4-20-2023

The Impact of Staffing Shortages in Healthcare

Sana Syed
Western Michigan University

The Impact of Staffing Shortages in Healthcare

Sana Syed

Western Michigan University

Lee Honors College

School of Interdisciplinary Health Programs

College of Health and Human Services

Thesis Committee:

Pamela Wadsworth, PhD, Chair

Cassie Lopez-Jeng, PhD

Jessica Cataldo, PhD

Introduction

Healthcare is an industry at high demand in which people are always needed. Having adequate staffing is a fundamental element in healthcare (Hooiveld, 2022). Adequate staffing ensures an increased likelihood of high quality care for patients as well as safety. Quality is represented within six categories: patient safety, person-centered care, care coordination, effective treatment, healthy living, and care affordability (AHRQ, 2022). Patient safety is a top priority in healthcare. From precautionary protocols to proper staffing, numerous changes have taken place throughout the years in hopes for improvement and better outcomes. While these factors are ideal for the average hospital, it is important to recognize how they are influenced by staff shortages, therefore impacting the quality of healthcare. Moreover, analyzing how the quality of healthcare is influenced by proper staffing and adequate safety measures determines needed room for improvement for healthcare administrators. Many safety protocols in hospitals demonstrate a positive trend toward improvement over the years to optimize patient safety. However, many may assume that the quality of healthcare has significantly decreased solely due to the COVID-19 pandemic. Although that is a factor, it is not the only reason contributing to the downward trend. For example, the recession between December 2007 to June 2009 entailed an increased number of nursing vacancies, physician burnout, and nonclinical staffing transitioning to higher-paying jobs (Briones, 2022). This issue has been lingering for over a decade before the existence of the pandemic. Staffing shortages across the nation have immensely contributed to how the quality of healthcare has changed (Briones, 2022). When taking these factors into consideration, it is important to acknowledge that this may ultimately jeopardize the safety of patients. Inadequate staffing evidently puts more stress on staff, which may lead to burnout, eventually leading to more shortage. As a healthcare worker myself, I have experienced

numerous occasions in which the facility was short-staffed, ultimately putting more pressure on employees. Such pressure can lead to medication errors, patient falls, and staff burnout (Dall'Ora et al., 2020). Given my experience in this situation, I am interested in diving deeper into how inadequate staffing may lead to medication errors, increased patient incidents, and staff burnout. Additionally, I will explore how hospital administration is working to optimize patient safety.

Background

Hospitals all over the country are facing a staffing crisis. Patient transporters, patient techs, paramedics, and nurses are crucial to the healthcare team. Without these occupations, it would be practically impossible to run a hospital. According to the Association of American Medical Colleges, the United States will face a shortage of up to 124,000 physicians by 2034, a third of them being primary care physicians (Mensik, 2023). Additionally, vacancies in various nursing positions have been detrimental to hospitals, as they provide direct care to patients. Ochsner Health, a 47-hospital system in New Orleans, has around 1,200 open nursing positions (Mensik, 2023). Having less nurses on the floor evidently results in a higher patient to staff ratio. With less staff to provide direct care, patients are more likely to fall or hurt themselves. Many patient techs have the responsibility of escorting and assisting high fall-risk patients to the bathroom. When there are not enough patient care techs to do so, patients are inclined to escort themselves, which may lead to them falling. A fall is a serious matter in any healthcare facility, as it requires staff to complete an incident report, which would be transferred to the facility administration.

Medication errors are also a potential risk when facing a staff shortage (HPAE, 2023). Generally, medications may be administered either one hour before or an hour after the allotted

time. When a nurse has additional patients due to low-staffing, there is a high chance that a medication error may take place in the midst of a stressful busy workload (HPAE, 2023). Healthcare staff reaching burnout is a significant outcome of a staff shortage as it leads to a high turnover and places an additional burden on current employees (HPAE, 2023). Further acknowledging and analyzing these various outcomes will help establish safer practices.

Methods

The information implemented in this research is derived from literature reviews by reliable online sources. Key words such as "staffing shortage" and "patient safety" were used in searches to find the needed information. The literature reviews consisted of a variety of systematic reviews, primary research, and peer reviewed journals. Using multiple types of sources has provided an adequate amount of information to closely analyze the topic. The databases used include scholarly sources such as Elsevier (Science Direct), Wiley, and PubMed Central. These literature reviews give an insight of the average staff to patient ratios in hospitals. Initially, my topic of focus was regarding changes in healthcare quality over time, which is very broad and general. I decided to further narrow it down to a topic that investigates an issue that the healthcare industry is facing nationwide. I had also briefly interviewed two quality assurance managers at the Bronson Methodist Hospital to get a glimpse of their perspective of patient safety from the staffs' perspective. This conversation gave me insight into how the administration is observing this situation as well as the measures that are taking place to improve such issues. By directly speaking with the quality assurance managers at Bronson, I learned about multiple programs that have recently been introduced to the healthcare team. These programs will be discussed in further detail.

Patient Safety Goals

Healthcare facilities carry the responsibility of ensuring that patients are safe. In order to achieve patient safety, the quality of care delivered should be optimal as well. Unfortunately, this does not always occur due to circumstances such as extremely low staffing. To improve this issue, National Patient Safety Goals are being implemented to increase the quality of care patients are receiving. The main purpose of the National Patient Safety Goals (NPSGs) is to improve patient safety by focusing on issues in healthcare safety and making a plan to solve them (The Joint Commission: Hospitals, 2023). The Joint Commission has compiled multiple sets of National Patient Safety Goals for several different facility types which are effective January 1, 2023. Safety goals for hospitals include: correct identification of patients, improving staff communication, using medications safely, using alarms safely, preventing infection, identifying patient safety risks, and preventing mistakes in surgery (The Joint Commission: Hospitals, 2023). The 2023 goals for assisted living facilities consist of identifying patients correctly, using medicines safely, preventing infection, and preventing falls (The Joint Commission: Assisted Living Communities, 2023). Each goal contains a concise description explaining a strategy to attain this outcome. Proper patient identification, safe medication use, and preventing patient falls seem to be common goals among both facility types. Since these specific goals serve as the foundation of patient safety, it is important to further analyze these outcomes in order to make improvements in the quality of care delivered.

What is Causing a Staffing Shortage?

A shortage of staff in the healthcare system is not a novel concept. For decades, the industry has been facing a shortage of nurses, physicians, and other healthcare workers, which

affects the quality of care delivered. The COVID-19 pandemic has significantly contributed with several factors as to why there has been a sharp decline in employee retention. Retirements, burnout, and opposition to vaccine mandates are adding to this challenge (Stromstad 2022). As more information became available about the pandemic, hospitals were forced to continually adapt to the guidelines of the Center for Disease Control and Prevention, sometimes on a daily basis, which understandably created panic and chaos (Stromstad 2022). Additionally, a shortage of personal protective equipment reflected the management's lack of foresight to stock essential equipment (Stromstad 2022). Frontline workers felt immense danger as the safety of them and their families was jeopardized. Additionally, the aging population or the baby boomer generation is entering a stage of an increased need for health services (Haddad et al. 2023). In 2029, the last of this generation will reach retirement age which results in a 73% increase in Americans over the age of 65. As diseases that were once terminal are now survivable, treating these long-term diseases puts immense strain on healthcare workers (Haddad et al. 2023). Similarly, those within the healthcare workforce are also aging (Haddad et al. 2023). As of February 2023, there are over 1 million nurses over the age of 50 (Haddad et al. 2023). This means that around one third of the workforce will reach retirement age in the next ten to fifteen years, leaving a shortage of nurses (Haddad et al. 2023). A lack of nursing educators will lead to fewer students and lower enrollment rates which will eventually impact the extent of care patients receive (Haddad et al. 2023). With such rising issues that lead to less staff available, employees will become inclined to leave their jobs and eventually resign. While travel agencies are beneficial and helpful to staff shortages, it can be extremely costly. For example, in 2022, the Mohawk Valley Health System spent between $750,000 and $1.1 million a week for travel agency employees (Stromstad 2022).

Patient Incidents - Falls

Falls are a major concern in any healthcare facility such as a hospital or nursing home. When a patient falls, the facility is required to complete incident reports, notify families, and have the information sent to administration. Many are curious to know how these falls occur and how they are initiated. If the patient is a fall-risk, he or she must be closely monitored and assisted by staff during ambulation. Patients with a fall-risk are more inclined to help themselves to the restroom, for example, when there are not enough staff to assist them which may eventually lead to a fall. A study was done in 8,069 units in 1,361 hospitals across the United States using the National Database of Nursing Quality Indicators (NDNQI) (Staggs & Dunton, 2014). This study aimed to observe the number of unassisted falls per patient day in relation to the number of staff in that particular unit. Results have shown that out of 3.53 falls per 1000 patient days, 84.6% of falls were unassisted (Staggs & Dunton, 2014). A patient day is defined as the unit of measure denoting lodging and providing services rendered to one patient between the census-taking hour on two successive days (New York Codes, Rules and Regulations, 2023). Data collected from Emory University Hospital in Atlanta, Georgia has demonstrated a clear link between high call-light volume and low patient satisfaction and safety (AACN, 2018). In 2015, the hospital reported to have had patient falls in the 'red zone' for six consecutive quarters, indicating that five to six patient falls had occurred in one month (AACN, 2018). When the hospital established a synergistic approach to care zones, patient falls had been significantly reduced by 58-percent (AACN, 2018). Care zones were being spread to the whole floor with more nurses confined to specific sections (AACN, 2018). This drastically increased nurse

satisfaction and helped meet the patient falls and patient satisfaction targets (AACN, 2018). Undoubtedly, having an increased number of staff available will more likely create a safer environment for patients as they will have more assistance from staff.

Medication Errors in Hospitals

Medication errors in any facility are extremely dangerous and can potentially be fatal. Patient safety is a central concern of several healthcare delivery systems (Stratton et al., 2004).With a lack of staff per shift, nurses and nurse assistants are compelled to take on heavier assignments. With increased patient calls and tasks, staff are bound to get overwhelmed and rush so that the tasks are completed in time, which puts patient safety at risk. In this situation, nurses have a high chance of making a medication error tending to more patient calls in less time. A study by the Institute of Medicine was conducted from 33 acute care units (27 adult units and 6 pediatric units) in 11 different hospitals in the rural Midwestern region and the Rocky Mountain region (Stratton et al., 2004). 284 nurses were inquired via a questionnaire about reasons why medication errors occur as well as reasons for not reporting errors to administration (Stratton et al., 2004). The questionnaire consisted of four categories surrounding demographics, personal experiences, and opinions. The first section inquired about the type of medication error, intravenous or non intravenous. Next, nurses were asked their reasons for not reporting errors on a scale of 1 to 5 regarding their level of agreement with management related and personal related reasons, with 5 being the highest level of agreement (Stratton et al., 2004). The third section consisted of questions asking why medication errors occur. The final section was demographic-based and included questions about age, education, years of work experience, and hours worked per week (Stratton et al., 2004). This specific section may be helpful to find

correlations between hours worked per week and the number of medication error incidents. Nurses within the 11 different hospitals had participated in the questionnaire based on occurrences in the past three months (Stratton et al., 2004). Overall, pediatric nurses claimed that 67% of medication errors are reported compared to the 56% of reported occurrences on adult units (Stratton et al., 2004). In this study, 37% of respondents reported that medication errors have occurred due to the large nurse-to-patient ratio, while 46.9% of respondents have made medication errors due to distractions and interruptions (Stratton et al., 2004). Both of these causes can be interrelated as constant distractions and interruptions are very likely to occur when there is lack of adequate staffing on the floor. In fact, distractions and RN-to-patient ratios were the common reasons for medication administration errors in this study (Stratton et al., 2004).

Medication Errors in Long-Term Care Facilities

The likelihood of medication errors occurring in long-term care settings is not a rare occurrence. Geriatric residents in nursing homes typically require more attention and assistance with activities of daily living. With a lack of staff available, multiple tasks are added to the working staff's responsibilities to ensure the needs of residents are taken care of. Nursing errors are perceived at two levels: active failures and latent conditions (Mahmood et al., 2012). Active failures are acquired through memory and decision-making, whereas latent conditions refer to errors resulting from stress, fatigue, and physical factors (Mahmood et al., 2012). A study was conducted among four different nursing homes located in Edmonton, Alberta to analyze the effect of the environment on likelihood of medication errors. Each facility was staffed with licensed practical nurses (LPN), registered nurses (RN), and auxiliary care workers (ACW) who were shadowed by a research assistant for four weeks as staff performed medication-related tasks

(Mahmood et al., 2012). A cross-sectional survey was completed by 54 nurses among the four facilities in units A, B, and C. In all three units, interruptions were the top source of error as residents required assistance and from other staff asking questions (Mahmood et al., 2012). In the event that the facility was short-staffed that shift, the practitioner handling medications would stop to provide assistance to residents when no other staff was available or nearby (Mahmood et al., 2012). More examples of interruptions include bed alarms going off, assisting in ambulating a resident, fixing feeding tubes, and tending to residents yelling "Help, help!" (Mahmood et al., 2012). These urgent matters ultimately stood as a significant hindrance in a safe medication pass as it deviated the staff's attention from handling the medications of residents. Additionally, such interruptions may interfere with how the medication should be prepared before passing it to the designated resident. For example, an LPN mentioned in the survey that, due to such interruptions, she had accidentally crushed a pill for a resident who is supposed to take it whole (Mahmood et al., 2012). Any alterations that are not ordered by the healthcare provider may pose a risk for patient safety. Overall, staff indicated that the excessive workload and staffing shortage were the dominant stressors (Mahmood et al., 2012). 94.3% (n= 50) of respondents indicated that insufficient nursing staff largely contributes to incidents of medication errors (Mahmood et al., 2012). This is primarily driven by staff feeling compelled to rush their tasks so that they can assist a short-staffed unit or area, increasing the chances of making mistakes. In addition, staff may be given additional workload which may require considerably higher degrees of attention, especially when preparing medications (Mahmood et al., 2012). Due to tasks being rushed, it is likely that the quality of care given to patients will significantly decline.

Staff Burnout

Healthcare workers and clinicians have a high risk of developing burnout (De Hert S., 2020). Burnout is defined as a work-related stress syndrome that results from chronic exposure to job-related stress which may manifest as emotional exhaustion, depersonalization, and reduced professional efficacy (De Hert S., 2020). Freudenberger, a psychoanalyst, illustrated the stages of burnout by initially introducing a 12-stage model, and further reduced it to 5 stages (De Hert S., 2020). The first stage, the honeymoon phase, entails enthusiasm about the job with minimal stress. Once stress develops, it is important to implement coping strategies; otherwise, the stress may remain stagnant and may directly lead to burnout. The second stage is referred to as the 'onset of stress' in which an individual's personal life may be limited due to a heavy workload (De Hert S., 2020). This is the stage in which stress slowly develops. The third stage, chronic stress, ultimately leads to frustration due to feelings of failure and powerlessness (De Hert S., 2020). Incompetency and inadequacy are common feelings during this stage as seldom acknowledgement and praise for employee's efforts are given by management (De Hert S., 2020). By the time an individual reaches the fourth stage of burnout, feelings of apathy take over which may manifest as pessimism, behavioral changes, and physical symptoms (De Hert S., 2020). The fifth and final stage of burnout is habitual burnout where employees become chronically sad, emotionally fatigued, mentally fatigued, and even depressed (De Hert S., 2020). The consequences of such burnout may consist of absenteeism and high turnover rates (De Hert S., 2020). The COVID-19 pandemic was a time of sheer uncertainty that had only increased the burnout amongst hospitals worldwide.

To further analyze burnout amongst nurses, a cross sectional study in New Jersey was conducted to gain a further understanding of nurse burnout during the COVID-19 pandemic. The

aim of this study was to further examine how staffing, personal protective equipment, and physical exhaustion have contributed to the high rate of burnout during the first peak of the pandemic (de Cordova et al., 2022). An electronic survey regarding perceptions of burnout and intent to leave was distributed to 107,477 licensed registered nurses in October 2020 among all New Jersey hospitals (de Cordova et al., 2022). Targeted groups included nurses from the emergency department or observational inpatient acute care. Staffing was measured by nurses self-reporting the number of patients they were assigned in a typical shift before and during the peak of the COVID-19 pandemic (de Cordova et al., 2022). Before the pandemic, nurses were reported to have been assigned six patients in the emergency department and medical/surgical units, and two patients in the intensive care unit (ICU) (de Cordova et al., 2022). During the peak of the pandemic, the ICU staffing ratio increased to one nurse to three patients (de Cordova et al., 2022). Due to the extreme uncertainty and ever-changing knowledge about COVID-19 at the time, it was generally unsafe for nurses to be assigned to multiple patients in the intensive care unit. This ultimately exhausted nurses physically and mentally. Amongst all specialties, 80.1% (n= 2426) of respondents reported physical exhaustion while 64.3% (n = 1908) of respondents reported that they had reached burnout (de Cordova et al., 2022). Additionally, 36.5% (n=1106) of the respondents reported to have had an intent to leave within the next 12 months (de Cordova et al., 2022). If employees have an intent to leave within the next year and follow through with resignation, it will leave hospitals with not enough staff to adequately care for patients. With a lack of proper staff, the quality of care provided will not be performed at its highest potential, therefore resulting in a lower quality of care. Burnout appears to be an endless cycle; it is the cause and the result of a staff shortage. Burnout is the cause of a staff shortage since employees

will resign due to high stress. Similarly, burnout is the result of a staff shortage when employees are assigned with additional workloads to compensate for inadequate staff available.

Interview with Nursing Managers at Bronson Healthcare

To further gain an insight of how staffing shortages impact healthcare, quality assurance managers at Bronson Healthcare were interviewed in order to directly hear from those that are involved with handling this issue and presenting solutions. The individuals interviewed included Abby Leonard, the patient safety and quality coordinator of the system health equity department, and Stephanie Wagner, the system manager of the nursing quality department. Both roles strive to optimize patient safety and safety interventions. While working as nurses on the floor, they were able to recall the various ways in which safety was compromised. Patient falls and medication errors served as the main focuses. When the topic of patient falls arose, Leonard mentioned that the system fall committee aims to implement technology such as Epic to incorporate a predictive fall model to determine a patient's risk of falling (A. Leonard, personal communication, March 6, 2023). This model will be helpful for extra caution toward patients when a staff shortage is present. The Morse Fall Code similarly predicts a patient's likelihood of falling based on their history of falling, secondary diagnoses, mental status, and whether they use ambulatory devices (A. Leonard, personal communication, March 6, 2023). While this is a great tool, it is subjective to the staff. This indicates that this might not initially be implemented since this model will be used starting in April or May (A. Leonard, personal communication, March 6, 2023).

Stephanie Wagner highlighted the importance of medication errors and the involvement of hospital administration. Wagner mentioned that once a patient incident report is completed, administration immediately gets involved (S. Wagner, personal communication, March 6, 2023).

The Medication Safety Committee meets to conduct at least two interviews to analyze the incident as well as the root cause whether it be from an inattentive mistake or from patterns of staff shortages (S. Wagner, personal communication, March 6, 2023). This collaborative approach seeks discussion with those from multiple roles in the hospital.

This interview also included a discussion on staff burnout and how it is a significant contributing factor to staff shortages. Both interviewees agreed that the hospital has been facing numerous staff shortages especially during and after the peak of the COVID-19 pandemic. To avoid the extreme end of habitual burnout, many nurses are opting to leave inpatient nursing and transition to outpatient settings (S. Wagner, personal communication, March 6, 2023). Additionally, there is heightened stress at hospitals which impacts psychological safety of the staff due to such a fast-paced environment (S. Wagner, personal communication, March 6, 2023). When psychological safety is compromised, errors are more likely to occur. Most outpatient settings are likely to be low-stress environments due to lower patient volume and increased staffing (S. Wagner, personal communication, March 6, 2023). Most hospitals implement mandations in which an employee is required to work a few additional hours after a scheduled time in the absence of another employee. Continuous mandations take away time from families, hobbies, and personal time. Therefore, more nurses are attempting to make the switch to a 9am to 5pm job which provides more stability and no mandations so that they are able to spend time with family (S. Wagner, personal communication, March 6, 2023). To remediate a staffing issue, Bronson hospitals across the region have an internal travel pool for float nurses to work in various units (S. Wagner, personal communication, March 6, 2023). This is an efficient way to make sure enough nurses are on the floor so that the highest quality of care is given to patients. Aside from burnout, there are various other reasons why there has been a shortage in nurses.

Wagner had mentioned that retirement is a significant factor contributing to staffing shortages (S. Wagner, personal communication, March 6, 2023). A retirement of nurses continuously leaves less nurses on the floor which impacts the degree to which a staff member can spend quality time with a patient.

Overall, the interview with nurse managers Abby Leonard and Stephanie Wagner was very insightful and engaging. I was interested to learn directly from nursing managers about the issues that are constantly on the rise in healthcare, specifically at hospitals.

Implementing Strategies to Maximize the Workforce

The staffing crisis in healthcare is a rising issue that requires solutions to maximize the workforce and create a safer environment. According to the American Hospital Association, staffing shortages replaced financial challenges as the top concern among CEOs in a survey within the American College of Healthcare Executives (American Hospital Association, 2022). To make some progress toward improvement, there are multi-faceted solutions to help make improvement toward the staffing shortage crisis.

Customizing retention strategies by involving clinicians and tailoring solutions according to the majority of everyone's needs will help create a more positive work environment (American Hospital Association, 2022). Strong management support, open communication, and input into decision-making are strategies that may increase job satisfaction and improve staff retention (American Hospital Association, 2022). Additionally, easy access to resources for mental health and well-being is crucial for employee wellness. Mount Sinai Health systems opened a center for employee wellness after taking note that 25 to 40 percent of first responders and healthcare workers experienced PTSD as a result of the COVID-19 pandemic (Frasier,

2022). Since not all solutions work for every health facility in the nation, it is important to customize and tailor solutions that suit the facility and employees best.

When staff are assigned additional workload in times of a staff shortage, there is a high chance of employee dissatisfaction. Establishing and adhering to staffing minimums is an important step in fixing the problem (Frasier, 2022). Stressed and overworked employees are more likely to make inattentive mistakes. Moreover, overworked employees are highly likely to reach burnout and eventually resign. A study has shown that there is a 7 percent increase in risk-adjusted mortality after general surgery (Frasier, 2022). Hospital administration must assign appropriate staff to patient ratios to increase patient safety and outcomes (Frasier, 2022). Earning back the trust of patients and employees is the most important step of establishing a safe and positive workplace for employees. This is possible by sticking to the maximum safe number of patients an employee can be assigned and not going over that number.

Allowing international medical graduates to practice in the United States with minimal additional training may drastically close the gaps of staff shortages (Frasier, 2022). With 270,000 internationally-trained immigrant healthcare professionals in the United States, there should be plenty of healthcare workers to fill in the gaps especially in rural, underserved areas (Frasier, 2022). This was implemented during the peak of the COVID-19 pandemic when more professionals were needed to fill critical positions. Additionally, implementing licensing that is valid nationwide is another way to attract more employees (Frasier, 2022). If a newly licensed employee moves to another state, it would be rather tedious to go through the licensing process again. Instead, brief training regarding the state's policies should be given. Clinicians will also benefit from this as well as it allows for flexibility and mobility (Frasier, 2022). Therefore, nationwide licensing would greatly benefit several healthcare workers as they fill roles in

hospitals. Internal staffing agencies may also be greatly beneficial to hospitals. An internal staffing agency may give staff flexibility in the organization while maintaining their seniority (American Hospital Association, 2022). Like Bronson Healthcare, hiring a float pool to specifically fill in roles of employee absences or shortages will make significant improvement.

Various solutions exist for the seemingly never ending staffing shortage crisis that the United States has been facing for years. Prioritizing the well-being of employees is a crucial step for preventing burnout and increasing job satisfaction (Frasier, 2022). By minimizing staff to patient ratios, employees are more likely to feel valued in a safe work environment and are more likely to stay in their jobs for a longer period of time while keeping the potential of burnout at bay (Frasier, 2022). Permitting international medical graduates to practice in the United States without extensive additional training will undoubtedly help increase staff availability in rural areas whether it be nurses or practitioners (Frasier, 2022). Similarly, implementing countrywide licensing establishes a mutualistic relationship between healthcare facilities and employees. If implemented, healthcare workers are able to immediately work after moving to another state while healthcare facilities receive assistance when short staffed. Although putting these solutions into effect is not always easy, it is beneficial to start thinking toward feasible ways to remediate the staffing crisis.

Conclusion

Among the many challenges of healthcare, a shortage in staffing is a rising concern for hundreds of facilities across the United States. There is no doubt that numerous hospitals and skilled nursing facilities are suffering from inadequate staff. The COVID-19 pandemic significantly impacted the healthcare field as it immensely impacted the employees during a time

of great uncertainty. The purpose of this research is to further investigate a known problem in healthcare that has been on the rise for decades. Moreover, the research aimed to find the root causes of this issue and provide an analysis of how exactly both patients and employees are affected by less staff on the floor. The fast-paced and unpredictable nature of healthcare has employees under constant stress with the potential of reaching burnout. Since the COVID-19 pandemic, staffing shortages have worsened which leaves several vacant positions waiting to be filled in hospitals and other facilities. The most common outcomes of having less staff available involve an increased risk of patient falls, higher chances of medication errors occurring, and eventual employee burnout (de Cordova et al., 2022). Mandations and overtime appear to play a key role in employee burnout as it hinders a work-life balance (Frasier, 2022). Employees are highly inclined to resign from their position after enduring several stressful situations in an unsupportive work environment. The endless cycle of burnout being the cause as well as the result of a staff shortage was an interesting finding throughout the research. As the healthcare industry moves forward in technological advancements and optimum strategies, staffing shortages should be a big focus for healthcare administrators. Hospital administration may suggest solutions such as customizing strategies that best fit the employees, creating internal staffing agencies, and establishing the validity of nationwide licensing (Frasier, 2022). By taking steps in the right direction toward resolving staff shortages, the quality of care that patients receive will significantly improve while employee satisfaction and patient satisfaction excel.

References

A. Leonard (personal communication, March 6, 2023)

AHRQ. (2022). *2022 National Healthcare Quality and Disparities Report*. AHRQ. https://www.ahrq.gov/research/findings/nhqrdr/nhqdr22/index.html

American Hospital Association. (2022, February). 5 ways to ease staffing shortages now and into the future: AHA. American Hospital Association. https://www.aha.org/aha-center-health-innovation-market-scan/2022-02-15-5-ways-ease-staffing shortages-now-and-future

Assisted Living Community: 2023 national patient safety goals. The Joint Commission. (2023a). https://www.jointcommission.org/standards/national-patient-safety-goals/assisted-living-commu nity-national-patient-safety-goals/

Bell, T., Sprajcer, M., Flenady, T., & Sahay, A. (2023, January 27). *Fatigue in nurses and medication administration errors: A scoping ...* Wiley Online Library. https://onlinelibrary.wiley.com/doi/full/10.1111/jocn.16620

Dall'Ora, C., Ball, J., Reinius, M. *et al.* Burnout in nursing: a theoretical review. *Hum Resour Health* 18, 41 (2020). https://doi.org/10.1186/s12960-020-00469-9

De Cordova, P. B., Johansen, M. L., Grafova, I. B., Crincoli, S., Prado, J., & Pogorzelska-Maziarz, M. (2022, May 11). *Burnout and intent to leave during COVID-19: A cross-sectional study of New Jersey Hospital Nurses*. Journal of nursing management. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9115191/

De Hert S. (2020). Burnout in Healthcare Workers: Prevalence, Impact and Preventative Strategies. *Local and regional anesthesia*, *13*, 171–183. https://doi.org/10.2147/LRA.S240564

Frasier, B. S. (2022, November 09). Critical condition: A four-part plan to solve the dire shortage of health care workers. https://www.shrm.org/executive/resources/articles/pages/health-care-worker-shortage-frasier.aspx

Haddad LM, Annamaraju P, Toney-Butler TJ. Nursing Shortage. [Updated 2023 Feb 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK493175/

Hooiveld, J. (2022, April 12). *How staffing shortages affect patient safety*. Patient safety software to improve safety in healthcare. https://www.patientsafety.com/en/blog/staffing-shortages-affects-patient-safety

Hospital: 2023 national patient safety goals. The Joint Commission. https://www.jointcommission.org/standards/national-patient-safety-goals/hospital-national-patient-safety-goals/

HPAE. (2023, March). Code Red. New Jersey; Health Professionals and Allied Employees

Mahmood, A., Chaudhury, H., Gaumont, A., & Rust, T. (2012). Long-term care physical environments - effect on medication errors. *International Journal of Health Care Quality Assurance, 25*(5), 431-41. doi:https://doi.org/10.1108/09526861211235928 - Long-term care med errors

Mensik, H. (2023, February 16). *Lawmakers stress urgency of healthcare worker shortage*. Healthcare Dive. https://www.healthcaredive.com/news/lawmakers-fixes-healthcare-workforce-shortages/642994/#:~:text=The%20country%20faces%20a%20shortage,drive%20them%20to%20other%20roles

New York Codes, Rules and Regulations. Title: Section 86-2.8 - Patient days | New York Codes, Rules and Regulations. (n.d.). https://regs.health.ny.gov/content/section-86-28-patient-days#:~:text=(a)%20A%20patient%20day%20is,hour%20on%20two%20successive%20days

S. Wagner (personal communication, March 6, 2023)

Staffing: A path to fewer patient falls. AACN. (2018, July 31). https://www.aacn.org/nursing-excellence/nurse-stories/a-clear-path-to-fewer-patient-falls

Staggs, V. S., & Dunton, N. (2014). Associations between rates of unassisted inpatient falls and levels of registered and non-registered nurse staffing. *International journal for quality in health care : journal of the International Society for Quality in Health Care*, *26*(1), 87–92. https://doi.org/10.1093/intqhc/mzt080

Stratton, K. M., Blegen, M. A., Pepper, G., & Vaughn, T. (2004). Reporting of medication errors by pediatric nurses. *Journal of pediatric nursing*, *19*(6), 385–392. https://doi.org/10.1016/j.pedn.2004.11.007