Online Quality Improvement Simulation
Tinisha M. Lambeth, Clifford Gonzales, Heather Johnson, Eric Marshburn
Department of Academic Nursing

Problem/Needs Assessment
Bachelor of Science in Nursing-Doctor of Nursing Practice, Nurse Anesthesia (BSN-DNP-NA) students:
• online learning first year of matriculation
• complete a practice-based capstone project by graduation
• Pre-quality improvement(QI) simulation survey:
  • 47% of the incoming 2021 students had not taken a prior QI course
  • 60% had not participated in a QI initiative.

Program Objective
Provide an online experience for BSN-DNP-NA students to learn/practice QI methodology in preparation for capstone projects/future career goals.

Description of the Program
• In-person simulation materials converted to online in the Articulate RISE platform.
• Students began in Canvas-Learning Management System (informational video and QI methodology articles provided)
• Accessed simulation in Articulate RISE from a link
• Same scenario for all, but students chose additional information based on Plan-Do-Study-Act (PDSA) results and run chart data as they progressed through the scenario
• Students completed 3 PDSA cycles with deliverables at set intervals (fishbone diagram, impact/feasibility chart, key driver diagram and 3 PDSA cycle forms)

Evaluation/Assessment
• Pre/post-survey in REDCap
• Course evaluations
• WebEx meeting with students after module for qualitative data

Results
• n=15 BSN-DNP-NA students
• 100% of students found the simulation helpful in understanding QI and positively affected their interest in pursuing QI in their career
• 93% were likely to use QI principles to address work problems
• Open-ended question in the course evaluation: 33% respondents specifically stated QI modules as a helpful topic/experience
• Notable student comments during the WebEx meeting were, “this has been my favorite assignment so far,” “this was a great platform to learn QI methodology” and “I was surprised at how much creativity it required.”

Conclusions
• Successfully changed students’ views on the effectiveness of QI
• Increased confidence to develop/implement QI projects
• Increased interest in using QI in future careers.

Lessons Learned
• Design/compilation of using two platforms to provide the simulation experience/place for students to submit assignments.
• The next iteration will require less movement between the two platforms.

References:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Pre-module</th>
<th>Post-module</th>
</tr>
</thead>
<tbody>
<tr>
<td>QI methods can be effective in improving medical care, education and processes at work</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>Confident to develop a QI project</td>
<td>73%</td>
<td>85%</td>
</tr>
<tr>
<td>Confident to implement a QI project</td>
<td>67%</td>
<td>93%</td>
</tr>
</tbody>
</table>