

IMPROVING NURSING STUDENT OUTCOMES: A QUALITY IMPROVEMENT
INITIATIVE TO IMPLEMENT A STRUCTURED CLINICAL TEACHING PROGRAM

A Doctor of Nursing Practice Project Report

by

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Submitted in Partial Fulfillment of the Requirements for the Degree of

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This Doctor of Nursing Practice Project Report meets the standards for scope and quality of
Texas A&M University-Corpus Christi and is hereby approved.

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ABSTRACT

Upon entry into practice, only 23% of newly graduated nurses from 140 registered nursing programs across the United States demonstrate essential nurse competencies and practice readiness (Kavanagh & Szweda, 2017). The lack of uniformity and structure in faculty engagement with students at the project site has resulted in inconsistent student performance in simulations, student/faculty interaction in clinical, and didactic course exam performance at the project site. The results acquired through an integrated literature review found use of structured clinical questions assist in advancing student/faculty engagement and elicit higher-order thinking. The purpose of this project was to increase competencies for entry into practice by promoting clinical judgement and improving analytical thinking through actively engaging clinical faculty with students in the clinical setting using structured clinical questions versus an informal structure. Key findings in relation to student simulation performance identified students in the non-intervention group only using the structured objectives performed better than those students in the intervention group using the structured objectives and clinical questions. Using a structured teaching format identified program weaknesses, evaluated performance differences among clinical faculty, and provided an evidence-based structure to the newest clinical faculty to have the best performance outcomes in patient safety and communication. Regarding didactic exam performance, the intervention group performed statistically better on exam one. No significant findings were identified among groups in relation to more time spent engaging with clinical faculty improving student performance.

Keywords: nursing students, clinical judgement, active learning, practice readiness

DEDICATION

I would like to dedicate this work to my dad (Pop), late mother Bell, big brother Ross, and my son Hunter. I find strength and qualities in each of you that make me who I am today. Dad, I learned from you that dedication and hard work pay off, family always comes first, and to love big. Momma, even though you are not with me, I feel your presence every day cheering me on and supporting me. You nurtured all of us and I know the reason I am the caring person I am today is because of you. Man, would you have loved to see this day! Ross, you are my biggest inspiration and I have been eagerly following in your footsteps to be just like you my entire life whether it be headstands to higher education. I have never met anyone as smart as you and I will be forever wishing I can someday to be just as awesome as you. My only son Hunter. You are my everything and I will never stop loving you and cheering you on to be your very best. Remember you have a heart of gold and never stop being you. You are smart, caring, and loyal to those you love. I cannot wait to see what the world holds for you.

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1. INTRODUCTION

Upon entry into practice, only 23% of newly graduated nurses from 140 registered nursing programs across the United States demonstrate essential nurse competencies and practice readiness (Kavanagh & Szweda, 2017). New graduates experience gaps in theory and skill competency upon entry into practice requiring time to transition to deliver safe patient care (Murray et al., 2017). New graduates are often delayed in recognizing changes in patient status, which impacts patient safety (Kavanagh & Szweda, 2017). Building a solid foundation begins with consistent application of a well-structured nursing program curriculum, committed faculty participation, and engaged student populations. The mission of the American Association of Colleges of Nursing (AACN) Commission on Collegiate Nursing Education (CCNE) is to improve nursing student preparedness and create solid foundations for nurses entering the nursing profession using a competency-based theoretical framework (AACN, 2021). The effectiveness of nursing clinical faculty (CF) engagement and the type of clinical models promote successful student learning outcomes (Collier, 2018; Ghasemi et al., 2020; Jayasekara et al., 2018). As part of ongoing quality improvement efforts, a review of student performance metrics at the project site identified inconsistencies in educational interactions between CF and students in the clinical setting. Further inquiry into the issue revealed that students instructed by hospital-based nursing faculty were not performing as well in high-fidelity simulations using standardized patients as students instructed by university-based faculty. It was further observed that students who interacted with university-based faculty using structured objectives had the most successful simulation performance.

Background

D'Souza et al. (2013) defined student and faculty engagement as a willingness to actively participate in the learning experience to overcome challenges in the clinical environment. A study by D'Souza et al. identified positive outcomes of engaging students in the clinical setting through evidence-based education techniques and clinical experiences such as shared learning experiences, reflective practice, critical thinking questioning, and evidence-based group work using evolving case studies. D'Souza et al. add that engagement in the learning process enables constructive influences on critical thinking, experiential learning, connectivity to course curriculum, and the ability to ask questions in the clinical environment. Most importantly, student learning improved through the effective use of time, planned activities, and CF personality traits (Collier, 2018; D'Souza et al., 2013; Ghasemi et al., 2020).

Instruction models used in the clinical setting include clinical preceptor models and clinical facilitator models. A clinical preceptor model involves assigning students to a nurse employed at the clinical site and the clinical facilitator model includes full-time or part-time university CF teaching in the hospital setting (Jayasekara, et al., 2018). The intention was to use the clinical facilitator model when providing instruction in the clinical environment.

Unfortunately, CF were not utilizing the facilitator model appropriately and the primary instructional model used was the clinical preceptor model with occasional interaction with university CF. Learning environments with CF supervision supporting student learning results in positive outcomes and fosters learning through CF interactions (Kamphinda & Chilemba, 2019; Jayasekara et al., 2018).

At the project site, anecdotal observations revealed lack of uniformity and structure in faculty engagement with students in the clinical setting which has resulted in inconsistent student

performance in simulations and didactic course test performance in the Medical Surgical Concepts I course. Student evaluations of CF revealed inconsistent levels of interaction. Inconsistent student simulation performance and limited CF engagement with students support the need for modifications in clinical instruction. The aim of this Doctor of Nursing Practice project was to implement best practices for engaging both nursing students and CF to improve critical thinking, analytical judgement, and simulation performance to support successful entry into practice. Implementation of Seibert's (2022) structured clinical question tool (CQT) using a clinical facilitator model was used as the project intervention. Student simulation performance and course exam performance were used to evaluate whether the use of structured objectives and CQT by CF improve student performance compared to students who received traditional clinical instruction using only weekly objectives.

Review of Literature

During a gap analysis of the project site, program leaders observed that lack of structured teaching in the clinical setting and inconsistent levels of faculty engagement may have contributed to first-time NCELX-RN pass rates falling below 80%. A review of the literature identified the need for teaching methods that support structured clinical experiences, faculty engagement using active-learning teaching strategies, and personality characteristics promoting effective learning. In a quantitative study by Jessee and Tanner (2016), 220 nursing students completed a 20-question survey addressing CF teaching behaviors and types of interactions and found promotion of higher order thinking coming from university-based faculty versus hospital-based staff. The project site predominately used clinical environment learning occurring through student interactions with nursing staff. Takase et al. (2020) performed a quantitative multi-site cross-sectional design surveying 154 nursing students on teaching and learning approaches used

in clinical experiences and found learning must be reinforced by educators who enable and facilitate learning, support active engagement, and implement interactive learning techniques. When used in the clinical environment, the CQT can provide an active-learning approach to facilitate learning and engagement with nursing educators (Seibert, 2022). Ghasemi et al. (2020) performed a non-systematic review of the literature on 32 articles to identify strategies to promote nursing students' academic clinical judgement and indicated technology, collaboration, simulation, and active-learning strategies as the best means to promote student engagement. The CQT has been validated as a tool to promote clinical judgment during patient care (Seibert, 2022). Kamphinda and Chilemba (2019) conducted an exploratory mixed method study of 219 third- and fourth-year nursing students and found students to be dissatisfied with the amount of faculty support received in clinical and a need to improve student clinical supervision using pedagogical principles. The study further revealed inadequate support and inconsistency in structure in the clinical setting ($p < .05$), and resulted in the inability of students to link didactic learning to clinical performance. Use of weekly objectives and questioning prompts enabled CF to use pedagogical principles and supported student learning in the clinical environment.

Jessee and Tanner (2016) found CF who interacted with each student a minimum of five times, facilitated learning and had a 41% higher ability to develop relationships with students and improve student retention of information. Clinical models were reviewed by Jayasekara et al. (2018) and found clinical facilitator models to be one of the most effective ways to improve student clinical judgement and higher-order thinking. D'Souza et al. (2013) studied the effect of faculty and student relationships and showed that high quality teaching improved learning in the clinical setting. Nursing students prefer engaging learning activities and shared learning experiences that include on-going supportive feedback from CF (D'Souza et al., 2013; Ghasemi

et al., 2020). Thus, structured clinical questions enabled faculty to positively interact with students by using active-learning modalities.

Problem Description in the Setting

A self-study gap analysis was performed at a BSN program located in South Texas. In addition to meeting accreditation standards by the American Association of Colleges of Nursing Commission on Collegiate Nursing Education (AACN), nursing program success is also measured by the National Council of State Boards of Nursing (NCSBN) Licensure Examination (NCLEX-RN) which should be greater than 80% of program graduates (Spector et al., 2018). Unfortunately, 25 out of 100 graduate nurses at the project site are entering into practice without the basic competencies, knowledge application, and clinical reasoning to pass licensure exams and enter practice successfully (Texas Board of Nursing, 2022). Furthermore, the project site gap analysis identified lack of CF engagement with students and inadequate support of student learning were obstacles contributing to poor student performance.

In the last year, the project site nursing program experienced high faculty turnover with five full-time BSN faculty leaving, resulting in increased use of adjunct CF. Additional turnover included two dean changes, three department chair changes, and a change in program coordinator for the BSN nursing program. Adjunct CF are not full-time university employees and typically work multiple jobs. Five new CF were hired; however, there is currently no formal orientation or structure to support development of consistent clinical teaching competencies. The Medical Surgical Concepts I course was highly impacted by the turnover that resulted in the hiring of multiple adjunct faculty with no academic teaching experience in pedagogical principles that assist with retention and application of information. As a result, students have not received consistent instruction with active-learning strategies which add context to situations for

development of clinical judgement and reinforces course curriculum. Additionally, the project site underwent two substantial organizational structure revisions since 2017, resulting in communication challenges and dismantling of foundational communication processes within and among programs. A third re-organization was recently implemented to improve communication and support operations. To address student performance issues, the project site implemented program revisions using Tanner's (2006) clinical judgement model.

The problem identified at the project site is lack of uniformity and structure in faculty engagement with students in the clinical setting resulting in inconsistent student performance in clinical simulations, decreasing didactic course test averages, and inequities of faculty/student interaction across clinical groups. Implementing a validated clinical questioning tool (CQT) by Seibert (2022) promotes active-learning exercises to mitigate inconsistencies in clinical instruction in the hospital setting. The clinical exercises allowed CF to engage with students using questioning exemplars to elicit students' higher-order thinking. The CQT provided CF and students with structured content and promoted structured interactions across students to improve student-faculty engagement and improve clinical judgement for safe entry into practice (Seibert, 2022).

The goal of this quality initiative was to improve faculty and student engagement in clinical settings and examine the use of structured clinical questions as the primary instructional intervention. Strategies to promote CF engagement, modes to endorse active-learning, and teaching models for use in clinical instruction were created to support CF and student interactions. Research has demonstrated that clinical facilitator models improve engagement and are most influential in developing competent nurses (Jayasekara et al., 2018).

Project site administrators and program faculty support the implementation of this quality improvement project due to sub-optimal student simulation performance, declining didactic exam scores, and first-time NCLEX-RN pass rates falling below the NCSBN recommended 80th percentile. (See Appendix A).

Project Purpose and Aims

The purpose of this project was to promote clinical judgement and improve analytical thinking by actively engaging CF with students in the clinical setting using structured clinical questions versus the current informal structure. The clinical question guiding this quality initiative is: Does faculty use of structured immersive clinical questioning versus using weekly clinical objectives in the hospital setting improve simulation and didactic exam averages across 90 hours of clinical instruction within Medical Surgical Concepts I nursing students in a traditional South Texas BSN program? For the purposes of this project, clinical experiences included student time spent in hospital settings providing patient care when performing assessments, interventions, and communicating with patients. Students attended clinical twice weekly over a five-week period.

The general goal to improve consistency and structure in teaching during hospital clinical rotations was evaluated using improvements in student performance during simulation, course didactic exam performance over time, and the total number of hours that faculty spent with students. The first goal aimed for higher student simulation competency in recognizing patient cues, communication ability, critical thinking, and technical skills than the non-intervention group by the end of the 90 hospital clinical hours and are evaluated using the Creighton Competency Evaluation Instrument (CCEI). The second goal aimed to increase course didactic exam performance over time and was evaluated by comparing the mean test averages from exam

one and two for the two groups. The last goal aimed to correlate whether more time spent engaging with students in clinical directly relates to student outcomes through a Qualtrics survey on average time spent with faculty during a nine-hour clinical day as well as overall student experience with assigned CF. Specific survey questions are in Appendix B.

Quality Improvement and the AACN DNP Essentials

This quality improvement project is consistent with Domain VII of the AACN DNP Essentials (2021) and is focused on systems-based practice which includes nurses applying evidence through a systems-level project to improve clinical outcomes. Additionally, Essential VII includes designing policies to impact health equity (AACN, 2021). Introducing CQT and structured clinical teaching strategies into instruction at the project site has the added benefit of mitigating the potential for unequal faculty-student interactions during clinical experiences, thus aligning with this DNP Essential. The current 75% NCLEX-RN first-time pass rates at the project site do not meet Texas Board of Nursing (TXBON) program requirements and newly graduated students cannot be employed as an RN if they do not pass NCLEX-RN. Hospital systems are impacted when 31% of nurse turnover happens in the first year of employment contributing to loss of organizational revenue, impacting safe healthcare delivery, and contributes to the escalating nursing shortage through loss of new graduates (AACN, 2021, NSI Nursing Solutions Inc., 2022). The American Organization for Nursing Leadership (AONL) (2022) provides the core competencies to assist nurses into becoming effective organizational leaders. The standard reflecting this project referred to knowledge of the healthcare environment through formulation and implementation of objectives into student care that is provided in healthcare facilities (AONE, 2022). The rationale for choosing this standard was to provide CF

with structure and guidance to support student learning that promoted clinical judgement and student learning outcomes.

Guiding Frameworks

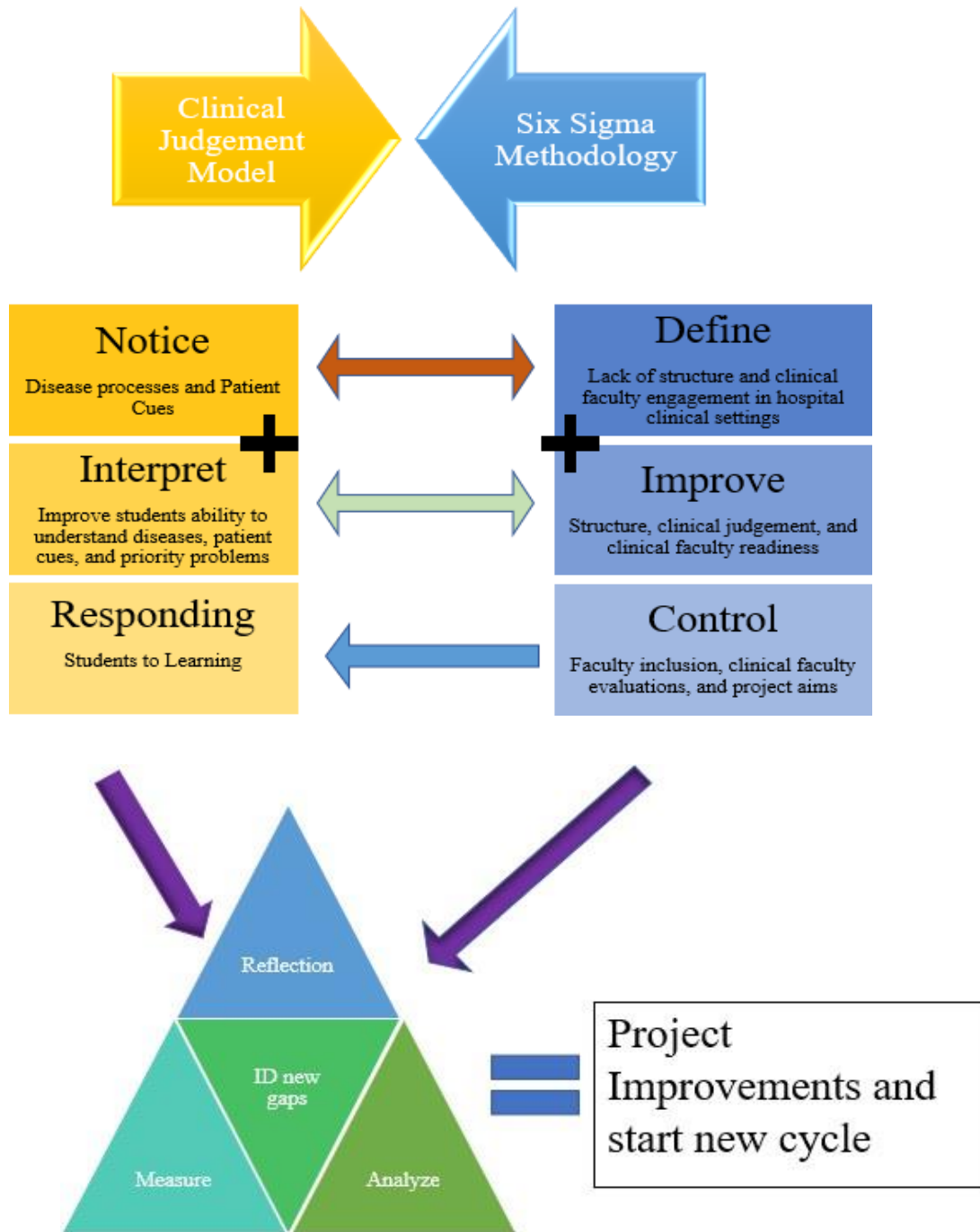
The theoretical framework used to guide this quality improvement project was Christine Tanner's Clinical Judgement Model (CJM) which describes processes in which students develop analytical thinking through noticing, interpreting, responding, and reflecting (Tanner, 2006). The four aspects of Tanner's CJM relate to the project's purpose of providing a consistent instructional structure during hospital clinical experiences. The CJM aligns with the project problem to engage students using a structured educational framework that supports the use clinical experiences to interact in real-time with students.

The Six Sigma (SS) conceptual framework uses five steps to guide and evaluate an improvement project. The five steps include defining, measuring, analyzing, improving, and controlling (Moran, 2017). Defining the project problem included identifying organizational gaps in structure and allowing for current processes to be supported by research and creating change. The interventions were measured using validated evaluation tools reflecting the theoretical framework used in this project.

Merging the two frameworks allowed the CJM and the SS methodology to work in alignment when conducting interventions. The SS model enabled identified gaps to be defined and improved while the CJM improves how students notice and interpret patient cues. Faculty inclusion on decision making, monitoring clinical evaluations, and ongoing project aim evaluations guided how the CJM responded to student learning. Figure 2 illustrates how both models measure, analyze, and reflect on newly identified organizational gaps for future project improvements to occur.

Figure 1

Theoretical and Conceptual Frameworks



Note. Todd et al., (2008); Moran (2017)

2. METHODS

Ethical Considerations

This project plan was reviewed by the Texas A&M University-Corpus Christi Institutional Review Board (IRB) for project classification and received a determination of “Not Human Subjects Research” and permission to proceed as a Quality Improvement project. See Appendix C for the TAMU-CC IRB Letter of Determination. The South Texas BSN program involved in this project has agreed to support the project. Appendix A includes the facility letter of support.

A convenience sample of the Spring 2023 Medical Surgical 1 (MS1) students were recruited from the BSN program. Students were randomly placed into four clinical groups using the typical ratio of 10 students per CF and remained static for the duration of the semester. A random selection of two of the four CF used Seibert’s (2022) questioning exemplars to promote CF and student guidance during clinical and created stated expectations using objectives to encourage interactions. Student names were replaced with university issued numbers to maintain student privacy. The student information was retrieved by a third-party honest broker who de-identified all student information and coded the data. The study team did not have access to the master list for the coding system and de-identified the data. To maintain the integrity of the project the project director did not know which students were in the intervention groups.

Project Design

This quasi-experimental quality initiative consisted of CF that were employed full-time at the university and clinical adjunct faculty. Students were divided into two groups: intervention versus non-intervention groups. The intervention group used Seibert’s validated clinical questioning tool (CQT) and weekly structured objectives with their assigned students. The tool

uses a series of questions to query students and foster thinking encompassing each domain of clinical judgement. The non-intervention group used the current clinical model which included no uniform clinical questions or uniformity in teaching styles. CF decided how they would deliver teaching the structured weekly clinical objectives. After receiving permission by Seibert to use the published tool (Seibert, 2022), the project director educated the selected faculty using the intervention on proper use of the CQT during clinical hours.

The project was conducted at a traditional BSN program located in South Texas. The population of interest was the Medical Surgical Concepts I nursing students. Clinical rotations included two 10-hour shifts per week for five weeks totaling 90 hours of immersion in the clinical setting using the clinical facilitator model for both groups. The clinical settings consisted of three local in-patient hospital systems in the South Texas region. Hospital experiences consisted of 80 hours in MSI units and 10 hours in a perioperative observation experience.

Potential risks for meeting project aims included variations in CF teaching experience. The intention was to distribute CF based on teaching experience and educational levels among the four groups. The second risk was lack of CF engagement. All students were given weekly clinical objectives. Faculty chosen to use the CQT asked specific questions per the validated tool relating to the specific weekly objectives. All CF were provided instructions on how to instruct weekly post-conferences. A third risk for successful goal achievement was CF knowledge deficit on how to use the CQT in a real-world setting. The project director provided CF orientation on the use and purpose of the CQT, provided clinical written instructions on how to meet weekly clinical objectives, and performed a weekly check in to see if CF using the CQT intervention needed clarification on how to use the tool. See Table 1 below.

Table 1*Risk Assessment Table*

Risk	Impact	Countermeasure	Resources	Barriers
Inconsistency in CF teaching methods	Students are observing in clinical and not being questioned on the care of the patient	Equal distribution of CF teaching experience and use of CQT	Use of the CQT by Seibert (2022)	CF resistance to change
Lack of clinical engagement with students	Students are following nursing faculty and limited in performing skills due to faculty lack of time and precepting experience	Students are given two weekly objectives to work on with CF	Use of the CQT by Seibert (2022)	CF are uncertain in how to instruct in the clinical setting.
CF knowledge of using CQT effectively	Faculty will not use tool as instructed and impact reliability of results	Faculty orientation and written instructions on how to use CQT	Use of the CQT by Seibert (2022)	Failure to use tool

Note. CQT= Clinical Questioning Tool

Intervention

CF included a combination of full-time and part-time (adjunct) faculty who have a range of experience teaching in the clinical setting. Teaching experience ranged from 0-3 years and all faculty having a Master of Science in Nursing degree. At the beginning of the Spring 2023 semester, the project director developed weekly clinical objectives focused on developing critical thinking skills to assist with ongoing student questioning during clinical to include competencies in giving report, patient assessment, analyzing laboratory findings, medication administration,

prioritization of care, and evaluation of patient outcomes (Seibert, 2022). Students and CF received an orientation covering the weekly clinical objectives and how to use the objectives checkoff worksheet while in clinical. Students were held accountable for working weekly with CF during their time in clinical to perform skills aligned with the weekly objectives. The CF using the CQT questioning exemplars intervention received a separate orientation on the purpose of the tool and how to incorporate it into student clinical learning. The CQT is a validated and reliable instructional resource used to foster critical thinking in the clinical setting by using specific questioning exemplars to elicit higher order thinking (Seibert, 2022). See Appendix D for the 55-question prompts for use in the CQT. Tanner's Clinical Judgement Model (CJM) was the theoretical framework used to foster clinical judgement and develop weekly clinical objectives using the four major components of noticing, interpreting, responding, and reflecting. At completion of the 90 clinical hours, students asked faculty to sign the weekly clinical objectives worksheet and turn in the assignment to the project director.

The simulation laboratory faculty who were not associated with the Medical Surgical I course first completed the required training to correctly use the CCEI, and then used it to evaluate student simulation performance to ensure objectivity and decrease observer bias (Rouen, 2017; Todd et al., 2022). Training on the simulation evaluation tool consisted of 30 minutes to review videos provided by Creighton University and 30 minutes of discussion on using the tool to evaluate students during simulations. See Appendix E for the CCEI. The CCEI is a quantitative means of measuring student competency in assessment, communication, intervention, and patient safety (Todd et al., 2022). Prior to simulation, the project director and laboratory faculty collaborated to determine the patient scenarios to use for simulation and each patient was given two system problems for which students would provide care. The laboratory faculty and project director determined the competencies students had to meet to receive points

when assessing, communicating, using clinical judgement, and patient safety. At the end of the 90 clinical hours, students participated in simulation at the project site. Each student was given health history and medication information to prepare for the simulation experience. Students perform simulations individually by participating in two 35-minute patient scenarios on students acting in the patient role. They also participated by observing peer participation. Prior to the start of each simulation, students were given a report and 10 minutes to review the patient chart. To prevent repeated simulation scenarios while also promoting consistency in experience, faculty varied laboratory and vital sign values with each patient scenario. Students who acted in the patient role were provided detailed scripts including patient behaviors and evaluation outcomes.

Assessment of student performance on course exams began with evaluation of the first two instructor-generated written exams. Exam one and exam two were averaged separately and then reviewed to compare group performance and to evaluate whether more time spent in the clinical setting improves exam scores overtime. Student-faculty evaluations of time spent interacting with CF were completed at the end of the 90 clinical hours using a Qualtrics survey (see Appendix B). Data were analyzed using the Six Sigma processes and was used to measure and evaluate whether processes need improvement in the initiative (Moran, 2017). See Figure 2 for the detailed timeline.

Figure 2

Project Timeline

Project Phase	Milestone	Estimated Month of Completion						
		Oct.	Nov.	Dec.	Jan.	Feb.	March	April-July.
Initiation	<i>Project Approval</i>	■						
Planning	<i>Project Meeting</i>	■						
	<i>Proposal</i>	■						
	<i>IRB Approval</i>	■	■					
Implementation	<i>Project Initiation</i>				■			
Monitoring	<i>Simulations</i>						■	
	<i>Course Didactic Test Averages</i>							■
	<i>Student Faculty Evaluations</i>							■
Data Collection					■			
Results Summary	<i>Finalizing Data</i>							■

Note. Jan.= Oct.=October, Nov.=November, Dec.= December, January, Feb.=February, Aug.=

August

Data Collection

Student data were monitored using university-issued student identification numbers. Project aims evaluated student performance in simulation, didactic exams, and faculty-student engagement during clinical experiences. Simulation performance was evaluated after 90 hospital clinical hours using direct observation and the validated Creighton Competency Evaluation Instrument (CCEI). Laboratory staff assessed student performance during two simulations and documented performance in the CCEI. Didactic exam scores reviewed after the second Adult Concepts I exam to evaluate differences in test performance as time elapsed and students were

exposed to didactic materials and clinical experiences. Two exams were administered during the semester with the first exam given at week two of the intervention and the second exam given after the final 90 hours of the clinical experience. The two simulation performances and didactic exam scores were manually entered into Microsoft Excel spreadsheet by the project director. Lastly, a Qualtrics survey was sent to students to assist with identifying faculty engagement in using the clinical objectives and average time directly spent with CF in the clinical environment. The survey information was entered into the same Excel spreadsheet by a Third-Party Honest Broker. All data collected were de-identified by the third-party honest broker and saved on a password-protected computer.

Measurement Tools

The CCEI was validated by five nursing programs for reliability and validity in the accuracy of student simulation performance and competency in clinical (Hayden et al., 2014). Validity ranged from 3.78 to 3.89 on a four-point Likert scale with a Cronbach's alpha of .90, showing it is a valuable tool for evaluating student simulation and traditional clinical environment performance (Hayden et al., 2014; Todd et al., 2008).

The Clinical Questioning tool (CQT) used in the project intervention organized questions into content domains following critical thinking and the nurse's day. Questions are organized to foster thinking as a comprehensive patient scenario and promote clinical judgement through concept clarification, discovery of assumptions, identifying different perspectives, identification of implications/consequences, evidence validation, and reflective practices (Seibert, 2022). Five expert clinical instructors teaching in four different universities and geographic locations rated the initial 60 questions and validated the reliability of the final 55 questions tool. Using a four-

point scale, 100% of items scored a 3 or 4 rating and the calculated validity of the tool was 1.0 on a .80 endorsement scale (Grant & Davis, 1997, as cited by Seibert, 2022).

Data Analysis

Statistical Package for Social Sciences (SPSS) Version 28 was used for all descriptive calculations and group comparisons. Descriptive statistics were used to analyze the project's demographic data (Polit, 2010). Project aims evaluating simulation and didactic exam performance were completed using independent group *t*-tests to compare student performance between intervention and non-intervention groups. Analysis of student performance among professors was performed using Analysis of Variance (ANOVA). Lastly, pairwise comparisons were used to identify performance differences among professors. Analysis for simulation performance included total score performance for simulation one and two, as well as the categorial components making up the total score of the CCEI. Student and CF engagement evaluation were performed using point bi-serial correlation to analyze whether time spent with students correlated with improving the project aims. The analysis of differences among professors in terms of post-conference, weekly objectives, interactions with students, and faculty feedback was performed using the Kruskal-Wallis method since the survey used categorial dependent variables.

3. RESULTS

Implementation

At the time of the project implementation, the facility culture was undergoing organizational changes to support the culture of student learning. The project site was developing curriculum changes intending to actively engage students' clinical judgement and improve competencies for entry into nursing practice. The initial project plan remained unchanged from the inception of the intervention apart from availability of laboratory staff performing student simulation evaluations. As changes occurred the project director was able to identify faculty that were able to assist with evaluation of project aims.

Project implementation began the first week of the Spring 2023 semester and was completed by the eighth week of the semester. Week one of the project implementation included determining the CF that would be using the CQT. Faculty were chosen as participants through a random blinded name selection by one of the program faculty not acting as a project participant. All CF were provided with an orientation that covered the expectations during the time spent with students in the clinical environment. CF were expected to follow weekly structured clinical objectives to assist in creating uniformity and structure in faculty engagement with students in the clinical setting. The two CF chosen to perform in the intervention were provided a separate orientation to discuss how to incorporate the CQT as the primary instructional intervention to endorse students' actively learning in the clinical environment. Students attended a two-day orientation where all students practiced multiple skills to prepare for patient care in acute-care hospital settings. Competency evaluations were completed by all students and covered tracheostomy suctioning and medication administration. All students received an orientation to better understand the new structured clinical objectives the faculty would be using and the

expectations of student behaviors during clinical experiences. Students started the 90-hours of clinical immersion the following week which consisted of attending two days weekly for a total of five weeks.

Weekly clinical objectives were created by the project director to create uniformity and guide structured interactions with CF and students. The project director created scaffolded clinical objectives to generate engagement between all CF and students. Activities included giving patient reports, watching students assess patients, medication review, physician communication, lab analysis review, setting patient priorities, and evaluation of patient outcomes. Students were responsible for following-up with CF to complete the weekly objectives. Additionally, the two chosen CF were to incorporate use of the CQT when engaging with students. The CQT allowed the faculty to have questioning exemplars to elicit students' clinical judgement and higher-order thinking. The CF not using the CQT were able to meet the clinical objectives without a particular structure or validated tool.

As the students completed the clinical experience, the project director met with simulation laboratory staff to begin the CCEI training process. Laboratory staff learned how to use the CCEI through watching a series of training videos covering the instrument components and how to score student performance (Todd, 2022). Once training was completed, the project director and laboratory staff convened to develop the CCEI template that would be used to evaluate student behaviors during two simulation scenarios. The CCEI template provides the evaluators with a consistent means to establish student competency among different evaluators. A score of one establishes that a student has shown competency in the key behaviors on the CCEI. At the end of the 90-hour clinical experience, students were evaluated by laboratory

faculty as they performed two 35-minute simulation scenarios. Each scenario involved caring for patients with several disease processes, laboratory results, and vital sign interpretations.

Outcomes

The quality initiative project included 40 student study participants. One student was unable to complete the simulation experience due to illness. Of the 39 participants who completed the intervention evaluation, 35 were female and four were male. Most participants were Hispanic ($n = 26$), followed by Caucasian ($n = 9$), African American ($n = 2$), and other ($n = 2$). All participants were between the ages of 20-25 years of age. See Table 2.

Table 2

Participant Demographics

Study Participants	$n = 39$	
	$n =$	%
Gender		
Male	4	10.26
Female	35	89.74
Ethnicity		
Hispanic	26	66.67
Caucasian	9	23.08
African American	2	5.13
Other	2	5.13

The CF participating included two faculty in the intervention group with CF1 having three years of teaching experience and being employed full-time at the project site. The CF2 that used the intervention had no previous teaching experience in the clinical setting. The faculty in the non-

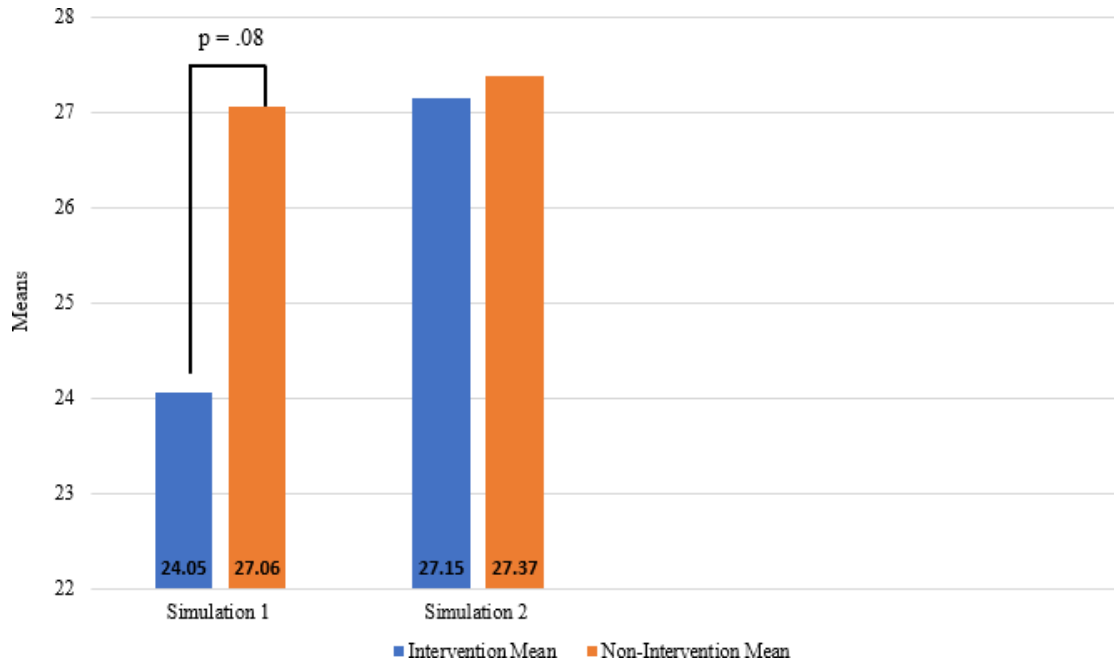
intervention group consisted of CF3 with one previous semester of teaching experience, and CF4 two years of clinical teaching experience.

Project Aim One

Project Aim 1 evaluated student simulation competency in recognizing four components including: patient cues, communication ability, critical thinking, and patient safety performance. The aim was to identify differences between intervention and non-intervention groups. Results for simulation one total score which included all four components showed that the 20 students in the intervention group ($M = 24.05$, $SD = 4.51$) compared to the 19 students in the non-intervention group ($M = 27.16$, $SD = 6.14$) demonstrated weaker performance on the first simulation scenario total score; however, this difference was not significant, $t(37) = 1.79$, $p = .08$. Simulation two total scores showed that the 20 students in the intervention group ($M = 27.15$, $SD = 7.28$) compared to the 19 students in the non-intervention group ($M = 27.37$, $SD = 3.73$) demonstrated no significant difference $t(28) = .119$, $p = .90$. See Figure 3.

Figure 3

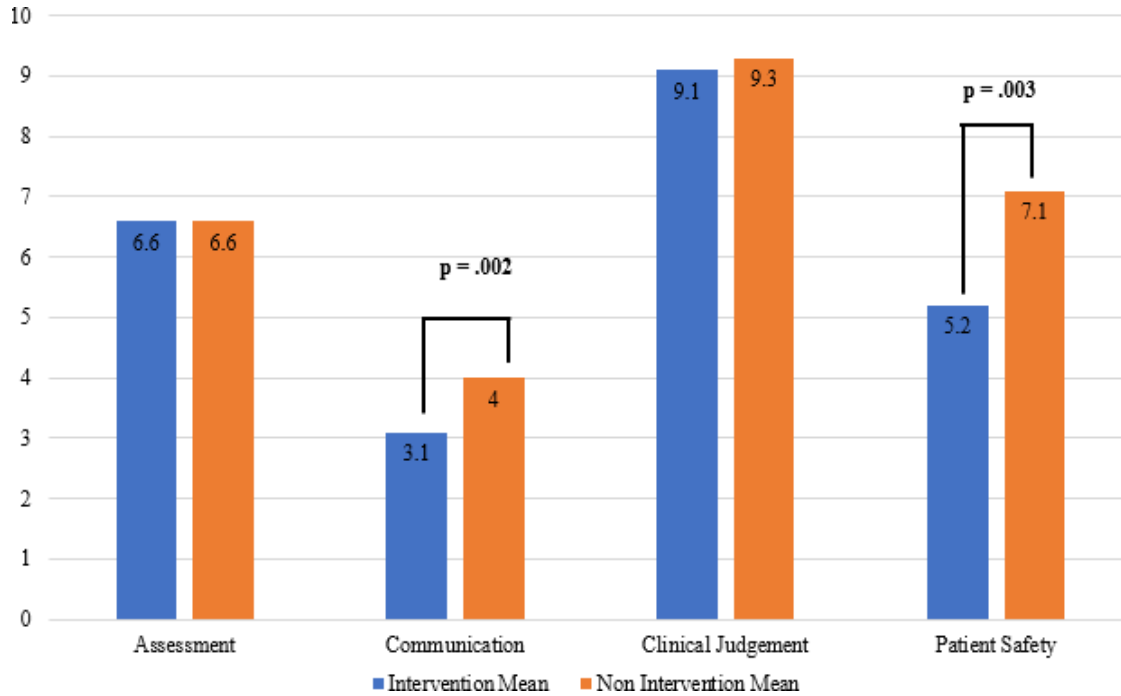
Simulation Total Score Differences



The four components for Aim 1 were analyzed to identify differences among the two groups. Results for simulation one communication ability and patient safety showed statistically significant differences. Communication ability in the intervention group ($M = 3.15, SD = .74$) compared to the non-intervention group ($M = 4, SD = .81$) and statistical significance $t(36) = 3.39, p = .002$ with a large effect size (Hedges' $g = 1.06$). Patient safety in the intervention group ($M = 5.20, SD = 1.79$) compared to the non-intervention group ($M = 7.16, SD = 2.06$) which identified statistical significance $t(35) = 3.15, p = .003$ with a large effect size (Hedges' $g = .99$). Clinical judgement was the highest performing area for both groups with little noted difference between the intervention group ($M = 9.1, SD = 2.41$) and non-intervention groups ($M = 9.3, SD = 2.16$). Figure 4 displays component analysis among groups for simulation one.

Figure 4

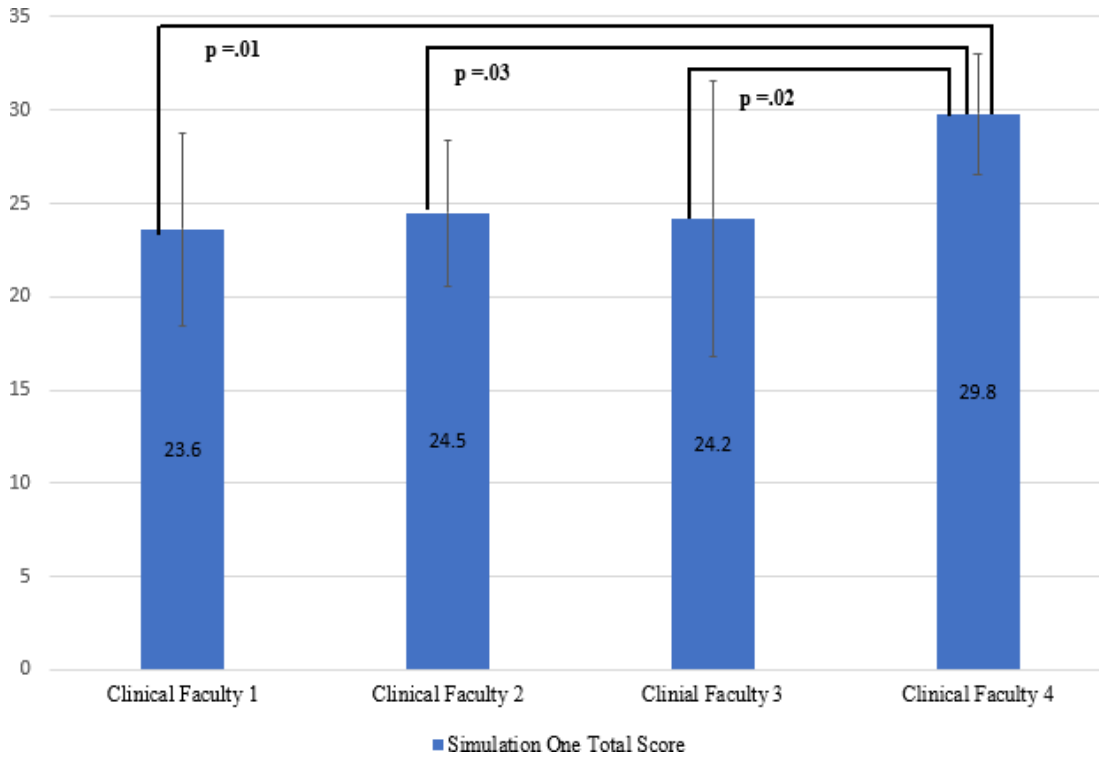
Simulation One Component Scores Among Groups



A further analysis of simulation performance among CF was performed using ANOVA on both simulations total and component scores. Statistically significant differences were evident among CF with simulation one total score showing $F(3, 35) = 3.13, p < .04$. Simulation one communication score revealed $F(3, 35) = 3.95, p < .016$ and a patient safety score of $F(3, 35) = 5.52, p < .003$. Patient safety was also statistically significant in simulation two with results being $F(3, 35) = 3.73, p < .020$. A pairwise comparison on simulation total one demonstrated that CF4 outperformed all other CF ($M = 29.8, SD = 3.25$), CF1 ($M = 23.6, SD = 5.21, p = .01$), CF2 ($M = 24.5, SD = 3.92, p = .03$), and CF3 ($M = 24.2, SD = 7.37, p = .02$). Figure 5 illustrates simulation one total score differences.

Figure 5

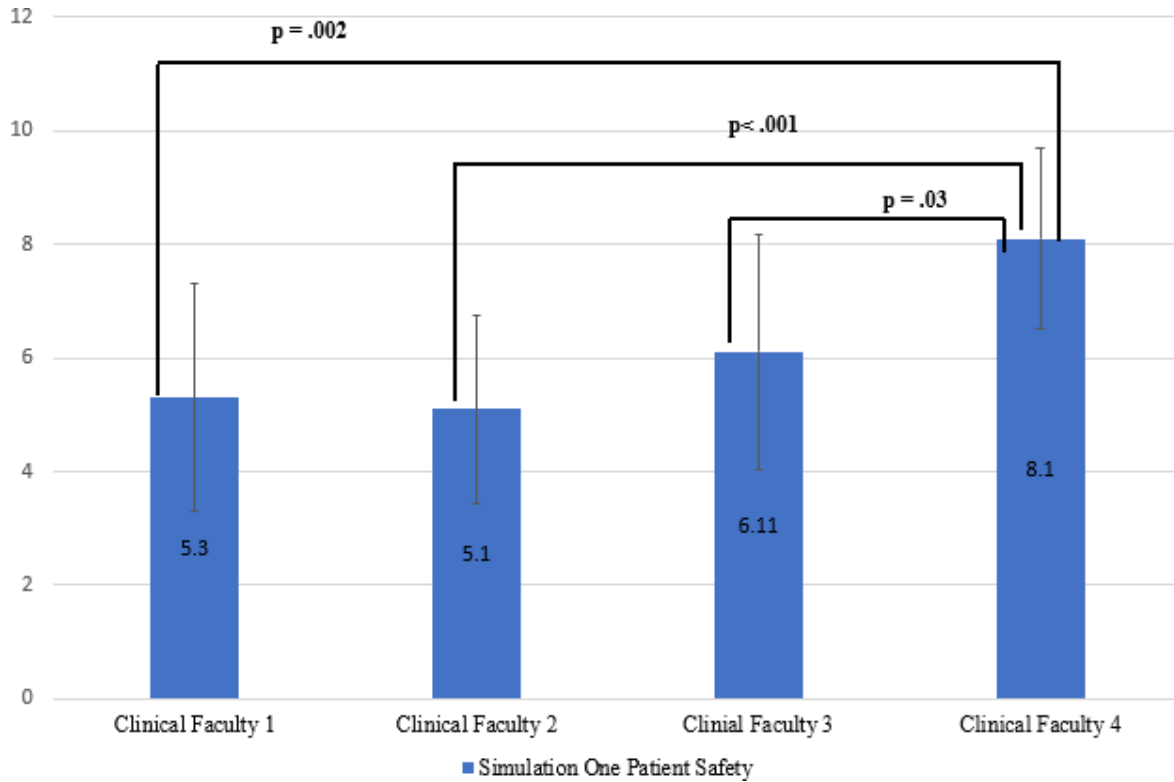
Simulation One Total Score Differences Among Faculty



Student performance relating to patient safety pairwise comparison for simulation one found CF4 having statically significant findings compared to all CF ($M = 8.1, SD = 1.59$), CF1 ($M = 5.3, SD = 2, p = .002$), CF2 ($M = 5.1, SD = 1.66, p < .001$), and CF3 indicating ($M = 6.1, SD = 2.08, p = .03$). Figure 6 provides simulation patient safety scores among faculty for the first simulation.

Figure 6

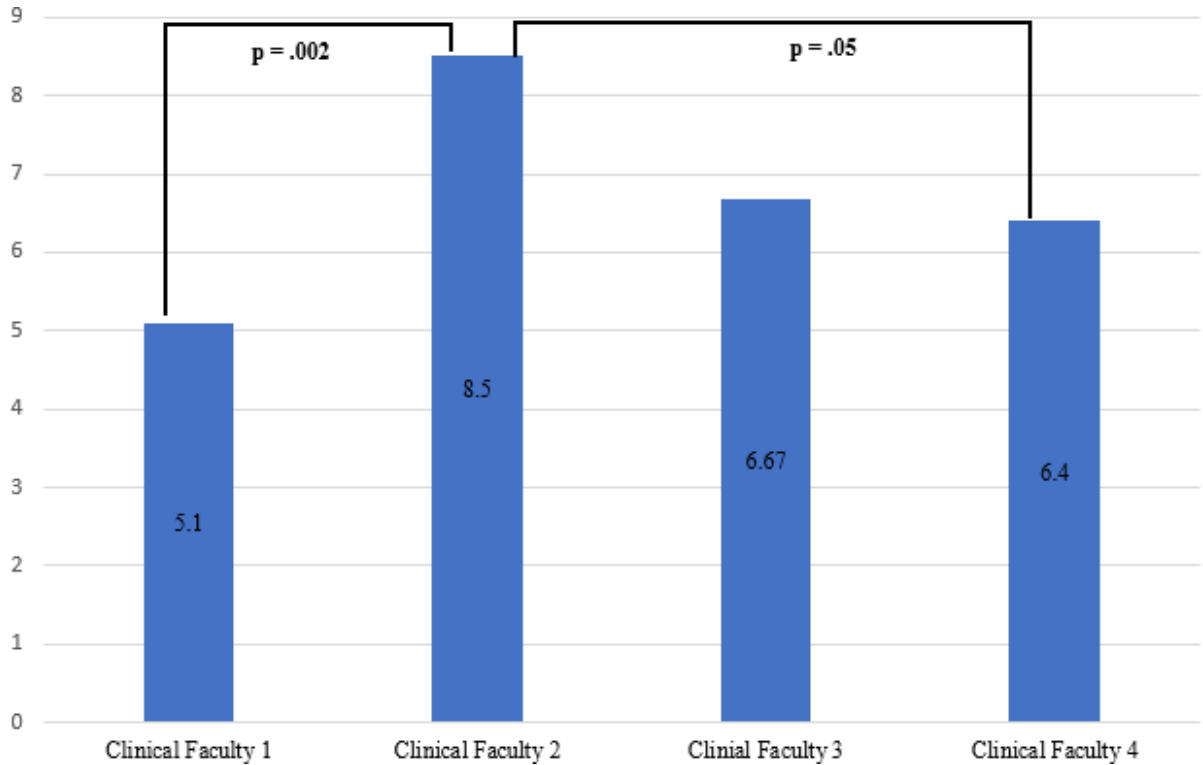
Simulation One Patient Safety Performance Among Faculty



The pairwise comparison of student simulation one communication with patients revealed CF1 ($M = 5.1$, $SD = .47$) performing worse than CF3 ($M = 4$, $SD = .87$, $p = .01$) and CF4 measuring ($M = 4$, $SD = .81$, $p = .008$). Lastly the pairwise comparison of student performance regarding patient safety in simulation two showed CF2 ($M = 8.5$, $SD = 2.22$) outperforming CF1 ($M = 5.1$, $SD = 2.92$, $p = .002$) and CF4 ($M = 6.4$, $SD = 1.5$, $p = .05$). Figure 7 includes patient safety student performance.

Figure 7

Simulation Two Patient Safety Performance Among Faculty

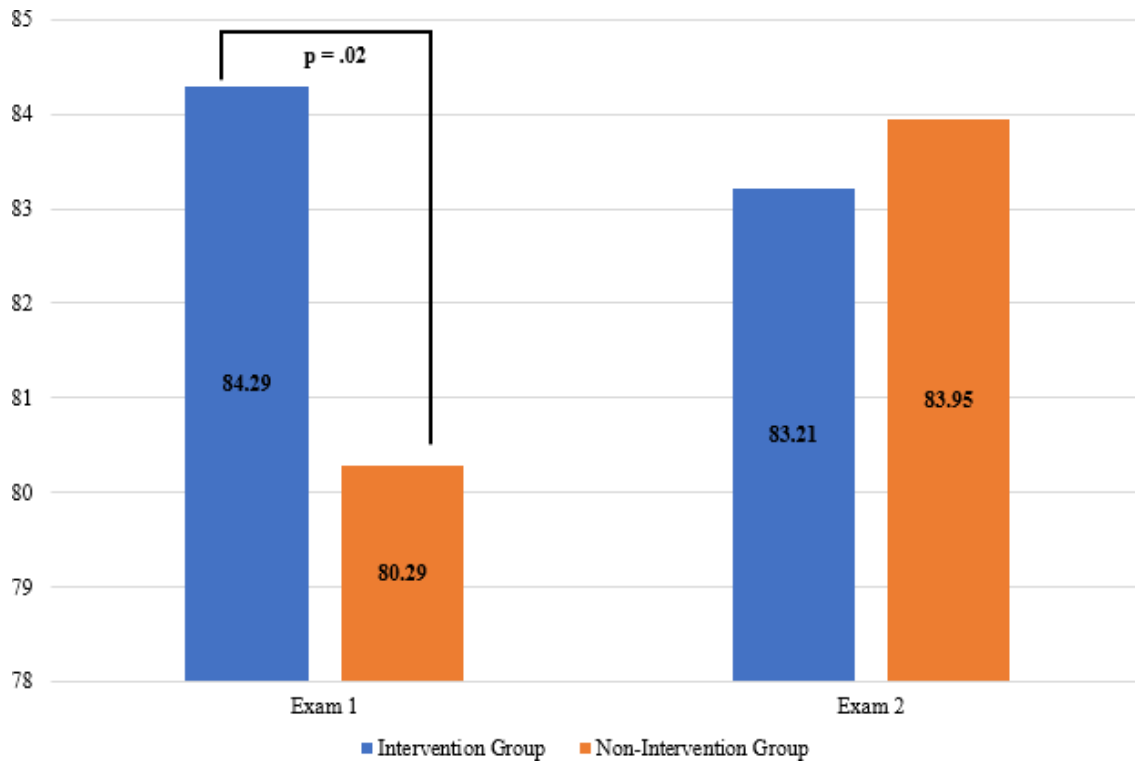


Project Aim Two

Aim 2 evaluated the differences between groups to determine whether exam performance was better and improved over time. An independent t-test of exam one $F(37, 33) = 1.24, p = .02$, indicated that the score was significantly greater for the intervention group ($M = 84.86, SD = 6.17$) than the non-intervention group ($M = 80.25, SD = 8.07$). There was no difference in exam performance among groups for exam two. An ANOVA comparing exam performance among CF had no difference in exam scores. Figure 8 details the differences in exam scores.

Figure 8

Exam Score Differences Among Groups



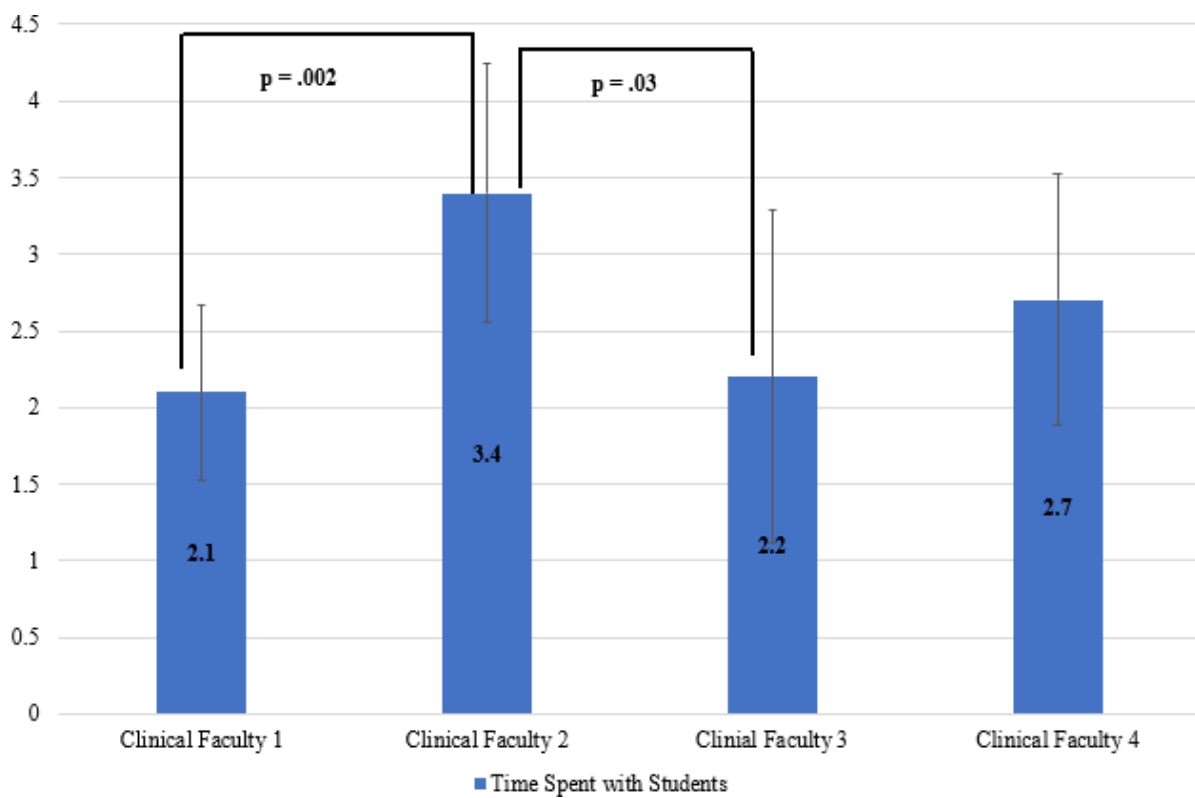
Project Aim Three

Aim 3 was to find whether more time spent engaging with students in clinical directly relates to student outcomes and CF adherence. A point bi-serial comparison among groups found no correlations between simulation and exam performance. The Kruskal-Wallis method was used to evaluate if there were differences among CF in terms of the survey questions. Students completed a survey rating CF adherence to post-conference objectives, communicating weekly clinical objectives, interacting with students, giving feedback on assignments, and time interacting with faculty. There was a significant difference among CF adherence in terms of time interacting with students. A pairwise comparison using ANOVA revealed a significant difference among CF time spent interacting with students $F(3, 3) = 4.80, p = .007$. The pairwise

comparison results in which CF2 spent the most time with students ($M = 3.4$, $SD = .84$) compared to CF1 ($M = 2.1$, $SD = .57$, $p = .002$), CF3 indicated ($M = 2.2$, $SD = 1.09$, $p = .005$), and CF4 ($M = 2.7$, $SD = .82$, $p = .07$), as shown in Figure 9. One student in the non-intervention group three was unable to complete the project outcome evaluation due to illness.

Figure 9

Faculty Comparison of Average Time Spent with Students



4. DISCUSSION

Summary

Key findings from the quality initiative were identified for all three project aims. Aim 1 findings in relation to student simulation performance identified students in the non-intervention group only using the structured objectives performed better than those students in the intervention group using the structured objectives and CQT. When simulation scores were divided into categorical data communication and patient safety performance scores were significantly worse among groups. The project results enabled categorical differences to identify communication and patient safety as program weaknesses. Pairwise simulation comparisons were performed to assist in identifying faculty strengths. Simulation one total score, communication, and patient safety had significant differences among professors.

In simulation two, the patient safety score was the only significant difference identified between CF. Understanding performance weaknesses allows for course managers to meet with CF and assist them with new methods of teaching with more intention. The newest CF member participating in the intervention group, performed better than all other CF with respect to patient safety and communication. This finding supported use of the CQT intervention because it enabled a novice CF to have the tools to ensure student success in areas found to have the most weaknesses. During the first simulation experience, three students encountered technical issues with accessing patient electronic health information which caused performance difficulties and potential inaccurate scoring on the CCEI.

Evaluation of Aim 2 didactic exam performance among intervention and non-intervention groups identified students in the intervention group performed significantly better on exam one. Exam two pairwise comparisons among CF did not show any differences. These findings support

didactic time is meeting expectations and not relying on clinical time to solely improve student outcomes. More dramatic differences may have resulted if the non-intervention group was not using the structured clinical objectives, but ethically it was important to have all students and CF have access to the needed structure.

Aim 3 evaluated whether time improves outcomes and revealed no correlation between comparison groups. Students may have been interpreting the questions differently than intended. Future changes will be made to the post-clinical experience survey to clarify any points of confusion and assist in a better interpretation of this aim. It was noted the newest CF spent significantly more time than two of the other CF interacting with students on a weekly basis.

Relation to Other Evidence

The project intervention helped to evaluate individual CF performance and assist the project director with supporting faculty performance improvement. In a study by Donovan et al. (2022), the aim was to understand students' perceptions of learning in the clinical environment. Results of the mixed-method study showed CF must be competent and able to support nursing students through active engagement and student-centeredness. As the next phase of the project is developed, use of the CCEI will enable and identification of CF strengths and for future development of teaching strategies.

Although using the CQT intervention did not show statistically significant improvement in student performance, it did show clinical significance in relation to setting expectations through structured environments. Jasemi et al. (2018) aimed to improve the quality of education and identified inefficient educational structure as the most challenging component in improving student learning experiences. The students also found limited training time, shortcomings of clinical teaching methods, and limited competency in CF as contributors to poor student

outcomes. The project intervention and structured weekly clinical objectives assisted new faculty with having the tools to actively engage student analytical thinking as well as help experienced faculty teach with more intention. Neglecting the nursing process has also been found to have a negative impact on development of nursing student's critical thinking (Jasemi et al., 2018). Incorporating Tanner's (2006) Clinical Judgement Model (CJM) as the quality improvement projects theoretical framework enabled students to use the nursing process as care was provided.

This project provided valuable information to the project site to assist with program improvement and support the integration of structured objectives and the CQT into other clinical courses. Clinical educational models assist in providing faculty with the infrastructure and resources for reducing the gap between theory and the clinical environment (Vosoughi, et al., 2022). There will be an implementation of a formal CF orientation and an integration of the project design into clinical courses specific to the course objectives within the next eight months. Ongoing evaluations will continue and identified weaknesses will be addressed as part of ongoing improvements.

Limitations

There were three main limitations identified in this quality improvement initiative. The first limitation included the design of the project. Traditional teaching methods for most clinical courses include CF instructing students without formal structure or guidance. Medical Surgical 1 (MS1) course instituted weekly clinical objectives one year prior to the start of the project. CF have been using objectives mimicking Tanner's CJM (2006) to actively engage with students in the clinical environment, but not utilizing the CQT. An analysis of courses teaching without the CJM structure may have yielded much different results. The second limitation to the study included technical difficulties experienced in the first student simulation. Three students were

unable to effectively provide care due to technological distractions that increased student anxiety and potentially skewing results found in the intervention group performance. The last limitation to the project was the one-page laminated CQT used to engage students analytical thinking during clinical. CF complained it was difficult to carry and they did not consistently utilize the tool as expected.

Interpretation

The results did not show that the intervention created a statistically significant change but did assist the newest CF with tools to foster meaningful interactions. The project site will continue to evaluate student simulation performance using the CCEI to effectively assess CF weaknesses and support CF with using the CQT as intended. Tanner's CJM theoretical framework describes processes in which students develop analytical thinking noticing, interpreting, responding, and reflecting. The four aspects of the model relate to the project's purpose of engaging students using a consistent instructional structure during hospital clinical experiences. The project results found the newest of all faculty using the intervention had significantly better student performance than all other CF in patient safety and communication skills. Six Sigma conceptual framework uses five steps to guide and evaluate an improvement project (Moran, 2017). Defining the project problem included identifying organizational gaps in structure and allowed current processes to be supported by research. Planned interventions were measured with the validated CCEI that reflected the CJM theoretical framework used in the project. Results from the intervention identified student weaknesses in communication and patient safety and allow for future program changes to improve faculty and student performance.

The implementation of structured clinical objectives prior to the project implementation may have lessened the overall impact of project outcomes. Studies have established structured

clinical environments improve student outcomes in clinical environments (Ghasemi et al., 2020; Jasemi, 2018, Jayasekara et al., (2018); Ramsbotham et al., 2019). It was undetermined whether the project results would have statistically supported the use of the CQT intervention because of the already implemented structure.

For future use of the CQT, the tool will be made available in different formats to promote ease and consistency of use. It is anticipated this change will promote utilization of the tool for established CF. A second change in the next cycle will include CF meetings to discuss areas of student simulation weaknesses identified after each semester.

The project's sustainability will continue with the incorporation of structured weekly clinical objectives and use of the CQT. The clinical objectives will also be scaffolded so they fall seamlessly into the curriculum and reflect appropriate knowledge application in the clinical environment. The project site is supporting the integration by providing the project director time to create clinical objectives specific to each clinical course and is the only financial impact to the project site. Three hours of release time will be paid to the project director for implementation and faculty education on how to integrate into clinical courses.

Conclusion

This quality initiative was designed to improve consistency and structure in teaching during clinical rotations. Doing so aimed to promote clinical judgement and improve student's analytical thinking through active engagement using structured objectives and clinical questioning. CF were given tools to assist students to improve knowledge gaps and skill competencies. The project provided an evidence-based structure to assist new faculty with being successful educators and fostered student learning and meaningful interactions. Although the CQT intervention did not show significant improvement in performance during this project

cycle, it did provide useful information to evaluate faculty and assist course managers with ongoing performance improvement. The findings also identified program weaknesses regarding patient safety and communication and will allow for future changes and integration of the tool into other courses. The third aim regarding time spent interacting with students showed no significant findings, and further research evaluating the type of interactions will need to be performed.

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APPENDIX A

LETTER OF SUPPORT



COLLEGE OF NURSING AND HEALTH SCIENCES

6300 OCEAN DRIVE, UNIT 5805
CORPUS CHRISTI, TEXAS 78412-5805
O 361.825.2648 • F 361.825.2484

July 2, 2022

Dr. Tammy McGarity, DNP Program Coordinator
College of Nursing and Health Sciences
Texas A&M University – Corpus Christi
6300 Ocean Drive Corpus Christi, TX 78412

Dear Dr. McGarity,

The purpose of this letter is to provide Karen LaNasa, a Doctor of Nursing Practice student at Texas A&M University College of Nursing and Health Sciences, support in conducting a quality improvement project at Texas A&M University Corpus Christi. The project, Improving Nursing Student Outcomes in Simulation and Didactic Performance through, creating structured clinical objectives model to lead clinical faculty in the hospital setting. The goal is to promote critical thinking and improve analytical judgement during patient care by actively engaging clinical professors with students in the clinical setting.

The purpose of this project is to improve student nursing outcomes in simulation and course didactic test average. Texas A&M University Corpus Christi was selected for this project to assist in improving teaching quality at my university. Karen LaNasa is employed at this institution and has an interest in improving care at this facility.

I, Dr. Christina Murphey Associate Dean of Nursing at Texas A&M University Corpus Christi, do hereby fully support Karen LaNasa in the conduct of this quality improvement project, Improving Nursing Student Outcomes in Simulation and Didactic Performance at Texas A&M University Corpus Christi.

I also approve Karen LaNasa to access protected FERPA information for purposes of conducting this quality improvement project. She has agreed to protect FERPA designated information by only reporting data in aggregate form.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Murphey", followed by a horizontal line.

Dr. Christina Murphey
Associate Dean for Nursing

APPENDIX B

POST INTERVENTION SURVEY QUESTIONS

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Conducts post conferences per weekly objectives				
Communicates student outcomes/expectations to students				
Interacts with students during clinical hours in the delivery of safe, effective care				
Provides written feedback on assignments to assist with improving clinical judgement				

On average how many hours a week did you interact with your CF one-on-one to complete the weekly objectives worksheet?

1-2

2-3

3-4

Greater than 4

Please provide specific feedback about your CF that you appreciated:

Please provide specific feedback about your CF that could have used improvement

APPENDIX C

TAMU-CC IRB LETTER OF DETERMINATION



Date: November 23, 2022
To: Pamela Greene
CC: Karen Lanasa, Marina Martinez, Michelle Eisenman, MSc, Tammy McGarity, DNP
From: Office of Research Compliance
Subject: IRB Declaration of Research Not Involving Human Subjects

Dear Pamela Greene,

Activities meeting the DHHS definition of research or the FDA definition of clinical investigation and involve human subjects are subject to IRB review and approval.

On 11/23/2022, the Office of Research Compliance reviewed the project below and determined that the proposed activity does not meet the FDA definition of a clinical investigation or DHHS definition of research.

Type of Review: Initial Review Submission form
Title of Study: Improving Nursing Student Outcomes: An Initiative to Implement Consistent Teaching Strategies in Clinical Settings
Principal Investigator: Pamela Greene
IRB Number: TAMU-CC-IRB-2022-0679
Submission Action: IRB Review not Required for projects not involving definition of research

This project does not involve a systematic investigation designed or intended to contribute to generalizable knowledge. Therefore, this project does not require IRB review and you may proceed. This IRB Declaration is in effect from 11/23/2022 and does not expire.

Limits to this determination:

1. This determination corresponds with the versions of the application and attachments in the electronic system most recently approved as of the date of this letter. This determination is issued with the understanding the data collected will be used internally by the organization for internal use and not be generalizable. Any planned changes require submission to the IRB to ensure that the research continues to meet the criteria for a non-human subject research determination.
2. This project may NOT be referenced as "IRB approved" or "research".

The following statement can be included in the manuscript: "This project was reviewed and determined to not meet the definition of research involving human subjects by the Texas A&M University IRB - Corpus Christi Institutional Review Board."

Please do not hesitate to contact the Office of Research Compliance with any questions at irb@tamucc.edu.

Sincerely,

Cari Loeffler, MA
Office of Research Compliance

APPENDIX D

CLINICAL QUESTIONING TOOL

Clinical Faculty Resource to Foster Critical Thinking

Questioning Prompts Clustered by the 6 Categories within the Socratic Method

Clarifying Concepts- Aim: Clarification of definitions, theories, principles, unknowns, or prior knowledge.

- Tell me about your patient.
- What problems does your patient currently have and how are you managing them?
- What do you already know about the patient's condition?
- What additional information do you need to care for this patient?

Discovering Assumptions- Aim: Uncovering notions, suppositions, conjectures, or beliefs.

- What assumptions about your patient's illness, wishes, decisions, and/ or care are you making?
- Do you have any prior experiences that may elicit bias with this patient? Please, explain.

Identifying Implications and Consequences- Aim: Examining repercussions, effects, costs, results, or outcomes.

- Why is this nursing intervention important to the overall treatment plan?
- What are some of the anticipated outcomes of the intervention?
- What are some alternative interventions?
- Considering all the options for interventions, what is the best option? Explain your rationale.
- What additional nursing care interventions could be offered to help the patient?
- What would be the consequence of withholding the intervention?

Recognizing Other Points of View- Aim: Consideration of different perspectives or orientations.

- What are the viewpoints of the patient, family, and/ or care givers regarding care options?
- How might the variety of viewpoints impact patient care decisions?

Validating Evidence- Aim: Validating decisions/ diagnoses with data, rationale, reasons, support, or proof.

- What information should be included in the patient's teaching plan?
- What are the pros and cons of the intervention?
- What data support the nursing diagnosis (or care decision)?
- How are the nursing interventions meeting the patient goals?
- What resources did you use to make your decision? Examples: EHR, textbooks, drug guide, clinical pathway, practice guideline.

Reflecting- Aim: Metacognition and quality improvement on a personal level.

- Reflect upon the care you provided and identify areas that you would want to make improvements if you could. Examples: skill execution, communication, teaching.
- How do you feel about the care provided and the patient outcomes?

APPENDIX D

CLINICAL QUESTIONING TOOL CONTINUED

Clinical Faculty Resource to Foster Critical Thinking

Questioning Prompts for Typical Nursing Routines

Questions To Ask Prior To Report and Assessment

- Now that you know your patient's medical diagnosis, explain what is going on in the body that led to this hospitalization.
- Identify risk factors or comorbidities that may have contributed or predisposed your patient to their current problem.
- What assessments would you include for a person with this disease state?
- Knowing the disease process, what abnormal assessment findings do you anticipate?
- What is going on pathologically that caused the patient to exhibit this abnormal assessment finding?
- Knowing the disease, what abnormal lab and diagnostic test results do you anticipate?
- Knowing the disease process, what provider orders do you anticipate? Examples: meds, lab and diagnostic tests, treatments, referrals
- In addition to implementing provider orders, what interventions should nurses do for this patient condition to promote good patient outcomes?

Questions To Ask After Receiving Report

- What did you learn from report that concerns you and why?
- Based on the information learned in report, what problems do you think you will address today as the nurse?
- What other information do you need to provide safe, competent care for this patient?

Questions To Ask After Assessment of The Patient

- What abnormal assessment findings did you discover in your head-to-toe assessment and review of lab and diagnostic test results?
- Were the abnormal findings congruent with the patient's medical diagnosis?
- Did you discover any abnormal findings that are not expected with the patient's diagnosis?
- What interventions do you plan to use to assist with symptom management?

- What do you suspect is causing the unanticipated findings?
- What interventions do you plan to implement to assist with symptom management?

Questions To Ask When Analyzing Laboratory Results

- What lab or diagnostic test results cause concern?
- What is going on pathologically that caused the high or low lab value (or concerning trend)?
- Based on the lab and diagnostic results, what are the necessary nursing actions?
- Should you expect this result in a patient with this disease state?

Questions To Ask When Analyzing the Medication List

- What is the indication for each medication on the MAR?
- What is the mechanism of action for each medication on the MAR?
- Are there any special assessments you must do prior to and after giving this medication?
- Are there any adverse effects that you must watch for when administering this medication?
- How do you prepare and administer this medication?
- Is there any special teaching you must do for the patient about this medication?

Questions To Ask Regarding the Plan of Care

- What nursing interventions would you implement for each nursing diagnoses?
- Explain why each intervention is beneficial.

Questions To Determine Priority

- After report ask: What patient should you see first? Explain your rationale.
- After patient assessment ask: What should you do first and why?
- How do you plan to accomplish all the nursing tasks today?
- What tasks could you delegate and to whom?
- What is the top priority need for each of your patients?

APPENDIX E

CREIGHTON COMPETENCY EVALUATION INSTRUMENT

Creighton Competency Evaluation Instrument (CCEI)

Student Name: _____		0= Does not demonstrate competency 1= Demonstrates competency NA= Not applicable	Date: ____/____/____
Staff Nurse Instructor Name: _____			MM / DD / YYYY
ASSESSMENT		Circle Appropriate Score for all Applicable Criteria - If not applicable, circle NA.	COMMENTS:
1. Obtains Pertinent Data	0 1 NA		
2. Performs Follow-Up Assessments as Needed	0 1 NA		
3. Assesses the Environment in an Orderly Manner	0 1 NA		
COMMUNICATION			
4. Communicates Effectively with Intra/Interprofessional Team (TeamSTEPPS, SBAR, Written Read Back Order)	0 1 NA		
5. Communicates Effectively with Patient and Significant Other (verbal, nonverbal, teaching)	0 1 NA		
6. Documents Clearly, Concisely, & Accurately	0 1 NA		
7. Responds to Abnormal Findings Appropriately	0 1 NA		
8. Promotes Professionalism	0 1 NA		
CLINICAL JUDGMENT			
9. Interprets Vital Signs (T, P, R, BP, Pain)	0 1 NA		
10. Interprets Lab Results	0 1 NA		
11. Interprets Subjective/Objective Data (recognizes relevant from irrelevant data)	0 1 NA		
12. Prioritizes Appropriately	0 1 NA		
13. Performs Evidence Based Interventions	0 1 NA		
14. Provides Evidence Based Rationale for Interventions	0 1 NA		
15. Evaluates Evidence Based Interventions and Outcomes	0 1 NA		
16. Reflects on Clinical Experience	0 1 NA		
17. Delegates Appropriately	0 1 NA		
PATIENT SAFETY			
18. Uses Patient Identifiers	0 1 NA		
19. Utilizes Standardized Practices and Precautions Including Hand Washing	0 1 NA		
20. Administers Medications Safely	0 1 NA		
21. Manages Technology and Equipment	0 1 NA		
22. Performs Procedures Correctly	0 1 NA		
23. Reflects on Potential Hazards and Errors	0 1 NA		
COMMENTS			
<p style="text-align: right;">Total: _____ Total Applicable Items: _____ Earned Score: _____</p>			

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