%</td>
<td>72.7%</td>
</tr>
<tr>
<td>Overall</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>

**OUTCOMES**

In addition to the current PACU Nurse Residency Program, nurse residents need supplemental critical care courses. Courses should include:

- High-fidelity simulation after a didactic lesson to enhance learning
- Several simulation sessions with various topics throughout the residency program

**FUTURE ACTIONS**

In addition to the current PACU Nurse Residency Program, nurse residents need supplemental critical care courses. Courses should include:

- Classes offered in four parts over the course of eight months to be started in 2018

**REFERENCES**


