Using Simulation Technology to Validate Competency
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Background:
• The Institute of Medicine 2010, report recommends that nurses continue their education with ongoing competency assessment and validation in order to ensure safe quality care in a rapidly changing and diverse healthcare environment
• Historically nursing competency has been measured by annual skills fair focused on evaluating skills, not the Knowledge, Skills and Attitudes or essentially the understanding of the science behind the skills
• Wright (2005), defines competency as not only capabilities, but also the achievement of desired outcomes, with measurements reflecting nursing abilities beyond technical skills.

Literature Review:
• Simulation is embraced as a component of continuing education
• Serves as an effective means of systematically validating competencies in a controlled environment
• High Fidelity Patient Simulation provides the opportunity for participants to react to high risk situations without risk to patient safety.
• The use of a validated rubric with established inter-rater reliability and simulation is increasing being used by healthcare organizations for competency assessment of collection and interpretation of data, clinical judgement, clinical reasoning, and communication which are essential to patient safety

Objective:
• Conduct competency assessment within a high fidelity human simulated environment for the nurses at BSWMC-Taylor, using a validated and reliable measurement tool.

Sample:
• All registered nurses (n = 13) assigned to the medical surgical unit were recruited to participate as part of the organizations annual competency assessment program

Methods and Procedure:
• Needs assessment to identify competencies
• Develop simulation scenario and assessment of content validity
• Pilot testing of simulation scenario.
• Creighton Competency Evaluation Instrument (C-CEI®) used to assess participants’ response
• Training for validators on the use of C-CEI® tool.
• Inter-rater reliability of validators assessed using the Kappa statistic and percentage agreement among raters.

Evaluation/Results:
• C-CEI is a quantitative evaluation tool used to evaluate participants’ performance in a clinical simulated environment; Inter-Rater Reliability of .952
• Focuses on 22 general nursing behaviors divided into four categories: assessment, communication, clinical judgement, and patient safety
• Validators had Inter-rater reliability of 0.77
• The mean scores were 21.4 and 21.2 for Rater 1 and 2 respectively on the 23 item evaluation rubric

Ethical Consideration:
• UT-Austin IRB approval & BSW IR exempted approval
• Participants were informed of purpose of project.
• Remediation was provided as needed, and outcome not tied to work performance

Implication for Nursing Practice:
• Given the increased complexity of patient care needs and healthcare, clinical educators need a valid and reliable method for effectively validating staff level of competence to provide care.
• Further research on the use of C-CEI tool in the clinical setting

Limitation:
• Time commitment to develop scenarios and train validators
• Lack of evidence on how such competency is correlated to performances in the clinical setting

References: