Online Quality Improvement Simulation

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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."

Questions	Pre-module	Post-module
QI methods can be effective in improving medical care, education and processes at work	93%	100%
Confident to develop a QI project	73%	85%
Confident to implement a QI project	67%	93%

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/complication 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.

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