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Pandemic Recovery in Nursing: Labor Shortage and Financial Devastation

by

Rebecca Diane Rogers

A project submitted to the faculty of
Gardner-Webb University Hunt School of Nursing
in partial fulfillment of the requirements for the
Master of Science in Nursing Degree

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Abstract

The COVID-19 pandemic inadvertently caused one of the greatest nursing labor shortages in history. Many healthcare organizations were forced to rely on external agency nurses to staff their organizations and care for large volumes of patients. The high demand for these nurses caused an increase in costs for external contracted labor. The costs of external agency use became financially devastating for healthcare organizations who had not budgeted for this expense and still the external agency use did not resolve the issue of nursing labor shortages. Learning and recovering from the labor and financial costs of the COVID-19 pandemic requires an internal resolution to long-term staffing needs. Implementation of an internal agency can resolve staffing needs within an organization without relying on contracted labor externally. An internal agency pool can be a catalyst to nursing retainment, decreasing nurse turnover and increasing nursing engagement within their organizations.

Keywords: COVID-19, pandemic, agency nurse, internal agency

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CHAPTER I

Introduction

In December 2019, the COVID-19 virus launched globally. During the following months, apprehension remained focused on the clinical and logistic complications of the worldwide pandemic, with little foresight into what would become the biggest issue healthcare would face during and after the pandemic: one of the largest nursing shortages in history. As registered nurses (RNs) began to rapidly leave the bedside due to illness, exhaustion, safety, or other reasons, nursing leadership began to rely on resources outside their organization to maintain adequate and safe staffing.

During the 2020 year of the pandemic, COVID-19 acuity and census began to increase. This escalation caused nursing resources such as personal protective equipment (PPE), ancillary staffing resources, and other nursing resources to decrease significantly and quickly. Indirectly, nursing turnover and nursing vacancies began to drastically increase. Hospitals were forced to turn to external staffing agencies to maintain adequate and safe staffing.

Nationwide, agency usage and agency salary increased. Reportedly, agency nurse salaries increased by 80%-90%, beginning in the Fall of 2020, causing a spike in what is now termed “crisis agency” (King, 2020). The pandemic also created a 305% increase in demand for travel nurses, especially nurses with COVID-19 or critical care experience (King, 2020). These increases left a burden on healthcare organizations financially and in terms of employee retainment. As external agency salaries increased, vacancies and turnover increased as more nurses left the bedside of their organizations to travel for higher pay.

Through the peak months of the pandemic in the winter season of 2020 and 2021, external agency nurse use allowed many healthcare organizations to maintain adequate staffing and nurse-to-patient ratios, saving the hospital from having to shut down floors and even whole facilities. Upon the release of the COVID-19 vaccine in January of 2021 and its distribution to healthcare professionals, COVID-19 census in patients and associates began to decrease. This transition in pandemic cadence allowed healthcare organizations to assess the remains of a pandemic battlefield: continued nursing shortages, inexperienced student nurses with limited clinical experience, nurse fatigue or “burn-out”, and fiscal deterioration of facility budgets.

With the second peak of COVID-19 beginning in August 2021, proving the pandemic and its consequences are far from over, healthcare organizations must reorganize and strategize new staffing and fiscal budget plans going forward. Healthcare organizations need to thoroughly examine the impact of the amount of external agency use both financially and regarding nurse retainment, recruitment, and staffing. These organizations need to address recovery as well as planning for the future to protect themselves from another pandemic fiscal crisis.

Significance

Contracted labor is not a budgeted expense at most organizations, including a large, for-profit, 747-bed, level I trauma, tertiary, acute-care facility. Due to the increased turnover, over 150 external agency RNs were onboarded between November 2020 and February 2021 (Figure 1). Like many similar facilities during this time, external agency use was increased without a proactive de-escalation plan. Because of this, a phenomenon

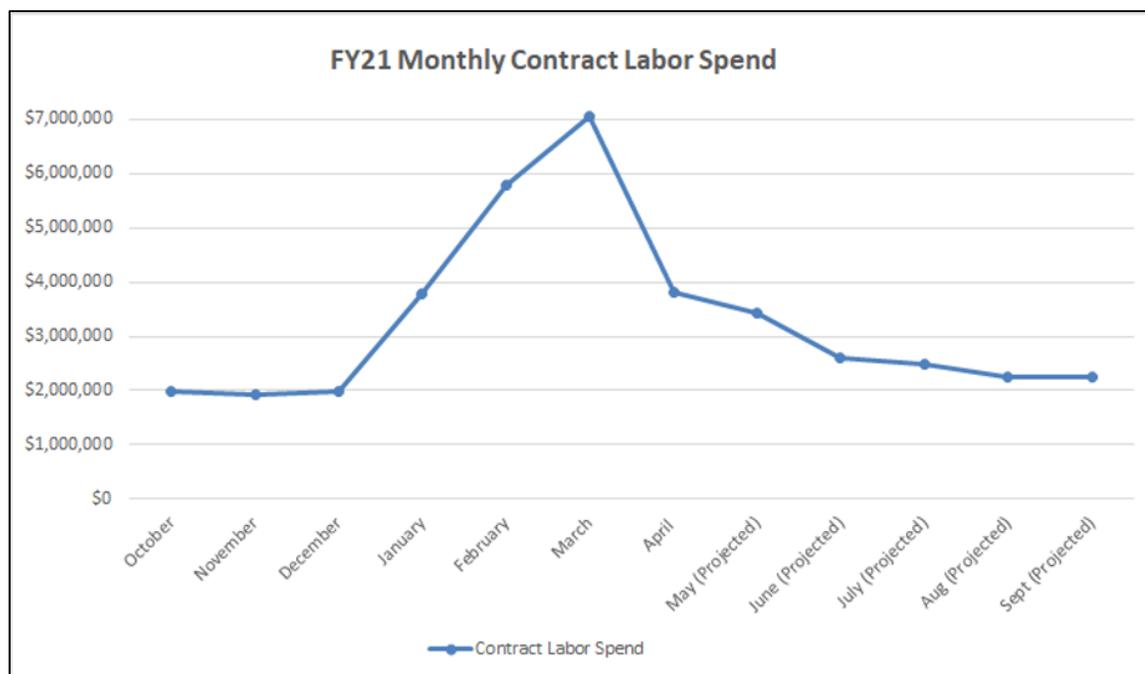
known as “staff hoarding” (when nurse leaders onboard more staff than they are budgeted for with anticipation of call-ins from sickness, fatigue, and turnover) began to take place.

Figure 1

External Agency RN Volumes at SMC –October 2020 through March 2021



With the mass influx of external agency staff onboarding during the winter months, contracted labor expenditures reached a peak of \$8,000,000 for the month of March 2021 alone, depleting the entire emergency capital budget for the remains of the fiscal 2021 year (Figure 2). This created the first-ever financial report in 100 years whereas the organization was not showing a profit. Many interdisciplinary teams were formed to brainstorm ideas on how to decrease turnover, increase nurse retainment, decrease staffing anxieties, and maintain safe nurse-to-patient ratios.

Figure 2*Contract Labor Expenses for Fiscal Year 2021*

Note. Expenditure for the month of March 2020 was greater than \$7 million.

The financial costs of external agency use impacted frontline staff, leadership, and executive associates at the project facility. Budget cuts had to be made across the organization. Front line staff experienced a freeze on any annual bonuses for the 2021 year. Leadership experienced short-term reduction in salaries. Additionally, the finance department was tasked with eliminating \$69 million for the upcoming capital budget year.

In addition to the financial impact of external agency use, studies have shown a link in decreased quality impact and external agency use as well. External agency abundance has been linked to poorer outcomes in quality metrics, including increased lengths of stay, nosocomial infections, and readmission rates (Adams et al., 2015). The Institute of Medicine (IOM) affirms that employment of temporary associates poses a risk

to patient safety, noting that external agency nurses tend to work fewer hours than organization-employed nurses throughout the year, have briefer orientation periods, and are less familiar with organization policies and procedures (Adams et al., 2015). Because of this, they may not become vested in an organization's mission and vision (Adams et al., 2015).

In assessing the quality metrics for the fiscal 2021 year (Figure 3), during the winter months from November 2020 to February 2021, when COVID-19-census peaked, and agency use increased, several trends are noted. There were reported increases in the percentage of patient falls with injury, re-admission rates, and nosocomial infections. There was also a reported decrease in overall HCAHPS scores and met blood transfusion criteria. While there has not been an in-depth study to determine the root cause of these trends, some of them do align with IOM warnings of external agency use.

Figure 3

Project Facility Acute Care FY 2021 Quality Scorecard

FY 2021 Quality Scorecard										
Performance Metrics	Target	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	FY2021 YTD
Improve Health										
Hospital Star Rating	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		3.00
Patient Safety Composite Measure AHRQ (PSI 90)	0.90	1.33	1.08	0.81	0.22	1.96	0.93	0.89	1.67	1.02
Percent of Patient Falls with Injury (Moderate, Major and Death)	3.0%	1.1%	1.4%	0.0%	1.3%	0.0%	2.6%	0.0%	1.4%	1.0%
Blood Transfusion Criteria Met	90.0%	99.0%	100.0%	100.0%	99.1%	95.9%	100.0%	100.0%		99.0%
Elevate Experience										
HCAHPS - Overall Rating Top Box Percent	76.5%	75.0%	73.9%	72.7%	72.3%	72.3%	73.1%	72.9%		72.9%
ED CAHPS - Overall Rating Top Box Percent	57.5%	56.3%	58.1%	57.3%	57.5%	57.4%	58.7%	58.8%		58.8%
Optimize Efficiency										
All Cause Readmission Rate	12.5%	13.6%	14.3%	13.0%	13.4%	17.6%	13.3%	11.5%	7.5%	13.0%
ED Throughput Arrival to Discharge for Admitted Patients	300.00	412.00	376.50	367.50	398.00	356.00	316.50	358.50	365.00	359.00
Maximize Effectiveness										
Catheter Associated Urinary Tract Infections	22	4	1	4	4	6	5	4	2	30
Central Line Blood Stream Infections	14	2	1	6	6	1	0	1	1	18
Surgical Site Infections for Colon Surgeries	10	1	1	2	2	3	0	0		9
Surgical Site Infections for Hysterectomies	4	1	0	0	0	0	0	0		1
Surgical Site Infections for Hips/Knees	10	2	3	1	0	1	2	0		9
C-Difficile Infections	82	6	11	10	3	4	4	8	2	48
Cost of Hospital Acquired Infections	\$ -	\$ 367,824.00	\$ 364,637.00	\$ 601,077.00	\$ 452,038.00	\$ 312,782.00	\$ 194,443.00	\$ 241,360.00	\$ 110,214.00	\$ 2,644,375.00

Purpose

The purpose of this project was to examine how taking a proactive approach to pandemic staffing can decrease financial and quality deficits for large, for-profit, healthcare organizations. Utilizing different strategies for employee engagement and retainment and investing back into the organization can prove to be a better solution than external agency use. While external agency use can be a quick fix for staffing issues, the financial and quality impact is not worth the risk. Other staffing strategies such as starting an internal agency within the organization, focusing on employee retainment strategies, and increasing nurse recruitment efforts would be a better investment for the organization.

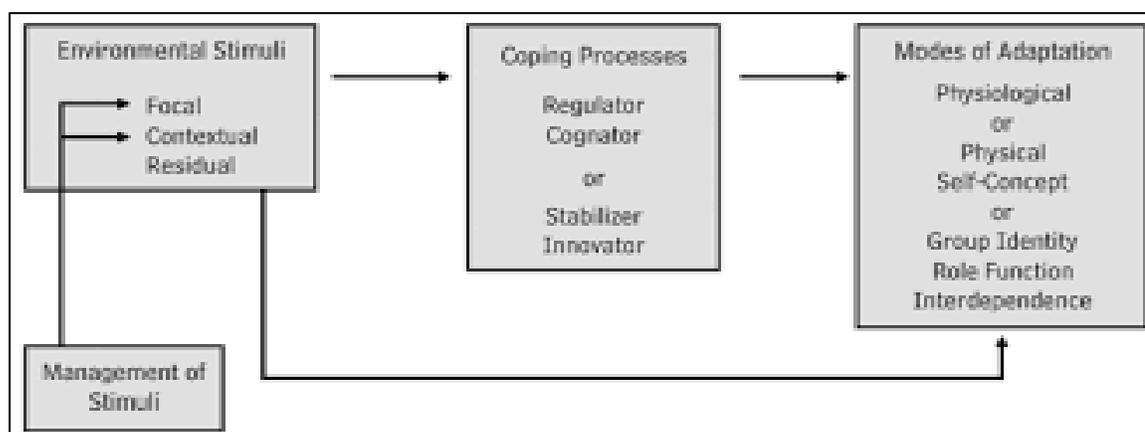
Theoretical or Conceptual Framework

Throughout the pandemic, adaptation to change has been a centralized theme in nursing. Strategizing how to recover both financially and safely must be based on the conceptual concepts of Roy's Adaptation Model (Figure 4). While Dr. Roy outlines four modes of adaptation in humans: self-concept, role function, physiologic needs, and interdependence, these modes can be applied to post-pandemic nursing practice (Smith & Liehr, 2018). According to Roy, nursing is based on causality, and adaptation is the goal of nursing (Smith and Liehr, 2018). These concepts apply synchronously with the COVID-19 pandemic, and the persistent healthcare ability to adapt to whatever trends arose next. Now that healthcare continues to recover from the pandemic, while still facing many challenges, adaptation seems key to success. With implementing new strategies such as an internal agency of RNs using the organization's own associates, increasing nurse recruitment, and focusing on nurse retainment, nursing can adapt to life

during and post-pandemic. COVID-19 changed healthcare, and the pandemic changed the way we staff our hospitals. Salaries now play a much more vital role than before. Nursing must take that stimuli (the pandemic), identify modes of adaptation, and find new ways to manage the stimuli. Nursing must find new ways to manage staffing before, during, and after the pandemic.

Figure 4

The Roy Adaptation Model



Note. Adapted from Fawcett, J. (2009).

Definition of Terms

There may be some terms noted in this project unfamiliar to readers. External agency nurse refers to what is commonly known as a travel nurse. This is a nurse employed by a separate travel nursing company that is contracted out to organizations. The expenditures for external agency nurses are classified as contracted labor, as they are not employees at the facilities they work, they are contracted to work there. The expenses for contracted labor are tracked fiscally, meaning annually within four quarters (October – September).

In contrast to external agency nurses, an internal agency is a workforce within an organization, comprised of the organization's associates. These associates are assigned

for a certain length of time to a unit based on need within their own organization.

Recruitment refers to the process of hiring and training new associates in an organization.

Retention refers to the process of keeping hired associates within the organization, so they do not leave to work elsewhere.

As this project chapter concludes, the focus going forward should be how the unforeseen pandemic nursing shortage has impacted healthcare in terms of patient safety in staffing, as well as a financial impact. As healthcare continues to recover, interdisciplinary team members must work to come up with solutions, outside of external agency use, to allow our healthcare organizations to adapt in a pandemic world both safely and financially.

CHAPTER II

Literature Review

A thorough literature review was performed to study the existing research published that link the severity of external pandemic staffing to the purpose of this project, highlighting the theoretical framework of Roy's Adaptation Model. The purpose of this project was to examine how taking a proactive approach to pandemic staffing can decrease financial and quality deficits for large, for-profit, healthcare organizations. The literature review was performed via the University's virtual library using two sources for searching: Cumulative Index for Nursing and Allied Health Literature (CINAHL) and Public/Publisher MEDLINE (PubMed). The following terms were searched within each database: external agency, internal agency, decreasing agency use, travel nurse, travel nurse agency, COVID-19 staffing, pandemic staffing, internal float pool, and travel nurse costs. Twenty meaningful journal articles were reviewed. These articles are grouped into the following categories: External Agency Use, Internal Agency Implementation, and Alternatives to External Agency Use.

External Agency Use

There is a general negative association with external agency use (Adams et al., 2015). Their wages are costly, they are not invested in the organization, and they hinder teamwork (Adams et al., 2015). Despite their negative impact on organizations, external agency use continues to increase. A literature review on drivers of external agency use, general perspective and insight of external agency nurses, and fiscal and quality impacts to organizations was performed to gain more understanding.

Nurse Shortage or Nursing Shortage

The cause of external agency is agreeably dependent upon nursing shortages whether short-term or long-term. Bower and McCullough (2004) seek to answer the question not of how to fix it, but what is causing it. While nurse burnout has already been an identified factor in turnover, the researchers argue that identifying the source of burnout can address the nursing shortage. Bower and McCullough (2004) argue that this is due to the lack of advanced technology used in nursing, creating barriers to efficiency in nursing. Nationwide, nurses should have easy access to more handheld technologies, tablets, broadband wireless technologies, smart cards, smart phones, and more point of care equipment. The lack of accessibility to technological advancements in nursing is causing nurse burnout and in turn, nationwide nursing shortages that now require organizations to turn to the costly strategy of external agency use. While investing in new technologies is always costly, it is an investment that benefits organizations in the prevention of excess external agency use.

Demand for Temporary Agency Nurses and Nursing Shortages

There is some debate as to whether nursing shortages increase agency use or if overall market demands increase agency use. Nursing shortages create long-term vacancies that force organizations to utilize external agency nurses to fill staffing needs; however, when there is an overall demand for nursing, the market increases nationwide, causing higher rates and more turnover, and more external agency use. Seo and Spetz (2013) conducted a study to answer this question, arguing that being able to identify the top motivator for external agency use allows hospitals to be able to strategize the ideal mix of permanent and temporary staff. To determine factors that affect external agency

nurse demand, financial, utilization, and staffing data was obtained from California's Office of Statewide Health Planning and Development (OSHPD) from 1993 to 2002. A labor demand model was created which examined demand derived from patient needs, hospital characteristics, and structural features of the healthcare market. Results indicated that labor shortages significantly influence external agency use as opposed to market trends. The implication of this study is that identifying the true motivator for external agency use as labor shortage-driven may mitigate the need to raise wages during a shortage. Doing so doesn't eliminate agency needs, only financial impacts organizations. This study was conducted in 2013, prior to COVID-19, and results could change over time as labor shortages and external agency use changed over time; however, identifying that vacancies drive agency use could be a motivating factor for organizations not to increase agency wage rates to fill vacancies.

What Do We Know About Our Agency Nurse Population

One of the hardest challenges in using external agency nurses is trying to figure out how to get them to become engaged in the organization's mission, vision, and values during their short stay. The issue requires figuring how agency nurses motivate and think. A 2019 study by Simpson and Simpson addresses the question of what healthcare organizations need to know about agency nurses in order to properly utilize them. The researchers argue that knowing what motivates agency nurses, can allow for more proper training and onboarding. Over 5,000 articles were retrieved for this review. Positive external agency, as well as negative external agency experiences, were identified. Positive experiences include the schedule flexibility and ability to maintain control of their schedules, the ability to have a career "stop-gap," as a means to avoiding permanent

work prior to retirement, and the ability to not be involved in “office politics.” Negative experiences include feeling alone, a lack of opportunity for career growth, and issues such as transportation and housing. Flexibility and control over schedules were identified as major motivators for external agency nurses. This emphasizes the importance of scheduling and giving the nurse a voice in their own schedule. This discovery gives insight on how to engage staff members, retain staff, and even onboard external agency nurses as organizational employees.

Dealing with Resistance in Temporary Agency Nurses

A common theme among the quality deficits associated with high agency use is the lack of loyalty to the organization’s mission, vision, and values. Agency nurses appear resistant to organizational conformity. To address this issue, Cicellin et al. (2015) conducted a qualitative study to address two questions: how do organizational conditions which characterize the temporary agency relationship affect workers’ emotions and influence the process of identity and meaning construction and how can fear be linked to self-positioning within a collective identity and to discursive processes of resistance? The researchers argue that emotional and contractual insecurities cause a feeling of fear amongst agency nurses, forcing them to use resistance as an adaptation model. Twenty-nine interviews of 23 nurses in a hematology department in Naples, Italy were conducted. Through these interviews, the researchers concluded that fear was a primary motivator for resistance. Fear resulted from not just being “outside” the organization, but a majority of fear is motivated from contractual insecurity. Agency nurses discussed how the majority of their conversations with nurse leadership revolved around their working contract. The working contract by nature suggests job insecurity, causing the agency

nurses to consistently feel job insecurity. The study was small, creating a major research weakness; however, the study does provide some insight on how nurse leadership can alter their verbiage with agency nurses from primarily about their working contracts to an organizational-based conversation to create more engaged agency nurses and increase quality of patient care that is aligned with the organization's mission, vision, and values.

Use of Temporary Nurses and Nurse and Patient Safety Outcomes in Acute Care Hospitals

A 2010 study by Bae et al. was conducted to determine if there was a positive correlation between external agency nurse use and needlestick injuries, back injuries, patient falls, and medication errors. The argument pursued by researchers was that because of the lack of training and investment by the organizations, increased agency nurse use would have a significant impact on the occurrence of these nurse and patient safety outcomes. A sample size of 286 medical and surgical nursing units was identified by a SAS computer-generated random selection from the American Hospital Association Survey of Hospitals. Nurse managers from each unit filled out data questionnaires for 6 months including occurrence of needlestick injuries, back injuries, patient falls, medication errors, and number of agency hours worked on the floor. Results found a correlation of agency use with back injuries and patient falls, but not needlestick injuries and medication errors. The study found that nurses working on units with more than 15% external agency hours were 1.730 times more likely to have back injuries than nurses working on units without external agency nurses. Nurses working on units with more than 15% agency hours reported an 18.8% increase in patient falls. The high number of units studied was a strength of this study; however, the study could not consider the

characteristics of agency nurses such as experience, education, gender, etc. The implications for practice from this study show the need to invest more training in external agency nurse use if external agency use cannot be avoided.

The ROI of Travel Nursing

In comparison to many articles retrieved discussing the financial impact of external agency use, a 2018 study and cost analysis was performed to determine if the costs of agency nurses were as detrimental as it seemed. Many times, the wage rates of external agency nurses are compared to the wage rates of organization or “core” nurses. In this study, the researchers argue that the wage gap is not as far as it seems because external agency salaries should not be compared to regular core staff salaries, but to core staff overtime and incentive salaries. External agency nurses are only ever brought in to relieve overtime use from core staff. In addition, in 2018, the U.S. Bureau of Statistics noted that other employer costs such as unpaid leave, supplemental pay, insurance, retirement, and benefits average 35.2% of total nurse compensation. These are not required of external agency nurses. Travel nurses also cover the non-productive hours of staffing, which include education and training. The study also notes that external agency use can lead to nurse burn-out, causing high costs for nurse turnover. For this study, data was obtained over 24 months on four units of a large, acute-care facility to determine the true return on investment (ROI) of external agency use. Results determined that when compared to overtime wages, the use of external agency nurses was appropriate to cover core nurses scheduling when overtime was greater than 5%. Limitations of this study include the number of units they examined data for at only four units.

Buyer Beware: The Cost of Competence

With every nursing shortage, similar resolutions arise: external agency use, sign-on bonuses, and incentive pay. With these strategies, comes a risk of nursing competence. In this 2001 study, Bueno used a competence measuring tool to address the question of how an organization can be sure that staff are competent. The researcher argued that competent staff would result in less turnover. A competence measuring tool called the Performance-Based Development Tool (PBDS) was used to measure staff at 22 hospitals. Results indicated that agency nurses scored lower than staff RNs, both experienced and inexperienced. Methods for data analysis are not detailed in this article, leaving many questions such as nurse sample size and setting, but the results do indicate a negative impact with external agency use due to decreased competency.

Agency Staff Related to Care in Nursing Homes

In 2009, Castle conducted a study to address the question of whether agency use had an impact on staff, facilities, and residences. With most research of agency nurses having been performed on acute-care hospitals, Castle felt the previous study's findings were appropriate to lay the groundwork for a long-term care study as both environments facilitate relationships between workers, organizational impact, and the relationship between workers and residents. The researcher argues that understanding how to appropriately provide staffing solutions that did not compromise the quality of care could be achieved by first examining the "go-to" staffing solution, agency nurses. A conceptual model was created to portray the potential advantages and disadvantages between agency use and quality of care. A survey to long-term residential care leadership was sent out to

determine if findings aligned with Castle's conceptual model. The conceptual model suggested that between workers, teamwork would decrease, workload would increase, supervision needed would increase, and overall morale would decrease. Agency staff impact on facility operations would include high expenses, lower productivity, decreased commitment, and high turnover. Among agency nurses and residents, the conceptual model portrayed a lack of continuity of care, lack of familiarity with practices, and psychological distress of the residents. Of the 6,000 surveys sent to facility leaders randomly selected using the Online Survey, Certification, and Recording (OSCAR) data, 3,946 were returned. The data was analyzed using Stata computer software. The most common disadvantage listed by administrators was the expense of using agency nurses, followed by the need for increased supervision as a burden to staff. The results of the surveys seem to be aligned with the conceptual model created by Castle, and the implications seem to suggest that agency use had more disadvantages than advantages and could possibly hinder quality of care of residents.

Internal Agency Implementation

One of the most successful implementations to avoiding excessive agency use is the implementation of an internal agency within an organization. This is the primary solution proposed for the project facility. Literature reviewed examines how utilizing short-term contracts for the facility's own associates can benefit both fiscally and in terms of quality.

Beyond a Band-Aid® Approach

Based on IOM standards, the use of external agency nurses can be detrimental to an organization due to the nurses' low number of clinical hours worked per year, limited

training, and limited knowledge of the organization's policies and procedures (Adams et al., 2015). Based on the IOM recommendation to find alternatives to external agency use, this piece of literature addressed the question of comparing benefits of an internal agency department in lieu of external agency nurse use. Since limited training, clinical hours, and organizational knowledge are the support for IOM's recommendations, Adams et al. (2015) argued in this study that using the organization's own associates as agency RNs would eliminate the supporting points in the IOM's theory and allow the organization to be more fiscally viable and higher quality facility. The facility used in this study is Emory University (EU) in Atlanta, Georgia. At time of publication, EU was comprised of six hospital facilities and one clinic. The largest facility is a 579-bed Magnet Hospital and Level I Trauma center, much like the project facility. Implementation of the internal agency was broken into three phases: planning, implementation, and evaluation. During the planning phase, idea conception, literature review, facility collaboration, and day-to-day processes were examined. During the implementation phase, focus remained on the staff through Recruitment career fairs, staff support, and thorough staff orientation. During the evaluation phase, hiring and cost savings data were examined. Results of the study include greater than 7,200 unscheduled hours filled with internal staff, a decrease in external agency use between fiscal years 2013 and 2014, cost savings surpassed 1.1 million dollars in the 2013 fiscal year, overtime hours were reduced by more than 5,000 hours, and 312 nurses were hired within four quarters (Adams et al., 2015). In conclusion, there were staffing and fiscal benefits to implementing an internal agency at EU. The study's methodology was actually creating a list of goals prior to implementation and reviewing those goals post-implementation. The study has a limited

literature review, mentioning only the IOM study and one theoretical framework of The Synergy Model.

Internal Agency Nurses Provide an Integrated, Centralized Staffing Solution

In 2013 and 2014, a study of staffing processes at Novant Health examined the question of whether “just-in-time” staffing and external agency use could adequately staff their hospital. The argument of this article was that these current staffing methods were made staying within budget impossible for its organization. A centralized staffing method was piloted to determine if proactive, centralized staffing with internal agency use would prove more fiscally beneficial. Novant Health is a large, for-profit healthcare system, consisting of 14 medical centers. The method of this staffing pilot involved four steps: consolidating the float staff and budget to a staffing office, recruiting more staff to increase number of associates, understand the appropriate utilization of services, and development of flex staffing capabilities across facilities. To focus on retainment, transfer dates of associates switching departments were negotiated to prevent rapid turnover and scheduling depletion. In this method, long-term staff absences and vacancies were proactively scheduled with coverage to prevent external agency needs, staffing was examined weekly for pre-planning any critically staffed short-term staffing needs, and a smaller “just-in-time” staffing model was introduced as opposed to being the only staffing model. The outcomes of 2014 showed a reduction of external agency nurses from 73 to 4. Sixty-eight percent of RN vacancies were filled. Safety events and quality measure misses both decreased as well. In conclusion, having an internal agency pool allowed the organization to obtain a staff that was more vested in their mission, vision, and values and provide better quality care.

Reducing the Deployment of Agency Nurses

It was found that the question of fiscal and quality value of external agency nurses was not just a United States issue, but a United Kingdom issue as well. A 2006 study at Broadgreen University NHS Trust Hospital revealed that at that time, 54% of full-time nurses employed were external agencies. Leadership argued that an internal pool of nurses would be more fiscally beneficial to the organization, as well as beneficial in terms of quality. An internal agency pool was created, eliminating the ability for individual nursing floors to request their own agency, but rather having requests reviewed through a committee. This committee would closely monitor agency use. Nurses hired into the internal agency pool were offered higher wage rates, holiday pay, and supplemental pay based on length of contract working on the nursing floors in need. As a result, percentage of external agency nurses staffed at the trust hospital decreased from 54% to 12%, with complete external agency use eliminated after 18 months. While this is a smaller study conducted within a smaller hospital, the conclusions of this study showed how using the hospital's own nursing staff created better staffing solutions.

Cross-Training Hospital Nurses to Reduce Staffing Costs

There are many alternatives to external agency use provided in literature. Many of these alternatives can be vague and focused around recruitment, retention, and engagement. In 2005, Inman et al. performed a statistical analysis of different cross-training strategies for nurses that would reduce dependence on agency use. The researchers set out to answer the question of whether or not cross-training would provide the fiscal alternative needed for organizations in staffing crisis. The researchers' argument was cross-training could alleviate the negative impact of nurse absenteeism.

Four cross-training policies were compared: no cross-training, total cross-training (all nurses are cross-trained for all units), reciprocal pairs (one unit is cross-trained specifically for another unit), and chaining (a small group is cross-trained for one unit and that unit has a small group cross-trained for another unit, etc.). A statistical model was created to compare the cross-training policies, whereas the number of nurses absent in each unit is represented by a binomial distribution, this portrays the number of successful shifts of nurses arriving for work, with each shift maintaining the same probability of absenteeism. The performance metric for this model was the number of external agency nurses staffed. Chained cross-training proved to be the most beneficial cross-training model due to high benefits without excessive costs. The drawback to cross-training all nurses is that if the training is not used regularly it is lost. According to the study, cross-training fiscal benefits would allow a 6% wage increase for cross-trained nurses. While the major weakness in this study is that it was not trialed in real life, only statistically, this principle could be applied to starting an internal agency. A float pool that provides “just-in-time” staffing cross-trains all nurses, and there are no guarantees those nurses will work all units, creating a possible waste in training. Starting an internal agency to identify certain groups that could provide a chaining model of cross-training, with a certain group of nurses trained in cardiac, a certain group of nurses trained in oncology, a certain group of nurses trained in dialysis, etc. The implications for this study are supportive of two major foundations of this project: centralized staffing and use of select group of specialized nurses to provide supplemental staffing, as provided by an internal agency.

Alternatives to External Agency Use

With fiscal and quality costs of utilizing agency use so high, nurse leadership must identify all alternative plans to decrease dependency on agency. When an internal agency implementation is not feasible or needs supplemental strategies, nurse leadership needs to develop other options. Some of these alternatives include recruiting strategies, retention of staff, and leadership style. Small insight into pandemic staffing alternatives was also reviewed.

Identifying Strategies to Decrease Overtime, Absenteeism, and Agency Use

The question addressed in this study was what are best practices that can be identified to decrease overtime use, excessive absenteeism, and agency use. These are drivers of fiscal disparities, poor quality of care, and nurse burn-out and turnover. A qualitative study was performed using semi-structured interviews. Twenty-three leaders from 17 hospitals in Ontario were interviewed. Data from the interviews were obtained and analyzed by the Ministry of Health and Long-Term Care (MOHLTC) Health Analytics Branch. The hospitals were categorized into high performing (defined by low sick time and low overtime use) and low performing (defined by high sick time and high overtime use). Results of the data emerged two central themes to decreasing overtime, absenteeism, and agency use: (1) enacting proactive, human resource practices and (2) having strong and strategic leaders that create learning and supportive work environments. Sub-themes of enacting proactive human resource practices include: employing a “just-in-time” “surge staffing” pool, minimizing agency use, proactively scheduling staff, and utilizing part-time and PRN staff to fill full-time positions. Sub-themes for having strong, caring, and strategic leadership include: creating a healthy

work environment, providing learning opportunities through orientation and professional development, using employee wellness programs to decrease burnout, using data to drive decisions, collaboration with unions, and maximizing that Late Career Nurse Initiative (LCNI). The strength of this study was its process for data analysis. The biggest weakness of this study is the subjectiveness of the data due to the interview questionnaire. The conclusion is that healthcare leadership needs to examine its own practices and focus on strategies aligned with the two identified themes in order to decrease overtime, absenteeism, and agency use.

Reducing Reliance on Agency Staff = \$7.7 Million in Savings and Improved Nurse Engagement

With nursing shortages, increased vacancies, hospital expansions, many organizations are faced with the challenge of staffing hospitals and are forced to turn to external agency use. Farrington et al. (2020) suggests channeling energy into focusing on recruitment and retainment. Replacing nurses is a financial burden and in 2018, the average turnover cost to replace a nurse was between \$53,798 and \$143,460. The organization used in the study was not described in size but had a significant 12% vacancy rate and was filling 224 FTEs to supplement staffing. A four-pronged approach was initiated, focusing on transformational leadership to improve employee engagement: partnering with marketing to improve social media presence, optimizing the organization's website, hosting recruitment fairs, and focusing on creating a smooth transition for new nurses. Results of these efforts included hiring 800 registered nurses within one year, reducing agency nurse use by 203 FTEs. This led to a \$7.7 million

savings. Employee engagement scores also increased and turnover rate decreased from 12% to less than 5%.

Give Nurses the Right Tools...and Labor Costs Go Down

The financial and quality impacts of agency nurses did not begin during the pandemic, but the already existing issue was worsened by the pandemic. In a 2009 study by Wiest et al., Lee Memorial Health System (LMHS) implemented a new proactive staff forecasting model to decrease expenditures on nurse labor due to external agency use. The question addressed in the study was whether external agency use could be eliminated due to financial burden. Due to the rigid and lengthy recruiting processes, the researchers argued that by streamlining the recruitment process, the organization could remain within its budget. LMHS is a large hospital located in Fort Meyers, FL, and had reached its peak of agency nurses in 2000 after acquiring two local, neighboring hospitals, causing 350 agency nurses to be recruited and onboarded. Five strategies were implemented in this study to decrease agency use: creation of a centralized staffing office, implementation of a staffing forecasting model, engage and train current staff, monitor performance, and define processes for use of contract staff. The goals of the centralized staffing office were to define and standardize staffing processes, retain existing staff, minimize cancellation of scheduled PRN associates, and ensure core vacancies remained filled so temporary staff could be used for “just-in-time” staffing. LMHS developed a predictive staffing model using census points to match capacity to help determine staffing needs. Census points were examined monthly to determine staffing needs and how many beds to keep open on each particular unit. From this model, bed placement became contingent on a census point forecasting model. Instead of filling all of the units up at once, evenly, one

unit would fill before any other unit received a patient, allowing maximum use of staffing resources. This staffing forecast model was a major change from hours per patient day (HPPD) forecasting, which is popular in healthcare. To assist with long-term staffing needs, a scheduling coordinator was hired in an effort to set up an opportunity to create long-term contract staffing (i.e., internal agency pool). One year after the pilot implementation, LMHS saw a labor reduction of \$11 million, as well as a 50% external agency nurse reduction. While this study does not provide much detail on how they monitored their new processes, this is a great example of how using alternatives to external agency use can lower costs, turnover, and quality expenditures.

Recruitment and Retention Strategies

Many experts suggest being proactive to nursing shortages by improving recruitment and retention efforts prevents the need for excess agency use. Upeniaks (2003) argues that increased wages are not the answer to modeling recruitment and retainment after Magnet hospital strategies may be the answer. Magnet hospitals are those hospitals identified as a good place to work by nurses, have an ability to recruit and retain nurses, and located within a competitive market. Magnet hospitals maintain lower vacancy rates, lower turnover rates, and higher levels of job satisfaction. Key characteristics of Magnet hospitals include participatory and supportive management styles, professional practice models of delivery of care, and planned orientation pathways for new staff. The Magnet hospital characteristics suggest the importance of nurse autonomy and clinical decision-making in nurse retainment. While increased wages are desirable, the professional practice models of Magnet hospitals retain nurses, and retainment must come before recruitment, which is a common mistake in healthcare.

Creative Staffing Models for Recruitment and Retention Challenges

Perioperative healthcare leadership develop ground-breaking staffing techniques due to the specialization of their practice. Many staffing practices developed by perioperative leadership often have a “trickle down” effect to acute care. In 2019, when so many perioperative leaders found themselves dependent on external agency use, alternatives were developed to decrease the facility burden of requiring outside help for their specialty. The three biggest implementations for four different facilities, rural and urban, were a team of nurses strictly working as on-call. These nurses were never scheduled regular shifts, only on call, but was found to be highly utilized and fiscally efficient. For larger health systems, an internal float pool was developed for staff that agreed to work between campuses. This strategy proved successful for both urban and rural healthcare organizations, having a turnover rate as low as <1%. Physician-specific nursing teams were also developed to maximize efficiency and increase quality of care. A pilot program was introduced in 2014 to maximize associate engagement and retention and improved patient outcomes. In the pilot year, cases with developed complications decreased by 66%. While these interventions were successful in a specific perioperative setting, the theoretical framework of using collaboration to develop alternatives to agency use can be used across the entire healthcare continuum.

When Flex Comes to Shove

A 2001 study focuses on additional staffing strategies when a float pool and internal agency are not enough. Wing (2001) conducted a study with a research team to determine alternatives to more agency use. This research team set to answer the questions: what level should core staffing be set, what’s the best way to provide flexible

staffing, what percentage of days each unit needed to flex up beyond its core staffing, what are the maximum numbers of caregivers beyond core staffing on the busiest days, and what was the average number of additional shifts required per 14-day period. A four-unit facility was studied for 315 days. Two variations were identified in flexed staffing: the unit's share of house-wide census variation and unit-specific variation. Cross-training was the best implication for flex staffing and a mixed model was proposed. This model included staffing three of the four units at max core staffing and flexing down one FTE in the other unit. After 315 days of study, the facility was able to eliminate the need for six FTEs with the flexed staffing model. While the size of the facility was never disclosed, the assumption of four units suggests a smaller hospital. The study is an implication for a flexed staffing model for smaller hospitals.

Optimizing Nurse Staffing During a Pandemic

With a nationwide nursing shortage and limited external agency resources available during the COVID-19 pandemic, many organizations had to develop strategic staffing plans in lieu of external agency use. Riley Hospital for Children at Indiana University Health is a 456-bed pediatric hospital, belonging to a major health care organization in Indiana. During the pandemic, pediatric acute care census decreased, leaving a bank of nurses needing work, but without skills for adult patients. RHC argued that pediatric nurses could be rapidly trained and deployed to other areas in need. The nursing professional development (NPD) team at RHC created an algorithm to design a training program based on the individual nurse's education, experience, and confidence in skillset. These training programs included skills lab training with validation and continued follow-up and monitoring while working on adult floors. Using this method,

Indiana University Health was able to supplement staffing without bearing the financial burden of external agency use creating an implication for nursing practice to assess all valuable resources, not just those readily available or belonging to a certain specialty.

Staffing Up for the Surge

With the COVID-19 pandemic spreading so quickly in the spring of 2020, many hospitals had to think quickly to address the issue of massive staffing shortages. In March 2020, New York City became the hub of COVID-19 outbreaks causing NYC Health + Hospital system to find new ways of recruiting, onboarding, and training staff as quickly as possible. Keeley et al. (2020) argued that partnering with the Department of Defense, temporarily increasing agency nurse bandwidth, and recruiting volunteers saved the staffing of their hospital. A COVID-19 staffing team met multiple times per day to determine hospitals with the greatest need and redeployed staff to that hospital, even redeploying all local school nurses to assist with the pandemic census. The department of defense was able to open seven new hospitals and provide over 700 staff members to NYC+. Five thousand additional agency RNs had to be hired on short-term contracts to fill staffing needs. Two hundred workers were used to recruit volunteers from around the country. This three-pronged approach allowed the NYC+ healthcare system to recruit for the staffing needs of the COVID-19 pandemic. Onboarding and training quickly became centralized and virtual, creating the ability to onboard associates as early as 48 hours after application submission. NYC+ attributes their success to flexibility, technology, and communication. While this article is not a typical literature review, the findings of this article have direct implications to the purpose of this project right now. The researchers

emphasized the impact of flexibility in their staffing plans. Staffing flexibility must be maintained, and new strategic models must be created amidst pandemic staffing.

CHAPTER III

Needs Assessment

A needs assessment of the project and project facility was performed to develop a strategic plan. The excessive use of external agency nurses throughout the pandemic has created an organizational deficit-fiscal, quality-based, and employment-related. This deficit requires a multidisciplinary approach to planning project implementation.

Target Population

While the project facility, itself, is the target population affected most in this project, other groups are significantly impacted: nurses, patients, and community members. The project facility serves a large area, with both urban and rural communities. The population of the county the facility resides in is documented as over 300,000 by the United States Census Bureau (2021), creating a large community that is served by the facility's nursing staff. The project facility staffs over 3,000 RNs according to its Human Resource Department. Out of 35 nursing departments, 21 departments in the project facility utilize agency nurses, which are affected by the nursing shortage post-pandemic.

Setting

The project facility is a large, tertiary, acute-care facility, which is part of a multi-hospital health care system, founded in 1921. The healthcare system is a for-profit organization, described as a Level I Trauma Center and teaching hospital. The facility serves a county of greater than 300,000 community members. The mission of the organization is to "provide excellence in health." The facility's vision is to "become a national leader in healthcare quality."

Sponsors and Stakeholders

The Nursing Director of Professional Practice has been identified as the project partner in this quality improvement project. This director oversees education, staffing, nursing quality, and system-wide professional practice models. This director does not oversee any specific nursing unit, eliminating any bias that could be a barrier to the project.

Additional key stakeholders establish a strong, interdisciplinary team to oversee the project and its goals and outcomes. Key stakeholders in this project include the staffing office (currently restricted to just nursing staffing practices at the practice facility), Finance, the Resource Pool Nurse Manager, the Chief Nursing Officer (CNO), the Director of Employment and Recruitment, and Vice President of Human Resources. The staffing office at the project facility oversees all resource allocation at the facility. Resource allocation encompasses strategically staffing multiple units based on their census and acuity needs by reorganizing the distribution of staff members based on their allocated FTEs in their approved staffing grid. During pandemic surges, resource allocation was expanded to include redistribution of perioperative staff while surgeries were shut down due to census. This office works closely with the senior financial analyst for nursing to determine labor trends and predict labor costs. These figures are regularly reported to the project sponsor and CNO, who collaborate with Human Resources and Employment and Recruitment to implement labor management staffing plans. The bulk of the resources used to start an internal agency at the project facility would come from the Resource Pool, making the Resource Pool Nurse Manager a key stakeholder.

Desired Outcomes

Desired outcomes from this project are derived from the 2015 study by Adams et al. of a comparable facility implementing new staffing strategies. The desired outcomes of this study include decreased overtime use, decreased on-call staff utilization, a large recruitment effort to increase the number of staff employed in the resource pool, decreased external agency use, and decreased nursing turnover rates. This project's desired outcomes also included some variables affected by the COVID-19 pandemic and its nursing shortage.

SWOT Analysis

Strategic planning is vital to the effectiveness of an organization (Roussel et al., 2018). Environmental scanning and organizational assessment can provide helpful insight into strategic planning (Roussel et al., 2018). The SWOT method is an effective framework for strategic planning that includes both internal and external analysis of strengths, weaknesses, opportunities, and threats (Roussel et al., 2018).

Internal Analysis

An internal analysis examines the capabilities within an organization and how those either do or do not line up with the organization's mission, vision, and values. The organization's values are embedded in the six established standards of behavior: compassion, collaboration, accountability, integrity, respect, and stewardship.

Strengths

The strengths of the project facility are its value of collaboration, growing Employment and Recruitment Office (ERO), and sizeable resource pool. Collaboration is not only a standard of behavior, but a commitment statement at the facility, promising to

act as “engaged associates positively working together for a common goal.” Multi-disciplinary teams are highly utilized to obtain different perspectives, incorporate other disciplines, and give the hospital the best opportunity for improvements in quality patient care. Collaboration will be key in reducing agency through implementation of an internal agency, centralized staffing, and recruitment and retention strategies.

The ERO at the project facility was recently restructured, doubling the staff of recruiters, and bringing on new leadership. The ERO continues to work diligently on recruiting outside the state, adding sign-on bonuses for new associates, issuing retention bonuses for experienced associates, and streamlining onboarding processes. Future collaboration with the ERO will aid in reducing external agency use. Currently, the staffing office receives weekly updates on open vacancies for each unit, a spreadsheet of all agencies within the organization, and a spreadsheet of all nurses in orientation, onboarding, or hired. This effort assists the staffing office view agency in terms of positions and seeing what departments are in excess and what departments are still in need.

The resource pool was established over a decade ago, and it has grown from four RNs to over 100 RNs, 20 patient care associates (PCAs), 10 secretaries, and 30 companions. The facility’s sizeable resource pool is a great advantage in transitioning from a float pool mentality to an internal contracted mentality. Other strengths of the organization include having two campuses for one hospital for easy reallocation of staff, a supportive and charitable foundation to provide grants and funding for new improvement processes, an established clinical informatics department, and others noted in Figure 5.

Weaknesses

Identifiable weaknesses for the project facility in the strategic planning of decreasing agency use include high vacancy rate, resistance to centralization, lack of standardization and data collection, and limited staffing office. After surviving two pandemic surges and their increased turnover rates, the project facility now has over 600 full-time nursing (and nursing support) positions that need to be filled as of October 2021. The project facility will need to focus on recruitment and retainment at the same time. The push for centralized staffing has been ongoing for the last two years. Many nurse leaders are hesitant to support centralized staffing, fearing their staff will lose their specialty skills, and their units will not be adequately staffed. Loss of control of scheduling is also a hesitation. Trust will need to be built between the staffing office and nurse leadership to ensure that an organizational staffing view continues to staff individual departments effectively.

With the recent acquisition of another acute-care campus for our hospital, the lack of standardization became apparent through various processes from education to staffing. Every unit schedules differently; therefore, a barrier to standardization exists on transitioning the new campus to our established staffing and scheduling processes. The facility's main campus has taken several scheduling standardization ideas from the acquired campus and put those in place here after viewing their success. Scheduling and staffing processes will need to be further standardized throughout the organization, and nurse leader support for data collection regarding vacancies, callouts, on-call nurse usage, etc. will also need to be established. Currently, the staffing office has established templates in the organization's scheduling software to track data on agency

use, call-ins, on-call usage, call-offs due to low census, call-offs due to overtime, and even call-outs related to COVID-19 for Federal Emergency Management Agency (FEMA) reimbursement. These processes are easy to perform but require nurse leadership encouragement, as well as support for staffing transparency in order to be successful.

The facility's staffing office was established on February 1, 2021, with the purpose of implementing fiscally responsible staffing processes. Currently, the department consists of two persons, a nurse manager, and a staffing coordinator. While the future may require multiple positions from administrative assistants, to staffing coordinators, tech support, and even clinical informaticists, the business proposal has been completed to request an administrative scheduling coordinator to assist with collecting data and a data analyst to assist with interpreting data for future predictive staffing methodologies. The expectation is for the staffing office to grow as the needs for standardization grow, eventually becoming a corporate division. Other weaknesses such as current staff morale, financial capabilities, and lack of communication are also identified in Figure 5.

External Analysis

A comprehensive external analysis is helpful in identifying future trends and preparing for changes in the future. Opportunities and threats of the project facility have been identified. These subcategories are then broken down into specifics for the project.

Opportunities

External opportunities for the project facility include competitive marketing changes, supportive community leadership, and an abundance of local nursing

education programs. With the acquisition of a second campus at the facility, the biggest outlying competitor for census and recruitment became eliminated at the local level. New competitors became larger multi-hospital corporations that continue to push the facility to standardize and improve and benchmark to remain current and relative. The project facility has much community support as it is the largest employer in the community. Many associates consistently donate to its foundation and are loyal to giving back to the community. During the COVID-19 pandemic, the facility's community has repeatedly supported nursing in various ways from providing meals, to first responder parades to boost morale, to decorating walkways in the parking garage to encourage nursing staff and acknowledge their hard work.

There are over 10 nursing schools established near the project facility, which allows for a great advantage in terms of recruitment. Not only local area nursing schools but other nursing schools are invited to the facility for clinical, education, network, etc. Other positive opportunities are identified in Figure 5.

Threats

External threats include the current pandemic state, loss of staff, and new generational values. While the second COVID-19 presence continues to trend downward, the pandemic climate remains unstable. Another sudden spike in cases and census, especially with the expected season change, is a looming threat.

Much staff was lost during 2020 and 2021 COVID-19 census surges due to delayed implementation of hazard pay, short staffing, and travel nursing opportunities at higher salaries. While the facility's ratio of organizational employees to external agency

employees is an opportunity for improvement, backfilling vacancies through competitive employment and recruitment first must be a priority.

A new generation with different priorities faces nursing. Work-life balance is a priority, and many nurses prefer to work their required full-time hours only, leading to more shifts needing to be filled, and less desire to work without benefits. Incorporating staff to an internal agency without benefits will be a challenge. The staffing office will need to work diligently with the ERO to ensure the right nurses are identified and given those opportunities, such as experienced nurses that have spouses with benefits or nurses not requiring internal benefits. Other external threats are identified in Figure 5.

Figure 5

SWOT Analysis of Project Facility

<p><u>Strengths</u></p> <ul style="list-style-type: none"> • Collaboration • Employment and Recruitment Office • One Hospital: Two Campuses • Established Resource Pool • Foundation of staffing office • Facility’s charitable Foundation • Nursing Informatics Department 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Resistance to centralized staffing • Lack of standardization • Resistance to change • Resistance to transition from Resource Pool to internal agency • Current staff morale • Current financial state • Lack of Communication
<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Local Market Competitiveness • Supportive Community • Quantity of local nursing schools • Abundance of Agency nurses visiting area wanting to stay • Rural and Urban community involvement 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • Current pandemic • Loss of staff • Generational values • Community fear of pandemic • Stalled nursing advancements in politics due to pandemic

The SWOT analysis of the project facility provides a valuable framework in strategic planning, highlighting strengths and opportunities for utilization, as well as

identifying weaknesses and threats to improve and prepare for in the future. Strategic planning will be crucial to the task of decreasing agency used at the project facility. A collaborative, interdisciplinary approach with the staffing office, nurse leadership, human resources, ERO, and front-line associates are best suited for implementation of centralized staffing, use of internal agency, and increased employee retainment and recruitment. These three tools will help the facility live up to its mission to provide excellence in health and implement its vision to become a national leader in healthcare quality.

Resources

The desired outcome of the project will require resources outside of its current utilization. Decreased overtime use, decreased on-call staff utilization, recruitment for Resource Pool, decreased external agency use, and decreased turnover rates are the outcomes requiring external and internal resources. Decreased overtime use will require an increased number of RNs staffed, limiting the number of shifts nurses are currently working. Decreased on-call utilization will require a larger resource pool with a combination of short-term contracted associates as well as “just in time” staffing. Recruitment efforts for the Resource Pool will include visiting schools, job fairs, and hosting hiring events by the ERO. With the use of an internal agency, external agency use will decrease. With a decreased frequency of staffing shortages, the hope is that nursing turnover rates will also decrease.

Team Members

The project will be led by an interdisciplinary team, focused on the project’s proposal and desired outcomes. The team will meet regularly (either weekly or bi-

weekly) to maintain a proper timeline and evaluation of the project. The project will be led by this Project Leader. In addition, the team will include the Director of Nursing Professional Practice, Senior Financial Analysts, CNO, Resource Pool Nurse Manager, ERO Director, and Human Resources VP.

Cost-Benefit Analysis

With any project, the fiscal risk tolerance of the setting or facility must be assessed. The costs of the project will be considerable, as recruitment and onboarding of new associates is always costly, as is increasing salaries for an internal agency. Comparing these costs to the financial burden of excessive agency use; however, proves the investment to be beneficial.

Recruitment, Retention, and Onboarding

In order to begin utilizing Resource Pool staff for short-term contracts as an internal agency, 50 additional nurses need to be hired into the resource pool. The average cost of onboarding a new nurse is over \$60,000 according to the facility's Human Resources Department, totaling to an investment of over \$3 million. While this seems like a large investment, it is lower than the \$8 million per month spent on external agency staffing during the pandemic.

Internal Agency Salaries

The premise of an internal agency is that the nursing associate would have a higher salary than a regular staffing nurse or even a "just in time" staffing nurse in the Resource Pool. In mirroring salaries to the way that Adams et al. did in their 2015 study, the internal agency should be established between a regular, weekday nursing salary plus overtime and a weekend, night shift nursing salary plus overtime. At the project facility,

the average nursing salary is \$32.20 per hour according to the facility's Department of Finance. Night shift differential is \$3.50 per hour and weekend differential is \$5.50 per hour. The proposed internal agency salary should then be \$52.8 per hour, putting the salaries between \$48.30 per hour and \$57.30 per hour. If 30 nurses would be designated to the internal float pool, that salary increase would equate to a \$20.60 per hour for 30 designated nurses, which is a \$22,248 increase in salaries per week (based on a 36 hour work week) and an additional annual cost of almost \$1.2 million, which is still less than labor costs of external agency use.

The needs of the project facility and those affected by the pandemic-associated labor shortage are evident and require intervention. For a large facility serving such a large community, the ability to staff the organization and serve the public is imperative. The project design must be reasonable and attainable in a shorter time frame than previous staffing strategies implemented in the past.

Conclusion

In conclusion, a needs assessment of the project facility shows the importance of implementing an internal agency for nursing, increasing recruitment strategies, and improving retainment for nursing. The SWOT analysis emphasizes the strengths of the facility, over any weaknesses identified, and the cost-benefit analysis proves the fiscal value of the project. With support and collaboration from sponsors and key stakeholders, this project will be vital to process improvement.

CHAPTER IV

Project Design

In response to the staffing and financial devastation of the pandemic nursing shortage, desired outcomes based on recruitment, retainment, and internal agency implementation were identified in this project. To obtain the desired outcomes of this project, a specific design is proposed to ensure successful project implementation. The design of this project is based on a process of setting goals, implementing change, and evaluating outcomes. Setting goals, setting a timeline, establishing objectives, and strategic planning for budgeting and materials are components of the specific project design.

Goals and Objectives

The goals of this project are proposed in alignment with the desired outcomes and strategic plan. Goals of this project include internal agency implementation, employee retainment, increased employee recruitment, and decreased external agency use. Each of these goals has substantial correlating objectives used to guide the project implementation. Goals and outcomes are outlined in Table 1. The goals of implementation of internal agency RNs focuses on recruitment to increase Resource Pool staff and compensation efforts to stay competitive in a regional market. To increase Resource Pool staff, the project facility has set a goal of onboarding 50 additional nurses in order to begin internal contracts of Resource Pool staff by end of the fiscal year (FY) 2023. The wage rates of an internal agency will need to be considerably higher than regular float nurses in the Resource Pool. Based on previous studies, Adams et al. (2015) recommends a rate that is set between the average RN base pay and the average overtime

RN rate on a weekend night. These positions are ineligible for benefits, weekend, or shift differentials. In turn, these associates are not required to work holidays or take on-call shifts.

Recruitment and retainment must occur as a collaborative effort between nurse leadership and the ERO. In addition to the outcome of onboarding 50 Resource Pool nurses to create the internal agency, recruitment will need to onboard 50 additional nurses to backfill the vacancies created by implementation of the internal agency, which will likely appeal to internal candidates. With decreased on-call use and decreased overtime, which leads to burnout, the goal is for retainment to increase and turnover to decrease. The desired outcome for this goal is to decrease overtime use by 10% and decrease on-call use by 20%, as on-call utilization was identified by the project facility as one of the most commonly mentioned dissatisfiers in the facility's recent associate engagement survey. With this implementation, the desired outcome will be a decreased turnover rate. Turnover rates increased by 7% during COVID-19. The desired outcome for emphasizing retainment would be a turnover decrease of 10%.

With implementation of other project strategies, there is an overall goal to decrease external agency use. External agency use is a staffing crutch that has led to the fiscal demise of nursing labor budgets. The outcome for this goal is to decrease externally contracted labor hours by 30%.

Table 1*Project Goals and Objectives*

Goal	Objective
1. Boost Recruitment Efforts.	1. Hire and onboard 50 Resource Pool RNs by end of FY 2023.
2. Improve Retainment	1. Decrease overtime use by 10% by mid-year, FY 2024. 2. Decrease RN on-call usage by 10% by mid-year, FY 2024. 3. Decrease turnover rates by 15% by mid-year, FY 2024.
4. Implement internal agency pool.	1. Start implementing internal RN contracts from Resource Pool by end of FY 2023.
5. Decrease External Agency Use.	1. External agency contracted labor hours decreased by 30% by mid-year, 2024.

Plan and Material Development

In order to address the goals and specific outlines of this project, an outline of steps has been identified for each of the four goals. This plan with material development is outlined in Figure 6. Included is the specific goal's outcome, key stakeholder, timeline, and brief identification of method of evaluation.

Figure 6

Project Materials Development

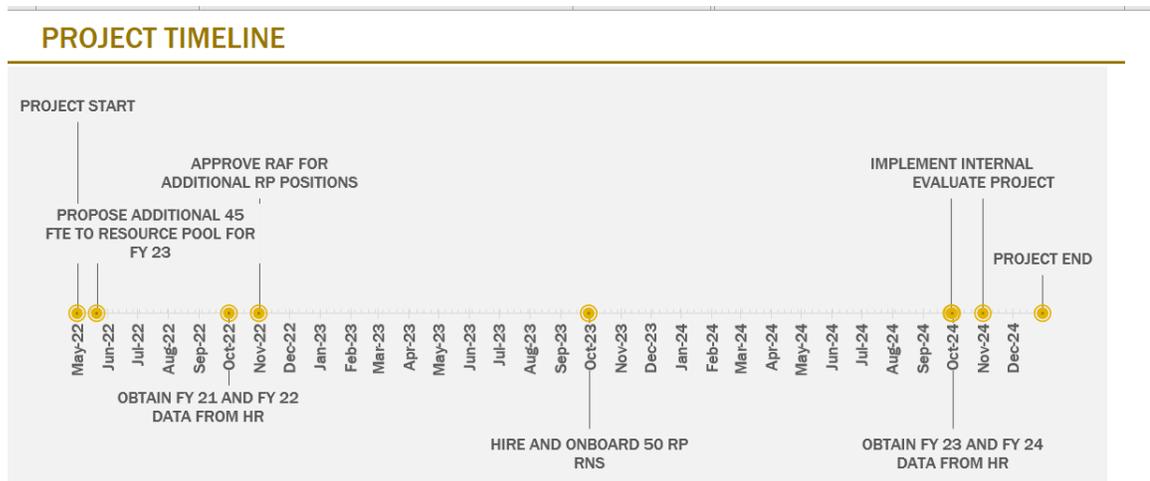
Goal	Objective	Outlined Steps	Stakeholders	Estimated Timeline	Method of Evaluation
1. Boost Recruitment Efforts.	1. Hire and onboard 50 Resource Pool RNs by end of FY 2023.	<ol style="list-style-type: none"> 1. Propose FTE increase for Resource Pool to Finance. 2. Obtain approval of 45 FTE (50 0.9 RN FTEs). 3. CNO to approve requisitions (RAFs) for FTEs. 4. ERO to attend hiring fairs and events. 5. ERO to hire 50 agency RNs. 6. Onboard 50 RP RNs. 	<ol style="list-style-type: none"> 1. Director of Employment and Recruitment. 2. Chief Nursing Officer (CNO). 3. ERO Nurse Recruiters. 4. Resource Pool Nurse Manager. 	<ol style="list-style-type: none"> 1. FTE Approval completed before FY 2023. 2. 2. RAF approval before FY 2023. 3. Hiring and onboarding by FY 2024 end. 	1. Timeline evaluation.
2. Improve Associate Retainment.	<ol style="list-style-type: none"> 1. Decrease RN overtime use by 10% by mid-year, FY 2024. 2. Decrease RN on-call usage by 10% by mid-year, FY 2024. 3. Decrease RN turnover rates by 15% by mid-year, FY 2024. 	<ol style="list-style-type: none"> 1. Obtain data from Finance and HR to obtain baseline Overtime hours for FY 2021. 2. Obtain on-call usage for FY 2021 from staffing office. 3. Obtain turnover data from HR. 4. Re-evaluate overtime use for FY 2022 and FY 2023. 5. Re-evaluate on-call usage for FY 2022 and FY 2023. 6. Re-evaluate turnover rates for FY 2022 and FY 2023. 	<ol style="list-style-type: none"> 1. Division of Finance. 2. Human Resources. 3. Staffing office. 	<ol style="list-style-type: none"> 1. Obtain data at beginning of project for FY 2021. 2. Obtain data for FY 2023 by April, 2024. 	<ol style="list-style-type: none"> 1. Compare data for FY 2021, FY 2022, and FY 2023.
3. Implement internal agency pool.	4. Start implementing internal RN contracts from Resource Pool by end of FY 2023.	<ol style="list-style-type: none"> 1. Create internal agency agreement document and have approved by Compensation in HR. 2. Obtain list of long-term staffing needs from inpatient unit managers. 3. Match internal contracts with long-term needs based on experience and skillset. 4. Sign internal agency agreements. 5. Begin contracted internal agreements. 	<ol style="list-style-type: none"> 1. Resource Pool Nurse Manager. 2. Inpatient Unit Managers. 3. Director of Compensation. 4. Director of Hr. 5. Director of Payroll. 	<ol style="list-style-type: none"> 1. Compensation to draft internal staffing agreement by mid-year (April) 2023. 2. HR to approve to document by June 2023. 3. Obtain list of long-term needs by July 2023. 4. Assign long-term agreements by August, 2023. 5. Begin contracted agreements by September, 2023. 	<ol style="list-style-type: none"> 1. Evaluate timeline for document creation. 2. Obtain report of assigned internal agreements from Resource Pool Nurse Manager.
4. Decrease External Agency Use.	1. External agency contracted labor hours decreased by 30% by FY 2024 end.	<ol style="list-style-type: none"> 1. Obtain contracted hours report from Finance for FY 21 and FY 22. 2. Utilize internal agency agreements. 3. Obtain contracted hours report from Finance for FY 23 and FY 24. 	<ol style="list-style-type: none"> 1. Division of Finance. 2. Resource Pool Nurse Manager. 	<ol style="list-style-type: none"> 1. Obtain contracted hours report for FY 21 and FY 22 at start of the project. 2. Obtain contracted hours report of FY 23 and FY 24 by November, 2024. 	<ol style="list-style-type: none"> 1. Comparison of contracted labor hours reports.

Timeline

The collective steps for implementing the plan for each goal intersect and create a very specific project timeline. This timeline is outlined in Figure 7. The complete timeline for this project takes place over 2 fiscal years. This allows ample time for project planning and implementation.

Figure 7

Proposed Project Timeline



PROJECT DETAILS

DATE	MILESTONE	POSITION
05/01/2022	Project Start	25
05/21/2022	Propose additional 45 FTE to Resource Pool for FY 23	10
10/01/2022	Obtain FY 21 and FY 22 Data from HR	-10
11/01/2022	Approve RAF for additional RP positions	15
09/30/2023	Hire and Onboard 50 RP RNs	-15
09/30/2024	Implement Internal Agency	15
10/01/2024	Obtain FY 23 and FY 24 data from HR	-15
11/01/2024	Evaluate Project	15
12/31/2024	Project End	15

Budget

The cost-benefit analysis previously mentioned outlined some of the fiscal costs of implementation of the project. The complete budgeted expenses for this project are outlined in Figure 8. This budget will be used to evaluate success or opportunities for improvement throughout project implementation. The total capital budgeting request for this project would be \$10,000,000, with two main sources of expense: hiring and labor. Recruitment of 50 nurses at a higher salary is a big expense; however, more beneficial than a constant influx of externally contracted nurses with high turnover. Final external contracted labor costs of Fiscal Year 2020 equaled roughly \$38,000,000, which is almost four times the proposed project budget expenses.

Figure 8

Proposed Project Budget Expenses

PROJECT EXPENSES	
RECRUITMENT	AMOUNT
Job Fairs/Hiring Events	\$5,000.00
Sign-On Bonuses (\$10,000 x 25)	\$250,000.00
Onboarding & Education x 50 (average \$80,000)	\$4,000,000.00
Other	\$5,000.00
Total	\$4,260,000.00
INTERNAL AGENCY SALARIES	
	AMOUNT
FTE (2080 hrs) x 50 (44.8\$/hr)	\$4,661,800.00
Evaluation Labor	\$5,000.00
Other	\$5,000.00
Total	\$4,671,800.00
TOTAL	\$8,931,800.00

Evaluation Plan

An evaluation plan has been created to strategically assess the success of the project's goals and outcomes. For each goal and identified desired outcome, a specific measure of evaluation has been identified and detailed to ensure proper evaluation. The primary method of evaluation will be the assessment of the desired outcome and goals identified. Much of the evaluation will be comparison-based. Many of the HR reports regarding overtime use, on-call utilization, and contracted labor hours and expenses will be pulled prior to project initiation and 1 year after project initiation for comparison. A breakdown of evaluation criteria is outlined in Figure 9 and a copy of the Project Evaluation Tool can be found in Appendix A.

Figure 9

Project Evaluation Tool Chart

Goal	Objective	Goal Exceeded (4)	Goal Met (3)	Goal Partially Met (2)	Goal Not Met (1)	Not Yet Started (0)	Score
		Defined As:	Defined As:	Defined As:	Defined As:	Defined As:	
Boost Recruitment Efforts	Hire and Onboard 50 RP RNs by end of FY 2023.	55+ RP RNs hired and onboarded by end of FY 2023.	50 RP RNs hired and onboarded by end of FY 2023.	25+ RP RNs hired and onboarded by end of FY 2023.	Less than 25 RP RNs hired and onboarded by end of FY 2023.	0 RP RNs hired and onboarded by end of FY 2023.	
Improve Associate Retention	Decrease RN overtime use by 10% by mid-year FY 2024.	RN overtime decreased by more than 15% by mid-year FY 2024.	RN overtime decreased by 10% by mid-year FY 2024.	RN overtime decreased by 5-9% by mid-year FY 2024.	RN overtime decreased by 4% or less by mid-year FY 2024.	RN overtime not assessed by mid-year FY 2024.	
	Decrease RN on-call usage by 10% by mid-year FY 2024.	RN on-call usage decreased by more than 15% by mid-year FY 2024.	RN on-call usage decreased by 10% by mid-year FY 2024.	RN on-call usage decreased by 5-9% by mid-year FY 2024.	RN on-call usage decreased by 4% or less by mid-year FY 2024.	RN on-call usage not assessed by mid-year FY 2024.	
	Decrease RN turnover rates by 15% by mid-year FY 2024.	RN turnover rates decreased by 20% or more by mid-year FY 2024.	RN turnover rates decreased by 15% or more by mid-year FY 2024.	RN turnover rates decreased by 5-10% by mid-year FY 2024.	RN turnover rates decreased by 4% or less by mid-year FY 2024.	RN turnover rates not assessed by mid-year FY 2024.	
Implement Internal Agency Pool.	Start implementing internal RN contracts from RP by end of FY 2023.	15+ RN contracts implemented by end of FY 2023.	10 RN contracts implemented by end of FY 2023.	5 RN contracts implemented by end of FY 2023.	Less than 5 RN contracts implemented by end of FY 2023.	Internal RN contracts not yet implemented by FY 2023.	
Decrease External Agency Use.	Decrease External agency RN contracted labor hours by 30% by end of FY 2024.	External agency RN contracted labor hours decreased by more than 35% by end of FY 2024.	External agency RN contracted labor hours decreased by more than 30% by end of FY 2024.	External agency RN contracted labor hours decreased by 10-29% by end of FY 2024.	External agency RN contracted labor hours decreased by less than 10% by end of FY 2024.	External agency RN contracted labor hours not assessed by end of FY 2024.	
TOTAL							

Summary

Implementation of the project includes the identification of goals and outcomes, planning and implementation within budget and timeline, and thorough evaluation plans.

Strategically planned project implementation can minimize barriers or constraints within the project and increase the probability for success. This allows the project to become a foundation for future evidence-based practice going forward.

CHAPTER V

Dissemination

Amidst the COVID-19 pandemic, external agency nursing became the first and only solution to nursing shortages in acute care facilities, creating financial devastation, quality dissolution, and a revolving door of nursing labor turnover and continued shortages. Key stakeholders in acute care facilities must acknowledge the financial and quality impact of external agency nurse use, consider alternatives, and implement strategies to resolve nursing shortages internally prior to seeking external resources. Implementing an internal agency, focusing on recruitment and retention, and decreasing external agency use will prevent future financial and nursing labor desolation.

Dissemination Activity

The financial impact of external agency use in the capacity it has been used during the COVID-19 pandemic is not sustainable to acute care, non-profit facilities. With contracted labor classified as a non-budgeted expense, an annual expenditure of \$36 million, such as the one at the project facility is not a practice that can go unchanged. In presenting this project proposal to Directors of Nursing and Senior Financial Advisors in an acute care setting, handouts highlighting the problem, impact, and project proposal, details can be found in Appendix B.

The financial costs of external agency use were shocking to the presented stakeholders, especially as it tied to the quality impacts of external agency use. The upfront costs of implementing an internal agency pool caused some initial push-back from both nursing and financial leaders, but when compared with expenditures on external labor from the previous fiscal year, leaders began considering the investment in

alternative solutions. Comparing the implementation to those completed at other comparable facilities in literature eased anxieties about creating such an impactful staffing change in nursing.

Several recommendations were made by nurses and financial leaders. Senior financial leaders recommended researching an implementation that was not only nursing-based but reached across other interdisciplinary teams. Many other acute-care disciplines use external contracted labor such as respiratory, therapy, and post-acute organizations. Nursing leaders encouraged expanding the bandwidth of an internal pool to reach across all facilities within the organization, not just the largest facility within the organization. The project was challenged to determine a way to fix nursing labor shortages system-wide, instead of hospital-wide.

Limitations

Development of this project required collaboration from multiple resources at the project facility: nurse leadership, finance, employment and recruitment, human resources, compensation, and quality. One of the biggest limitations to the project is that it considers a system-wide problem at a facility-wide level. All data and proposals in the project are the largest facility within the organization. Improving labor shortage processes at one facility still leaves gaps in improvement at other facilities and will continue to have a financial impact on the organization.

Another limitation of the project is that it proposes a solution to nurse staffing in its current state. Many organizations are looking at team-nursing models, bringing licensed practical nurses (LPNs) back to the bedside, increasing ratios, and also

increasing the team of caregivers. As this becomes more prevalent, staffing solutions will have to be re-examined to accommodate this staffing model.

Implications for Nursing

Nurse-to-patient ratios and safe staffing have major impacts on nursing turnover and retainment. Creating an environment where nurses feel confident in their staffing and their practice allows for higher job satisfaction, increased engagement, and decreased turnover. Creating an environment where nurse leaders feel confident about their staffing and their schedules allows them to mentor and grow their staff into future nurse leaders and drive the nursing profession toward continued improvement.

While healthcare cannot know when the next pandemic will occur, learning from the labor shortages and expenditures from the COVID-19 pandemic can allow for better planning for the future. As any other epidemics begin to surface globally in the future, nursing can be proactive in examining their current staffing practices and acknowledging the value in their current staff to decrease turnover and labor shortages.

This project facility was founded in the early 1900s amidst the Spanish influenza epidemic. These global pandemics have a history of defining healthcare practices and creating organizations that are dedicated to meeting the needs of their community. Learning from the nursing labor practices of the COVID-19 pandemic, learning how to recover from those practices with processes outlined in this project, and outlining those successful solutions in the future can prepare nursing for what is yet to come.

Recommendations

Building off the recommendations obtained in dissemination and the identified limitations, a recommendation for the project is to expand the view of the nursing labor

problems to identify system-wide resolutions within the organization. Bringing in leaders from disciplines at other facilities could help develop a plan in the future to resolve system-wide nursing shortages based on the successes of this project.

Examining how nursing shortages can be resolved within the organization can set a precedent for resolving other labor shortages outside of nursing: respiratory therapists, speech therapists, physical therapists, phlebotomists, physicians, etc. While they also have labor shortages as a result of the COVID-19 pandemic, their staffing models are quite different and would need to be re-evaluated and proposals made based on the framework of this project and with the flexibility to change based on the individual needs of the disciplines.

Conclusion

The COVID-19 pandemic, introduced in December 2019, caused a global impact on nursing, creating one of the largest nursing labor shortages in history. Reliance on external agencies for nurse staffing became the quickest and easiest solution. Demand for external agency RNs created a bidding war among organizations, driving up the costs of contracted labor higher than ever before. These unregulated costs of external agency nurses became financially devastating to acute care organizations that had never budgeted for this kind of expense before. New staffing strategies and nursing labor plans have to be created to recover from the labor shortage and financial devastation of the COVID-19 pandemic.

Like the project facility, many organizations were not prepared for supplying long-term staffing solutions to their organizations. While float pools create a quick solution for just-in-time staffing issues, without a plan for long-term staffing needs,

external agency nurses are the only option. Creating an internal agency within the organization allows for long-term staffing solutions and accommodates predictive staffing needs. As both short-term and long-term staffing issues are resolved, overtime and on-call use decrease. Resolved staffing issues can decrease turnover, improve employee engagement, and further decrease any future external agency needs in the future.

Healthcare is always changing, whether it is fueled by global health changes, political changes, or generational labor changes. Finding ways to adapt to staffing changes in healthcare requires collaboration, flexibility, and imagination. The staffing solutions of this project allow not only the nursing profession to recover from the COVID-19 pandemic, but healthcare organizations as well. The value of adaptation and interdisciplinary collaboration learned from this pandemic recovery prepares healthcare organizations for future trends and changes and provides members of our community with the best possible healthcare they deserve.

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Appendix A
Project Evaluation Tool

Goal	Objective	Goal Exceeded (4)	Goal Met (3)	Goal Partially Met (2)	Goal Not Met (1)	Not Yet Started (0)	Score
		Defined As:	Defined As:	Defined As:	Defined As:	Defined As:	
Boost Recruitment Efforts	Hire and Onboard 50 RP RNs by end of FY 2023.	55+ RP RNs hired and onboarded by end of FY 2023.	50 RP RNs hired and onboarded by end of FY 2023.	25+ RP RNs hired and onboarded by end of FY 2023.	Less than 25 RP RNs hired and onboarded by end of FY 2023.	0 RP RNs hired and onboarded by end of FY 2023.	
Improve Associate Retention	Decrease RN overtime use by 10% by mid-year FY 2024.	RN overtime decreased by more than 15% by mid-year FY 2024.	RN overtime decreased by 10% by mid-year FY 2024.	RN overtime decreased by 5-9% by mid-year FY 2024.	RN overtime decreased by 4% or less by mid-year FY 2024.	RN overtime not assessed by mid-year FY 2024.	
	Decrease RN on-call usage by 10% by mid-year FY 2024.	RN on-call usage decreased by more than 15% by mid-year FY 2024.	RN on-call usage decreased by 10% by mid-year FY 2024.	RN on-call usage decreased by 5-9% by mid-year FY 2024.	RN on-call usage decreased by 4% or less by mid-year FY 2024.	RN on-call usage not assessed by mid-year FY 2024.	
	Decrease RN turnover rates by 15% by mid-year FY 2024.	RN turnover rates decreased by 20% or more by mid-year FY 2024.	RN turnover rates decreased by 15% or more by mid-year FY 2024.	RN turnover rates decreased by 5-10% by mid-year FY 2024.	RN turnover rates decreased by 4% or less by mid-year FY 2024.	RN turnover rates not assessed by mid-year FY 2024.	

Goal	Objective	Goal Exceeded (4)	Goal Met (3)	Goal Partially Met (2)	Goal Not Met (1)	Not Yet Started (0)	Score
		Defined As:	Defined As:	Defined As:	Defined As:	Defined As:	
Implement Internal Agency Pool.	Start implementing internal RN contracts from RP by end of FY 2023.	15+ RN contracts implemented by end of FY 2023.	10 RN contracts implemented by end of FY 2023.	5 RN contracts implemented by end of FY 2023.	Less than 5 RN contracts implemented by end of FY 2023.	Internal RN contracts not yet implemented by FY 2023.	
Decrease External Agency Use.	Decrease External agency RN contracted labor hours by 30% by end of FY 2024.	External agency RN contracted labor hours decreased by more than 35% by end of FY 2024.	External agency RN contracted labor hours decreased by more than 30% by end of FY 2024.	External agency RN contracted labor hours decreased by 10-29% by end of FY 2024.	External agency RN contracted labor hours decreased by less than 10% by end of FY 2024.	External agency RN contracted labor hours not assessed by end of FY 2024.	
TOTAL							

Appendix B

Dissemination Activity Handouts

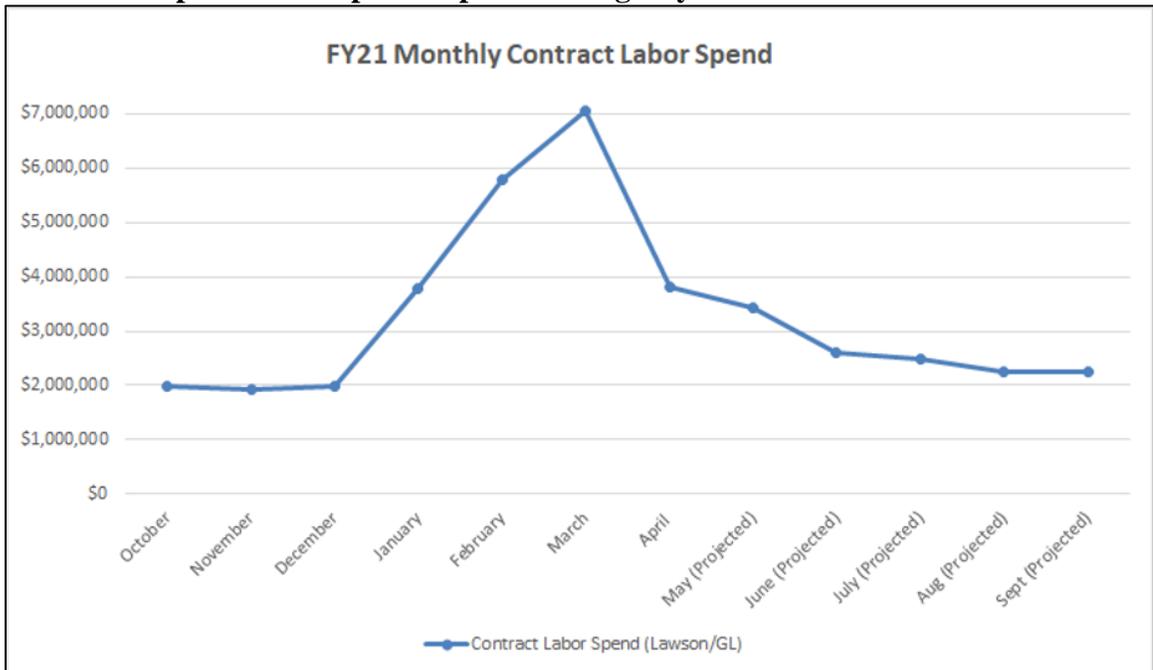
The Problem

Overuse and reliance on external agency nurses related to COVID-19 pandemic.



The Impact

\$7 million expenditure at peak of pandemic agency use.



The Project

Implementation of Internal Agency to reduce on-call usage, overtime use, external agency use, and improve nursing retainment via decreased turnover.

Goal	Objective
2. Boost Recruitment Efforts.	3. Hire and onboard 50 Resource Pool RNs by end of FY 2023.
4. Improve Retainment	6. Decrease overtime use by 10% by mid-year, FY 2024. 7. Decrease RN on-call usage by 10% by mid-year, FY 2024. 8. Decrease turnover rates by 15% by mid-year, FY 2024.
9. Implement internal agency pool.	2. Start implementing internal RN contracts from Resource Pool by end of FY 2023.
10. Decrease External Agency Use.	2. External agency contracted labor hours decreased by 30% by mid-year, 2024.

The Timeline

PROJECT DETAILS

DATE	MILESTONE	POSITION
05/01/2022	Project Start	25
05/21/2022	Propose additional 45 FTE to Resource Pool for FY 23	10
10/01/2022	Obtain FY 21 and FY 22 Data from HR	-10
11/01/2022	Approve RAF for additional RP positions	15
09/30/2023	Hire and Onboard 50 RP RNs	-15
09/30/2024	Implement Internal Agency	15
10/01/2024	Obtain FY 23 and FY 24 data from HR	-15
11/01/2024	Evaluate Project	15
12/31/2024	Project End	15