Undergraduate Student Nurse ACLS Certification to Improve Practice Transition and Confidence

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Problem
- The ability of nursing students to recognize and assess the deteriorating patient is critical in cardiopulmonary arrest (6).
- A simulated learning environment can improve student skill knowledge, confidence, and competence (3).
- Student performance with clinical simulation alone did not produce a significant improvement in students self-perceived performance (4); (5).
- Challenge to create a new method of instruction to bridge the gap between didactic and clinical learning.

Objectives
- Execute a leveled code blue curriculum in a multi-scaffolding environment.
- Pilot a SICBS tool to provide a new method of instruction for the didactic classroom.
- Assess student code blue self-confidence with a new code blue assessment tool.
- Increase student confidence in code blue processes.
- Implement an ACLS course to prepare the undergraduate nurse for the transition into practice.

Evidence
- Patient outcomes in critical situations are improved when CPR is performed within the first two minutes of care (1).
- Simulation is a safe environment to create and foster student critical thinking with critical events (2).
- Simulation can train students to identify critical trends before entering into clinical practice (7).
- The millennial student thrives with active learning through simulation methods (8).
- Critical thinking and general performance scores were significant for simulation instruction versus traditional instruction (9).
- ACLS certification in eighth semester nursing students increased self-reported confidence in code blue skills (11).

Methods
- Population
  - Convenience sample from 89 senior BSN students.
  - No exclusion criteria.
- Research Design
  - Quantitative, Pre-test/Post-test
- Instruments
  - Demographic Survey
  - Pre- & Post-Intervention Survey
  - 12-Item Self-Confidence Questions: Modified from Code Blue Survey (10).
  - Standardized In-Class Code Blue Simulation (SICBS)
  - Designed & created by PI.

Outcomes
- Sample Demographics (N=15)
  - Gender:
    - 86.7% Female
    - 13.3% Male
  - Age:
    - 80% Traditional Student (18-24)
    - 20% Non-Traditional Student (35-45)
  - Race:
    - 100% Caucasian
  - Previous Healthcare Experience:
    - 60% Yes
    - 46.7% CNA/SNT/PCT
    - 40% No
  - Current Employment:
    - 86.7% Employed
    - 60% Healthcare Position
    - 13.3% Unemployed
  - Code Blue Exposure:
    - 40.0% 0 Code Blue Events
    - 40.0% 1-3 Code Blue Events
    - 13.3% 4-6 Code Blue Events
    - 6.7% >7 Code Blue Events
  - Variables: The T-Test was not statistically significant between groups: gender, age, previous healthcare experience, and specialty certifications.
- Design: Pearson Correlation as split half reliability check: r=.444 & p=.199
- Comfortability: Survey questions relating to comfortability: 2, 3, 4, 5, 6, 8, 10, 11. Results are pre / post intervention.
  - Cronbach's Alpha=.786 / .750
  - Factor analysis = LOE > .579 / .631
  - Range Pre: 4-40, 40= most comfortable
  - Range Post: 4-20, 20= most comfortable
- Anxiety: Survey questions relating to comfortability: 7, 9.
  - Cronbach's Alpha=.922 / .237
  - Factor analysis = LOE > .963 / .754
  - Pre/Post Range: 2-10, 10= most anxious

Conclusions
- The Standardized In-Class Code Blue Simulation (SICBS):
  - Improved student comfortability
  - Decreased student anxiety
  - The T-Test was not statistically significant between groups: gender, age, previous healthcare experience, and specialty certifications.
  - Reaches all target audiences regardless of sex, age, experience level, and specialty certifications equally.
- Modified 12-Item Self-Confidence Survey:
  - Goal was to pilot new instrument that was able to use composite measures and was able to assess implicit bias.
  - Proven valid through the factor analysis.
  - There is an inverse correlation between comfortability and anxiety. (r=.444, p=.199)
  - Survey questions excluded from study: 1 & 12. Will revise for anxiety for future studies to improve validity.

ACLSCertification:
- 54 BSN students completed ACLS certification prior to graduation.
- Stakeholder feedback requested PALS certification for future consideration.