Enhancing patient safety through high fidelity simulation
University of Maryland Medical Center (UMMC)

Program/Project Description.
Problem: A "Code Blue" situation can be anxiety-producing for both new and experienced acute care nurses. Reasons for anxiety include infrequent experience, lack of self-confidence, or previous experience with a resuscitation event that did not run smoothly.
Baseline data - No baseline data available.
Goals:
1. Nurses will recognize the team dynamics and participate in code situation.
2. Nurses will perform ongoing assessment and provide cardiac and respiratory support throughout the Code Blue.
3. Nurses will demonstrate how to treat dysrhythmias appropriately with defibrillation, cardioversion and drugs.

Evaluation: Analysis of pre and post test and subjective evaluation by nurses

Process.
In collaboration with staff in the Maryland Advanced Simulation Training Research and Innovation (MASTRI) Center, the unit leaders developed a simulation-based training program for nurses. Patient scenarios that included physiologic conditions such as dysrhythmias and asystole were created and then simulated with a high-fidelity patient simulator. The objectives of the simulation sessions included: timely delegation of code team member roles, effective communication among nurses, familiarization with code cart supplies, proper use of the Lifepak 20 defibrillator, and appropriate demonstration of BLS and ACLS protocols.

Solution.
In order to address the problem, the leadership team of the Surgical Acute Care Unit developed a "Code Blue" simulation program.
Implementation - Each month, a team of 5-6 nurses and 2 trainers were scheduled for a simulation training session. A debriefing session was held after each session. Prior to attending a simulation session, RNs were instructed to review study material that covered team roles and ACLS protocols. Knowledge was measured with a 10-item knowledge-based quiz that was administered prior to the simulation session and again after the session. To evaluate the simulation curriculum, a 10-item survey was also administered.

Measurable Outcomes.
To date 23 RNs have completed training. Scores on the knowledge-based quiz improved slightly. Overall survey results were favorable. 100% of nurses agreed that hands-on training with simulation was effective and 86% agreed that their comfort level in facing a code situation was improved. Qualitative feedback was also positive. See appendix I and II.

Sustainability.
1. Annual education to all nurses by rotation every month
2. Expansion of model to other departments and units
3. Poster presentation sessions at organizational and national level.

Role of Collaboration and Leadership.
In collaboration with staff in the Maryland Advanced Simulation Training Research and Innovation (MASTRI) Center, a team of unit leaders developed and facilitated a simulation-based training program for nurses.

Leadership - Unit nurse manager, senior clinical nurses, medical director and staff of MASTRI center facilitated the collaboration

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Appendix I

Pre and Post test score

Simulation Evaluation By Nurses

Simulation Evaluation
**Surgical Curriculum Course Evaluation**

**DATE:**

**INSTRUCTORS:** ________________________________________________

**Directions:** On a scale of 1 to 5, please rate each of the following items with **five** representing strongly agree and **one** representing strongly disagree.

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<td></td>
<td>STRONGLY DISAGREE</td>
<td>DISAGREE</td>
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<tr>
<td>1.</td>
<td>The content of the course met my expectations.</td>
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<td>2.</td>
<td>My knowledge base for a variety of surgical procedures was enhanced with this course.</td>
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<td>3.</td>
<td>The BLS and ACLS protocols were effectively reinforced throughout this course.</td>
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<td>4.</td>
<td>The time allotted for &quot;hands-on&quot; simulation was adequate.</td>
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<td>5.</td>
<td>This course reinforced the importance of defined roles in a Code Blue and effective communication.</td>
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<td>6.</td>
<td>My comfort level in facing a Code Blue has improved with this course.</td>
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<td>7.</td>
<td>The instructors in this class were knowledgeable about the subject matter and provided useful, immediate feedback.</td>
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<td>8.</td>
<td>The debriefing after the simulation exercise was useful.</td>
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<td>9.</td>
<td>My comfort level in facing a Code Blue has improved with this course.</td>
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<td>10.</td>
<td>This training session was effective and I would recommend it to others who will perform these skills in clinical practice.</td>
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**What did you like best about the course?**

**How can we improve the course?**

**Additional comments/suggestions:**