

FACTORS CONTRIBUTING TO TURNOVER AMONG CRITICAL CARE NURSES  
DURING THE TRANSITION TO PRACTICE PERIOD

A Scholarly Project Submitted in Partial Fulfillment of  
The Requirements for the Degree of  
Doctor of Nursing Practice  
in  
The School of Nursing  
Rhode Island College  
May 14, 2022  
by  
Paula M. Gellner MSN, RN

DNP Scholarly Project Team

Justin DiLibero, DNP, APRN, CCRN-K, ACCN-AG, FCNS

---

DNP Scholarly Project Advisor

Anette Griffin, PhD, MBA, RN

---

DNP Scholarly Project Content Expert

Joan Walsh, DNP, APRN-CNS, CCNS-BC, CNRN, SCRNP

---

DNP Scholarly Project Organizational Mentor

Justin DiLibero, DNP, APRN, CCRN-K, ACCN-AG, FCNS

---

DNP Program Director

FACTORS CONTRIBUTING TO TURNOVER AMONG CRITICAL CARE NURSES  
DURING THE TRANSITION TO PRACTICE PERIOD

A Scholarly Project Submitted in Partial Fulfillment of  
The Requirements for the Degree of  
Doctor of Nursing Practice  
in  
The School of Nursing  
Rhode Island College

May 14, 2022

by

Paula M. Gellner MSN, RN

## **Acknowledgements**

I would first like to like to thank my husband Michael Gellner, my sons Brian Danz and Joseph Danz as well as my sister Barbara Metz, SND for their unending support and encouragement over the past three years. To my grandchildren Alexandra, Anderson, Ellie, Juliana, and Olivia thank you for the many laughs and entertainment during these three years.

The data for this project would not be complete without the contributions of the many nurses on the study units taking time to complete surveys at Rhode Island Hospital.

My peers from the very beginning, Darlene, Elizabeth, Lori, and Yetunde have been amazing mentors. They are now forever friends!

To my second reader Annette Griffin, Organizational Mentor Joan Walsh, and Primary Investigator Kara Misto, I acknowledge and thank them for sharing their expertise and professional assistance in navigating through the many aspects of this final project.

Finally, a sincere thank you to my first reader and Project Advisor Justin Dilibero for his encouragement, expertise, kindness, and patience through this process.

## **Abstract**

**Background:** New nurses are the major source of hiring for most hospitals. They fill vacancies left by seasoned nurses. As a result, an experience-complexity gap is created. The turnover of new graduate nurses is as high as 85% in the first two years of employment. A cycle of turnover has been created.

**Purpose/Specific Aims:** The purpose of this study is to determine the most important factors contributing to turnover and the opportunities to mitigate or reduce turnover in the critical care setting.

The specific aims are to evaluate the perceptions of the new graduate nurse and experienced nurses related to the transition to practice period and to evaluate the perception of all nurses' health of the work environment.

**Methods:** The AACN's Healthy Work Environment Assessment Tool was distributed to all nurses permanently employed on four study units. The Casey Fink New Graduate Nurse Survey was distributed to all permanent nurses on the study units with less than one year of experience on the unit. The survey was in effect for three weeks during February 2022.

**Results:** Nurses with less than two years' experience note staffing, true collaboration, and meaningful recognition as elements of the work environment most challenging. New nurses indicated dissatisfaction with staffing, length of orientation, and multiple preceptors.

**Conclusion:** This study has provided a more detailed understanding of the local practice environment related to the health of the work environment and the experiences of new nurses during their transition to practice.

**Key Words:** New graduate nurse; experience-complexity gap; turnover; transition to practice; Reality Shock; Healthy Work Environment.

## Contents

<b>Background and Significance .....</b>	<b>1</b>
<b>Problem Statement and Study Question .....</b>	<b>4</b>
<b>Literature Review .....</b>	<b>4</b>
<b>Local Context .....</b>	<b>24</b>
<b>Purpose Statement and Specific Aims .....</b>	<b>27</b>
<b>Conceptual/Theoretical Framework .....</b>	<b>28</b>
Healthy Work Environments .....	28
Skilled Communication:.....	28
True Collaboration: .....	28
Effective Decision Making:.....	29
Appropriate Staffing: .....	29
Meaningful Recognition:.....	29
Authentic Leadership: .....	29
Reality Shock Theory .....	29
<b>Methods .....</b>	<b>30</b>
Setting .....	30
Participants.....	30
Intervention .....	31
Measures .....	31
Analysis Plan.....	33
Ethical Considerations .....	33
<b>Results .....</b>	<b>34</b>
<b>Discussion .....</b>	<b>49</b>
<b>Sustainability and Scalability .....</b>	<b>51</b>
<b>Implications .....</b>	<b>53</b>
<b>Conclusion .....</b>	<b>54</b>
<b>References.....</b>	<b>55</b>
<b>Appendices .....</b>	<b>64</b>

## FACTORS CONTRIBUTING TO TURNOVER AMONG CRITICAL CARE NURSES DURING THE TRANSITION TO PRACTICE PERIOD

### **Background and Significance**

Newly graduated nurses are the largest source of hiring for hospitals (Welding, 2011). Seasoned nurses are leaving the bedside for many reasons. With fewer experienced nurses to fill open positions, the hospital must rely on new graduate nurses. Concurrently, we are experiencing an aging population, and advances in technologies and medical science, resulting in increasing complexity. This illustrates the experience-complexity gap phenomenon in which “more novice nurses must provide more complex care” (Poindexter, 2019).

Several reasons contribute to turnover, including controllable and non-controllable factors. Non-controllable factors include relocation, family needs, pursuing advanced degrees, promotions, and retirement. Controllable factors generally refer to conditions in the work environment. Creating a healthy work environment has been shown to improve nurses’ satisfaction and retention. Ultimately this leads to improved quality and safety of care and enhanced patient outcomes (Shirey, 2006; Kramer et al., 2012; Lake et al., 2019).

Historically, new graduate nurses were primarily hired onto general nursing units where they gained basic nursing skills supporting them before they transitioned to more complex specialty care areas such as the emergency department, pediatrics, maternity, and critical care. More recently, new graduate nurses are increasingly being hired directly into specialty care areas of the hospital. These new graduate nurses must develop general

competencies required of a nurse (Casey et al., 2004), and the competencies needed for the specialty.

The gap between theory and practice is expanding (Freeling & Parker, 2015). New graduates hired into specialty areas must be skilled in using advanced technologies at the bedside. They must assimilate patient data with foundational knowledge and skill essential for advanced critical thinking. While the experience-complexity gap affects nearly every practice area, critical care is perhaps the most vulnerable. The transition of new graduates into these practice areas often results in stress, burnout, and related negative sequelae.

New graduate stress results from perceptions of patient safety issues, poor staffing, lack of knowledge, and peer expectations (Eckerson, 2018). The literature supports that these are leading factors contributing to the high turnover of new graduate nurses. Turnover among new graduates has been shown to be as high as 35-60% in the first year and up to 85% by the end of the second year (Beecroft, 2007; Ekerson, 2018; Welding, 2011).

The transition to practice period, defined as the first year of practice, has been identified as a period of “reality shock” (Duchscher, 2008). During this time, the new nurse's experiences as a student come into conflict with the realities they experience as they transition into practice (Missen et al., 2014). The transition experience has been widely studied. Stress, lack of knowledge, sense of inadequate preparation, autonomy, moral distress, work-life balance, and lack of collegial relationships are all factors identified as leading to reality shock contributing to turnover. It is a challenging time for our new nurses and is not limited to nurses in the United States. The difficulty

experienced by new nurses in the transition to practice period is a global phenomenon that has been identified in many countries and is a leading cause of turnover (Duchscher, 2008; Missen et al., 2014).

The experience complexity gap and rapid overall turnover decrease the collective experience and organizational knowledge in the unit or within the organization (Jones & Gates, 2007). These factors increase the risks of adverse patient outcomes and patient experiences (Jones & Gates, 2007).

Importantly, this situation affects not only new graduates but also more experienced nurses, who find themselves in a continual cycle of orienting new nurses, many of whom leave within the first two years, creating new vacancies, leading to short staffing, and requiring the experienced nurses to precept the next wave of new hires. The cycles of hiring, precepting, and turnover, contribute to stress, burnout, and turnover of experienced nurses, which further compounds the experience-complexity gap and exacerbates the broader problem.

Turnover is costly to the organization, approximating up to \$88,000 per nurse (Welding, 2011). There are various qualitative, quantitative, mixed methods, and meta-analysis designs exploring the cause of nurse turnover in the hospital setting. The labor budget of a hospital is approximately 51% of the operating budget, with the nursing budget responsible for a large portion of the budget (Lingo, 2018). An organization's financial success depends on the stabilization of nursing turnover. In addition, turnover leads to decreased quality and safety outcomes.



Decreasing turnover is a top priority in the practice setting. Decreasing the new graduate turnover is hoped to contribute to elevation in the confidence of recent graduates, decrease the burnout of seasoned staff, improve the health of work environments, reduce cost, and optimize quality and safety outcomes.

### **Problem Statement and Study Question**

Despite previous interventions at the practice site for this study, new graduate turnover remains high. The most important causes of turnover are not well understood. There is an opportunity to understand the new graduate nurses' perceptions during the transition to the practice period and the health of the work environment.

### **Literature Review**

#### **Nursing shortage**

The Health Resources and Service Administration's (HRSA) 2017 report, *The Future of Nursing Workforce: National and State Level Projection 2012-2025*, predicted that the supply of nurses would be sufficient to meet demand in most states by the year 2025. The prediction took into consideration the departure of baby boomers from the workforce. Although there would be a surplus of nurses in some states, others may experience a deficit. The report accounts for an expected increase in insured patients, the aging population, and predicted population growth. However, it did not consider the need for nurses in the future coordination of the care of patients with both acute and chronic diseases. As a result, some nurses will need to be prepared for more expanded roles, such as Nurse Practitioners, Midwives, Certified Nurse Anesthetists, and Clinical Nurse Specialists. Additionally, the predicted number of new nurses will not resolve the problem created by the gap between knowledge and the complexity of the patients. This

prediction has been further challenged since the emergence of COVID-19. The pandemic has created unprecedented nurse staffing shortages by significantly increasing overall nursing turnover above previously observed levels (Miller, 2020). Turnover trends are now considered pre and post COVID-19.

### **New Graduate Nurses**

Casey et al. (2004) studied the stresses and challenges of the new graduate nurse. Four identical surveys were distributed at baseline, three months, six months, and 12 months. A convenience sample of 270 new graduate nurses from six acute care facilities was recruited. The authors created and utilized their validated survey tool to identify qualitative themes. The design of their study was a descriptive comparison. The themes emerging related to turnover were personal and financial stressors, frustrations in the work environment, lack of confidence, lack of a sense of belonging, consistent support from preceptors, communication with management and physicians, lack of readiness for independence, and need for more extended educational support.

A secondary analysis of qualitative data was conducted by Fink et al. (2008) to describe the work experiences and transition to practice of 1,058 new graduate nurses who had completed a one-year residency program. Almost half (42%) of the sample indicated they continued to experience a lack of confidence, high workload, and orientation issues at the end of the first year. Additionally, assertiveness, communication issues with physicians, having a care routine, and being disorganized were identified as sources of stress for the new graduate nurses (Fink et al., 2008).

DeGrande et al. (2018) performed a qualitative hermeneutic phenomenology design study in Texas using snowball sampling of 11 nurses from various ICUs across the state. The purpose of this study was to understand the experiences of new graduates who survived the practice readiness gap and successfully transitioned from the novice phase to a competent nurse phase after two years in the ICU. Interviews were used to collect data to make meaning from their experience throughout the transition. Analysis of the data revealed six themes which included a lack of confidence in the ICU setting, the need for additional experience and continued learning, and team support was identified during the first year. The nurses reported increased confidence through intuitive knowledge during the second year of experience on the unit (DeGrande et al., 2018).

A literature review was conducted to study the transition experiences of new paramedics studied using Arksey and O'Malley's five-stage framework (Kennedy et al., 2015). This study aimed to determine if the same reality experienced in nursing likewise occurred in the allied professions. Analysis of the data revealed that the students and new paramedics reported feeling overwhelmed, anxious, stressed, and experienced a difficult learning curve and reality shock between theory and practice.

Stress in the workplace has been reported as the primary reason for nurse dissatisfaction in a study of nurses (Groff, Paris & Terhaar, 2010). This study examined nurses from a small community medical center in the mid-Atlantic region who reported experiencing stress due to workload, staffing, the perception that staffing was unsafe, acuity of patients, schedules, workflow/design, and poor interdisciplinary relationships.

Twibell and St Pierre (2012) prospectively studied the retention rates of 111 newly graduated nurses attending six separate residency programs in the United States.

They concluded that after a 1-year residency program retention rate of 87% was achieved. A retrospective study of 679 new nurses enrolled in 12 residency programs in the United States demonstrated a similar retention rate at one year and reported less stress coupled with confidence in documentation and communication.

Sandu and Halm (2010) conducted a meta-analysis of 12 various new graduate programs in the United States. The study concluded that the high stress of new graduate nurses, despite educational preparation, was an essential component of turnover. Through collaboration, communication, and coaching, preceptors were the most supportive individuals during the orientation period. Although low at six months, autonomy rose by the conclusion of some programs. In the organizations where this phenomenon occurred, turnover decreased, and the organization's financial health improved.

According to the literature, transition difficulties in the newly graduated nurse occurs not only in the United States but also internationally. Wong et al. (2018) performed a qualitative descriptive study of eight new graduate nurses and their challenges in Hong Kong at a large medical center. Themes were common in previous studies, including communication, lack of knowledge, workload, work atmosphere, blame/complaint culture, and support. The research demonstrated that a positive personal attitude showed perseverance during their transition period (Wong et al., 2018).

In an Australian study by Parker et al. (2010) a snowball sample of 282 new graduate nurses from a pool of 1604 responded to a survey placed online. This was part of a mixed-methods survey. From this sample, 55 new nurses were chosen to participate in focused groups of 60-90 minutes. A combination of positive and negative results was obtained. Positive results surrounded support with learning. The experiences were

rewarding. The nurses were welcomed to their new units. Negative experiences were identified as stress resulting from the perceptions of a high level of responsibility, responsibility for the safety of the patients, and the treatment they received from the more seasoned staff.

A qualitative descriptive study was conducted to describe the clinical experiences of fourth-year baccalaureate nursing students (n=15) in an intensive care unit in Turkey. The purpose was to identify factors that influence the transition to nursing practice (Tastan et al., 2013). Data were collected through open-ended interviews. The themes that emerged from the nursing students' descriptions of their experiences included: anxiety, fear of harming a patient, lack of confidence, organization and prioritization, and communication in difficult situations (Tastan et al., 2013). This study suggests the need for curriculum development that proactively meets students' needs.

Nurses from four hospitals at the Tehran University of Medical Sciences participated in a qualitative study focused on the preparedness of new graduate nurses during the transition to practice period. In this study Hezaveh et al., (2013) used a purposeful and theoretical sampling of 21 nurses. Of this sample, there were 17 new graduate nurses and four nurses practicing in a management capacity. Individual in-person interviews were conducted for 25 to 120 minutes until data saturation was attained. Three themes emerged from the interview data. New nurses lacked basic and complex skills and had difficulties communicating with patients and peers. They were challenged with time management accountability and decision-making. It was concluded that the unpreparedness of the new graduate nurses was the source of stress for both the recent graduate and the care team.

In another study, a sample of 151 student nurses in their final clinical placement in Finland was studied using a modified version of the highly validated Finnish tool HOTOHA (Kajander-Unkuri et al., 2014). Most students trust their competence around the time of graduation. They rated their technical nursing skills as very good. However, when asked to evaluate their knowledge of the required skill, critical thinking was low, risking not providing optimal safe patient care. This indicated a need for careful nursing education in the transition period.

A phenomenological study of six Indonesian new graduate nurses was performed, during which each new nurse was interviewed for 15-25 minutes by telephone (Nelwait et al., 2013). The graduate nurses described similar experiences. The respondents expressed feelings of being under pressure from clinical assignments and assisting with performing procedures. Difficulty forming relationships with patients, coworkers, and the community was also noted. Finally, the graduate nurses reported a lack of coping strategies when feeling very stressed. Overall, nurses reported not having the life experience or examples of a healthy stress response (Nelwait et al., 2013).

### **Experience-Complexity Gap**

The demand for nurses was predicted to reach a surplus of 300,000 nurses by 2030, although parts of the United States may experience some shortfall (Virkstis et al., 2019). Due to the increased numbers of retiring nurses and new nurses entering school, the workforce is experiencing an increase in the number of nurses in the novice phase and a decrease of those experts near retirement. This coincides with the rapidly increasing complexity of patients' care and therapies, resulting in expanding the time for the new graduate nurse to achieve competency status compared to nurses from previous years

(Marolf, 2020). Meanwhile, seasoned mid-career nurses are diminishing in numbers. The result is less experienced nurses in the workforce and a widening experience-complexity gap. This has added an additional level to the overall nursing shortage, a shortage of experienced nurses (Virkstis et al., 2019).

In 2019, executives of the Advisory Board sought to identify strategies to close the experience-complexity gap by eliciting input from nurse executives, educators, and directors from the United States, Canada, and Australia (Virkstis et al., 2019). Over 80 qualitative telephone interviews were conducted, and many ideas were presented, such as decreasing the transition time of new graduates, forming academic partners with nursing schools, expanding retention efforts for near retirement nurses, standardizing the work of the preceptors, revision of core competency lists, and staffing models to support the novice nurse such as senior staff reassignment.

Currently, as we experience a worldwide pandemic, the effects of the complexity gap deepen. New nurses are not ready to care for the complexities of critical care patients (Delgado, 2020). Using the Advisory Board information gathered in 2018, nursing departments have begun to follow the suggestions outlined by redistributing staff among various units and shifts, pairing new nurses with competent and proficient nurses, and expanding access to all nurses to the experienced nurse (Virkstis et al., 2019).

### **Reality Shock**

Marlene Kramer first introduced the concept of reality shock in 1974. Reality Shock describes the reaction of the individual beginning work in the field in which they have received education to the realities of the professional role. She describes a cyclical

process of four phases of reality shock: honeymoon, rejection/regression, adjustment, and recovery.

Two significant factors of reality shock in the transition to practice period are the relationship between the culture and the education provided by the new professional organization and the undergraduate education obtained by the new nurse (Caliskan & Ergun, 2012). The new nurse experiences transition professionally, personally, and individual level. Various life changes coincide during this period. These changes include but are not limited to social, economic, intellectual, and emotional changes (Duchscher & Windey, 2018).

Duchscher described three stages through which the new nurse progresses - doing, being, and knowing. This model is a nonlinear process, describing transition shock as having a beginning, middle, and end (Duchscher, 2008; Duchscher & Windley, 2018; Graf et al., 2019).

Duchscher outlines her model as such: the beginning as the first three to four months as “doing” or stabilizing initial practice through learning and adjusting to the clinical environment. During this phase, the new nurse is excited to embark upon their professional career. The learning curve here is steeper as new, unfamiliar elements of practice requirements are introduced, requests for assistance from peers, and patient assignments are increased in complexity. The new nurse may develop a sense of being overwhelmed. The next four to five months are the middle and are defined as “being.” The new nurse adjusts to their clinical practice's learning and thinking elements. Growing knowledge and competency result in confidence while observing the new healthcare system—the nurse questions what was learned academically and compares it to clinical



practice requirements. Confidence and expertise are cultivated in the recent graduate as they transition to the stage of ‘knowing’ by the end of 12 months. At this stage, the new nurse may assist other staff, is caring for more complex patients, and has possibly been given the role of preceptor or charge nurse (Duchscher et al., 2018).

The Benner model is linear (Graf et al., 2019). Benner concluded in 1982 that the time a nurse requires to reach competence is three years. The transition from novice to expert, as explained by Benner, occurs through a process over five stages. In the Benner model, new nurses move from the novice to the advanced beginner stage by the end of the first 12 months of experience. As the nurse progresses in experience and knowledge, they become competent and later move to be proficient and finally expert. Some nurses never reach the expert level as described in the Benner model and remain competent or proficient practitioners throughout their careers, according to Benner (Graf et al., 2019).

Graf et al. (2019) note that William Bridges, 2009, described a three-step linear theory of transition such as Benner (1982) although his perception of the transition process was slightly different from Benner’s. The transition stages described are focused on letting go emotionally and physically of the familiar, “loss,” to embrace the new change, “neutral,” and “new beginning.” Thus, in letting go, the individual achieves openness and creativity that will lead to new opportunities, “new beginnings.”

### **Nursing Culture (HWE)**

The culture of a nursing unit is essential to turnover reduction. Elements of a healthy environment such as meaningful recognition, collaboration with peers, inadequate staffing levels, and having an authentic leader (AACN, 2001) are some

necessary components. These contrast with the dissatisfiers identified by new nurses, such as dealing with argumentative peers and physicians, staffing ratios, stress, work-life balance, and outdated equipment (Casey et al., 2007; Donnelly, 2017).

A qualitative study of 907 Bachelor of Science student nurses from five European countries who were placed on night shift clinical rotations to understand the students' experiences and skills acquired during this shift. This research was conducted in Poland (Dobrowolska et al., 2020). The students' professional skills, such as communication with the care team, including physicians, and performing nursing comfort skills for patient sleeping, improved in this setting. However, these students on the night shift described personal struggles with fatigue, performing family responsibilities, and academic requirements. Night shift work was perceived as an overall negative experience by the students. This may parallel the experiences of new graduate nurses many of whom are hired onto a night shift or a rotating shift assignment upon graduation from nursing school.

For many nurses, the experience of fatigue is familiar. The issue of fatigue was explored in a study that addressed the aspects of patient and nurse safety (Steege & Rainbow, 2017). This qualitative study of 22 nurses from critical care and medical-surgical units was conducted to investigate the consequences of fatigue in the healthcare workforce. The term "Supernurse" describes seasoned nurses possessing a cloak of invulnerability to fatigue as a badge of honor. These nurses' attitudes conflict with those of new graduate nurses who are reluctant to engage in the practice of frequently working overtime and extra shifts leading to feelings of fatigue and stress. New nurses have successfully learned to disengage from work and engage themselves in regular self-care

activities. New nurses believe part of the stress experience is related to the expectation to work additional hours, precept as a new nurse, and take charge (Fink et al., 2008).

A systematic review was conducted to identify current research on the barriers created by seasoned nurses toward new graduate nurses during the transition period (Freeling et al., 2015). A literature search through online databases resulted in 1512 potential articles; of these, 31 met the study criteria 'nursing' and 'peer review.' The themes across the literature yielded; were lack of confidence, clinical skills related to patient assessment, leadership, delegation, and time management. The data described senior nurses as dismissive when asked questions by new nurses, bullying, critical, exhibiting horizontal violence, causing work stress, and leading to a turnover (Freeling et al., 2015).

In 2017, Freeling et al., performed a literature review of senior nurse attitudes toward new graduate nurses. Their research discovered there was little information related to the attitudes of experienced nurses toward new graduate nurses in the literature and suggested that the experienced nurses' interaction and relationship with new nurses will determine the unit's culture. These researchers identified ten studies that met the search criteria and sought to identify the common themes across these studies (Freeling et al., 2015). The four themes that emerged in this study were: the need to improve clinical skills, negative attitudes of senior nurses toward new graduates, lack of confidence in recent graduates, and lack of proper preparation for clinical practice. Qualitative research was conducted in the operating room of a metropolitan hospital with a convenience sample of three seasoned operating room nurses. Feedback was elicited by exploring their attitudes and expectations of the new graduate. Face-to-face interviews were conducted

using a hermeneutic methodology. It was concluded that mentoring recent graduates by supportive, experienced nurses and preceptors was essential; consequently, the lack of supportive relationships led to the delay in successful outcomes for the new graduate (Freeling et al., 2015).

Literature suggests that new nurses should be hired into their area of interest. One study exploring this topic used a multivariate analysis of prospective data to determine intent to turnover among 889 nurses from 1999-2006 (Beecroft et al., 2007). Using logistic regression analysis, the researchers studied the relationship between the actual turnover demonstrated and reported intent to turnover. This was compared using the Kaplan-Meier survivorship tool. Results from this study indicated that new nurses of one year intended to turn over if their placement on their initial desired unit was not accommodated upon hire. Unit and organizational climate were also studied. Results from this study indicated an indirect relationship to turnover. For example, high unit and organizational scores with an organizational commitment to the nurse and teamwork, job enjoyment, and cohesion with managers and peers demonstrated a lower turnover risk.

Upon completing orientation, the nurse is expected to demonstrate clinical knowledge and skill to practice independently. They must be confident in performing new skills safely. To support this, Benner (1982), describes the need to have repetitive experience with skills adding variances throughout the experience (Marolf, 2020). However, many new graduates are less confident performing advanced skills and therapies; thus, they must recognize their responsibility to seek assistance from seasoned staff. If they are reluctant to ask questions of senior nurses due to the perceived reaction, patient safety is risked (Wong, 2018).

Similar results were reported by Bae et al., (2010). The researchers collected nurses' responses rating group cohesion, learning, and relationships in 268 nursing units of 141 hospitals over six months. Results demonstrated a correlation between lower levels of turnover with higher group cohesion, increased workgroup learning with fewer severe medication errors, and higher patient satisfaction.

Phillips et al. (2015) conducted a qualitative study of 392 nurses in Australia using questionnaires to collect the data. The purpose of the study was to determine if pre-nursing employment of any type influenced the transition of new graduate nurses. Results demonstrated that although pre-employment was beneficial, it was not a prerequisite to success in a transition program. Work experiences during the first year of employment were determined to be the key to success (Phillips et al., 2015).

The study by Philips et al. (2015) was built upon a previous study completed in 2012. In this study, 459 new graduate nurses in Australia were invited to report about their first year of transition to practice. The nurses reported the successful transition based on one-year orientation, including feedback and the thoughtful matching of new skills with patient acuity, which was described as elevating their confidence and clinical competency in the new role. Conversely, it was reported that nurses who did not have these experiences with placement reported their transition as negative.

The introduction of magnet designation for hospitals occurred in the 1980s. When evaluated, characteristic elements among these hospitals were: the ability to retain staff and demonstrate high-quality metrics was highly evident. Additionally, it has been reported that the elements of the work environment that enhance the satisfaction of nursing staff were found in Magnet-designated hospitals including the properties of

autonomy, the ability for decision making, open communication, and collaboration.

These factors contribute to low turnover and allow nurses to become competent in their areas of expertise (Kramer & Schmalenberg, 1991), as cited in Beecroft et al., 2007).

Conversely, non-magnet hospitals were less successful in providing an environment that supported nurse satisfaction and the ability to reduce turnover mentioned by Kramer & Schmalenberg, 1991 (Beecroft et al., 2007).

The Healthy Work Environment (HWE) concept was released by the American Association of Critical Care Nurses (AACN) in 2001 (Shirey, 2006). The elements of this framework include skilled communication, skilled collaboration, effective decision-making, appropriate staffing, meaningful recognition, and authentic leadership. The HWE standards are aligned with, yet not identical to, the Essentials of Magnetism (EOM) related to the productivity of quality patient care. The eight EOM are: clinically competent peers, collaborative nurse-physician relationships, clinical autonomy, support for education, perception of adequate staffing, nurse manager support, control of nursing practice, patient-centered cultural values, both align to focus on relationships and processes in the environment (Schmalenberg & Kramer, 2007). Magnet-designated hospitals and organizations recognized by the Baldrige Award are synonymous with best practices for supporting healthy environments focused on the experience of the patient and employee (Shirey, 2006). The environment, internal and external, has been linked to Florence Nightingale's writings suggesting that nursing provides the most beneficial natural healing environment. It is considered that the work environment is essential in facilitating positive patient outcomes (Kramer et al., 2012).

In the early 2000s, there was a longitudinal study of a sample of 40 Magnet hospitals with nurse residency programs of greater than three years. All were selected based upon receiving awards designating excellence such as the Baldrige, 100 Top Hospitals, Best Places to Work, and type of hospital. The selection process aimed to choose from the best organizations for participation in this study. Retention data at one, two, and three years were analyzed. Twenty-eight hospitals were represented in this data. Conclusions demonstrated the positive impact of the HWE. Staff reported less reality shock, high professional and work satisfaction, and higher retention. Also noted were feelings of fulfillment in the delivery of care, more allegiance to the organization, and served communities. The new graduate programs were influential in the professional development, loyalty, and the culture of retention for recent grads (Kramer et al., 2012).

A meta-analysis by Lake et al. (2019) used studies published before and including 2018. Seventeen articles, including 21 samples, met the inclusion criteria for work environments using the four nurse-sensitive outcomes: Patient outcomes, patient satisfaction, safety, quality ratings, and nurse job outcomes (Lake et al., 2019). Conclusions from this study indicate fewer adverse patient outcomes and higher patient satisfaction. There was less burnout, higher nurse retention, and higher nurse satisfaction with the environment's safety. It was concluded that the impact of the environment on nurse job outcomes was related (Lake et al., 2019).

In 2009, a cross-sectional correlational study included nurses with three years of experience across the United States (Djukic et al., 2011). In this study, a survey was mailed between January and May to 2,007 nurses. A sample of 1439 met inclusion criteria. They were requested to respond to a 98-question survey asking how they would

rate the quality of care irrespective of staffing numbers or ratios. This study revealed that nurses from Magnet organizations describe high job satisfaction and rate the quality of care as high. These nurses rated supervisory support as high.

In contrast, nurses from non-magnet facilities concluded that several outstanding elements were essential for measuring appropriate staffing. Those elements are the cohesion of the workgroup, the relationship between physicians and nurses, the constraints inherent organizationally, and the physical attributes of the work environment (Djukic et al., 2011). The presence of a HWE mitigates risks of the perceptions of poor staffing, lack of professional recognition, and feedback are some risk factors causing the bedside nurse to become disengaged in their role.

A pre-post study of two cohorts of staff were studied from a 32-bed Cardiothoracic Intensive Care Unit in 2017 (baseline) and again in 2019 (Kester et al., 2021). Based on the results of the 2017 survey, interventions addressing each standard were discussed with the staff and implemented for improvement. The results of the 2019 survey were then compared. Although scores improved, there was no statistical difference in the scores of the Healthy Work Environment Assessment Tool (HWEAT) elements from 2017 to 2019. Positive results were evident in the length of employment as nurses stayed in their positions a mean of 219 days longer in 2019 than in 2017. (Kester et al., 2021).

Supportive leadership, autonomy, and motivation in the workplace are essential satisfiers for millennial nurses. Less seasoned staff on a unit allows for a deficit in qualified preceptors and mentors for the new graduate nurses. Coaches for the millennial nurse contribute positively to the transition experience, adding needed structure for



learning (Hofier & Thomas, 2016). One study reported that teamwork amongst peers was the most crucial characteristic in providing work satisfaction (Koppel et al., 2017).

### **Negative Factors**

Nursing turnover can be described as either good or bad. The organization must be thoughtful in weighing the benefit of each. Seasoned nurses possess elements of wisdom and expertise developed through years of experience. They are paid highly for this, yet some may not be willing to progress with new technologies, precepting, or engage in unit activities necessary to advance and contribute to the care required for patients by today's standards (Jones & Gates, 2007).

Until recently, the negative costs of turnover were suggested; however not quantified in relation to the quality of care and safety of the patients (Jones & Gates, 2007). A review of recent studies and cost-benefit analysis demonstrates the direct relationship between turnover and retention costs, quality metrics such as length of stay, falls, medication errors, mortality, patient satisfaction, and caregiver stress (Jones & Gates, 2007).

The new nurse is trained to obtain advanced skills over time as they progress toward becoming the more seasoned nurse at the bedside. Most new graduate nurses are members of the millennial generation. A 2020 study by the Office of Nursing Retention (2020) reports that the turnover of this age group is 17% each of the first two years of post-graduate employment, up to a high of 60% by year eight. In 2007 the estimated cost of recruitment of new graduate nurses was between \$22,000 and \$64,000. Detailed

financials overall are difficult to obtain relative to the data collected in the study process as the methodologies vary (Jones & Gates, 2007).

Steege & Rainbow (2015) describe in their research that nurses are experiencing fatigue related to extra hours, long shifts, and imbalance of work-life. Fatigue and burnout have been associated with patient and caregiver safety risks, poor patient and nurse satisfaction, and nurse retention in organizations.

An integrative review by Saintsing et al., (2011) which included twenty research studies, examined the types of errors, causes, and interventions post-error committed by the new graduate nurse to make recommendations that might proactively reduce the risk. The data suggested that new graduate nurses are most likely to have errors in medication administration. The risk of patient falls and delays in treatment were also noted as high under the watch of a new graduate nurses. Communication between physicians and new nurses was lacking in many instances, including incomplete information provided by new nurses, lack of understanding, and urgency of treatments ordered by the physician team was delayed (Saintsing et al., 2011).

### **Implementation Studies**

Transition programs for new graduate nurses have common goals purported to instill confidence in novice nurses to assist them in developing the skills needed to become competent providers through unit support and clinical supervision (Hussein et al., 2015). Some programs do not demonstrate supportive behavior toward the new nurse. The lack of clinical knowledge and education in needed skills training and supervision to risk successful transition to the unit. This leads to a higher turnover.

Two Boston hospitals implemented new graduate programs (NGP), each included a year-long process of classes, mentoring, and peer support (Adams et al., 2015; Crimlisk et al., 2017). It was found that the retention of new nurses who participated in these programs was high. Upon the creation of a new ICU at Massachusetts General Hospital (MGH), 200 recent graduates were hired (Adams et al., 2015). Thirty-four new nurses were enrolled a study of outcomes after participation in the new residency program. The six-month residency program was a combination of classroom, hands-on, and clinical experiences. The nurses were assigned to one of five host ICUs and paired with nurse partners possessing an average of seven years of experience. The new graduates' education was overseen by the clinical nurse specialist (CNS) of the assigned unit. Exposure to additional areas was built into the residency program. Nurses floated over a two-week span to the post-anesthesia recovery unit (PACU), the respiratory and transplant units. The purpose was to offer a broad range of experiences. The nurses were evaluated by the nurse partners, CNS, and the manager for success in their transition; additional time was allotted if necessary. The average length of the residency was 10.5 months (Adams et al., 2015).

To evaluate the program, focus groups were performed to answer questions related to the residency program, opportunities for improvement, and individual needs that were not provided during the period (Adams et al., 2015). Five themes emerged: communication, program design, development of nursing practice, impact on the unit, and expectation of the new ICU. Responses to the focus groups led the way for changes in the residency program. The length of the program was doubled from six months to 12, the number of clinical narratives required of the new nurse was increased from one to

two, preceptors recognized the importance of socialization of the new nurses into the role of the professional nurse. Nurse managers were empowered to decide the numbers of new nurses a unit could accommodate.

In addition, teambuilding with the new nurses for the ICU was provided in a retreat aimed to solidify the unit identity, familiarization them with unit routines and practices (Adams et al., 2015). After one year, compared to other ICUs, the new unit performed at or above in all nurse-sensitive metrics demonstrating positive outcomes in medication errors, bloodstream infections, patient satisfaction, ventilator-associated pneumonia, and pressure ulcers.

Another study of a new graduate residency program was performed at a metropolitan Level 1 trauma center with 46 nurses replacing 50 newly retired seasoned nurses in 2013 (Crimlisk et al., 2017). All new nurses had achieved their BSN prior to the commencement of the program. Candidates were chosen from a sample of 200 candidates interviewed. Elements of the program mirrored that of most new graduate programs, including the incorporation of didactic, simulation, and technical skills training. Two groups were formed for orientation: Group 1 n=26, and Group 2 n=20. The start dates of the groups differed by one month. The interventions were identical for both groups.

The program included orientation to a medical-surgical unit for one month, five days per week, followed by a preceptor and the unit's nurse educator (Crimlisk et al., 2017). The assignment to this unit was not the participant's unit of choice. After this first month, the new graduates reported to their permanently assigned units. Clinical classes were provided to include critical thinking scenarios. High risk, and high-frequency concepts were presented by a medical-surgical generalist. Introduction to specialty care

during emergency situations, critical care, and perioperative care were also provided. Time was taken for the new graduates to present patient cases initially informally, and finally formally to the group. Lunch conferences were included to add additional clinical knowledge, group socialization, and the ability to assimilate into the nursing culture of the organization.

Students were surveyed twice on their experience in the program, assessment of the knowledge acquired, their confidence at six months and one year. Results from both surveys were similar. Retention of the new graduates was reported by Crimlisk et al. (2017) to be 91% in the first year, although it was suggested that this be reviewed in future years.

### **Local Context**

The cardiac critical care units at Rhode Island Hospital (RIH) are members of the Lifespan Cardiovascular Institute (CVI). There are two medical and surgical units, each with a designated intensive care unit and stepdown unit. The AACN has awarded both surgical units the Silver Beacon Award for excellence in nursing care and outcomes. The Beacon Award recognizes the top critical care units in the country by the AACN. Elements of the Beacon award are nurse empowerment, morale, turnover, education, and patient outcomes (AACN, 2021). In 2021, the CTIC was named a Center of Excellence in providing education in the specialty of Cardiac Surgery Cardiac Life Support (CSU-ALS).

All new graduate nurses hired into critical care participate in a critical care internship program. Contingent on unit openings, they are assigned to specialty areas depending on their area of interest. The critical care residency program is tailored to the

needs of the new nurse. This program is locally sought after by new graduate nurses and frequently receives positive evaluations from its participants. A limited number of new graduate nurses are assigned to any unit at one time. Most are replacing seasoned nurses who are advancing their careers or otherwise leaving the bedside.

Following completion of the didactic portion of the internship program, nurses are provided unit-based classes to learn the skills of advanced therapies on a rotating basis every three to four months. Resource time is granted on the unit to gain exposure to the therapies with the oversight of a seasoned practitioner. Operating room observation is provided.

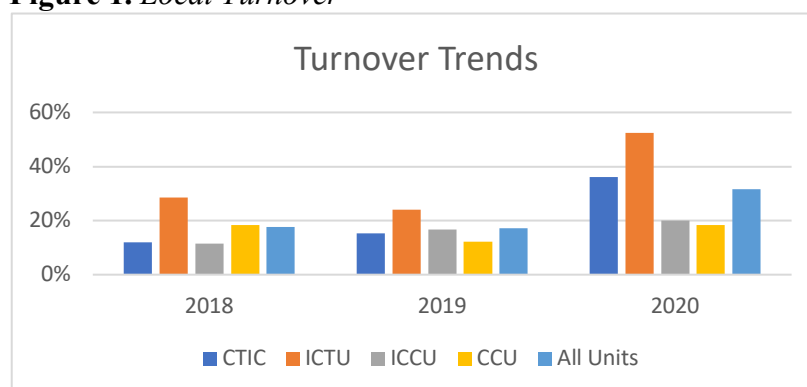
Typically hired onto night shifts, a new graduate nurse may transition to more desirable shifts when openings come available. Historically, orientation time has been on the day shift. Here the nurses regularly participate in rounds, admitting, discharging, and transferring patients. They begin to understand workflows with seasoned preceptors and multiple resources. Despite the efforts of this longstanding program to address nursing turnover and build relationships among peers, such as scheduling time orienting to the off shift to gain familiarity working with future peers and work expectations, adaptation to the off shifts has been challenging. Although the program feedback has been positive, turnover remains high.

A careful review of the critical care internship program has occurred every year for the past six years for improvement. Initially, the Essentials of Critical Care Orientation (ECCO) was provided (AACN, 2006) as an adjunct to class and skills orientation. Feedback from participants consistently indicated that additional time with a preceptor would be more helpful. This was mindfully allocated. The ECCO program was

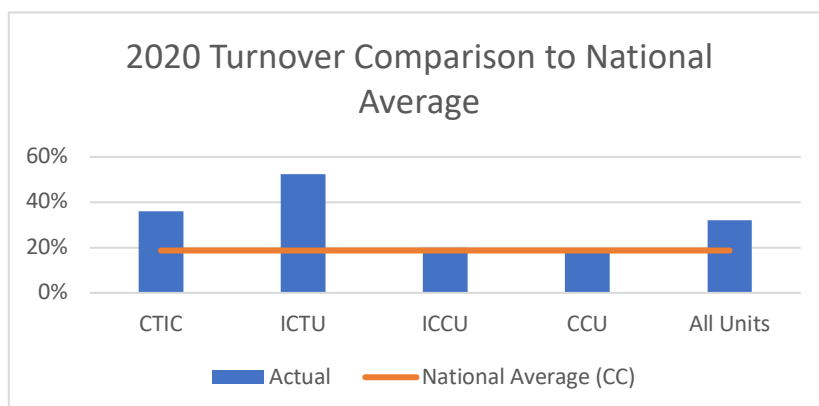
lengthy and time-consuming for some staff who required additional unit experiences. Despite the length of 16 weeks, there was no formal follow-up meeting or class with the critical care interns once their program was completed. The decision was made to modify didactic and skills-based education. Hands-on critical skills replaced this aspect of the program leading the nurses to have more confidence in their clinical areas. The time frame for orientation remained unchanged, and formal follow-up with participants did not occur.

This year the Vizient program for newly graduated nurses has been implemented. It consists of skills, preceptor, unit experience and will be in effect for one year, although the nurse will practice independently once signed off to do so by their preceptor. Vizient is a nurse residency program scientifically based to assist the transition of the new graduate nurse. It helps in building the skills of the new nurse, advocating for evidence-based practice using clinical decision making, and promoting confidence. The completion step of this program is an evidence-based project presented to their peers. This program is conducted in partnership with the American Association of Colleges of Nursing (AACN).

Despite previous interventions, turnover remains a problem. The local rates are provided in figure 1 below. The effects of COVID-19 on turnover in 2020 are dramatic in most units.

**Figure 1. Local Turnover**

Reviewing the turnover data nationally compared to the study units reveals a similar pattern, as seen in Figure 2. According to Nursing Solutions Incorporated NSI National Health Care Retention and RN Staffing Report, in 2021, the national average for nursing turnover is 18.7%. All units in this study group are at or above this metric. See Figure 2 below.

**Figure 2. Unit turnover compared to the national average**

### Purpose Statement and Specific Aims

Despite previous interventions in the local setting as described above, retaining new graduate nurses in critical care remains an important challenge. The most important contributors to turnover are not well understood. The purpose of this study is to



determine the most important factors contributing to turnover and the opportunities to mitigate or reduce turnover in the critical care setting.

The specific aim is to evaluate the perceptions of the new graduate nurse and experienced nurses related to the transition to practice period and to evaluate the perception of all nurses' health of the work environment.

### **Conceptual/Theoretical Framework**

The two frameworks used in this study will be the AACN Healthy Work Environment (HWE) and Reality Shock Theory.

#### **Healthy Work Environments**

The AACN Healthy Work Environment (HEW) (AACN 2021) was introduced in 2001 (Shiley, 2006). There are six standards of this framework: Skilled Communication, True Collaboration, Effective Decision Making, Appropriate Staffing, Meaningful Recognition, and Authentic Leadership. Each standard is essential in its contribution to the HWE. A description of each standard is provided below.

**Skilled Communication:** Given the increasing complexity of the patients, communication among caregivers must be allowed to be open and respectful, not promoting a culture of silence. An environment allowing disruptive behaviors is at risk of errors and poor patient outcomes.

**True Collaboration:** This includes the creation of partnering with colleagues on the units to include advanced practice providers and physicians. The partnering must be based on trust and respect, positive communication, and willingness to support each

other. Conflicts may come into play here. The ability to effectively resolve conflict will lead to informed decision-making and increased commitment to the team.

**Effective Decision Making:** Education, understanding, and increased skills are the hallmarks of effective decision-making. Decision-making can involve staffing input, recruitment strategies, shared governance participation, and team support. For the novice nurse, its role is in prioritizing care, understanding outcomes of decisions and developing self-confidence.

**Appropriate Staffing:** Inappropriate staffing combined with an unhealthy work environment leads to burnout. Staffing is complex and dynamic. The skills of the staff available must be an appropriate match for the needs of the patients requiring care. The complexity gap is essential to recognize in this standard.

**Meaningful Recognition:** This can be in the form of thank you notes, verbal recognition at daily rounds, DAISY Award nominations, posting of patient and family letters, and unit celebrations. Leadership must be aware that meaningful recognition is different for many individuals, therefore it is important for it to be personalized.

**Authentic Leadership:** Most units possess formal and informal leaders. It is the authentic leader who is the role model for the staff. The leader promotes, the commitment of the staff, trust, cohesiveness within the unit, and reaches toward goals of achieving high patient outcomes. Authentic leaders can accept necessary feedback.

### **Reality Shock Theory**

Marlene Kramer coined “Reality Shock” in 1974 according to Duchscher, (2008). This occurs when school experiences and expectations conflict with the reality of the

work environment. It is defined in four phases. “Honeymoon” is the first phase in which the new nurse is excited to be joining the team. “Shock,” the second phase and the one in which the nurse is at greatest risk of leaving, is the phase whereby negative feelings begin to surface toward the new role. It is now that finding a mentor is significant. The third phase is the “Recovery” phase. The new nurse becomes more favorable toward their role, and their perspective improves. Being able to accept constructive criticism is essential. Finally, in phase four, the “Resolution” phase, the nurse understands their role and contribution to effective patient care (Wakefield, 2018).

## **Methods**

### **Setting**

The setting of this project was Rhode Island Hospital’s four cardiac critical care units. These units are included in the Lifespan Cardiovascular Institute (CVI). There are two medicine and two surgical units, each with an accompanying stepdown. The Coronary Care Unit CCU and Intermediate Coronary Care Unit (ICCU) are the medical units. The surgical units are the Cardiothoracic Intensive Care Unit (CTIC) and Intermediate Cardiothoracic Intensive Care Unit (ICTU). All units have experienced average to above-average nursing turnover since 2018 compared to the national benchmark.

### **Participants**

The primary student investigator met with the nursing leaders of the involved units. Flyers introducing the study and purpose were posted on participating units one week before the start of the study. These flyers were replaced when the study was in progress, noting that anticipated participation of the staff was appreciated.

Several informational sessions were held one week before survey implementation for permanent registered nurses of the study units. Nurses not permanently hired onto the study units, such as contract nurses or float nurses, were not eligible as the purpose of the study was to gather information regarding the study units' nursing staff. The information sessions explained the background, purpose, electronic informed consent for each survey, and participant requirements. Survey participation was anonymous, no personal information was requested, participation was voluntary, there was no penalty for not participating, nor was an individual incentive provided for participation. A prize was awarded to the unit with the highest response rate of over 70%. The study investigator secured all data in a password protected file. Overall, it was estimated that there would be > 60 participants collectively in this study representing the four identified units.

### **Intervention**

The study involved two components:

1. Completing the American Association of Critical Care Nurses (AACN) Healthy Work Environment (HEW) survey. All registered nurses permanently assigned to the study units were invited to participate in this survey.
2. Completion of the Casey Fink New Graduate Nurse Experience Survey. All nurses with one year or less of critical care experience permanently assigned to the study units were invited to complete the Casey Fink New Graduate Nurse Experience Survey.

### **Measures**

The Casey Fink New Graduate Nurse Experience Survey is intended for new graduate nurses and asks participants to rate the areas of support, patient safety, stress,

communication and leadership, and professional satisfaction. The responses to proposed questions elicited information regarding the nurse's perceptions of their new role as they transitioned to critical care nurses. Section I requested a response to open-ended questions regarding current skills. Section II Is a 24-question survey scored on a 4-point Likert scale. This section evaluated the support and stress experienced in the setting. Possible responses were "Strongly disagree," "disagree," "agree," "strongly agree." The last question in section II (#25) asked the participant to define the source of stress in their personal life if the response to question 24 was "agree" or "strongly agree." Section III includes nine Likert-style questions about job satisfaction., with possible responses including "very dissatisfied," "moderately dissatisfied," "neither satisfied nor dissatisfied," "moderately satisfied," and "very satisfied." Section IV had four multiple-choice questions and one open-ended question related to concerns and comments. Finally, section V had questions regarding demographics (see Appendix D).

The internal reliability of this survey is determined to be high with an  $\alpha = .71$  to .89 (Casey & Fink, 2006). Permission was received from the authors of this tool for use in the study. It was estimated that the completion of this survey would be 15 minutes. Permission for use of the survey was obtained using an online link (see Appendix E).

The AACN Healthy Work Environment Assessment Tool (HWEAT) evaluated the work environment across six themes: skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership (Connor et al., 2018) (see Appendix F). There were three questions included in each theme. The themes and questions have been tested for validity and achieved a Cronbach score of  $\alpha \geq 0.8$  (Connor et al., 2018). This survey is commercially available

without cost through an online link provided by the AACN. Every participating nurse was asked to complete this survey. It consisted of 18 questions and was scored on a 5-point Likert scale from “strongly disagree,” “disagree,” “neutral,” “agree,” and “strongly agree.” (See Appendix F). Permission was requested and granted by the AACN through email. The estimated time of completion was  $\leq 10$  min (see Appendix G).

Together these surveys were intended to inform understanding of the nurse’s perception of the health of the work environment and the new graduate nurse experience during the transition to practice period to critical care. It was not required that the surveys were completed in a single setting. The surveys were open from February 6 through February 26, 2022. These tools were delivered to the nurses through the Qualtrics platform and distributed by email.

### **Analysis Plan**

Once data collection was closed, the results were tabulated and examined. The data were analyzed at the aggregate level only, using descriptive statistics. It was stratified by unit, experience level, and years of critical care practice.

### **Ethical Considerations**

This project was presented to the Institutional Review Boards (IRB) at Rhode Island Hospital (RIH) and Rhode Island College and deemed exempt from continuing review.

The study included one or two online surveys for each participant. All participants were required to sign an informed consent upon entry into the survey site. Participation in this project was voluntary anonymous, and no incentive was provided to participants.

Each survey question allowed for the ability to opt-out of response for any reason without penalty and completed the remainder of the survey without penalty.

No identifiable personal information was collected. The risk of participation was negligible. Data obtained was encrypted and stored on a password drive accessible only to the study investigator. Data were analyzed at the aggregate level only using descriptive statistics. Results were stratified by unit, experience level, and years of critical care experience.

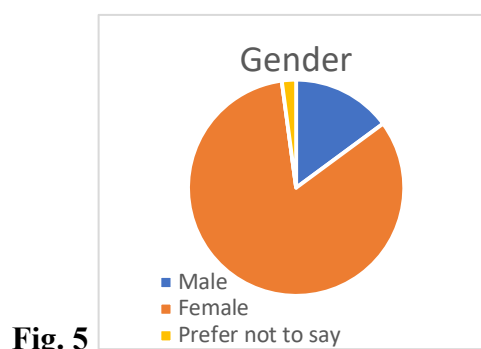
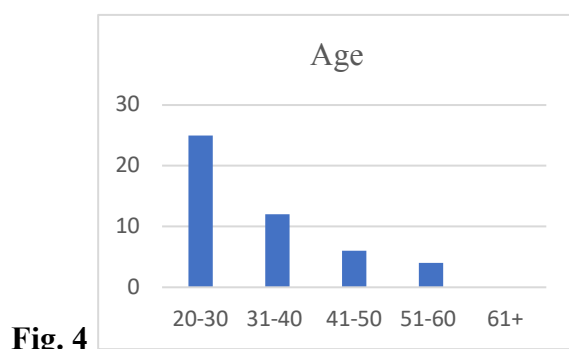
## Results

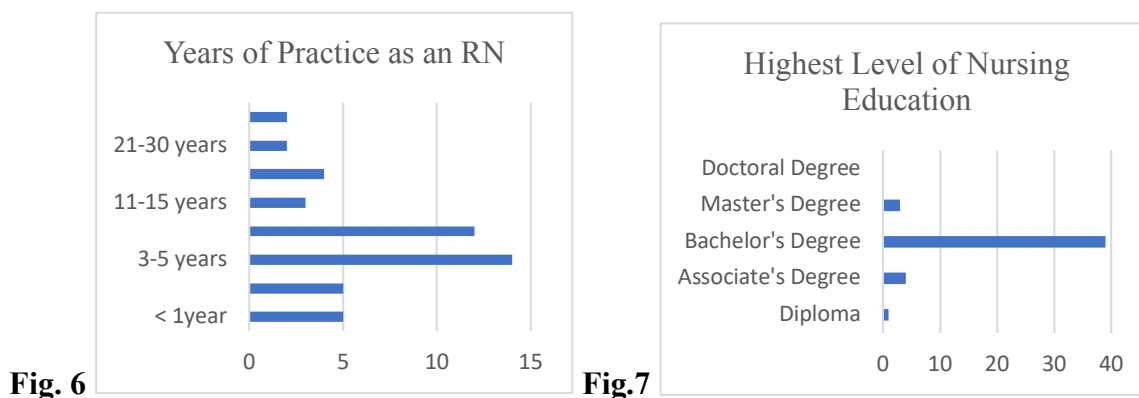
### Demographics

There were 101 eligible nurses to receiving the HWEAT by email. There were 47 responses obtained for an overall response rate of 46.5%. The completion on individual units was: CTIC 20, ICTU 8, CCU 9, and ICCU 10.

The Casey Fink New Graduate Nurse Survey was emailed to 28 eligible nurses. The number of responses was 12 or 43%. The unit breakdown of responses was CTIC 5, ICTU 2, CCU 2, and ICTU 3.

Demographics of the respondents are displayed below in Figures 4-7 below:





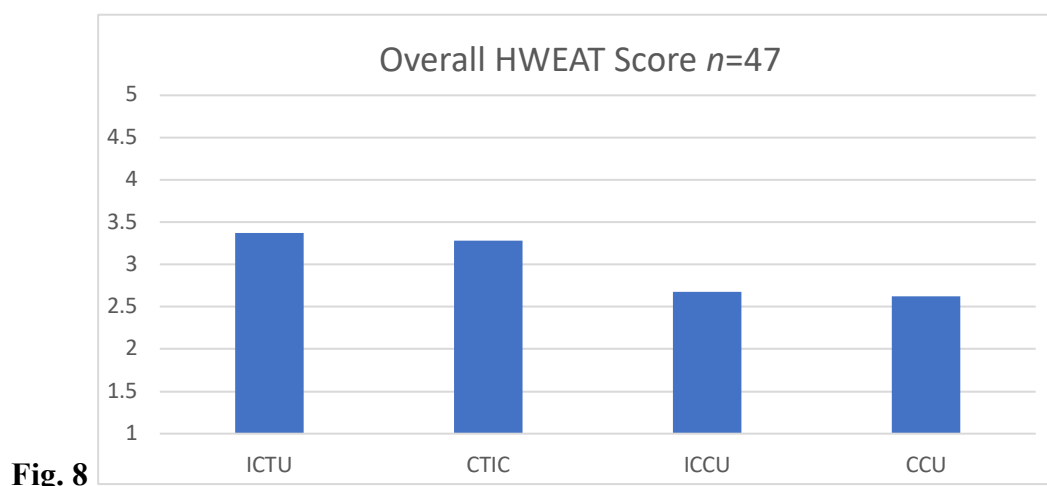
The survey respondents were predominately female (83%), 37 were under 40 years of age, with a mean age of 37 years. Ten had less than 2 years of nursing experience, 26 had between two and ten years of nursing experience. This represents 76.7% of the sample as possessing ten years or less experience. Consequently, 23.4% reported greater than ten years' experience. Finally, 39 respondents (83%) indicated they have a bachelor's degree in nursing (BSN).

These findings were similar in comparison to the 2021 data exhibited in the National Nurse Workforce Survey, nationally, the mean age of nurses is 52. Prior BSN before employment was reported to be 47%, and 93% were female (Smiley et al., 2021). The mean age of this study sample was younger, the sample demonstrated a higher percentage possessing a BSN and a higher percentage of male nurses.

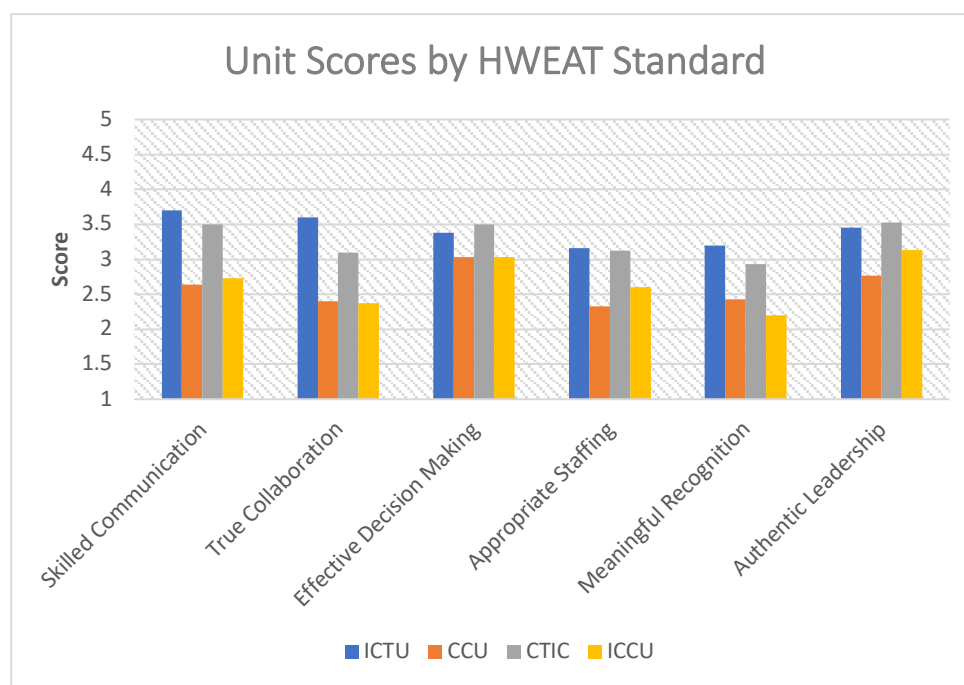
## HWEAT

The HWEAT survey was completed by 47 eligible nurses and evaluated the health of their work environment based upon six standards. The scores of the results translate as such: 1-2.99 Needs Improvement, 3.01- 3.99 Good, and scores 4.0-5.0 Excellent. Overall results by the units are shown in Figure 8 below:



**Fig. 8**

This survey is rated on six standards of the working environment. Based upon overall responses, the satisfaction with the work environment is highest on the two surgical units, CTIC and ICTU. Further stratification was performed. Collective overall results of each standard by individual unit are seen in Figure 9.

**Fig. 9**

Skilled Communication was the first standard scored. The goal here is to maintain open communication among care givers for the safety of the patient. Adverse patient outcomes may occur in a hostile environment or in an environment that does not

welcome open communication. Scores ranged from 2.65 to 3.7. The units scoring less than 3 in this category require improvement initiatives to engage collaborative relationships among the teams, led by the staff and leadership.

True Collaboration scores ranged from 2.37-3.6. The goal of this standard is the focus upon common unit goals based on trust and mutual respect among the members. Units scoring less than three in this category indicate that their unit requires improvement in the elements supporting true collaboration. Relationship challenges require investigation and the support to remedy. It is essential that leadership and staff are accountable to work toward standards addressing conduct, and the management of conflict.

Effective Decision Making is the inclusion of the nurses in policy development, team projects, and quality teams that affect patient care through the enhancement of knowledge, skills, clinical understanding. The scores of this standard ranges from 3.03 to 3.05. All units were within this range.

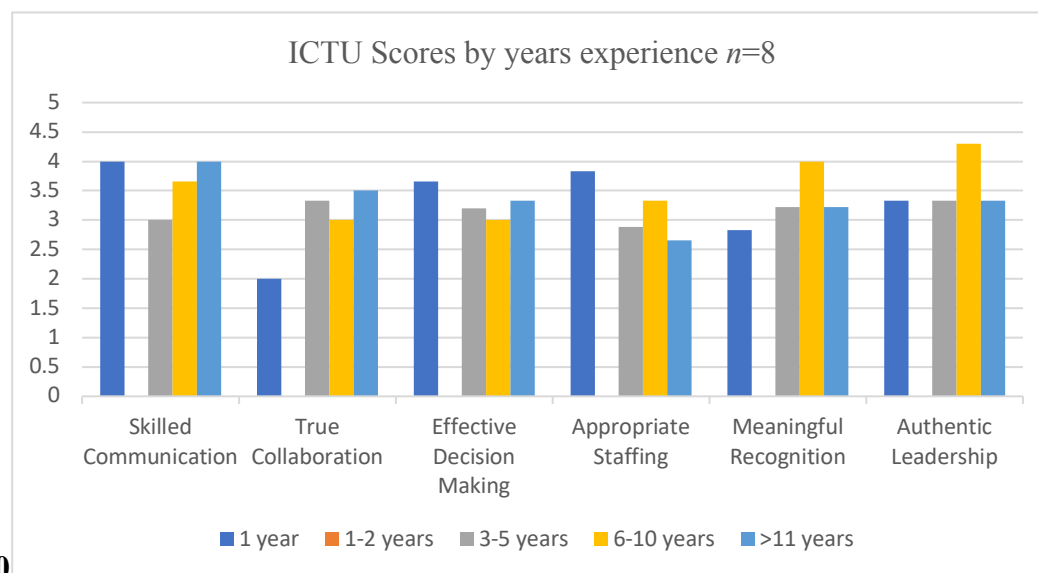
Appropriate Staffing identifies not only sufficient numbers of individuals with the knowledge and skill to directly care for the patient load, but also the support staff available to augment needs for assistance, supplies, and communication services. The experience complexity gap is a major factor in evaluating staffing. Scores for this standard ranged from 2.6-3.16. The administration has selectively restricted access to beds on three of the four units in this study. Float nurses and travel staff are used to supplement unit needs.

Meaningful Recognition validates nurses feeling valued for their contribution to patient care on their units. It is associated with respect, job satisfaction, and commitment

to the organization. Results in this standard 2.2-3.2. This is an area that is evaluated organizationally as well as on a unit level. The Daisy Award has been in place for two years. The candidates are nominated by peers, families, patients, etc. Nominations are reviewed by the Daisy Committee. Each month a nurse or nurses are awarded. Birthday cards are sent to each nurse to celebrate his/her special day. There is a board on each unit to shout out a "Cheer for Peers". This is continually being evaluated for success.

Authentic Leadership is the final standard to be scored. Results ranged from 2.77-3.45. These are individuals considered role models on the units. Two of the study units have lacked a consistent leader for over six months. Interim leaders have been assigned coverage on these units. Visibility and communication have been inconsistent. Candidates for leadership on these units are being actively sourced.

Each unit was then studied comparing responses to the standard by years' experience. See Figures 10-13 below.



**Fig. 10**

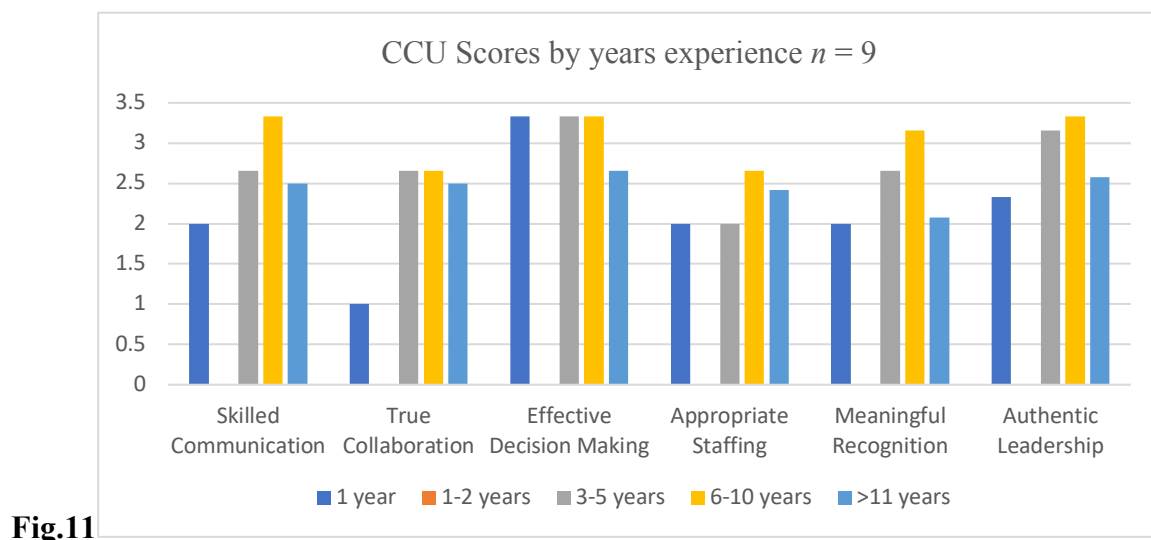


Fig.11

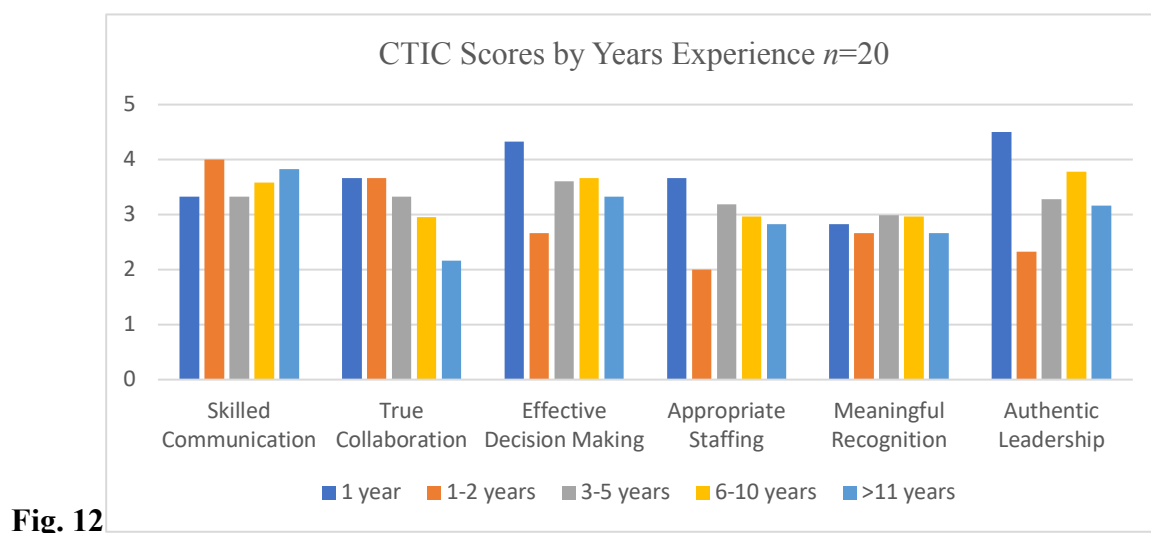


Fig. 12

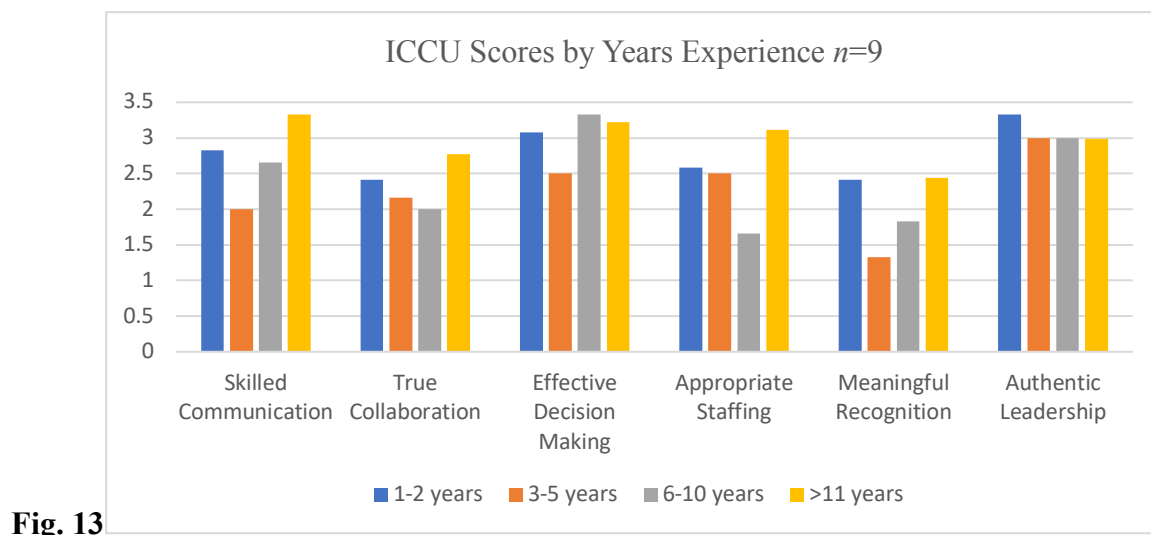
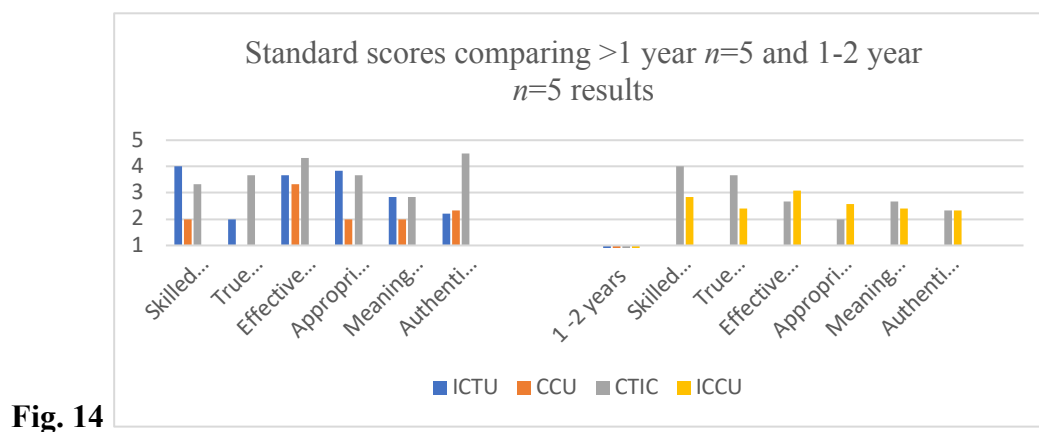
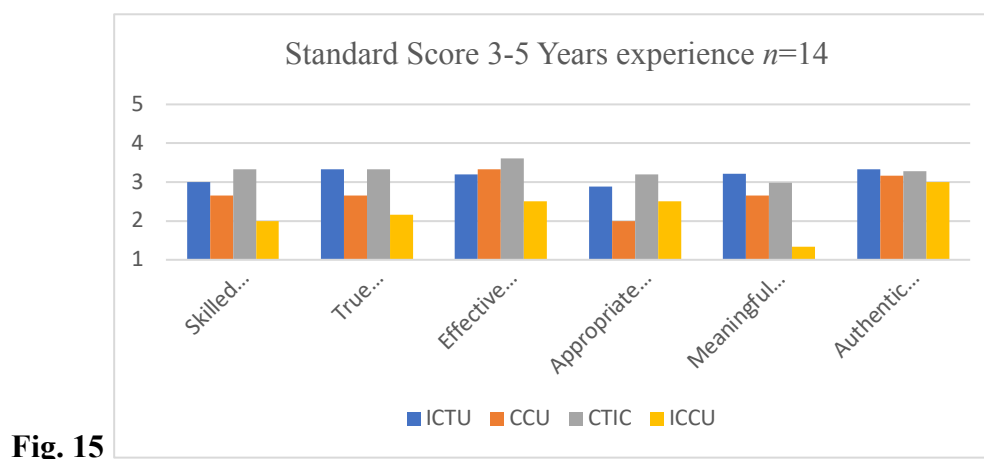


Fig. 13

Evaluation of this data reveals the highest satisfaction with the overall health of the work environment on all units during the first year with a decrease during year two. Perception of inadequate staffing is consistent during years one and two as a dissatisfier for new nurses (Groff Paris et al., 2010) see Figure 14. During the period of 3-5 years, satisfaction with the environment decreased slightly. Results improve and stabilize after year six. See Figures 14 – 17 below.



**Fig. 14**



**Fig. 15**

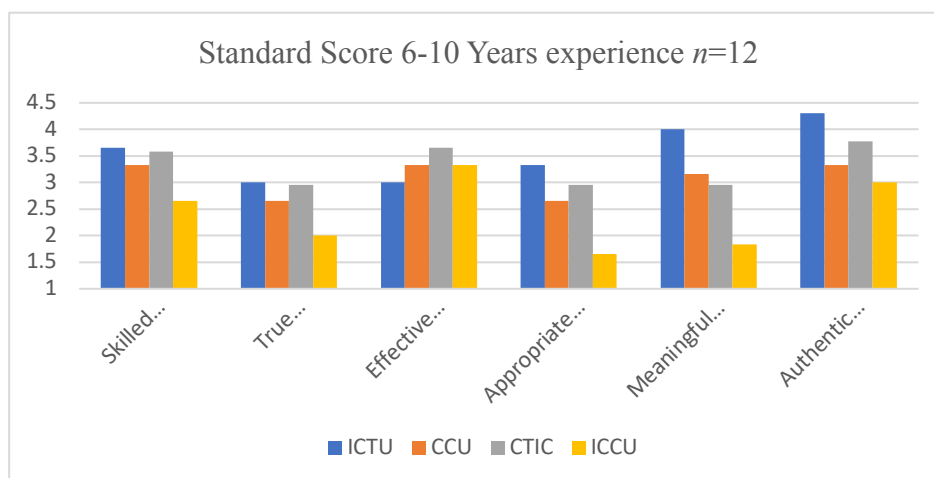


Fig. 16

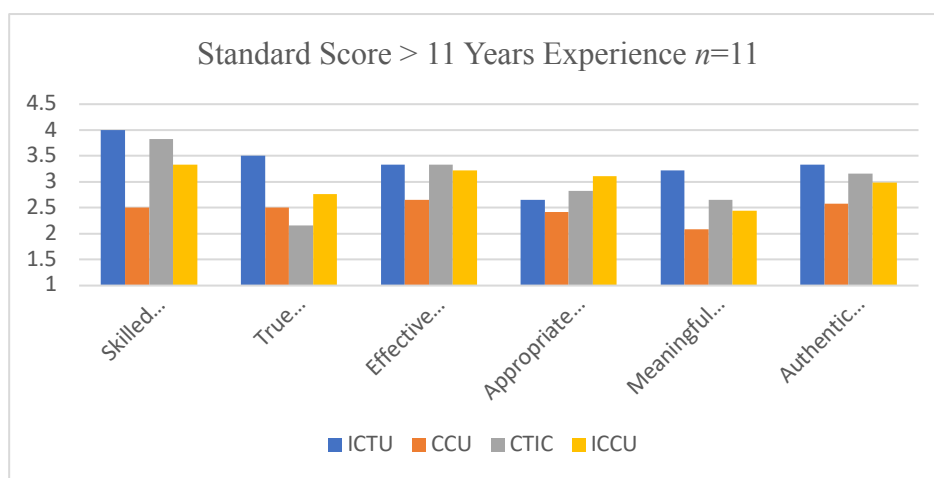


Fig. 17

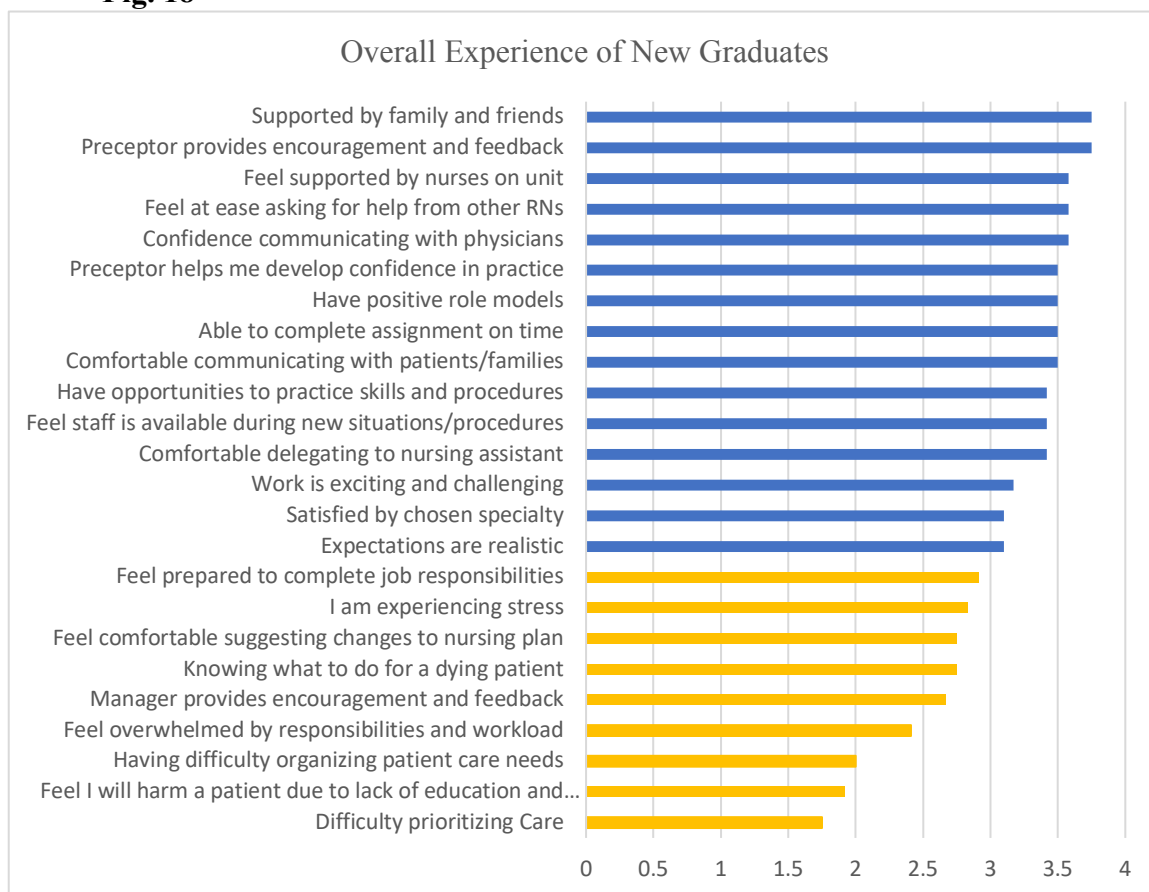
These findings can be evaluated within the context of Reality Shock Theory (Duchscher, 2008), which suggests that at six months, the nurse experiences high levels of job-related stress due to newly introduced job requirements. By the end of the first year, the new graduates enter the recovery phase. Here they have gained the confidence and knowledge needed to deliver care on the assigned unit.

Results from the HWEAT indicate it is in year two that the struggles with elements of their role, the unit, and their job expectations, while in year three the nurse is settled, able to appreciate and identify the various components of the work environment. As previously mentioned, the mean age of the nurses responding to the surveys on these

units was 37. This is 15 years younger than the national mean age of nurses. Seasoned nurses have left the bedside in this organization leading to a less skilled and seasoned staff orienting and teaching advanced skills.

### **Casey Fink New Graduate Nurse Experience Survey**

Twelve nurses participated in the Casey Fink New Graduate Nurse Experience Survey. They completed 24 questions related to their work experience in their assigned unit and related responsibilities. Nurses had been on the units for less than one year. Some respondents had prior experience as a nurse. The goal was to elicit the experience of a new nurse in transition to the new unit regardless of level of prior experience. Responses were recorded on a Likert scale of strongly disagree, disagree, agree, and strongly agree. Results are in Figure 18 below:

**Fig. 18**

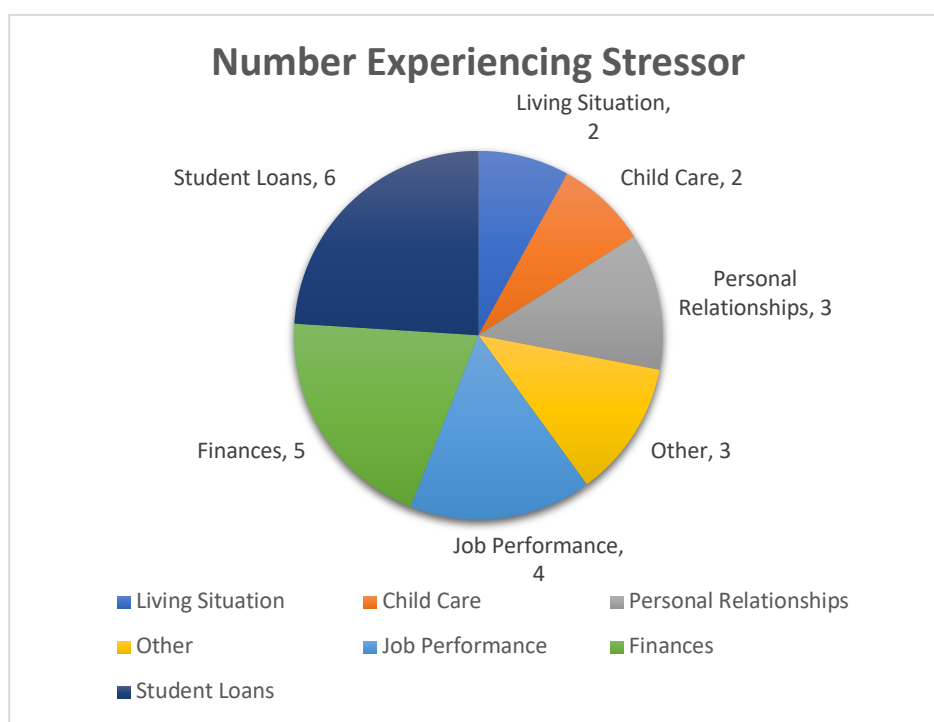
Responses indicated that the new nurses on these units were having difficulty prioritizing care, organizing patient needs, lacked manager feedback, were uncomfortable with changes related to the patient plan of care, and were not prepared to complete responsibilities related to their job. This is consistent with previous new graduate nurse research studies (Casey, et al., 2004; Tastan et al., 2013; Hezaveh et al., 2014; Degrande et al., 2018).

Elements of the work environment rating greater than “three” indicate the respondents agree with the support from their preceptors and other staff on the units. Communication with physicians, nurses and families was rated highly. They find their work exciting, challenging, are invited to observe new procedures and practice new



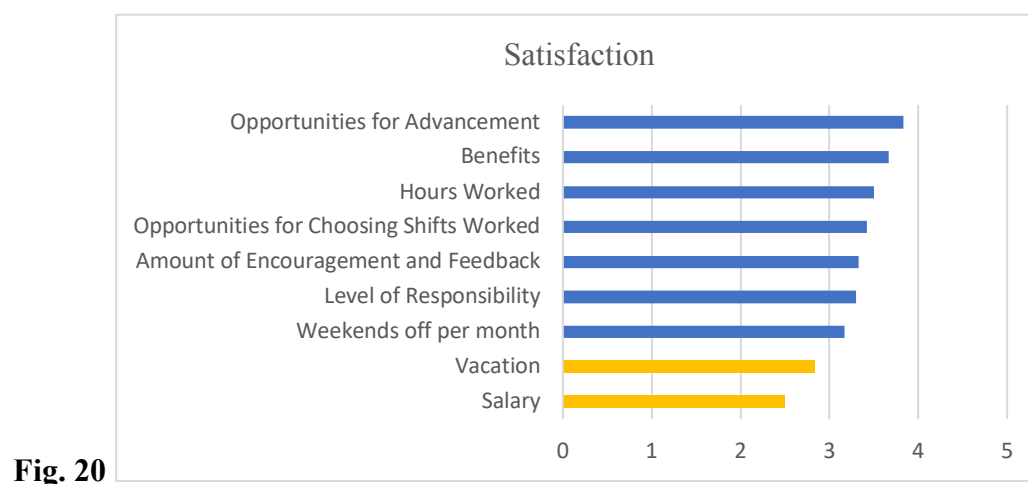
skills. The role of preceptors was critical in coaching and support of the new nurses (Sandu et al., 2010).

Aside from work stressors experienced by the new nurse, it is during this period they experience additional stressors outside of their professional roles (Duchscher, 2008; Missen et al., 2014). These nurses revealed that finances and student loans were the highest causes of external stress. This was followed by job performance, personal relationships, their living situations, and “other.” See Figure 19 below:



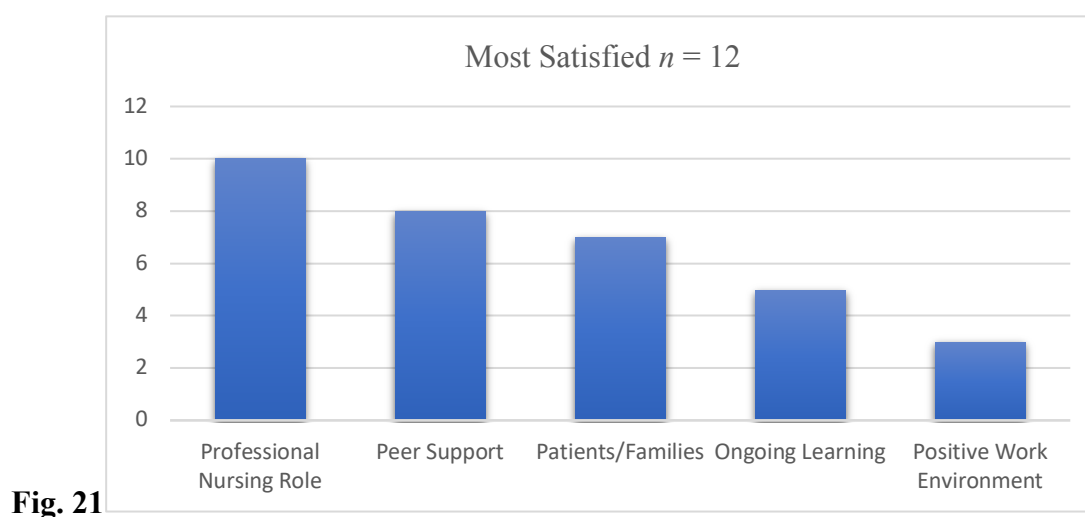
**Fig. 19**

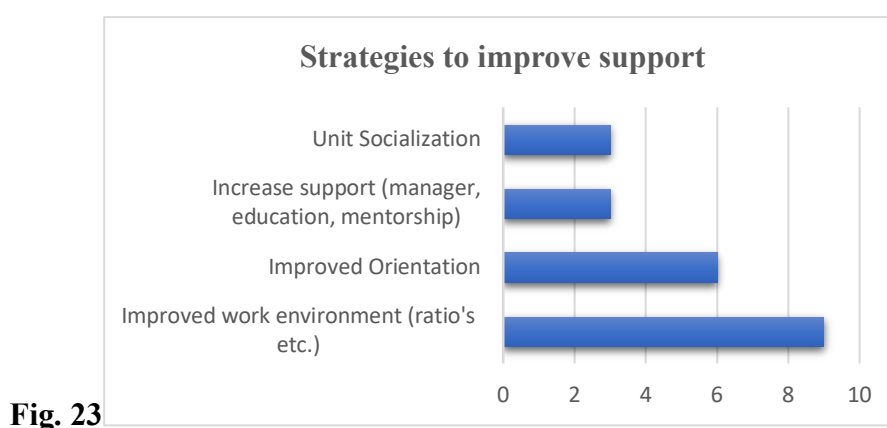
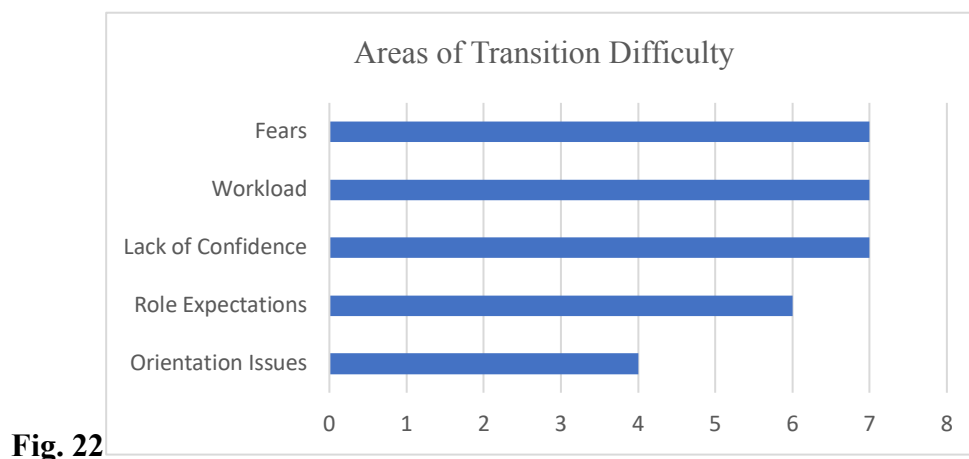
Section III of this surveyed job satisfaction using a 5-point Likert scale. Answers were rated as “very dissatisfied,” “moderately dissatisfied,” “neither satisfied nor dissatisfied,” “moderately satisfied,” and “very satisfied.” Satisfaction scales are displayed in Figures 20 and 21 below.



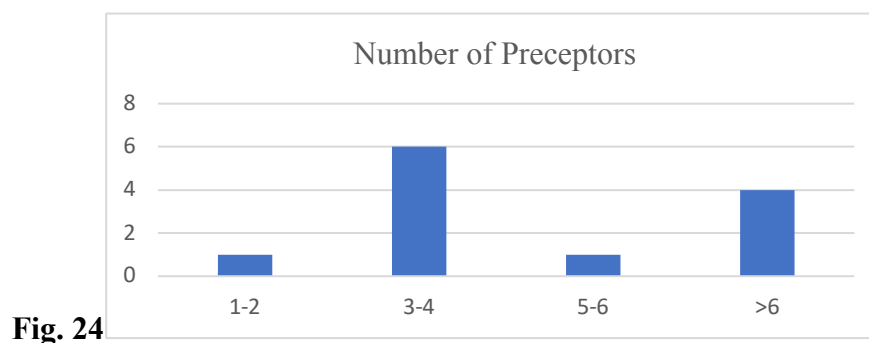
In Figure 20 above, the nurses indicated that they were least satisfied with their allotted vacation time and salaries, yet advancement opportunities, scheduling, shifts selection and feedback were all satisfying for the new nurse.

Section IV requested the respondents to select environmental elements with which they were most satisfied, identify perceived difficulties experienced during their transition and strategies for improved support.





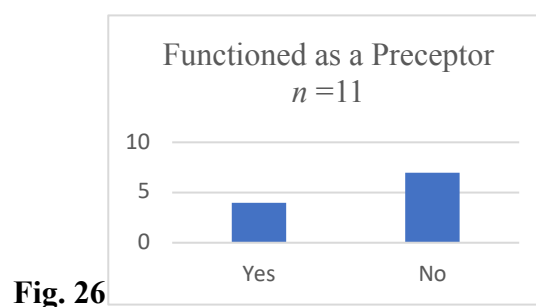
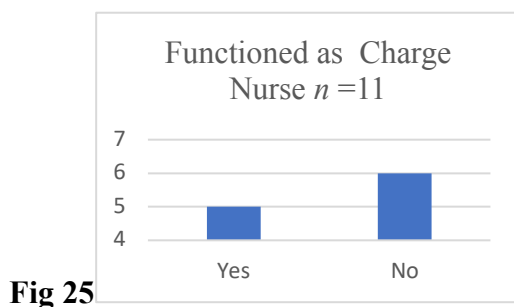
The last two questions elicited thoughts about orientation. Themes from these questions were lack of consistent preceptors and multiple preceptors, post orientation leadership and preceptor check-ins. When asked, the number of preceptors each nurse had throughout the orientation, most indicated they had more than three.



The role of the preceptor in the period of transition to practice for the new graduate is essential in bridging the gap between the student nurse who was sheltered caring for one patient with oversight of by a staff nurse and the role of professional nurse who is expected to immediately respond to the complexity of the professional nurse role in critical care (Powers et al., 2019). The number of preceptors a new nurse may have is subject to vacations, illness, turnover, leave of absence, shift work, other shift duties such as the need to assume charge. Attempts are made to carefully choose and limit preceptors to a maximum of 3.

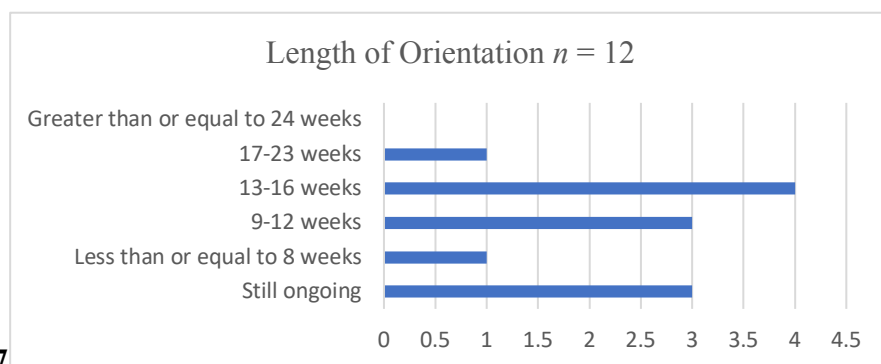
Regarding the residency program, comments surrounded the class education period of 2 weeks prior to unit experience. Comments included that the timing of classes did not coincide with experiences on the unit, and documentation requirements were not taught prior to unit experience. Respondents reported that working full time and attending classes is difficult, thus virtual classes may be more beneficial. They also reported overall disorganization due to staffing issues surrounding COVID-19. Suggestions for improvements included that working on the units and receiving hands-on experience would be more helpful than class time, and that the residency program needs more focus on skills as well as critical care fundamentals.

Given the climate of the units, questions were asked eliciting information whether the new nurse was requested to precept, assume the charge role, length of orientation and work pattern. See Figures 25-29 below.

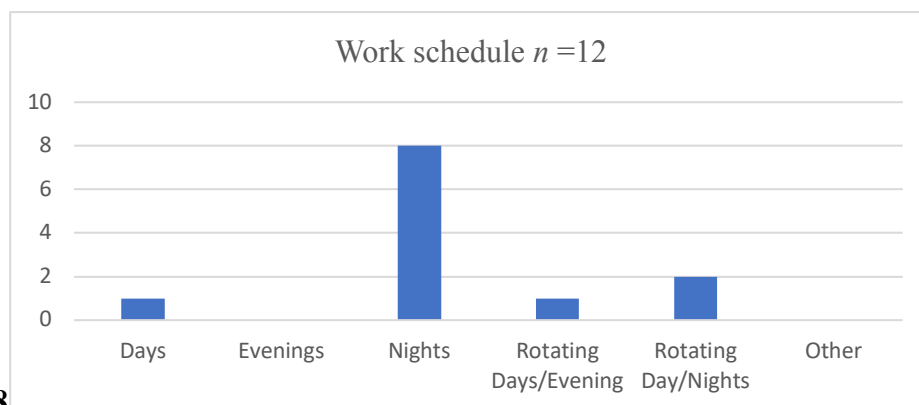


Assuming the role of charge nurse or preceptor comes with additional stress and responsibilities for the new nurse (Casey, et al., 2004; Duchscher, 2018). There is unprecedented turnover and vacancy on these units, new nurses are increasingly required to take on this role. There is a charge nurse class, outside the transition program. New graduate nurses are not scheduled for this for one year. During these situations, care is taken to limit precepting to student nurses, float nurses to the unit who are unfamiliar with resources, leadership, and advanced practice personnel. As well, the role of charge nurse is assigned based upon available personnel and required responsibilities. A preceptor class is provided at one year and is not scheduled for new graduate nurses.

Usually, orientation time frames match the predicted length. For critical care, the time expected for a new graduate to complete orientation is 12 weeks for stepdown units (e.g. ICTU, ICCU) and 16 weeks for the ICUs (e.g. CTIC and CCU). Length of orientation varies as nurses may transfer into the units with experiences in medical-surgical areas, from other ICUs, or from step-down units. Progress is evaluated carefully based upon elements of critical thinking, clinical knowledge, shift assignment, support available and preceptor feedback. See Figure 27 below.

**Fig. 27**

Initial scheduling of assignments is based upon available openings on the units. Assignment to night shifts is common for the new graduate nurse. Fatigue resulting from this type of schedule, and requirements of family and personal factors many times is considered a negative factor to this shift (Dobrowolska et al., 2020). See Figure 28.

**Fig. 28**

## Discussion

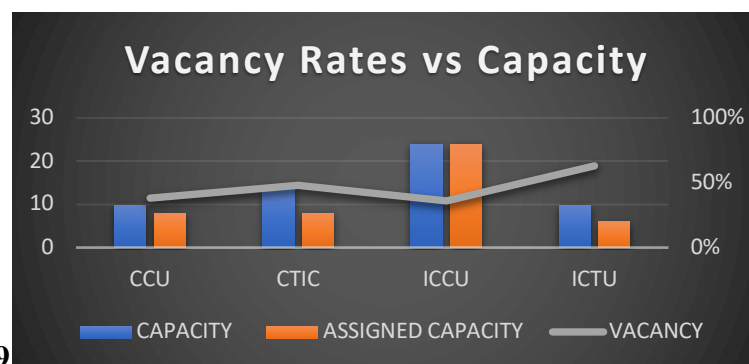
The purpose of this study was to determine the health of the work environment and the perception of new graduates related to the transition to practice period. Baseline data revealed turnover was above the national average in most units. Data from the years 2018 – 2020 demonstrate the dramatic initial effect of COVID-19 related to exacerbation of turnover of nursing staff.

A limitation of the study is that took place when COVID-19 was 23 months post initial lockdown. Unit staff was minimal with severe shortages; thus, beds were closed to

accommodate COVID-19 patients as well as emergent cases in all ICUs. Many of the respondents to the survey were different. The strength of this study demonstrated the interest of the staff in the work environment, their collective experience through difficult months and their desire for the success of the units moving out of COVID-19. The study was performed during a turbulent time for the nurses who were willing to thoughtfully share their thoughts.

Vacancy rates on each unit were high resulting in restriction of occupancy. This administrative decision was essential due to the nursing shortage at the hospital created because of the COVID -19 omicron wave during the winter of 2021-2022.

CTIC a 14 bed ICU, was physically combined with ICTU during survey dates, staff remained separate. Six beds were allocated to ICTU patients and eight of 14 beds to CTIC patients. CCU, a ten-bed unit was operating with eight beds. ICCU, was fully open. See Figure 29 below.



**Fig. 29**

The most common reasons for dissatisfaction, according to Casey (2004), include stress and the need to experience a sense of belonging in the unit. Despite numerous studies identifying the dissatisfaction level of new nurses between six and 12 months, the results of the HWEAT did not demonstrate this. The results of the HWEAT were higher in this population than in subsequent years. The standards of the HWEAT are necessary

as a collection to provide a healthy, safe environment for the nurse and the patient (Kester, et al., 2021). They are a basis for the Beacon Award. The two high-scoring units are current Silver Beacon award recipients.

The Casey Fink New Graduate Nurse Experience Survey indicated the new nurse felt the support of their new peers, receive mentoring on the units, request more management visibility, and changes in their residency education classes. The length of residency was not mentioned as too short requiring additional weeks or months. Some of the new staff had been requested to assume the roles of preceptor and charge nurse on their new units.

Importance of administrative leadership visibility and local leadership on off-shifts were mentioned anecdotally on each unit. The seasoned nurses wanted to know their leaders. Many were familiar with their managers or interim managers and assistant managers. Staff mentioned not seeing nursing supervisors on a regular basis off shift and being unfamiliar with the nursing leadership of the hospital.

### **Sustainability and Scalability**

The sustainability of this project was reviewed in detail using the National Health Service (NHS) Institute for Innovation and Improvement Sustainability Model at the inception of this project in 2019.

This model was created for the purpose of determining the sustainability of a given quality improvement project and identifying opportunities to manage the success (Doyle et al., 2013). It is a three-part evaluation tool. Sections include Process, Staff and Organization measurements. Both the Process and Staff sections consist of four factors. The Organization section consisted of two factors. Each factor was a multiple-choice

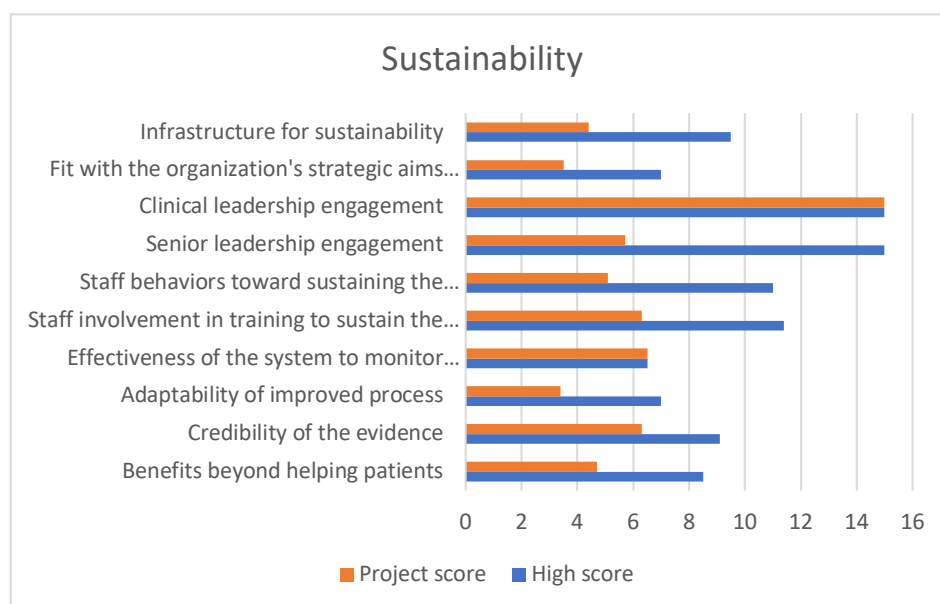


response to the identified issue. Answer choices were 'a' through 'd'. The answer 'a' was the highest indicating no deficiencies reported in sustaining and supporting the project to 'd' having significant deficiencies.

Together with ownership, a project's success in sustainability is the engagement of the stakeholders with staff being the essential element (Parsons & Cornett, 2011). In the case of this project, the staff demonstrates engagement scoring 32.1 of 52.4 possible points for a total 61%. The staff involved in this project collectively choose the correct new graduate candidates for the team. The new staff was provided onboarding with preceptors and centralized education leading to the acquisition of critical knowledge. The environment was conducive for the successful transition of the new graduate nurse to critical care.

Senior leadership support scored low. The visibility of senior leaders is not consistently evident on a day-to-day basis. Communication is through email updates and staff meetings held by the clinical management team.

Process scores of this exercise were 67%. Elements reviewed in this section was the belief that the program provided benefit to the patient, that the program was credible and that employees were adaptable to the change. The Organizational scores were 48%. See Figure 30 below.

**Figure 30**

The educational infrastructure is currently undergoing change; however, the overall aim of the organization was to reduce turnover and offer a sustainable new graduate nurse program as evidenced in the scores. When the sustainability of this project was revisited at the time of the survey concurrently during the fourth COVID wave results were similar (see Appendix G, Sustainability Assessment).

This organization has recently invested in a new graduate nurse residency program, Vizient. This is the first year of implementation. Further evaluation will need to be performed to monitor the success of the revised transition program. Recent metrics demonstrate a high vacancy rate and restricted bed access. See Figure 29.

### **Implications**

Further study is needed to evaluate the perception of the health of the nursing environment along the continuum of years' experience. With the loss of staff possessing many years of experience, the mean age of nurses is decreasing, the complexity gap is widening. Nurses with less experience are assuming clinical leadership roles once

performed by the very seasoned and skilled. Unit strategic goals for the future must include a framework such as the categories of Beacon, the Elements of Magnet, or the HWE.

The current residency program requires several revisions using suggested responses of the participants in the Casey Fink survey. Using this survey consistently in this population may give additional clues to turnover.

DNPs are uniquely prepared and positioned to evaluate the work environment in comparison to best evidence-based practices and standards related to supporting the transition of new graduates into practice and designing interventions that optimize outcomes. It is essential that effective processes are developed and standardized to address the expanding complexity gap (Virkstis et al., 2019).

### **Conclusion**

Although the study has identified limitations, findings are likely transferrable to other practice settings. This study has provided a more detailed understanding of the local practice environment related to the health of the work environment and perceptions of new nurses during the transition to practice period necessary and will inform ongoing strategies to improve outcomes in the local setting. This project should be expanded to other units and practice settings. Future quality improvement studies are needed to evaluate the effectiveness of strategies informed by findings from this project to improve the health of the work environment, optimize the experience of new graduates, and reduce controllable turnover.

## References

- American Association of Critical Care Nurses. (2021). Creating healthy work environments an evidence-based toolkit for nurses 2<sup>nd</sup> Ed.
- Adams, J. M., Alexander, G., A., Chisari, R. G., Nanister, G., McAuley, M. E., Whitney, K. B. & Ives Erickson, J. (2015). *The Journal of Continuing Education in Nursing*. 46(1), 41-48. DOI: 10.3928/00220124-20151217-01
- Bae, S., Mark, B. & Fried, B (2009). Impact of nursing unit turnover on patient outcomes in hospitals. *Journal of Nursing Scholarship*. 42(1), 40-49.
- Beecroft, P. C., Dorey, F., & Wenten, M. (2007). Turnover intention in new graduate nurses: a multivariate analysis. *Journal of Advanced Nursing*. (Nov), 41-52.
- Benner, P. (1982). From novice to expert. *American Journal of Nursing*. 82(3) 402-407.
- Caliskan, A. & Ergun, Y. E. (2012). Examining job satisfaction burnout and reality shock amongst newly graduated nurses. *Procedia-Social and Behavioral Sciences*. 47(2012) 1392-1397. DOI:10.1016/j.sbspro.2012.06.831
- Casey, K., Fink, R., Krugman, M. & Propst, J. (2004). The graduate nurse experiences. *Journal of Nursing Administration*. 34(6), 303-311.
- Connor, J. A., Ziniel, S. I., Porter, C., Doherty, D., Moonan, M., Dwyer, P., Wood, L. & Hickey, P. A. (2018). Interprofessional use and validity of the AACN healthy work environment assessment tool. *American Journal of Critical Care*. 27(5), 363-371.

- DeGrande, H., Liu, F., Greene, P. & Stankus, J. (2018). The experiences of new graduate nurses hired and retained in adult intensive care units. *Intensive and Critical Care Nursing*. (49), 72-78. <https://dx.doi.org/10.1016/j.iccn.2018.08.005>
- Djukic, M., Kovner, C. T., Brewer, C. S., Fatehi, F. K. & Cline, D. D. (2011). Work environment factors other than staffing associated with nurses' ratings of patient care quality. *Healthcare Management Review*. 38(2), 105-114. DOI: 10.1097/HMR.0b013e3182388cc3
- Dobrowolska, B., Visintini, C., Porokna, A., Nascimento, C, Ferro, S., Ziakova, K., Solgajova, A., Rybarova, L., Machul, M., Gorizza, G. L. & Palese, A. (2020). Exploring the meaning of night shift placement in nursing education: a European multicentre qualitative study. *International Journal of Nursing Studies*. 112 DOI: 10.1016/j.ijnurstu.2020.103687. Epub 2020 Jul 2. PMID: 32682520
- Doyle, C., Howe, C., Woodcock, T., Myron, R., Phekoo, K., McNicholas, C., Saffer, J. & Bell, D. (2013). Making change last: applying the NHS institute for innovation and improvement sustainability model to healthcare improvement. *Implementation Science*. 8(1). <https://doi.org/10.1186/1748-5908-8-127>
- Duchscher, J. B. (2008). The process of becoming: the stages of new graduate professional role transition. *The Journal of Continuing Nursing Education*. 39(10), 441-450.

- Duchscher, J. B., & Windey, M. (2018). Stages of transition and transition shock. *Journal for Nurses in Professional Development*. 34(4), 228-232.
- Eckerson, C. (2018). The impact of nurse residency programs in the United States on improving retention and satisfaction of new nurse hires: An evidence-based literature review. *Nurse Education Today*. (71), 84-90.
- Fink, R., Krugman, M., Casey, K., & Goode, C. (2010). The graduate nurse experience qualitative residency program outcomes. *Journal of Nursing Administration*. 38(7/8), 341-348.
- Freeling M, & Parker S. (2015). Exploring experienced nurses' attitudes, views, and expectations of new graduate nurses: a critical review. *Nurse Education Today*. 5(2), 42-9. DOI: 10.1016/j.nedt.2014.11.011. Epub 2014 Nov 28. PMID: 25499528.
- Freeling, M., Parker, S., & Breaden, K. (2017). Exploring experienced nurses' views, attitudes, and expectations of graduate nurses in the operating theatre. *Journal of Perioperative Nursing*. 30(1), 23-28.  
<https://www.journalacorn.org.au/jpn/vol30/iss1/2>
- Graf, A. C., Jacob, E., Twigg, D. & Nattabi, B. (2020) Contemporary nursing graduates' transition to practice: a critical review of transition models. *Journal of Clinical Nursing*. 19(15-16), 3097-3107. DOI:10.1111/jocn.15234.
- Groff Paris, L., & Terhaar. M., (2010) Using Maslow's pyramid and the national data base nursing quality indicators to attain a healthier work environment. *Online Journal of Issues in Nursing*. 16 (1), 1-12. DOI:10.3912/OJIN.Vol16No01PPT05

Gonzalez, H. C., Hsiao, E. L., Dees, D. C. Noviello, S. R. & Gerber, B. L. (2020).

Promoting critical thinking through an evidence-based skills fair intervention.

*Journal of Research in Innovative Teaching and Learning*. 15(1), 41-54.

Retrieved from: <https://doi.org/10.1108/RIT-08-2020-0041> ISSN: 2397-7604

Hezaveh, M. S., Rafii, F & Seyedfatemi, N. (2014). Novice nurses' experiences of

unpreparedness at the beginning of the work. *Global Journal of Health Science*.

6(1), 215-222. Doi:10.5539/gjhs.v6n1p215

Hofleer, L & Thomas, K. (2016). Transition of new graduate nurses to the workforce:

challenges and solutions in the changing healthcare environment. *North Carolina*

*Medical Journal*. 77(2), 133-136. Doi: 10.18043/ncm.77.2.133

Hussein, R., Everett, B., Hu, W., Smith, A., Thornton, A., Chang, S. & Salamonson Y.

(2016). Predictors of new graduate nurses' satisfaction with their transitional

support programme. *Journal of Nursing Management*. 24(3), 319-326. doi:

10.1111/jonm.12321. Epub 2015 Jul 14

Jones, C. B. & Gates, M. (2007). The costs and benefits of nurse turnover: a business

case for nurse retention. *The Online Journal of Issues in Nursing*. 12(3),

manuscript 4. <https://doi.org/10.3912/OJIN.Vol12No03Man04>

Kajander-Unkuri, S., Suhonen, R., Katajisto, J., Meretoja, R., Saarikoski, M., Saiminen,

L. & Leino-Kilpi. (2014). Self-assessed level of graduating nursing students'

nursing skills. *Journal of Nursing Education and Practice*. 4(12), 51-64.

- Kennedy, S., Kenny, A. & O'Meara, P. (2015). Student paramedic experience of transition into the workforce: a scoping review. *Nurse Education Today*. 35(10, 1037-1043. <https://dx.doi.org/10.1016/j.nedt.2015.04015>
- Kester, K., Pena, H., Shuford, C., Hansen, C., Stokes, J., Brooks, K., Bolton, T., Ornell, A., Parker, P., Febre, J., Andrews, K., Flynn, G., Ruix, R., Evans, T., Kettle, M., Minter, J. & Granger, B. (2021). Implementing AACN's healthy work environment framework in an intensive care unit. *American Journal of Critical Care*. 30(6), 426-433.
- Kramer, M. (1975). Marlene Kramer: Why Nurses Leave Nursing. *American Journal of Nursing*. (75)5, 891. Retrieved from:  
[https://journals.lww.com/ajnonline/Citation/1975/05000/REALITY\\_SHOCK\\_\\_Why\\_Nurses\\_Leave\\_Nursing.41.aspx](https://journals.lww.com/ajnonline/Citation/1975/05000/REALITY_SHOCK__Why_Nurses_Leave_Nursing.41.aspx)
- Kramer, M., Halfer, D., Maguire, P. & Schmalenberg, C. (2012). Impact of healthy work environments and multistage nurse residency programs on retention of newly licensed RNs. *Journal of Nursing Administration*. 42(3), 148-159. DOI: 10.1097/NNA.0b013e31824808e3
- Lake, E. T., Sanders, J., Duan, R., Riman, K. A., Schoenauer, K. M. & Chen, Y. (2019). A meta-analysis of the associations between the nurse work environment in hospitals and 4 sets of outcomes. *Med Care*. 57(5), 353-361.  
DOI:10.10197/MLR.0000000000001109



- Lingo, A. (2018) Your hospital budget and the real cost of a full-time nurse. *Passport USA for Healthcare Professionals*. <https://passportusa.com/hospital-budget-nurse-total-cost>
- Marolf, K. (2020). Closing the experience-complexity gap for novice nurses. Retrieved from: <https://www.childrenshospitals.org/Programs-and-Services/Pediatric-Learning-Solutions/PLS-Newsroom/Resources/Articles/Closing-the-Experience-Complexity-Gap-for-Novice-Nurses>
- Miller, J. (2020). How COVID-19 has widened the experience-complexity gap in nursing. Retrieved from <https://blog.petrieflom.law.harvard.edu/2021/04/06/experience-complexity-gap-nursing/>
- Missen, K., McKenna, L., & Beauchamp, A. (2014). Graduate nurse program coordinators' perceptions of role adaptation experienced by new nursing graduates: a descriptive qualitative approach. *Journal of Nursing Education and Practice*. 4(12), 134-141.
- Nelwati, McKenna, L. & Plummer, V. (2013) Indonesian student nurse' perceptions of stress in clinical learning: A phenomenological study. *Journal of Nursing Education and Practice*. 8(5), 56- 65.
- NSI Nursing Solutions (2021, April 27). (2021). National Health Care Retention & RN Staffing Report. [NSI\\_National\\_Health\\_Care\\_Retention\\_Report.pdf](https://nsinursingsolutions.com/NSI_National_Health_Care_Retention_Report.pdf) ([nsinursingsolutions.com](https://nsinursingsolutions.com))

Office of Nursing Retention (2020). Retrieved from

<https://www.msbn.ms.gov/onw/2019-08/improving-nurse-retention>

Parker, V., Giles, M., Lantry, G. & McMillan, M. (2012). New graduate nurses' experiences in their first year of practice. *Nursing Education Today*. 34(1), 150-160. DOI: 10.1016/j.nedt.2012.07.003. Epub 2012 Jul 31.

Parsons, M. L., & Cornett, P. A. (2011). Leading Change for Sustainability. *Nurse Leader*, 9(4), 36–40. <https://doi.org/10.1016/J.MNL.2011.05.005>

Phillips, C., Esterman, A. & Kenny, A. (2015). Theory of organizational socialization and its potential for improving transition experiences for new graduates. *Nurse Education Today*. 35(1), 118-124. <http://dx.doi.org/10.1016/j.nedt.2014.07.011>

Phillips, C., Kenny, A., Esterman, A & Smith, C. (2014). A secondary data analysis examining the needs of graduate nurses in their transition to a new role. *Nurse Education in Practice*, 14(2), 106-111. doi: 10.1016/j.nepr.2013.07.007. Epub 2013 Aug 6.

Powers, K., Herron, E. K., & Pagel, J. (2019). Preceptor role in new graduate nurses' transition to practice. *Dimensions of Critical Care Nursing*. 38(3), 131-136. DOI: 10.1097/DCC.0000000000000354

Poindexter, D. (2019). Yes, America has a nursing shortage. (But it is not what you think.). Retrieved from <https://www.advisory.com/daily-briefing/2019/09/27/nursing-shortage2>

- Saintsing, D., Gibson, L. M. & Pennington, A. W. (2011). The novice nurse and clinical decision-making: how to avoid errors. *Journal of Nursing Management*. 19(3), 534-559. DOI: 10.1111/j.1365-2834.2011.01248.x.
- Sandu, K. E. & Halm, M. A. (2010). Preceptor-based orientation programs: effective for nurses and organizations? *American Journal of Critical Care*. 3(2), 184-188.
- Schmalenberg, C & Kramer, M. (2008). Essentials of a productive work environment. *Nursing Research*. 57(1), 2-13. DOI: 10.1097/01.NNR.0000280657.04008.2a
- Shirey, M. R. (2006). Authentic leaders creating healthy work environments for nursing practice. *American Journal of Critical Care*. 15(3), 256-267.  
<https://doi.org/10.4037/ajcc2006.15.3.256>
- Smiley, R. A., Ruttinger, C., Oliveira, C. M., Reneau, K. A., Silvestre, J. H., Alexander, M., Hudson, L. R. & Allgeyer, R. (2021). The 2020 national nursing workforce survey. *The Journal of Nursing Regulation*. 12(1), S1-S96. DOI:  
[https://www.doi.org/10.1016/S2155-8256\(21\)00027-2](https://www.doi.org/10.1016/S2155-8256(21)00027-2)
- Steege, L. M. & Rainbow, J. C. (2017). Fatigue in hospital nurses – ‘supernurse’ culture is a barrier to addressing problems: a qualitative interview study. *International Journal of Nursing Studies*. 67, 20-28.  
<http://dx.doi.org/10.1016/j.jnurstu.2016.11.014>
- Tastan, S., Iyigun, E., Ayhan, H. & Hatipoglu, S. (2013). Experiences of Turkish undergraduate nursing students in the intensive care unit. *Collegian Journal of*

*the Royal College of Nursing Australia*. 22(1).

<https://dx.doi.org/10.1016/j.colgn.2013.12.003>

Twibell, R., St Pierre, J., Johnson, D., Barton, D., Davis, C. and Kidd, M. (2012).

Tripping over the welcome mat: why new nurses don't stay and what the evidence says we can do about it. *American Nurse Today*. 7(6) 1-10.

Virkstis, K., Herleth, A. & Rewers, L. (2019). Closing nursing's experience-complexity gap. *Journal of Nursing Administration*. 49(12), 580-582.

Wakefield, E. (2018). Is your graduate nurse suffering from transition shock? *Journal of Perioperative Nursing*. 31(1), 47-50. <https://doi.org/10.26550/2209-1092.1024>

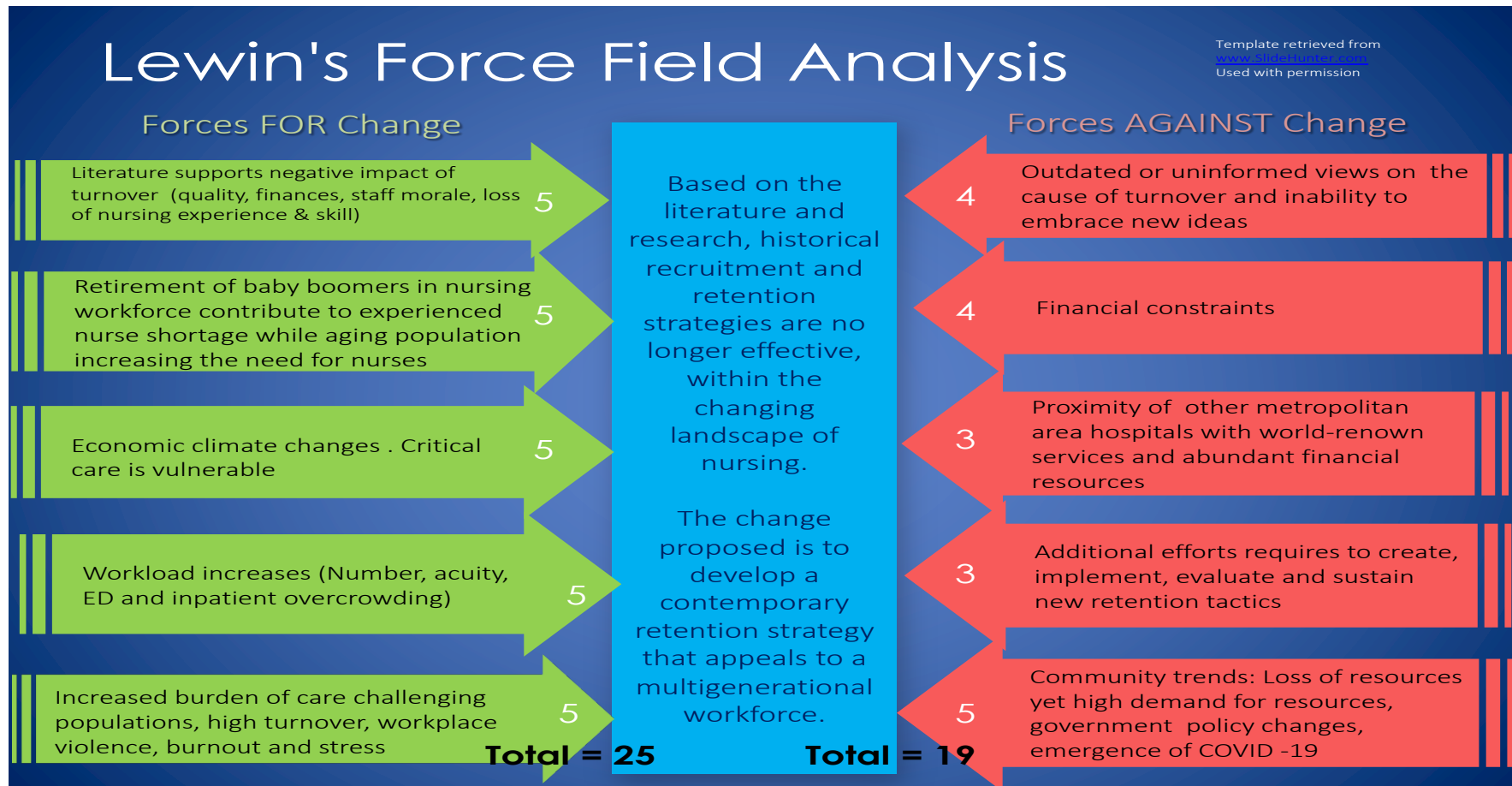
Welding, N. M. (2011). Creating a nurse residency: decrease turnover and increase clinical competence. *MEDSURG Nursing*. 20(1), 37-40.

Wong, S. W. J., Che, W. S. W, Cheng, M. T. C. & Cheung, C. K. (2018). Challenges of fresh nursing graduates during their transition period. *Journal of Nursing Education and Research*. 8(6), 30-37. Doi: 10.5430/jnep.v8n6p30

## Appendices

## Appendix A

### Forcefield Analysis



## Appendix B

### Logic Model

# Logic Model

Inputs	Outputs		Outcomes -- Impact		
	Activities	Participation	Short	Medium	Long
Critical Care leadership Human resources Center for Professional Practice, Innovation (CPPI) Critical Care staff Financial cost of nurse turnover	Advertisement, presence at outside career fairs Telephone screening process Interview panel (on Zoom) include Managers, educators and Human Resources. Multidisciplinary orientation program with 12-16 weeks orientation on assigned unit. Length of program one year with surveys at baseline , 3, 6, 9 and 12 months. EBP project presentation at the end of 12 months	Human resource to provide initial interview, and presentation of candidates' resumes for consideration Manager team, Human Resources recruiter and Clinical educator interviews each candidate Candidates are collectively evaluated, scored and ranked. Three-year contract is signed upon hire	Participate in appropriate educational and skills opportunities. Communication with preceptor and unit leadership. Participate in interdisciplinary rounds each shift. Demonstration of critical thinking skills regarding needs of patients assigned. No CCIs will resign from the program	Volunteer in unit activities such as staff meetings and unit council Completion of requested surveys Assigned to educational opportunities Meet new candidates for open unit positions, sharing experiences Partake in charge role Participating in precepting nursing students Role model new staff on unit CCI staff will remain on the unit or within critical care.	Retention of new graduate on critical care unit will exceed 90% at one year. Cost of turnover will decrease These nurses will become unit leaders.

## Appendix C

## Pert Chart

[illegible]



## **Appendix D**

### **Casey-Fink Graduate Nurse Experience Survey**

#### **Start of Block: Informed Consent**

**You are being asked to be in a research study about new nurse turnover and work environment.**

**Paula Gellner, graduate student in the Doctor of Nursing Practice program, is conducting this research in collaboration with the faculty advisor Justin Dilibero, a professor at Rhode Island College.**

#### **Why this Study is Being Done (Purpose):**

**The purpose of this study is to understand the most important contributors to nurse turnover and the environment of the workplace.**

#### **What You Will Have to Do (Procedures):**

**If you choose to be in the study, we will ask you to read and answer some survey questions.**

**This survey consists of a Likert scale, multiple choice and fill in the blank questions.**

**The survey will ask questions pertaining to your experience in transition to the new role in critical care work environment during the first year. It will take about 15 minutes to complete:**

#### **Risks or Discomforts**

**Risks are minimal, you may find that answering some questions is uncomfortable.**

**You can skip any questions you don't want to answer, and you can stop the survey at any time.**

#### **Benefits of Being in the Study:**

**Being in this study will not benefit you directly.**

**There will be not payment for your participation in this study.**

### **Deciding Whether to Be in the Study:**

**Being in the study is completely voluntary. You can change your mind and quit the study at any time, and you do not have to give a reason.**

### **How Your Information will be Protected:**

**Because this is a research study, results will be summarized across all participants and shared in reports that we publish and presentations that we give.**

**No personal identifiers will be collected. Data will be collected at the aggregate level only. All study data will be stored on a password protected file accessible only to the study investigator. The information will be kept in a locked office file, and seen only by myself and other researchers who work with me. The only time I would have to share information from the study is if it is subpoenaed by a court. Also, if there are problems with the study, the records may be viewed by the institutional review board responsible for protecting the rights and safety of people who participate in research.**

**The information will be kept for a minimum of three years after the study is over, after which it will be destroyed.**

### **Who to Contact:**

**You can ask any questions you have now: If you have any questions later, you can contact Paula Gellner [pmdanz1@gmail.com](mailto:pmdanz1@gmail.com) or 617-688-7638**

**If you think you were treated badly in this study, have complaints, or would like to talk to someone other than the researcher about your rights or safety as a research participant, please contact the IRB Chair at [IRB@ric.edu](mailto:IRB@ric.edu)**

### **Statement of Consent:**

**I have read and understand the information above. I am choosing participate in the Casey-Fink Nurse Graduate Experience Survey (revised) as part of the study: Factors Contributing to Turnover Among Critical Care Nurses During the Transition to Practice Period.**

**I understand that I can change my mind and quit at any time, and I don't have to give a reason. I have been given answers to the questions I asked, or I will contact the researcher with any questions that come up later. I am at least 18 years of age.**

## Q2 Electronic Consent

Clicking on the "Agree" button below indicates that you have read the above information and you agree to participate in the study.

If you do not wish to participate in the study you may decline participation by clicking on the "Disagree" button.

Do you agree to participate in this study?

- ☐ Agree (1)
- ☐ Disagree (2)

Q3 Please proceed to the link below to complete the Casey Fink Graduate Nurse Experience Survey (revised)

Q4 Thank you for your time, you may now exit the survey.

End of Block: Informed Consent

Start of Block: Study Questions

Q5 List the top three skill/procedures you are *uncomfortable performing* independently at this time?

- \_\_\_\_\_ Click to write Item 1 (9)
- \_\_\_\_\_ Click to write Item 2 (10)
- \_\_\_\_\_ Click to write Item 3 (11)

**Q6 Please answer each of the following questions by placing a marker inside the circles**

	<b>Strongly Disagree (1)</b>	<b>Somewhat disagree (2)</b>	<b>Somewhat agree (3)</b>	<b>Strongly agree (4)</b>
<b>1. I feel confident communicating with physicians. (1)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>2. I am comfortable knowing what to do for a dying patient. (2)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>3. I feel comfortable delegating tasks to a Nursing Assistant. (3)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4. I feel at ease asking for help from other RNs on the unit. (4)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>5. I am having difficulty prioritizing patient care needs. (5)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>6. I feel my preceptor provides encouragement and feedback about my work. (6)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>7. I feel staff is available to me during new situations and procedures. (7)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>8. I feel overwhelmed by my patient care responsibilities</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

and workload.

(8)

9. I feel

supported by  
the nurses on  
my unit (9)

☐
☐
☐
☐

10. I have

opportunities to  
practice skills  
and procedures  
more than once.

☐
☐
☐
☐

(10)

11. I feel

comfortable  
communicating  
with patients and  
their families.

☐
☐
☐
☐

(11)

12. I am able to  
complete my  
patient care  
assignment on  
time. (12)

☐
☐
☐
☐

13. I feel

expectations of  
me in this job  
are realistic.

☐
☐
☐
☐

(13)

14. I feel

prepared to  
complete my  
job  
responsibilities.

☐
☐
☐
☐

(14)

15. I feel

comfortable  
making  
suggestions for  
changes to the  
nursing plan of  
care. (15)

☐
☐
☐
☐

16. I am having  
difficulty

organizing  
patient care  
needs. (16)

☐
☐
☐
☐

**17. I feel I may harm a patient due to my lack of knowledge and experience. (17)**

☐☐☐☐

**18. There are positive role models for me to observe on my unit. (18)**

☐☐☐☐

**19. My preceptor is helping me to develop confidence in my practice. (19)**

☐☐☐☐

**20. I am supported by my family/friends. (20)**

☐☐☐☐

**21. I am satisfied by my chosen nursing specialty. (21)**

☐☐☐☐

**22. I feel my work is exciting and challenging. (22)**

☐☐☐☐

**23. I feel my manager provides encouragement and feedback about my work. (23)**

☐☐☐☐

**24. I am experiencing stress in my personal life. (24)**

☐☐☐☐

**Q7 If you chose that you are experiencing stress in Question 24. Please indicate what is causing your stress.**

	<b>Yes (1)</b>	<b>No (2)</b>
<b>Finances (1)</b>	<input type="radio"/>	<input type="radio"/>
<b>Child Care (2)</b>	<input type="radio"/>	<input type="radio"/>
<b>Student Loans (3)</b>	<input type="radio"/>	<input type="radio"/>
<b>Living situation (4)</b>	<input type="radio"/>	<input type="radio"/>
<b>Personal relationships (5)</b>	<input type="radio"/>	<input type="radio"/>
<b>Job Performance (6)</b>	<input type="radio"/>	<input type="radio"/>
<b>Other (7)</b>	<input type="radio"/>	<input type="radio"/>

**Q8 How *satisfied* are you with the following aspects of your job?**

	<b>Very dissatisfied (1)</b>	<b>Moderately dissatisfied (2)</b>	<b>Neither satisfied nor dissatisfied (3)</b>	<b>Moderately satisfied (4)</b>	<b>Very satisfied (5)</b>
<b>Salary (1)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Vacation (2)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Benefits Package (3)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Hours that you work (4)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Weekends off per month (5)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Your amount of responsibility (6)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Opportunities for career advancement (7)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Amount of encouragement</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

and feedback  
(8)  
Opportunity  
for choosing  
shifts worked  
(9)

☐ ☐ ☐ ☐ ☐

**Q9 What difficulties, if any are you currently experiencing with the transition from the "student" role to the "RN" role?**

- ☐ role expectations (e.g. autonomy, more responsibility, being a preceptor or in charge) (1)
- ☐ lack of confidence (e.g. MD/PT communication skills, delegation, knowledge deficit, critical thinking) (2)
- ☐ workload (e.g. organizing, prioritizing, feeling overwhelmed, ratios, patient acuity) (3)
- ☐ fears (e.g. patient safety) (4)
- ☐ orientation issues (e.g. unit familiarization, learning technology, relationship with multiple preceptors, information overload) (5)
- ☐ All of above (6)

**Q10 What could be done to help you feel more supported or integrated into the unit?**

- ☐ improved orientation (e.g. preceptor support and consistency, orientation extension, unit specific skills and practice) (1)
- ☐ increased support (e.g. manager, RN, and educator feedback and support) (2)
- ☐ Unit socialization (e.g. being introduced to staff and MDs, opportunities for staff socialization) (3)



☐ improved work environment (e.g. gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and work committee work) (4)

☐ All of above (5)

**Q11 What aspects of your work are most satisfying**

☐ peer support (e.g belonging, team approach, helpful and friendly staff) (1)

☐ patients and families (e.g. making a difference, positive feedback, patient satisfaction, patient interaction) (2)

☐ ongoing learning (e.g. preceptors, unit role models, mentorship) (3)

☐ professional nursing role (e.g. challenge, benefits, fast pace, critical thinking, empowerment) (4)

☐ positive work environment (e.g. good ratios, available resources, great facility, up-to-date technology) (5)

☐ All of above (6)

**Q24 If you could change on thing about your orientation, what would it be?**

---

**Q12 Please share any comments or concerns you have about your residency program:**

---

**End of Block: Study Questions**

**Start of Block: Demographics**

**Q14 Gender**

- ☐ Male (1)
- ☐ Female (2)
- ☐ Prefer to self describe (3)
- ☐ Prefer not to say (4)

**Q15 Please self-describe your gender**

---

**Q16 What is your highest level of nursing education?**

- ☐ Diploma (1)
- ☐ Associate's Degree (2)
- ☐ Bachelor's Degree (3)
- ☐ Master's Degree (4)
- ☐ Doctoral Degree (5)

**Q17 What is your current area of responsibility?**

- ☐ CCU (1)
- ☐ ICCU (2)
- ☐ CTIC (3)
- ☐ ICTU (4)

**Q18 What previous health care work experience have you had:**

	Yes (1)	No (2)
<b>Volunteer (1)</b>	<input type="radio"/>	<input type="radio"/>
<b>Nursing Assistant (2)</b>	<input type="radio"/>	<input type="radio"/>
<b>Medical Assistant (3)</b>	<input type="radio"/>	<input type="radio"/>

<b>Unit Secretary (4)</b>	<input type="radio"/>	<input type="radio"/>
<b>EMT (5)</b>	<input type="radio"/>	<input type="radio"/>
<b>Student Externship (6)</b>	<input type="radio"/>	<input type="radio"/>
<b>Other (7)</b>	<input type="radio"/>	<input type="radio"/>

**Q20 Charge Nurse****Yes (1)****No (2)**

**Have you functioned as a  
charge nurse? (1)**

☐☐**Q21 Preceptor****Yes (1)****No (2)**

**Have you functioned as a  
preceptor? (1)**

☐☐**Q22 What is your scheduled work pattern?**

- ☐ **Straight days (1)**
- ☐ **Straight evenings (2)**
- ☐ **Straight nights (3)**
- ☐ **Rotating days/evenings (4)**
- ☐ **Rotating days/nights (5)**
- ☐ **Other (6)** \_\_\_\_\_

**Q23 How long was your orientation?**

- ☐ **Still ongoing (1)**
- ☐ **≤ 8 weeks (2)**

- ☐ 9-12 weeks (3)
- ☐ 13-16 weeks (4)
- ☐ 17-23 weeks (5)
- ☐  $\geq$  24 weeks (6)

**Q24 How many preceptors have you had during your orientation?**

---

**End of Block: Demographics**

## Appendix E

### Permission for use

June 2015

Dear Colleague:

Thank you for the inquiry regarding the Casey-Fink Graduate Nurse Experience Survey© (revised, 2006) instrument.

The survey was originally developed in the spring of 1999, initially revised in June 2002, and revised a second time in 2006. Since that time, it has been used to survey over 250 nurses in hospital settings in the Denver metropolitan area, and has been further validated by over 10,000 graduate nurse residents participating in the University Health System Consortium/AACN Post Baccalaureate Residency program and elsewhere nationally and internationally. Psychometric analysis has been done using these data and is reported in the summary included with this letter. We have published a report of the research we conducted in the development of this instrument:

Casey K, Fink R, Krugman M, Propst J: The graduate nurse experience. *Journal of Nursing Administration*. 2004; 34(6):303-311.

Fink RM, Krugman ME, Casey K, Goode CM. The Graduate Nurse Experience: Qualitative Residency Program Outcomes. *Journal of Nursing Administration*. 2008;38(7/8):341-348.

We are granting you permission to use this tool to assess the graduate nurse experience in your setting. Please note that this tool is copyrighted and should not be changed in any way. We have enclosed a copy for you to use for reproduction of the instrument.

We hope that our tool will be useful in your efforts to enhance the retention, professional development, and support of graduate nurses in your practice setting. Please email us if you have further questions. We would be interested in being informed as to your results or publications related to the use of our instrument.

Sincerely,

Kathy Casey, RN, MSN  
Manager, Clinical Education Programs, Exempla Lutheran Medical Center Adjunct  
Faculty, University of Colorado, College of Nursing [kathy.casey@sclhs.net](mailto:kathy.casey@sclhs.net)

Regina Fink, RN, PhD, AOCN, FAAN  
Associate Professor, University of Colorado College of Nursing  
[regina.fink@ucdenver.edu](mailto:regina.fink@ucdenver.edu)

## **Appendix F**

### **Healthy Work Environment Assessment Tool**

#### **Start of Block: Informed Consent**

##### **Q1**

##### **Factors Contributing to Turnover Among Critical Care Nurses During the Transition to Practice Period**

**You are being asked to be in a research study about new nurse turnover and work environment.**

**Paula Gellner, graduate student in the Doctor of Nursing Practice program, is conducting this research in collaboration with the faculty advisor Justin Dilibero, a professor at Rhode Island College.**

##### **Why this Study is Being Done (Purpose):**

**The purpose of this study is to understand the most important causes of nurse turnover and the environment of the workplace.**

##### **What You Will Have to Do (Procedures):**

**If you choose to be in the study, we will ask you to read and answer some survey questions. This survey is based on a Likert scale.**

**Possible answers are strongly disagree, disagree, agree, and strongly agree.**

**The survey will ask questions pertaining to your work environment. It will take about 10 minutes.**

##### **Risks or Discomforts:**

**Risks are minimal. You may find that answering some questions is uncomfortable. You can skip any questions you don't want to answer, and you can stop the survey at any time.**

### **Benefits of Being in the Study:**

**Being in this study will not benefit you directly.**

**There will be not payment for your participation in this study.**

**Participation in the study is completely voluntary. You can change your mind and quit the study at any time, and you do not have to give a reason.**

### **How Your Information will be Protected:**

**Because this is a research study, results will be summarized across all participants and shared in reports that we published and in presentations that we give.**

**No personal identifiers will be collected.**

**Data will be collected at the aggregate level only. All study data will be stored on a password protected file accessible only to the study investigator. The information will be kept in a locked office file, and seen only by myself and other researchers who work with me.**

**The only time I would have to share information from the study is if it is subpoenaed by a court. Also, if there are problems with the study, the records may be viewed by the institutional review board responsible for protecting the rights and safety of people who participate in research.**

**The information will be kept for a minimum of three years after the study is over, after which it will be destroyed.**

**Who to Contact** You can ask any questions you have now. If you have any questions later, you can contact Paula Gellner [pmdanz1@gmail.com](mailto:pmdanz1@gmail.com) or 617-688-7638

**If you think you were treated badly in this study, have complaints, or would like to talk to someone other than the researcher about your rights or safety as a research participant, please contact the IRB Chair at [IRB@ric.edu](mailto:IRB@ric.edu)**

### **Statement of Consent:**

**I have read and understand the information above. I am choosing participate in the Healthy Work Environment Assessment Tool survey as part of the study: Factors Contributing to Turnover Among Critical Care Nurses During the Transition to Practice Period I can change my mind and quit at any time, and I don't have to give a reason. I have been given answers to the questions I asked, or I will contact the researcher with any questions that come up later. I am at least 18 years of age.**

**Q2 Electronic Consent**

**Clicking on the “Agree” button below indicates that you have read the above information and you agree to participate in the study.**

**If you do not wish to participate in the study you may decline participation by clicking on the “Disagree” button.**

**Do you agree to participate in this study?**

☐ **Agree (1)**

☐ **Disagree (2)**

**End of Block: Informed Consent**

**Start of Block: Block 2**

**Q3 Thank you for your time, you may now exit the survey.**

**End of Block: Block 2**

**Start of Block: Block 1**



## Q13

## Healthy Work Environment Assessment Tool

Please be provide your best answer for each of the following statements:

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
Administrators, nurse managers, physicians, nurses and other staff maintain frequent communication to prevent each other from being surprised and caught off guard by decisions. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrators, nurse managers, and physicians involve nurses and other staff to an appropriate degree when making important decisions. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrators and nurse managers work with nurses and other staff to make sure the are enough staff to maintain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

patient safety.  
(3)

The formal  
reward and  
recognition  
systems work  
to make nurses  
and other staff  
feel valued (4)

☐ ☐ ☐ ☐ ☐

Most nurses  
and other staff  
here have a  
positive  
relationship  
with their  
nurse leaders  
(managers,  
directors,  
advanced  
practice nurses,  
etc.). (5)

☐ ☐ ☐ ☐ ☐

Administrators,  
nurse  
managers,  
physicians,  
nurses and  
other staff  
make sure their  
actions match  
their words,  
they “walk  
their talk.” (6)

☐ ☐ ☐ ☐ ☐

Administrators,  
nurse  
managers,  
physicians,  
nurses and  
other staffer  
are consistent  
in their use of  
data driven,  
logical decision-  
making  
processes to

☐ ☐ ☐ ☐ ☐

**make sure their decisions are the highest quality. (7)**

**Administrators and nurse managers make sure there is the right mix of nurses and other staff to ensure optimal outcomes. (8)**

**Administrators, nurse managers, physicians, nurses and other staff members speak up and let people know when they have done a good job. (9)**

**Nurses and other staff feel able to influence the policies procedures and bureaucracy around them. (10)**

**The right departments, professions and groups are involved in important decisions. (11)**

**Support services are provided at a**



**level that  
allows nurses  
and other staff  
to spend their  
time on the  
priorities and  
requirements of  
patient and  
family care.  
(12)**

**Nurse leaders  
(managers,  
directors,  
advanced  
practice nurses  
etc.)  
demonstrate an  
understanding  
of the  
requirements  
and dynamics  
at the point of  
care, and use  
this knowledge  
to work for a  
healthy  
environment.  
(13)**

**Administrators,  
nurse  
managers,  
physicians,  
nurses and  
other staff have  
zero-tolerance  
for disrespect  
and abuse. If  
they see or hear  
someone being  
disrespectful,  
they hold them  
accountable  
regardless of  
the person's**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**role or position.  
(14)**

**When administrators, nurse managers, and physicians speak with nurses and other staff, it's not a one-way communication or order giving. Instead they seek input and use it to shape decisions. (15)**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

**Administrators, nurse managers, physicians, nurses and other staff are careful to consider the patient's family's perspectives when they are making important decisions. (16)**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

**There are motivating opportunities for personal growth, development and advancement. (17)**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

**Nurse leaders (managers, directors,**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

**advanced  
practice nurses  
etc.) are given  
the access and  
authority  
required to  
play a role in  
making key  
decisions. (18)**

**End of Block: Block 1**

**Start of Block: Block 3**

**Q6 What is your age?**

- ☐ **20-30 years (1)**
- ☐ **31-40 years (2)**
- ☐ **41-50 years (3)**
- ☐ **51-60 years (4)**
- ☐ **61+ years (5)**

**Q7 Gender**

- ☐ **Male (1)**
- ☐ **Female (2)**
- ☐ **Prefer to self describe (3)**
- ☐ **Prefer not to say (4)**

**Q12 Please self-describe your gender**

---

**End of Block: Block 3**

**Start of Block: Please self-describe the gender to which you identify**

**Q8 What is your highest level of nursing education?**

- ☐ **Diploma (1)**
- ☐ **Associate's Degree (2)**
- ☐ **Bachelor's Degree (3)**
- ☐ **Master's Degree (4)**
- ☐ **Doctoral Degree (5)**

**Q9 What is your current area of responsibility?**

- ☐ **CCU (1)**
- ☐ **ICCU (2)**
- ☐ **CTIC (3)**
- ☐ **ICTU (4)**

**Q10 How many years of RN practice do you have**

- ☐ **< 1year (1)**
- ☐ **1-2 years (2)**
- ☐ **3-5 years (3)**

- ☐ **6-10 years (4)**
- ☐ **11-15 years (5)**
- ☐ **16-20 years (6)**
- ☐ **21-30 years (7)**
- ☐ **30+ Years (8)**

**Q11 Do you currently hold either of the below RN level professional certification?**

- ☐ **CCRN (1)**
- ☐ **PCCN (2)**
- ☐ **Both (3)**
- ☐ **Neither (4)**



## Appendix G

### Permission for use of HWEAT



July 21, 2021  
 Paula Gellner, MSN, RN  
 25 Harbour Terrace  
 Cranston, RI 02905  
 pmdanz1@gmail.com

Dear Ms. Gellner:

Thank you for your reuse request. We hereby grant permission for your reuse of the AACN copyrighted content below, free of charge, subject to the following conditions:

1. Content will be used in a DNP project at Rhode Island College and in the cardiac ICUs and step-downs of a major academic medical center in New England in the form of a 4- week-long emailed survey to study new nurse turnover in the cardiac ICU during transition to practice.
2. Suitable acknowledgment to the original sources must be made, preferably as follows: American Association of Critical-Care Nurses. *Healthy Work Environment Assessment Tool*. Aliso Viejo, CA: American Association of Critical-Care Nurses. ©AACN. All rights reserved. Used with permission.
3. Permission is granted for the following use case: HWEAT, individual/academic institution, print and electronic, United States, original language, up to 499 viewers, no edits, current edition and up to 5 years (until July 21, 2026).

**Any modifications to the HWEAT require written preapproval by AACN.**

Thank you for your interest in the American Association of Critical-Care Nurses.

Sincerely,

Michael Muscat

AACN Publishing Manager

Accepted:

\_\_\_\_\_ SIGNATURE TITLE DATE



27071 Aliso Creek Road ® Aliso Viejo CA 92656 ® 949 362 2000 ® [www.aacn.org](http://www.aacn.org)

**Appendix H**  
**Sustainability Scores**

**Team Name:** All Cardiac Critical Care Units

**Date:** Spring 2022

---

**Process Total Score: 24.5**

**Staff Total  
Score: 31.2**

**Organization Total Score: 6.8**

**Total Sustainability Score: 62.5**

## Sustainability Model Report

