

Fall 2022

The Sweeping Changes Felt in Healthcare During the Covid-19 Pandemic

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The Sweeping Changes Felt in Healthcare During the Covid-19 Pandemic

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BIS 437 Project

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August 5, 2022

Abstract

This paper aims to acknowledge frontline healthcare workers' obstacles and hospitals' hardships during the covid pandemic in 2020. After identifying the origin and epidemiology of the covid-19 virus, extensive research determined how challenges impacted global hospitals. These challenges included reduction of staff, supply shortages, changes in policies and procedures, organizational forced mandates, decreased revenue, hospital capacity overflow, hospital visitation guidelines, fears among healthcare professionals leading to psychological distress, and management of the unknown virus within healthcare organizations worldwide. The research will discuss healthcare mandates that took place to manage the covid virus, visitation guidelines hospitals adopted during the Covid-19 pandemic to reduce transmission, how healthcare management supported staff, and how healthcare organizations ensured the safety of patients, staff, and visitors. It will illustrate how medical facilities have quickly adapted to meet the demands of a national crisis. This project will identify how the pandemic resulted in distress and created a negative psychological impact leading to burnout among healthcare staff. My research includes personal interviews with frontline healthcare workers who experienced the trauma firsthand. They discuss the hardships they experienced during that time. It discusses the healthcare staff's psychological significance during the covid-19 pandemic and the significance of frontline staff support from administration, leadership, colleagues, and family during the crisis. Finally, the paper provides modifications for new workflow processes adopted by healthcare staff to meet the demands initiated by the disease. This project aims to provide extensive research on how healthcare workers experienced changes in workflow during Covid-19 and how they maintained a healthy culture within our healthcare systems, and how hospitals

are still trying to come back from this challenging time. Healthcare staff must be recognized and advocated globally for risking their health to care for those critically ill with the covid-19 virus.

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The Sweeping Changes Felt in Healthcare During the Covid-19 Pandemic

Covid-19 impacted everyone globally, but most of all, hospitals worldwide were negatively affected. The surge of Covid-19 cases has created additional stress within our health systems, particularly on our frontline hospital staff, who continue to operate in “survival mode.” Covid-19 influenced healthcare professionals within hospital facilities worldwide. Surges in Covid-19 cases have generated- traumatic stress on frontline workers, resulting in reduced staffing, impacted medical supply shortages widespread, forced mandates, hospital capacity concerns, decreased healthcare revenue, and constant changes that have significantly impacted healthcare workers’ daily workflow. The challenges healthcare workers must overcome have affected all areas of healthcare, resulting in psychological, physical, and emotional distress. Healthcare workers must receive support from their organizations, direct leaders, coworkers, and loved ones to provide appropriate care for patients who may be critically ill with the covid virus. My goal for this assignment is to spread awareness and understanding of healthcare workers' obstacles during the pandemic and how they managed those obstacles to care for their patients adequately. I want to spotlight my fellow healthcare colleagues who have worked the front during this challenging time and who directed their focus on their patients. Although we are exhausted from hearing about “Covid-19” and the “pandemic,” healthcare workers tend to it every day in all areas. Staff working in healthcare are at risk every day when they enter healthcare facilities. I want to give my viewers a more extraordinary outlook and clear comprehension of the covid-19 virus and its influence on frontline healthcare workers; I am very passionate about the services healthcare organizations provide for the people within our community.

Origin of Covid-19

“Covid-19 is an infectious disease that was developed by severe acute respiratory syndrome (SARS-CoV-2)” (CDC, 2020). The virus was first discovered in Wuhan, China, when community members started experiencing pneumonia-like respiratory symptoms (Guo, YR., Cao, QD., Hong, ZS. Et al., 2020). All initial cases connected with the Huanan Seafood Wholesale Market (Guo, YR., Cao, QD., Hong, ZS. Et al., 2020). It did not take long for the increasing number of ill patients to gain attention from the public. Epidemiologists worldwide initiated research as to how the virus started. They performed nose and throat collections to send off to laboratories for testing. Investigations showed who was infected when they became ill and where they were before being sick. Although epidemiologists stated that the virus came from an animal sold at the market, many people who became ill were not exposed to an animal from the market, assuming the virus was spread from person to person. It has been assumed that the covid virus was leaked from a laboratory, but this theory has not been proven. “SARS-CoV-2 is like the bat SARS-like coronaviruses, in which bats may be the reservoir host” (Guo, YR., Cao, QD., Hong, ZS. *et al*, 2020). Additional research is being conducted to prove this theory. “RaGT13 is ~96% identical to SARS-CoV-2 with some differences in the spike receptor binding domain (RBD) that could explain the differences in ACE2 affinity between SARS-CoV-2 and SARS-like coronaviruses” (Ciotti, M. et al. 2020).

The increase in covid-19 cases across multiple countries led to a pandemic on March 12, 2020 (CDC, 2020). “According to the CDC, in January 2020, China notified the World Health Organization that they had identified over 40 cases of pneumonia from unknown causes. The disease spread across Thailand, Japan, the Republic of Korea, Viet Nam, Germany, the United

States, and Singapore. Information about the disease was leaked through national news, creating global fear” (CDC, 2020). No one knew what the virus was or how it came to be. The covid-19 pandemic began to be a global concern.

Epidemiology

Covid-19 is highly contagious and spreads person to person through the air via droplets by mouth or nose whenever you speak, cough, sneeze, and breathe (CDC, 2020). The virus is transmitted over longer distances in poorly ventilated areas such as vehicles or small businesses. Social distancing mandates were put in place to prevent covid-19 exposure. It was recommended by the CDC for people to social distance 6 feet from one another to avoid direct contact with mucous membranes (McIntosh, K., 2021). Infection may also be spread by touching contaminated surfaces such as phones, doorknobs, and countertops. The virus may be associated with acute respiratory distress syndrome (ARDS). Those who contract the virus will likely experience mild symptoms; some experience no symptoms, and others with possible underlying health issues may become severely ill (CDC, 2020).

Symptoms of covid-19 vary from patient to patient, mimicking a cold, flu, and pneumonia. Symptoms may include a cough, chest congestion, runny nose, fever, loss of taste or smell, fatigue, shortness of breath, headache, nausea or vomiting, and sore throat. Symptoms typically appear within 5-6 days after contracting the virus. Adults 65 years and older with underlying health conditions such as diabetes, obesity, asthma, and auto-immune diseases are at a higher risk of experiencing complications from the virus. A study utilizing hospital chargemaster data from 245 hospitals across 38 states determined co-existing conditions of 11,721 patients over 60. These conditions included hypertension (46.7%), diabetes (27.8%),

cardiovascular disease (18.6%), obesity (16.1 %), and chronic kidney disease (12.2%) (Brown, R. et al., 2021). The study determined that hundreds of thousands of people in the United States with underlying health conditions developed complications leading to hospitalization and even death from the Covid-19 virus.

Among those at higher risk for hospital admittance from complications with covid-19, male sex, elderly, obesity, geographic region, and preexisting chronic kidney disease and cardiovascular disease were associated with increased odds of necessary ventilation (Brown, R. et al., 2021). In an interview with an intensive care physician, who asked not to be named, she stated that patients placed on a ventilator due to covid-19 complications would most likely not make enough improvements to come back off the mechanical ventilator. To combat the spread of the novel coronavirus, the Centers for Disease Control and Prevention (CDC) has developed a list of recommended preventative health behaviors for Americans to enact, including social distancing, frequent hand washing, and limiting unnecessary trips from home (Probst, Lee, & Bazzoli, 2020).” The CDC has also developed recommendations for healthcare professionals caring for patients positive for covid with underlying health conditions. The first action healthcare professionals can take to support patients with underlying health conditions is to educate their patients on the covid vaccine. Not correctly and accurately educated patients will most likely not receive the vaccine. Healthcare professionals may consider antiviral medications, therapies, and monoclonal antibodies, when caring for patients with moderate to severe risk factors for severe illnesses. Antiviral drugs and therapies decrease the risk of hospitalization and morbidity for patients with underlying health conditions. Healthcare professionals can also educate patients on the importance of keeping appointments for minor issues, routine visits, and compliance in taking prescribed medications. Patients may consider telehealth visits with their

doctors to stay at home conveniently. Healthcare professionals can encourage patients with underlying health conditions to take preventative measures such as wearing a mask when in public, social distancing, avoiding contact with those suspected or positive for the covid virus, and seeking immediate treatment positive for the virus (CDC, 2022).

The covid virus may be associated with acute respiratory distress syndrome (ARDS). Those who contract the virus will likely experience mild symptoms; some experience no symptoms, and others with underlying health issues may become severely ill. Symptoms of covid vary from patient to patient, mimicking a cold, flu, and pneumonia. Many people present a combination of mild symptoms, including a cough, chest congestion, runny nose, fever, loss of taste or smell, fatigue, shortness of breath, headache, nausea or vomiting, and sore throat. Symptoms typically appear within 5-6 days after contracting the virus. Adults 65 years and older with underlying health conditions such as diabetes, obesity, asthma, and auto-immune diseases are at a higher risk of experiencing complications from the virus. A study utilizing hospital chargemaster data from 245 hospitals across 38 states determined co-existing conditions of 11,721 patients over 60. “These conditions included hypertension (46.7%), diabetes (27.8%), cardiovascular disease (18.6%), obesity (16.1 %), and chronic kidney disease (12.2%)” (Brown, R. et al., 2021). The study determined that hundreds of thousands of people in the United States with underlying health conditions developed complications leading to hospitalization and even death from the Covid-19 virus. “In order to combat the spread of the novel coronavirus, the Centers for Disease Control and Prevention (CDC) has developed a list of recommended preventative health behaviors for Americans to enact, including social distancing, frequent hand washing, and limiting unnecessary trips from home (Probst, Lee, & Bazzoli, 2020).” “A proper diagnosis of COVID-19 is made based on the following criteria, which have been recently suggested based on

the initial investigations, including clinical signs and symptoms, history of traveling or close contact with people suspected to be infected, the positive test result for the pathogen, and pathologic findings on CT scans” (Sheervalilou, R, Shirvaliloo, M, Dadashzadeh, N, et al., 2020). Diagnostic testing played a crucial role in identifying the covid-19 virus in patients who displayed symptoms of the virus and the virus. There are effective ways to perform diagnostic testing, such as rapid antigen testing, which consists of point-of-care testing in which results can be obtained in less than 30 minutes. Rapid antibody testing requires a couple of drops of whole blood from a finger and takes about 15-20 minutes to obtain results. These methods for testing ensure a quicker turnaround time for treating patients ill with the covid virus. Some patients exposed to the virus show symptoms, while others do not. During the covid-19 pandemic, contact tracing was crucial in identifying who was positive for the virus to prevent further exposure. “Delays in confirming COVID-19 cases allow continued transmission within communities and can fail to contain the pandemic despite other measures such as physical distancing and travel restrictions” (Boeras, D., Fongwen, N., Garcia, P., et al. 2020).

While there is no cure for the Covid virus, antiviral medications, infusions, anti-inflammatory drugs, low-molecular-weight heparins, and immune support supplements may be beneficial in reducing the severity of the virus. “In the early stages of SARS-CoV-2 infections, antiviral agents could prevent the progression of the disease, while immunomodulatory plus antiviral agents appear to improve clinical outcomes in patients with critical COVID-19” (Fallani et al., 2020). Currently, there is no cure for the covid virus, treatments that aid in supportive care include keeping a close eye on vital signs and treating complications such as fever. Therapies for the covid-19 virus include antiviral drugs, convalescent plasma, vaccinations, and experimental

drugs. Many experimental trials are currently being tested for use (Wu, Y. C., Chen, C. S., & Chan, Y. J. 2020).

Managing the Unknown Virus

Covid-19 impacted everyone globally, but healthcare workers working on the frontline in hospitals worldwide were negatively impacted. Healthcare organizations are under a tremendous amount of pressure. The surge of Covid-19 cases has created stressors within our health systems, particularly our hospital staff, who continue to operate in “survival mode. All employees within healthcare facilities have come together to provide the best healthcare possible during the covid-19 pandemic. “Healthcare staff was responsible for providing treatments and symptom relief, collecting data in clinical trials, protecting patients' safety, and monitoring vital functions for critically ill patients” (Treston. C, 2020).

While states across the country were subjected to “lockdown” and not to leave their homes, frontline healthcare workers were required to work to care for their patients. Healthcare professionals and other first-responding occupations were still expected to report to duty. “Healthcare staff working the frontlines were involved in systems planning, implementing surge capacity strategies, providing care in emergency rooms, screening people in long lines at testing sites, educating the public and reinforcing staff about infection control techniques, ensuring public health, managing personal protective equipment, protecting and reassuring immunocompromised patients at risk, and providing compassionate, skillful care to patients—those with the many conditions we normally face and, now, increasing numbers with COVID-19” (Treston. C, 2020).

They relied on family members and friends to care for their children due to the closure of childcare and schools. “The highly contagious virus has led to many changes involving

healthcare policies and procedures, significantly impacting all healthcare professionals within hospital facilities worldwide. Surges in Covid-19 cases have generated traumatic stress on frontline workers, reduced staffing, widespread medical supply shortages, forced mandates among healthcare staff, hospital capacity concerns, decreased hospital revenue, and changes that have significantly impacted healthcare. For two years, healthcare organizations have prioritized covid first.

Although frontline healthcare workers adapt well to changes leading to stress and burnout, during the onset of covid-19, healthcare staff had many questions and fears. What is the virus? How can we contract the virus? Do we have unknown underlying health conditions that may cause severe health outcomes? As a healthcare professional, I asked myself whether I could bring the virus home to my family. How will we be protected while providing care for covid-positive patients? "Among the many valid reasons for fear in this pandemic are fears of developing an infection, fear of failing to provide adequate care for patients given limited resources, fear of carrying the virus home and infecting family and friends, fear of stigmatization, and many others"(Cawcutt, Starlin, & Rupp 2020). These fears of unknowns led to healthcare staff failing to report to work and wanting to keep a distance from patients positive for the virus and leaving their jobs to work in a safer environment. During the initial outbreak of Covid-19, it was unclear how individuals could contract the virus.

Misconceptions from social media and fake news created fear. Healthcare staff was unsure if the virus could be contracted by touching contaminated surfaces. At the beginning of the covid pandemic, any package delivered from an outside source was to be wiped down with bleach wipes by healthcare staff before opening to prevent the spreading of the virus. Healthcare workers took all appropriate measures to protect themselves from the virus. Essential PPE was

utilized, appropriate handwashing guidelines were followed, and sterilization techniques for all medical equipment in between patients. Although following appropriate prevention measures helps reduce the risk of exposure among healthcare professionals, it has no guarantees. There are no records of how many healthcare workers contracted the virus due to exposure from patient care. If infection rates start to increase among the frontline healthcare staff, this may jeopardize healthcare systems collapsing and worsen the pandemic. Physicians cannot keep up with the workload of caring for their patients (Barranco, R. & Ventura; F., 2020).

All surfaces, including telephones, countertops, supply boxes, doorknobs, and computer keyboards, were to be wiped daily by healthcare staff to decrease the risk of exposure. Personal Protective Equipment (PPE) played a significant role in protecting healthcare staff during the Covid-19 pandemic. These essential items for frontline healthcare staff include N95 respirators, masks, gloves, face shields, eye protection, hand sanitizer, and gowns. Although it is common practice for frontline staff to utilize PPE, when necessary, the hospital mandates that masks be worn while in the hospital, creating fear and anxiety for healthcare workers wearing them during their shifts. Healthcare workers had high infection rates and deaths due to the lack of PPE. The discomfort and technical difficulties caused by wearing PPE created stress and fear among frontline healthcare workers. Frontline healthcare staff would develop marks and bruises on their faces from long-term wear of masks. Healthcare staff would also experience difficulties suffocating from the masks.

The Covid-19 restrictions such as wearing masks, social distancing, closure of schools, churches, and businesses, and quarantining and discontinuing global travel aided in reducing the transmission of SARS-CoV-2, viral respiratory infections, and Influenza (Flu). In 2020, Flu cases declined rapidly. “In the United States, influenza activity decreased in March 2020, was

historically low through the summer of 2020 (2), and remained low during October 2020–May 2021 (<0.4% of respiratory specimens with positive test results for each week of the season” (Barnes, J. et al., 2021). This could be considered a win for frontline healthcare professionals working in clinics and hospitals, as their priorities were primarily focused on the Covid virus. Like the Covid virus, Flu viruses are very contagious and are transmitted airborne through droplets. Although both viruses share similar symptoms and can lead to hospital admission, they differ in strict regulations, complications, and length of hospital stay related to the Covid-19 virus. During the winter months of 2020, it was challenging to differentiate covid and flu based on patient symptoms. Influenza and Covid (FLUVID) testing, which tests for Covid, Influenza A, and Influenza B, was very beneficial in determining the diagnosis of patients presenting with flu-like symptoms. It can be assumed that minimal influenza testing occurred at healthcare facilities during the Covid-19 pandemic. Influenza viruses usually peak during the winter season. “From October 3, 2020–May 22, 2021, influenza activity was lower than during any previous influenza season since 1997” (Barnes J. et al., 2021). Wearing masks to prevent the spread of the covid virus also reduced exposure to influenza during the pandemic. It can be expected to increase Covid and Flu cases when mandates are lifted. “Beyond 2021, reducing influenza exposure may increase the population's susceptibility to new influenza variants even further, leading to more extensive influenza outbreaks” (McCauley, J., 2021). Covid-19 significantly impacted our society and illnesses, including the Influenza virus. Although flu cases were abnormally low during its peak season in 2020-2021, we may see an increase in Flu cases when Covid restrictions are lifted. As the pandemic evolved, more discoveries surfaced regarding the virus.

Misconceptions took place by the general public. This was an excellent opportunity for healthcare organizations worldwide to provide credible information. “Almost all of US adults (over 90%) reported trusting information about medical topics from doctors and other health care professionals in 2019” (Earnshaw VA, Katz IT. Educate, Amplify, and Focus to Address COVID-19 Misinformation. *JAMA Health Forum*. 2020;1(4): e200460. doi:10.1001/jamahealthforum.2020.0460).

Healthcare organizations turned to social media to provide covid updates and recommendations from the CDC. When direct conversations with patients are impossible, healthcare staff could communicate covid-19 updates by sending mail to patients’ homes or letters through online patient portals. Healthcare professionals were able to educate patients using trusted health information, increasing support for public health policies when appropriate, and steering their focus on vulnerable patients to avoid misinformation (Earnshaw, V., & Katz, I., 2020). Healthcare organizations relayed communication regarding covid-19 vaccines and boosters, covid testing, treatments for outpatients, visitor restrictions, facts about the covid virus, coping information, and wearing masks. Healthcare organizations utilized their websites for also scheduling video visits. Health departments worldwide provided updates and information regarding covid-19 for the people in their communities. This information included CDC guidelines, state mandates, testing information, vaccination sites, and positive covid-19 census by date. The health department routinely updates its website, so people within the community are up to date on the latest information, including those hospitalized with covid complications.

Healthcare Mandates

Policies and procedures are significant for frontline healthcare workers in providing skilled patient care. There were many changes in policies and procedures in response to the Covid-19 pandemic. These rapid changes have created anxiety for healthcare staff globally. Jen Holder, manager at Deaconess Gateway Laboratory, played a significant role during the Covid-19 pandemic. In an interview with Jen, she discussed her concerns and challenges as an administrator in the hospital during the unfortunate event. Jen explains how there were so many unknowns during the Covid-19 pandemic. The upper administration assembled instant commands. Policies and procedures related to Covid-19 changed weekly and even daily. One of the first commands was for healthcare workers and visitors to wear masks within the hospital and clinic locations. Laboratories worldwide Covid volumes were recorded daily.

There was little information about the Covid test or how quickly the laboratory could validate instrumentation—the hospital-acquired outside sources such as grants for Covid testing. The demand for Covid testing far exceeded what the hospital laboratory could provide for patient care. The hospital created drive-through covid testing sites to keep possible infected patients out of the hospital to prevent the spread of the covid virus. Phlebotomists and other lab staff were recruited to run the drive-through testing locations. These sites were developed so infected patients could remain in their cars while the covid sample collection was performed using a nasal pharyngeal swab. Collecting staff was provided protection suits they wore during the shift. During the surge with many unknowns, staff would apply a pair of gloves and tape them to their protective suits, and her second pair of gloves that were changed between patients were applied. The staff members wearing the protective suits would end their shift sweating and worn down. Once the samples were collected and labeled with appropriate patient information, the samples

were batched and taken to the hospital for testing. At the beginning of the covid pandemic, this process managed the potential spread to other patients and healthcare staff and cut back on doctors' visits for covid. From early March until June 2020, the patient average was roughly 20-30 seen daily at the covid testing drive-through. As covid cases started to increase, sustaining this process became more challenging. Covid drive-through numbers started to increase in mid-July 2020, averaging about 100+ patients seen daily at one location. Specimens were picked up by a courier every 2-3 hours. At the beginning of the covid pandemic, the turnaround time for covid results was roughly one week. As the pandemic went out, the turnaround time for results significantly improved to 48-72 hours.

Laboratory staff working the covid clinics experienced the challenges of working long, exhausting shifts and feeling unsupported by upper management. The hospital also developed outdoor triage clinics for pediatrics and coagulation clinics for patients on coumadin. Patients would arrive at coagulation clinics for routine fingerstick tests on a point-of-care instrument. This process was for adjusting medication for patients on coumadin or another blood thinner. Hospitals also partnered with the city and larger organizations to perform a one-week covid study. During a one-week course, up to 200 employees would routinely arrive for random covid antibody testing to determine the prevalence of the covid virus in non-symptomatic patients. The development of Oakley Laboratory, also known as the "Covid Lab," was primarily used for molecular testing for Covid-19, which required additional staffing to support the need for covid testing.

Jen explains how constant changes turned into challenges for all healthcare staff. She recalls that at the beginning of the pandemic, frontline healthcare workers changed out of scrubs and showered at the end of each shift; the hospital had no choice but to drop to minimum

staffing, and elective surgeries were canceled. To provide quality care for Covid patients, new processes and workflows became essential for healthcare organizations during the initial outbreaks and were changing daily. Managers and Team leaders within the laboratory would have multiple meetings a day during the surge of the covid virus to discuss the constant changes and updates within the hospital. Manager meetings were also held during their time off on the weekends. Communication was sent out sometimes multiple times a day to the staff. Covid screenings performed in emergency departments and clinics would include questions such as patient symptoms, possible exposures, and recent travel information.

Healthcare facilities would isolate those suspected of the virus until confirmed by testing to minimize hospital exposures (Goh, K. 2020). Adapting to these changes became overwhelming for healthcare staff. Hospitals worldwide designated areas within the hospital as “Covid” units to isolate patients positive for the virus to prevent the spread of the disease. Once a decrease in procedures occurred, nurses and other healthcare staff who worked in surgery, recovery, and step-down covid screenings performed clerical work. During the initial surge of covid cases, healthcare organizations developed special teams requiring medical staff, nursing, patient care techs, pharmacists, and phlebotomy, to relocate to another unit dedicating care to patients. During the pandemic, it has been reported that healthcare providers of consistent changes in how they practice. There was minimal training for healthcare staff caring for those ill with the covid virus. “These changes, sometimes made very quickly by hospital administration, were generally viewed as a response to the contagious nature of COVID-19 and ranged from being transferred to a different unit in the hospital, adjusting delivery of care, and dealing with increased emotional demands” (Ness et al., 2021). With the number of covid cases increasing, so did the need for expanding intensive care units (ICU). Nurses working in ICUs were worried

their units would be converted into covid wards. It was not uncommon for healthcare staff to receive a daily email from the hospital regarding changes in policies and workflow related to Covid-19. These changes created concerns for staff and made it difficult for them to give skilled care to their patients. Nursing managers would host meetings with ICU staff to discuss improving the increasing responsibilities and workflows. Healthcare workers are challenged by working short-staffed and growing workloads, which deviate from their usual standards.

In response to the covid-19 pandemic, New York State mandated that all hospitals double their capacity to accommodate covid care for critically ill patients. New curriculums and structures were developed to properly educate and train non-critical care staff to assist in treating patients critically ill with the covid virus. The new curriculum contained respiratory failure, ventilator management, renal replacement, shock, and hemodynamics. Operating rooms, recovery areas, and medical-surgical units were transformed into ICU/covid care units. With the influx of covid cases, hospitals quickly realized that processes needed to be modified. Nursing staff went through a 3-hour curriculum including cardiac, pulmonary, and renal pathophysiology, as well as therapies and procedures to care for patients critically ill with the covid virus. Due to the covid virus spreading rapidly, hospitals had to move quickly with training programs for frontline staffing (Brickman, D., Greenway, A., Sobocinski, K. et al., 2020).

“Research studies estimate that SARS-CoV-2 remains viable in the air for hours and varies according to the air temperature and humidity and on surfaces for several days, as the average lifespan of the coronavirus, as aerosolized particles, is about an hour (Ashraf, 2021).” To reduce the virus’s spread and minimize the number of times someone enters a covid room, limitations were put on those entering covid units. Dietary, housekeeping and patient care techs were temporarily banned from entering covid rooms. It was up to the nursing staff to take on

those duties and provide patient care. Access to covid rooms was restricted, causing nursing staff to modify how they cared for their patients. Intensive Care Units resembled war zones, with supplies and equipment spread throughout the department for easy access. Nurses working in intensive care units experienced many workflow changes, including stationing Intravenous (IV) poles outside covid rooms so nurses do not have to enter the rooms to administer medications, designating buckets outside covid rooms for placing contaminated equipment for disinfecting, and increased amounts of biohazardous waste from caring for critically ill covid patients.

However, it is common practice for frontline healthcare workers to wear surgical masks in isolation rooms; N95 respirators are recommended equipment while directly caring for Covid patients. They fit tightly around a healthcare worker's face preventing inhalation of airborne particles and reducing the transmission of the Covid virus.

N95 respirators are 95% effective in filtering tiny particles released airborne. Although surgical masks are a barrier, they do not filter tiny particles. Masks can create damaging effects from prolonged use of PPE when caring for Covid-19 patients. The number one complaint for healthcare professionals wearing masks for a prolonged time is headaches. Wearing N95 masks for a prolonged time can cause headaches, difficulty breathing, acne, skin breakdown, rashes, and impaired cognition. Masks may also interfere with vision and communication among healthcare staff. Tight-fitted masks, known as hypercapnia, may cause inadequate ventilation and increased carbon dioxide levels. When exhaling in a mask, the buildup of carbon dioxide between the face and mask will cause increased lung ventilation and respiratory activity. This may cause confusion, impaired cognition, and disorientation. Frequent changes in masks may also result in the breaking down of skin (Rosner, E., 2020). Wearing masks long-term has been a factor in creating anxiety among healthcare staff.

Moving forward, masks may join as a uniform requirement for healthcare staff working in hospitals, clinics, and doctors' offices. Nurses spent most of their shifts in patient rooms while others assisted with medications and supplies outside the room. Designated smartphones with charges were kept in each ICU room so nurses in the covid rooms could communicate with nurses outside the rooms and preserve the usage of PPE. The Centers for Disease Control and Prevention (CDC) recommends that during a crisis, N95 respirator masks only be used during aerosol-generating procedures, which leads to a high risk of exposure for healthcare workers in contact with patients suspected of the Covid-19 virus. It became challenging for nurses to wear personal protective equipment and N95 respirators for 8-12 hours. Many covid wards began making schedule adjustments to limit the spread of the virus and time wearing N95 respirators. Due to the limited supply of PPE, ICU staff tried to cut back on time spent with patients positive for the covid virus. Patients positive for Covid were placed in rooms with negative air pressure to ensure the safety of healthcare workers by forcing the air down to disrupt the particles spread throughout the air. Unfavorable air pressure rooms were scarce within hospitals. The Covid-19 pandemic prompted administrators to work with their teams to formulate emergency plans, including specialized skills and exercises and modifying changes in policies and procedures to prepare their staff for responding to emergency disasters in the future (Gao et al., 2020).

The first action hospitals made during the initial virus outbreak was to cancel all elective surgeries. "The United States Surgeon General proclaimed a formal advisory to cancel elective surgeries at hospitals due to the concern that elective procedures may contribute to spreading the coronavirus within facilities and use up medical resources needed to manage a potential surge of coronavirus cases" (Stahel, 2020). Elective surgeries are considered non-urgent and are usually scheduled in advance for preventative health. These vital surgeries may include hysterectomy,

cataract removal, orthopedic surgery, eye surgery, tonsillectomy, and abdominal and kidney stone removal; However, postponing elective surgeries preserves personal protective equipment and ventilators for frontline staff, reduces inpatient capacity to free up ICU beds, and enables nursing and anesthesiology staff to be reassigned to isolation units for critically ill patients, it creates a financial strain for hospitals worldwide, with some losing up to \$25 million in hospital revenue per week (Tonna, 2020). An important question is how hospitals will compensate for the loss of income.

During the covid outbreak, healthcare workers worldwide expressed concerns regarding the covid vaccine. In the 16 years I have worked in healthcare, I have remained competent with my organization and received my yearly flu vaccine. Like the flu vaccine, the covid vaccine was developed to protect against the covid virus. Along with social distancing, proper hand hygiene, and face coverings, covid vaccines were a resource in controlling the virus, preventing its spread, and ending the pandemic. The Food and Drug Administration (FDA) quickly approved two covid vaccines for administering in late 2020. Because healthcare workers are at high risk for contracting and transmitting the virus, healthcare organizations worldwide issued mandates for all healthcare employees to receive the covid vaccine. Vaccinating against covid-19 is very controversial among healthcare workers and created hesitation toward the covid vaccine. They had concerns, including vaccination safety, efficacy, and side effects from the covid vaccine. In the article “The Nature and Extent of Covid-19 Vaccination Hesitancy in Healthcare Workers”, the authors conduct a worldwide assessment to support the hesitation of healthcare workers. They found that 22.51% of 76,471 healthcare professionals were hesitant about receiving the covid vaccine (Biswas et al., 2021).

Healthcare professionals felt apprehensive about accepting the covid vaccine due to the turnaround time of vaccine development and distribution. Some healthcare staff took a “wait and see” approach by observing others who had already received the covid vaccine, while others stood their ground and refused it. This mandate caused many healthcare professionals to quit their jobs and work remotely. Although many healthcare professionals hold different views regarding the covid vaccine, a large population of healthcare staff, such as me, felt pressure from their organization to take the covid vaccine. Healthcare professionals who were against the covid vaccine went to their primary care physicians for an “According to Mayo Clinic, vaccine hesitancy is predominantly rooted in concerns about the safety, efficacy, and long-term profile of the vaccine problems shared in the general population” (Olick R. et al., 2021). Medical professionals performed a study to assess healthcare professionals' willingness and concerns about vaccination against the Covid-19 virus. Upstate Medical University in Syracuse, New York provides care to 1.8 million people and is made up of 9565 employees; it conducted a study evaluating the attitudes, beliefs, and willingness of healthcare workers to get vaccinated. The anonymous survey was distributed on November 23rd and December 5th of 2020 and consisted of 22 qualitative and quantitative questions. These survey questions included demographic information, occupation information, the severity of covid-19 risk, and if they thought covid vaccines should be voluntary and were to be ranked strongly disagree to agree strongly. The survey was completed with a total of 5308 responses resulting in employees' 55% response rate. They found surprising results in those who were older and who were physicians and were more likely to vaccinate against the Covid-19 virus. Nurses, pharmacists, and other clinical staff members were concerned about vaccine safety and demonstrated the most hesitancy against the

covid-19 vaccine (Anderson, K., Shaw, J., Stewart, T., Hanley, S., Thomas, S., Salmon, D., & Morley, C., 2021).

Healthcare organizations in the United States mandated covid vaccines for all healthcare employees, or they would be terminated for remaining non-compliant. Houston Methodist Hospital in Houston, Texas, an organization made up of 8 campuses and 26,000 employees, required all healthcare employees to receive the COVID-19 vaccine by midnight on June 7, 2021, or they would be at risk of a 2-week unpaid suspension and possible termination. Over 100 healthcare staff sued their employer over the mandate, falsely claiming the vaccines were not thoroughly tested and are still in the experimental phase. Some healthcare organizations accept pastoral letters from employees provided by their primary care physician (PCP). This created much anxiety for healthcare professionals because they feared losing their job. Nursing homes require hospital employees to have weekly screenings for covid. During this process, it was found that some employees were cheerful and non-symptomatic. Since the development of covid vaccines, nursing homes require proof for those who enter their facilities, and if unvaccinated, a covid test is required.

In an interview with Heather Martin, a coding specialist for the Women's Hospital, she discusses the changes in her healthcare organization. Starting in March 2020, all healthcare professionals who could perform their job duties remotely were to start working from home to social distance. Heather utilized her personal computer to remote in through a Citrix application. Heather remembers struggles such as not having a second monitor and the inability to communicate with her coworkers face-to-face. At home, she had to rely on emails and phone calls which created a delay in her work. In the first couple of months of working from home, the network was prolonged, which created a delay in coding. During the pandemic's beginning, the

Society for Maternal-Fetal Medicine (SMFM) released information to the women's health coding department on how to code for the covid virus properly. The struggle of coding for covid was documentation in the medical record. Documenting covid should be very specific. If a patient has covid but also suffering from pneumonia, it needs to be documented appropriately with also diagnosis codes. Healthcare professionals have adapted to working remotely since the covid pandemic. They are finding that while working from home, they can communicate through their Epic charting program, which reduces the need to communicate using other programs. Heather explains that now that covid has been around for a while, she is seeing patients admitted for complications due to previously having the covid virus; the coding department has new codes in place which assists in adequately coding for those patients. Heather feels she will permanently work remotely due to hospital growth and lack of space. The Women's Hospital finds that healthcare professionals working remotely continue to reduce overhead expenditures while remaining successful.

Decreased Revenue

The covid-19 pandemic has created financial strain on healthcare systems nationwide. Social distancing and the pandemic led to the cancellation of inpatient and outpatient elective surgeries and elective doctors' visits. These cancellations were implemented to limit exposure to the virus, free up hospital beds and medical staff to care for those critically ill with the covid virus, and preserve PPE and medical equipment for medical staff. Telemedicine visits by video or phone were introduced so physicians could provide care for patients who did not require immediate medical attention. This created frustrations as many patients prefer to be treated in person. The reimbursement for telemedicine visits is lower than for outpatient visits. The

strategy of canceling all elective surgeries negatively impacted all healthcare systems. Inpatient and outpatient elective surgeries play a significant role in bringing income to healthcare organizations. Elective surgeries account for about 48% of hospital costs and contribute much revenue (Anoushiravani, 2020). Another concern is that hospitals must prioritize elective surgeries once the decision to resume procedures is made. Elective surgeries were postponed roughly between March and May of 2020 and would resume when the surge of cases decreased. Although many surgeries are considered “elective,” vascular procedures and surgeries for cancer removal are not recommended to be postponed, and delays can result in adverse outcomes for the patient. Postponing elective surgeries creates a financial burden for all healthcare facilities, especially those for-profit organizations.

Smaller for-profit hospitals will not be able to succeed without funding and support from a larger organization. Larger healthcare organizations have expanded their services and partnered with smaller organizations within their region. During the pandemic, critically ill patients would seek medical attention at local hospitals needing intensive care treatment. Due to the lack of complexity of care, for-profit hospitals began to see a decline in patient volume, which has led to a decrease in hospital revenue for those facilities and may lead to healthcare organizations filing for bankruptcy soon. For-profit hospitals are sometimes owned by their physicians. The cost of physician partnership in owning the hospital is too expensive, which causes a strain on physician recruitment. According to the *Annals of Surgery*, a national revenue loss of \$22.3 billion resulted from canceling elective surgeries during the pandemic.

Figure 1. (Boserup, B., McKenney, M., & Elkbuli, A., 2021)

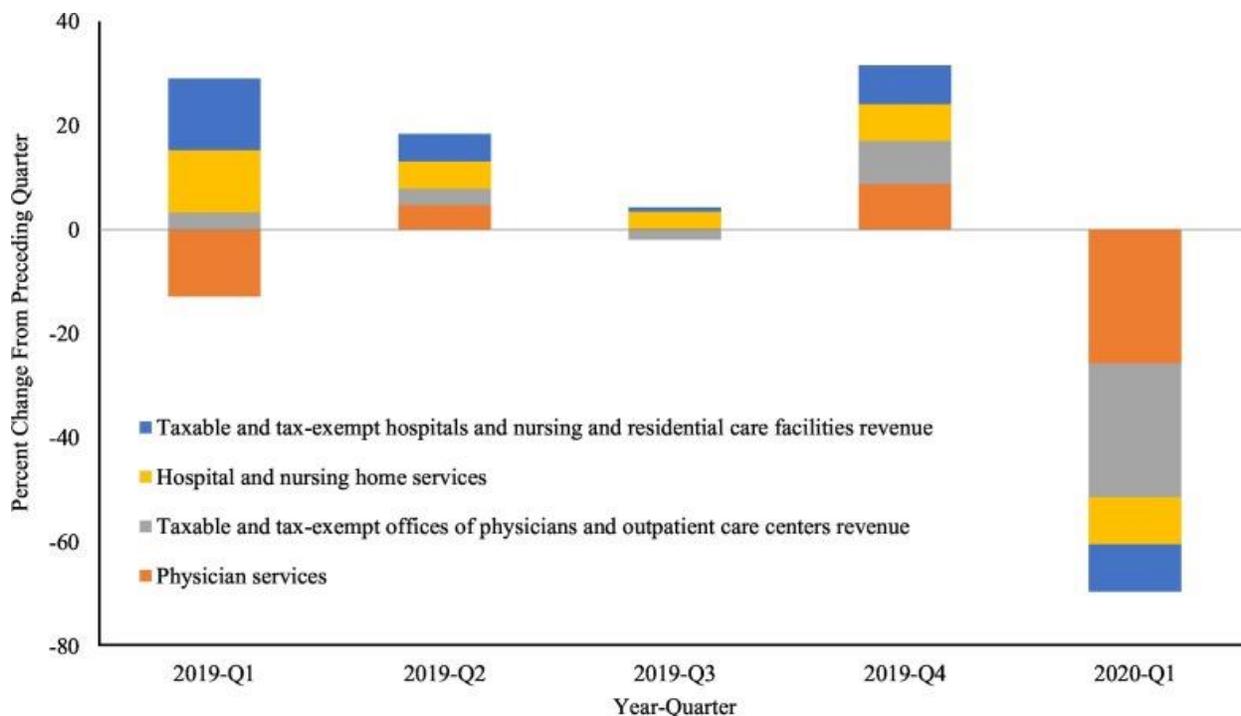


Figure 1. is a great representation to demonstrate the percent change from the previous quarter in taxable and tax-exempt residential care facility revenue, hospital and nursing home services, taxable and tax-exempt offices of physicians and outpatient care centers revenue, and physicians' services.

They suggest that hospital organizations should focus on marketing improvements if patient volumes are down. If hospital capacity is an issue, the facility should focus on expanding its capacity to accommodate patient census (Bose, 2021). In response to canceling elective procedures, hospitals will cut budgets and lay off employees. During the covid crisis, healthcare organizations in the United States developed designated covid testing and screening clinics within the region. This required a lot of resources, revenue, and staffing to ensure the facilities were appropriately equipped. The clinics were staffed with laboratory and nursing personnel who required special training for collecting and processing covid tests. These clinics were mainly accessible by the drive-through. In response to the covid-19 pandemic and healthcare financial concerns, the United States implemented the Coronavirus, Aide, Relief, and Economic Security

(CARES) Act. It issued \$100 billion to hospitals and healthcare organizations for support during the covid-19 pandemic. This funding will not be substantial enough to prevent hospital closures. Healthcare systems were responsible for providing appropriate PPE, training, and awarding overtime to staff working at these clinics. Some healthcare systems even covered the cost of childcare and transportation for healthcare workers running these clinics. An important question to ask is why is hospital revenue such a concern when so many people are sick?

Surgical admissions account for almost half of hospital revenue. With surgery cancellations into effect in most healthcare systems, this negatively impacted overall hospital revenue. A rise in covid cases leads to more prolonged admissions for critically ill patients in the ICU. Payments for patients in the ICU for extended stays do not cover the cost of those stays or additional lost revenue. Payments pre covid were fixed for diagnoses such as pneumonia and may not be accurate during or after the covid disaster. These payments may need to be altered for accuracy. Hospitals are seeing an increase in financial losses by the number of uninsured patients seeking treatment for covid-19. This is due to the high unemployment rate. Many hospitals throughout the U.S. do not have a financial cushion to lean on during hard times such as now. Unique orthopedic, gastroenterology, and ophthalmology services receive the most reimbursement through procedures. This became a concern when all elective surgeries halted during the pandemic. We are seeing hospital financial reserves depleting due to the financial burdens covid-19 presented (Barnett, M., Landon, B., & Mehrotra, A., 2020). Hospital admissions drastically declined during the onset of the covid virus. The covid virus has also created fear in the general public, causing patients not to seek medical attention for minor illnesses or emergency needs. Due to the unknowns, anxiety, and orders to stay at home, patients with acute medical illnesses have decided to stay at home rather than come to the

hospital for medical treatment. “During March–May 2020, U.S. emergency department visits declined by 23% for heart attacks, 20% for strokes, and 10% for diabetic emergencies” (French, G., Hulse, M., Nguyen, D., 2021). Emergency room visits declined by 15% in March 2020 compared to March 2019 (Boserup, B., McKenney, M., & Elkbuli, A., 2021). The cost of caring for patients has increased by 20% since the covid-19 pandemic. Healthcare organizations are investing in newer technology to assist in the treatment of hospitalized patients.

Delayed Patient Care

Since the start of the pandemic in 2020, we have seen a decrease in emergency room admissions for illnesses other than covid, such as appendicitis, heart attack, and stroke. Many patients avoid going to emergency rooms for fear of contracting the virus. A delay in medical treatment can lead to morbidity and mortality (Masroo, S. 2020). During the 2020-2021 pandemic, healthcare-focused primarily on the covid-19 virus. This has delayed care and treatment for patients suffering from other illnesses. Although some patients may suffer from minor illnesses that do not need immediate medical attention, physicians expressed their concerns for patients with chronic illnesses whose health may decline quickly without immediate care or treatment. Data has shown an increase in delayed care leading to deaths from illnesses such as diabetes, heart disease, stroke, and a high volume of drug overdoses ending in deaths (Woolf et al., 2020).

A national survey of nonelderly adults examined delayed absent healthcare among adults aged 18-64. The survey focused on two reasons for delayed or absent treatment. The first instance was due to the patient fear of contracting the virus. The second instance was due to limited services offered by providers. Those who completed the survey were asked if delayed

care was completed or was still in September 2020; the survey determined that 1 in 3 people (36%) experienced delayed or absent care due to fear of contracting the covid virus. Roughly 4 in 10 (40%) adults with one or more chronic health conditions and over half (56%) adults with physical or mental conditions stated they experienced a delay in healthcare due to the pandemic. Dental care was the most common type of healthcare delayed delay due to the pandemic. Roughly (25%) of patients delayed dental work or went completely without dental care. Among those who were delayed or forgone medical care, (76%) had one or more chronic illnesses such as diabetes, hypertension, heart disease, respiratory illnesses, cancer, kidney disease, and mental health disorders. Of participants who reported delays or absence of medical treatment, 1 out of 3 people worsened their conditions. This survey displays the significance of medical care and the risks involved in delayed or forgone medical care. Patients must trust that their healthcare provider is following protective safety measures to ensure patient safety. Healthcare organizations worldwide mandate that masks be worn to reduce exposure when in physician offices, clinics, and hospitals. Telehealth plays an essential role in managing patients who suffer from chronic illnesses. “Healthcare providers are working on equitable access for all patients to telehealth medicine since the pandemic” (Gonzalez, D. et al. 2021).

Psychological Stress Among Healthcare Staff

“In 2020, The World Health Organization (WHO) reported 65.6 million confirmed cases globally and nearly 1.5 million deaths up until 6th December 2020” (Maqbali, M., Sinani, M., & Al-Lenjawi, B., 2021). The covid-19 pandemic has created an increase in psychological distress in people around the world. Among those, frontline healthcare workers experienced higher levels of psychological stress while caring for patients critically ill with the covid-19 virus. They were

psychologically affected and faced adverse effects such as anxiety, depression, post-traumatic stress disorder (PTSD), burnout, compassion fatigue, and moral injury. “Psychological distress has been reported in more than 70% of healthcare professionals during the acute pandemic in Wuhan and Hubei” (Guler, D., & Yoruk, S., 2020). Frontline healthcare professionals experience psychological problems such as insomnia, lack of appetite, nervousness, indigestion, frequent crying, long-term fatigue, and suicidal thoughts. A few factors, such as understaffed work, heavy workload, long shifts, and lack of PPE, contribute to psychological problems. It is essential for staff to be aware of their social, cognitive, physical, and emotional well-being. Working in healthcare myself, I was able to see and experience firsthand the challenges initiated by the Covid-19 pandemic. At the beginning of the covid-19 pandemic, I remember the anxiety I felt as I walked through the halls of the hospital to get to my department. I feared being in the hallway with someone positive for the virus. I quit making trips to the gift shop and the cafeteria to avoid other people. In my breakroom at work, chairs were spread apart for social distancing. This was still during a time of many unknowns. It was not until June 2020 that I stepped foot in our Neuro ICU unit, also known as a Covid unit, since the pandemic.

I recall seeing IV poles stationed outside of all patient rooms, supplies stacked from countertops to the ceiling, and nursing staff walking around the unit in N95 respirators. It took everything I had not to cry in fear for my colleagues who worked in this type of atmosphere. Stressors such as shortages, mandates, protocol changes, and the many unknowns create anxiety in the workplace. These factors were the leading cause of “burnout,” also known as workplace stress within frontline healthcare staff. Burnout among healthcare professionals consists of three components, emotional exhaustion, depersonalization, and reduced personal accomplishment (Doulougeri, K., 2016). Burnout results in poor physical and mental health, lack of motivation, absenteeism, and

low morale in the staff. It also leads to the deterioration of the quality of care the affected staff provides, resulting in poor patient outcomes.

During the crisis, healthcare workers were at high risk for contagion while managing patient care. This caused anxiety among frontline healthcare workers caring for patients ill with covid-19.

Figure 2. (Centers for Disease Control and Prevention, 2020)

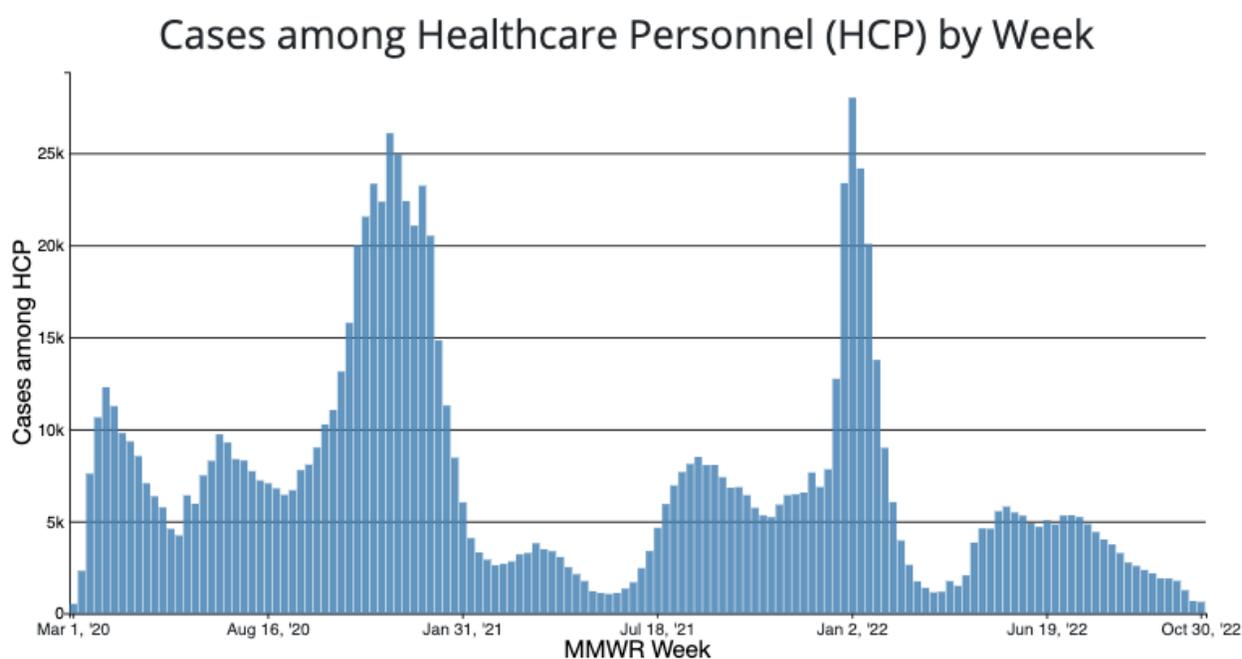


Figure. 2, provided by the CDC, displays weekly data on cases among healthcare personnel in the United States. Positive cases were confirmed by laboratory testing for healthcare professionals, including physicians, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, contractual staff not employed by the healthcare facility, and persons (e.g., clerical, dietary, environmental services, security, maintenance, administrative, billing, and volunteers. Healthcare professionals at high risk for the covid -19 virus may work in

hospitals, clinics, doctors' offices, nursing homes, dialysis facilities, home healthcare, and surgery centers (Centers for Disease Control and Prevention, 2020).

Frontline healthcare staff caring for patients who are highly contagious experience psychological distress. In cases such as covid-19, roughly 50 percent of healthcare workers experience anxiety, burnout, and post-traumatic stress from caring for those critically ill patients (Connors C. et al., 2020). In a YouTube video by Denver Health, frontline healthcare professionals recount memories of those they cared for during that covid-19 crisis worldwide. They express concerns about bringing the virus home on their clothes, spreading it, and exposing their loved ones. Community support was what kept frontline healthcare professionals out of despair. Thank you notes were written by family and friends, which also helped boost morale. The professionals on the frontline are working tirelessly to contain the outbreak, so we should be concerned about their physical and mental health to avoid burnout. Burnout is described as prolonged stress within healthcare workers that leads to their inability to perform their job. Factors that may lead to burnout include a heavy workload, chronic fatigue, compassion fatigue, the balance between family and career, sickness absence, and loss of confidence within their role. Administrators must pay close attention to their workers' behaviors and attitudes to improve employee morale (Wood, B., & Killion, J. 2007). Supporting healthcare workers' psychological and emotional needs is critical to the public health response. Healthcare organizations need to recognize burnout and incorporate measures to alleviate the stressors contributing to burnout. To reduce the prevalence of burnout among healthcare professionals working on covid units, a hospital in India developed "cooling off" rotations for nursing staff.

Each team would work a maximum of 7 days on a covid unit; the following week, they would be stationed at a non-covid unit. This rotation was designed so that no nursing staff was

strictly devoted to caring for covid patients and ensuring safety among healthcare staff (Jog, S., Kelkar, D., Bhat, M., Patwardhan, S., 2020). In March-April 2020, healthcare workers were asked qualitative questions regarding the impact covid-19 had on their professions. Two hundred ninety healthcare professionals responded to the survey regarding their challenges during the covid-19 pandemic. They reported a negative impact on their social, physical, and mental well-being (Sethi, B. A., Sethi, A., Ali, S., & Aamir, H. S., 2020). With protocols consistently changing and caring for critically ill patients, the staff also considers their colleagues who may have become sick. During a surge, resources are limited and prioritized. Many staff will contract the virus, some will become ill, and some may even die. Those healthcare workers who become exposed or ill from the Covid-19 virus must follow appropriate quarantine guideline restrictions. “Research has shown that those staff who are quarantined experience guilt about leaving front lines understaffed, fear that they have contaminated their families, and conflict about their roles as healthcare professionals and parents or carers” (Christian et al., 2020).

Leaders and front-line clinicians need to protect the well-being of themselves and their colleagues to avoid negative outcomes for clinicians and adverse effects on the quality of patient care. It is crucial for healthcare organizations to demonstrate appreciation for their clinicians working on the front. They can express their appreciation by providing healthy snacks, water, Organizations can support healthcare staff in many ways, such as by providing food and rest facilities, regular praise and acknowledgment, formal and informal psychological support, and appropriate PPE. There are, however, opportunities at every level to make a difference in the mental health support of staff and to identify and encourage prospects to find growth and meaning in this situation. The nursing staff’s job satisfaction contributes to a positive culture and increased retention. During a crisis, the most important thing a leader can do for their team is to

be a good leader. Leadership in healthcare during the Covid-19 pandemic was challenging as leaders were just as impacted as those they were leading. In an interview with Missy Riesling, Blood Bank Manager at Deaconess Hospital, she discussed how the little perks, such as supplying candy and doughnuts for her team, show appreciation. Missy tries to show her staff value, not just that they are a placeholder. She tries to be relatable and understanding with her team.

A few helpful techniques leaders can incorporate to navigate a crisis would be communicating clearly with their employees. Healthcare professionals value clear communication with their leaders. Leaders can use communication to provide hope, maintain transparency, and demystify the situation. Leaders should communicate regularly with their staff on changes during the covid crisis, such as the volume of covid cases in the hospital, hospital capacity, status of staffing, and resource availability. Clear communication with all staff keeps everyone on the same page and assists in limiting stress and anxiety from unknowns. During the covid-19 pandemic, hospital admissions increased by up to 270% of hospital bed capacities. This is an excellent opportunity for leaders to look at optimizing staff. Leaders should look at the additional time frontline staff spend caring for and treating covid-19 patients and how that will reflect on inpatient services. Employee wellness is essential for healthcare workers during a pandemic.

Leaders should allow employees to schedule a time to reflect on experiences and create a psychologically safe environment for employees to decompress (Garg, M., & Wray, C., 2020). Healthcare administrators play a vital role in providing emotional and psychological support for staff. “The impact of this pandemic and how leaders respond during it will shape the future relationship of teams and culture of organizations for years to come” (Christian et al., 2020). Peer groups played a vital role during the pandemic. Working in healthcare myself, I was able to

see and experience firsthand the challenges initiated by the Covid-19 outbreak. Stressors such as shortages, mandates, protocol changes, and the many unknowns create anxiety in the healthcare workplace. Without my organization's leadership, department supervision, peers, family, and friends' support, I would not have thrived during that crisis. Collaborating in a healthcare setting is crucial to support one another during an emergency. Colleagues can show support by offering the opportunity to talk, being kind and considerate, & helping others explore their causes of stress and anxiety. Although many adverse effects stem from Covid-19, relationships grow deeper, teams grow more robust, and individuals can develop. It is crucial to remember what healthcare professionals can do for themselves during extreme anxiety and uncertainty. Staying focused on the positives, such as family and friends, will benefit staff. It is helpful for healthcare workers to talk about their feelings or share their experiences with others. All healthcare personnel must ensure coordination, knowledge, and trust while caring for patients during the pandemic.

In an interview with Jennifer Carter, a Neuro/ICU nurse at Deaconess Gateway Hospital, she discussed the personal trauma she experienced working in the covid ward. Jennifer talked about her experiences of having multiple patients code in one shift, watching her patients suffer in pain and die daily, and comforting family members about the loss of a loved one. She says she will never forget the cries of families as their loved ones pass away. To "deal" with these challenges, Jennifer would sob during her drive home from work or call a family member to vent about what she had experienced. Other than her mental health and safety, Jennifer's primary concern was risking her nursing license. Being short-staffed and constantly tripled with high acuity patients kept Jennifer worried she would make a big mistake that could cost someone their life. After two years of working in the covid ward, Jennifer knew it was time to step away from

the ICU atmosphere and focus on her mental health and well-being. She took a transfer position to Endoscopy, loves her new role, and is happy to be working in a less stressful environment.

Healthcare professionals may experience psychological distress from providing direct care to patients with COVID-19, knowing someone who has contracted or died of the side, or being required to undergo quarantine or isolation. Most hospitals offer psychological support to their staff suffering from pandemic stressors. Because resources were limited during the pandemic, healthcare workers faced decisions regarding which patients would receive life support. Many frontline healthcare staff experienced psychological distress during the covid-19 pandemic. A study was performed by medical professionals from February to April 2020, interviewing frontline staff caring for patients ill with the covid virus from 5 major hospitals in Singapore and India. Frontline staff included doctors, nurses, pharmacists, respiratory therapists, administrators, clerical staff, and maintenance workers. The questionnaire consisted of occupation demographics, medical history, and symptom prevalence over one month. Based on the answers, physical symptoms were recorded based on psychological distress. Of the 906 healthcare professionals who participated in the survey, 48 (5.3%) screened positive for moderate to very-severe depression, 79 (8.7%) for moderate to extremely severe anxiety, 20 (2.2%) for moderate to highly severe stress, and 34 (3.8%) for moderate to severe levels of psychological distress. The most common symptom reported was headache (32.3%), with many participants (33.4%) reporting more than four symptoms. Headaches have been linked to healthcare professionals wearing personal protective equipment (PPE) and negative psychological impacts. Fatigue is also frequently seen in healthcare professionals exposed to the covid virus. Participants who had experienced these symptoms were more likely to be older, have underlying health issues and screened positive for depression, anxiety, stress, and

PTSD. This study represented healthcare professionals experiencing physical symptoms related to psychological disorders while caring for patients positive for covid-19 (Chew, N., Grace, L., & Tan, B., et al. 2020).

In a presentation, medical expert Dr. Debra Kayson from Stanford Medicine, Department of Medicine, discusses the impacts of Covid-19 on healthcare workers' mental health. She describes covid-19 as a novel type of traumatic stressor. Based on what they have learned, healthcare workers are at the highest risk of contracting the covid virus and experiencing negative psychological impacts from working in a stressful environment. Healthcare workers have been at a higher risk for PTSD, depression, and anxiety since the first surge of Covid-19. Professor Kayson provides a ton of research and supporting data to back her data. Dr. Kayson differentiates stress from traumatic stress related to the covid-19 pandemic. She defines stress as any uncomfortable emotional experience with physiological or behavioral changes. She describes traumatic stress as more specific such as exposure to death or severe injury, usually during your job.

Stressors include having too much work and being isolated or quarantined. Individuals who work more closely to covid positive patients are more susceptible to experiencing traumatic stress. Healthcare staff facing traumatic stress are more susceptible to experiencing moderate to severe physical consequences such as exhaustion, insomnia, depression, and anxiety.

Contributors to distress in healthcare workers can include long work hours, changes in protocols, conflicts in the role, lack of specific treatment, and limited supply of PPE. Factors that may include increased workload, concerns of contracting the virus and infecting family members, staff shortages, and quarantine. Dr. Kayson explains how healthcare professionals demonstrate stress reactions such as intrusive reactions, avoidance, physical arousal, grief, depressive

symptoms, and physical reactions. These reactions are common and will improve as stress resolves. She emphasizes coping mechanisms such as resting and eating healthy meals, engaging in pleasant activities, talking to others, journaling, and exercising, to name a few. Social connections and support are most beneficial for emotional support for healthcare workers during the pandemic.

Staff and Supply Concerns

In March 2020, the first ICU covid ward reached total capacity with patients critically ill with the virus. Neuro ICU within the hospital was converted into an additional covid ward to accommodate the high volume of covid patients. By April 2020, the Neuro ICU had reached total capacity, and a third covid ward became necessary. The need for covid wards puts pressure on frontline healthcare workers, causing them to feel stretched and burnout. As hospitals began to reach maximum capacity, so did the demand for healthcare staff. Hospital staff in all areas were asked to pick up extra shifts and to stay late. Some hospitals developed an overtime contract with healthcare employees to pick up additional hours each pay to help fill the gaps. This contract primarily benefitted part-time or supplemental employees. The healthcare worker-to-patient ratio in Neuro ICUs was 1:8 to 1:12 during the day shift and 1:12 to 1:18 during the night shift. “Staff shortages have led health system administrators to invoke mandatory overtime or to pressure nurses to take extra shifts to help their coworkers, including when they are ill” (Veenema, T. et al.,2022).

During the pandemic, hospital administration focused on the adaptations made in intensive care units. The overwhelming need for healthcare professionals due to the influx of covid cases led to hospitals hiring travel employees in most areas, including nursing, respiratory, and laboratory. “During the Covid-19 pandemic in the United States, demand for ICU nurses has

been high and has shifted as hot spots developed over time. As Covid-19 infections increase in each state, a corresponding increase in demand for ICU nurses is seen” (Longyear, R., Boxer, R., & Johnson, K. 2020). In the first period of Covid-19 infection growth, travel ICU jobs in Massachusetts and New York increased significantly (Longyear, R., Boxer, R., & Johnson, K. 2020).

Travel healthcare employees are beneficial to facilities table fill positions in generalized locations. Contracted healthcare professionals typically travel 50 miles or more from their homes and are contracted for about three months. Although the travel positions filled those gaps needed to provide patient care, they created a hostile work environment in some areas due to the wage difference. Contracted travel employees were paid significantly higher than those full-time employees. When Covid-19 infection rates increase, pay for critical care nurses attracts the available supply of nurses (Longyear, R., Boxer, R., & Johnson, K. 2020). “At the beginning of the covid-19 pandemic in the United States, demand for ICU nurses has been high and has shifted as hot spots developed over time. As Covid-19 infections increase in each state, a corresponding demand for ICU nurses is seen. During the first period of Covid-19 infection growth, travel ICU jobs in Massachusetts and New York increased by 612% and 1,038%, respectively. States not yet designated national hot spots, such as Arizona and Texas, had increased significantly” (Longyear, R., Boxer, R., & Johnson, K. 2020). “A six-state (Arizona, Florida, Georgia, Massachusetts, New York, and Texas) comparison was performed to allow for an analysis of the relationship between Covid-19 hot spots and demand for critical care nurses as demonstrated by several jobs and weekly pay rates” (Longyear, R., Boxer, R., & Johnson, K. 2020)

Figure 3. (Longyear, R., Boxer, R., & Johnson, K. 202

State	January 2020		April 2020		July 2020	
	Number of ICU Jobs	% Change from Baseline	Number of ICU Jobs	% Change from Baseline	Number of ICU Jobs	% Change from Baseline
Arizona	204	0%	745	265%	1,697	732%
Florida	270	0%	422	56%	1,781	560%
Georgia	266	0%	879	230%	1,028	286%
Texas	348	0%	554	59%	3,574	927%
Massachusetts	152	0%	1,082	612%	503	231%
New York	136	0%	1,548	1,038%	409	201%

Figure 3. demonstrates the high demand for ICU nursing jobs during the beginning of the covid pandemic in specific states. Over time, nursing pay corresponded with increasing covid infection rates. “Recent economic analyses have found that nurses are willing to travel long distances to increase their compensation, suggesting that an integrated national labor market facilitates reallocating workers when demand surges” (Veenema, T. et al.,2022).

“In January, before Covid-19 infection growth in the United States, the number of posted ICU jobs is used as a baseline to compare two peaks of infection growth in April and July. In April, the demand for travel ICU nurses ranged from 56% in Arizona to 1,038% in New York (the epicenter). Demand decreased as New York and Massachusetts; Massachusetts gained control of infection growth in July. Meanwhile, Georgia, Arizona, Florida, and Texas

saw a corresponding increase in demand for ICU nurses that exceeded April numbers due to higher rates of infection” (Longyear, R., Boxer, R., & Johnson, K. 2020).

During the second period of infection growth, the number of ICU jobs can be compared to the same January baseline. Hot spots during this time included Arizona and Texas, where ICU job increases of 732% and 927%, respectively, are visible. At the same time, New York and Massachusetts managed to keep new Covid-19 infection growth at bay during the second period. ICU jobs in New York and Massachusetts are elevated above January numbers but much lower than their peaks in April 2020 (Longyear, R., Boxer, R., & Johnson, K. 2020). Travel workers were also trained quickly and were unsure of the hospital’s workflow and process, which led to mistakes affecting patient care. Hospitals’ challenges during the pandemic have created new opportunities to prepare for future disasters. Hospitals modify disaster plans to prepare for future global disasters; they focus on necessary staffing, layout, new processes, and medical equipment (Dhala A, Sasangohar F, Kash B, Ahmadi N, Masud F 2020). Hospitals are still facing shortages in operations and resorting to newer technology to aid in these issues (Levine, D., 2022). Due to the impact of the covid-19 pandemic, hospitals are facing staffing shortages with high turnovers. Hospitals are addressing burnout amongst healthcare professionals in all areas. Some healthcare systems are turning to digital tools to improve efficiency within healthcare. Hospitals are initiating patients to self-monitor at home using an application to communicate with medical staff rather than calling a nurse or doctor’s visit. Using technology allows nurses to care for more than one patient at a time and allows patients to stay at home while increasing patient satisfaction rates (Levine, D., 2022).

Author Christi Grimm, Principal Deputy Inspector General with the U.S. Department of Health and Human Services, reviews the challenges and needs of 323 hospitals over 46 states in

response to the Covid19 pandemic. She found that hospitals reported that their primary challenges involved testing and caring for suspected Covid-19 patients and protecting healthcare staff. Healthcare staff faced many concerns, such as having appropriate PPE and adequate staffing to care for critically ill patients. They utilized hospital staff, including anesthesiologists, hospitalists, and nursing staff, to assist in caring for critically ill patients on ventilators. Hospitals reported an increase in costs, and decreasing revenues created concerns for their financials. They went on to state that changes and sometimes inconsistent guidance from Federal, State, and local authorities lead to challenges and confuse hospitals and the public. Some hospitals support their staff by offering childcare, laundry, grocery services, and hotel accommodations (Grimm, C., 2020).

Protective equipment (PPE) is necessary for frontline healthcare professionals caring for critically ill patients. The Covid-19 aerosols spread in the air from infected individuals, whether symptomatic or not. Personal Protective Equipment (PPE) significantly prevented and controlled the Covid-19 virus in healthcare. Covid-19 is spread by droplets and contact-based (Mahmood S, Crimbley F, Khan S, et al. 2020). Frontline healthcare workers utilize equipment such as masks, gowns, gloves, eye gear, and respirators for protection from the covid-19 virus and other illnesses. PPE is vital to promoting safety for frontline healthcare workers. Due to high demand and supply chain issues, hospitals globally face shortages of PPE for healthcare staff.

Typically, the hospital's sourcing teams initiate the supply chain by selecting 2-3 large, well-established distributors for supplies. The healthcare system places supply orders, and medical supplies are delivered weekly. Distributors receive these requested supplies from manufacturers in China. Due to the increase in demand and distributors reducing production, we are seeing a delay of 3-6 months in receiving medical supplies. Smaller healthcare facilities rely

on larger organizations to loan supplies to treat their patients. Critical items include respirators, gloves, face shields, hand sanitizer, and gowns. As the number of covid cases started to increase, so did the need for necessary actions and equipment. U.S hospitals began reporting shortages of essential equipment needed for critically ill patients. The lack of PPE for frontline healthcare workers continues to be an ongoing concern for hospitals. Although supply chain issues were not present prior to the covid pandemic, the supply chain was not designed to accommodate needs during a national crisis.

At this point, hospitals are desperate for supplies and are placing orders anywhere that can be filled. Smaller facilities such as clinics and doctors' offices rely on larger healthcare organizations to loan or even charge for supplies during this time of hardship. Hospitals must change vendors to ensure they are getting high-demand supplies. The production and distribution of PPE and ventilators were crucial for in-patient care during the Covid-19 pandemic. Two types of ventilators used in ICUs for respiratory support for those whose lungs were compromised are invasive and non-invasive ventilation. Ventilators significantly saved the lives of those critically ill with the covid virus by using positive pressure to supply oxygen to the lungs. "The lungs of the patients who require mechanical ventilation due to COVID-19 are so much inflamed that the oxygen is unable to reach the alveoli when a patient breathes, and the mechanical ventilator acts to force the oxygen flow under pressure to these small air passages" (Lyengar, K., Bahl, S., Vaishya R., & Vaish, A., 2020). Mechanical ventilators are appropriate for patients suffering from acute respiratory distress syndrome. They assist in normalizing the oxygen through the body. Ventilators are used in emergency rooms, intensive care units, surgery wards, and at home for long-term wear. Due to the increasingly high volume of patients critically ill with the covid virus, ventilators were in high demand. There are limited companies throughout the world that do

not have the expertise to manufacture ventilators. Due to global supply shortages, most countries have been affected by the shortages of ventilators. The government should aid in the production of ventilators, especially during a time such as the pandemic. “Thousands of experts, entrepreneurs, and volunteers worldwide are developing a different potential solution: creating open-source ventilators” (Lyengar, K., Bahl, S., Vaishya R., & Vaish, A., 2020). At the beginning of the pandemic, there was a nationwide shortage of ventilators which required frontline healthcare staff to make tough decisions on who would be placed on the ventilators for treatment. Prior to the pandemic, China produced face masks globally. As Covid-19 spread, China began shipping face masks in care packages to selected countries as a courtesy. The United States was not a primary recipient of those care packages. The supply shortages have led to desperation within healthcare organizations throughout the United States.

The Centers for Disease Control and Prevention (CDC) recommend that during a crisis, N95 respirator masks only be used during aerosol-generating procedures, which leads to a high risk of exposure for healthcare workers in contact with patients suspected of the Covid-19 virus. The CDC advised healthcare workers to reuse their masks and one-time respirators and, when supplies are bare, resort to scarves or bandanas (Griffeth et al., 2020). This became a concern for healthcare staff as they felt they were at higher risk for exposure to the covid virus and other illnesses. Because PPE was hard to find, departments within the hospitals started hoarding and even stealing medical supplies. The supply shortages have led to desperation within healthcare organizations throughout the United States. Healthcare organizations have turned to social media for the aid of medical supplies. It has become competitive between individual state governments and healthcare systems on receiving supplies that are not distributed promptly. Masks and gloves are used outside healthcare settings, including in construction companies, artists, laboratories,

and television shows. It would be beneficial if local governments would collect the supplies and donate the desired equipment to local hospitals and other healthcare facilities, particularly areas such as covid and ICU departments. It has become competitive between individual state governments and healthcare systems on receiving supplies that are not distributed promptly. It is unlikely for surges of Covid-19 to occur all over the country at once, so medical professionals suggest that it would be beneficial if other areas donated supplies. “As New York City, for instance, sees a surge of Covid-19 cases, other communities with few cases could share their supplies; New York could then pass equipment on when its surge subsides” (Griffeth et al., 2020). If staff are not fully equipped, they risk exposure and getting sick. Healthcare administrators must ensure their team is equipped with the appropriate protective supplies to keep them safe and the medical equipment necessary to provide for their patients. In a crisis, our state government must support and issue relevant commands. We must bridge the gap between the need and availability of medical equipment. “Failure to act in a coordinated manner would keep many patients from getting the care they need and would lead to the situation we see in Italy, in which frontline clinicians are making difficult decisions about who will and will not receive care (Griffeth et al., 2020). According to cardiologist Umesh Khot, in 24 hours of caring for a covid-19 patient, intensive care staff would require 36 pairs of gloves, 14 gowns, three pairs of goggles, and 13 N95 face masks. Although it may not be necessary for the entire hospital, with covid numbers increasing, hospitals with covid wards have now found over 100% of their beds being used for treating this infection during the surge leading to desperation for PPE. Today, we are seeing a global disaster in the healthcare supply chain. The supply shortages have led to an increase in prices. For example, the cost of isopropyl alcohol used in hand sanitizers for healthcare staff has gone from \$1000 to \$3,160 per metric ton (Khot, U., 2020). Hospitals

worldwide are seeing an increase in supply orders killed by vendors because of the inability to fill the requested orders. We are also starting to see healthcare facilities using incorrect supplies, such as the wrong blood tubes, because they cannot obtain the appropriate tube type from their vendors. As a result of supply shortages, we see an increase in departments within hospitals hospital departments starting to steal supplies that they did not order. According to the US News, hospitals feel from a lack of supplies and costs. Hospitals are spending 19% more on medical supplies since the covid-19 pandemic (Levine, D., 2022). Healthcare providers are still focusing on improving the supply request process. Moreover, reaching out to multiple vendors to supply orders is appropriately filled.

Hospital Visitation Guidelines

In the early 20th century, hospitals began allowing visitors for paying patients. About 50 years later, when newborn intensive care centers were developed, hospitals implemented visitor policies to protect their patient's privacy and protection. The Centers for Disease Control and Prevention (CDC) recommends that healthcare facilities limit visitors to only those essential to promoting good quality health and well-being for the patient. During the covid-19 pandemic, no visitors were allowed in the hospitals to reduce the virus's spread and protect the patients. This restriction created a lot of negative emotions among healthcare staff, especially those caring for dying patients. Video chats became a common form of communication with family members in discussing treatment options and progress in patients' health. Although this was not ideal, patients' families stated it helped keep them in the loop of what was going on with their loved ones. Many families of patients who were isolated with covid-19 expressed gratitude for the ability to video chat with their loved ones. Healthcare professionals worked hard to demonstrate

sympathy over the phone or via video chat (Iness, A. et al., 2022). In labor and delivery wards, it is common practice for a patient to have two visitors during delivery. During the pandemic, visitation restrictions were set, allowing only one adult visitor for every patient in the labor and delivery ward. The Centers for Disease Control and Prevention and the American College of Obstetricians and Gynecologists recommended covid screening for all visitors prior to visit. Other labor and delivery wards, such as in the New York City area, did not allow visitors to reduce the spread of the covid virus. Although limiting visitors helps promote a healthier atmosphere and reduce exposure, women need to have a support person with them during childbirth. In cases where the patient giving birth is positive for covid-19, the patient must wear a mask, and all healthcare workers wear appropriate PPE during delivery.

In an article by Haziq Siddiqi, a medical student at Harvard University, he discusses his personal visitation experience during the covid pandemic when his grandfather was hospitalized after a stroke. His grandfather spoke and understood limited English, which made it very challenging to communicate with healthcare staff. Haziq's grandfather started to experience delirium and became agitated, which caused him to be sedated and restrained. During this time, limited visitation was minimal to reduce the spread of the covid-19 virus. The only option for communication was video chat which would be challenging for Haziq's grandfather due to his lack of vision caused by the stroke. Haziq explains how challenging it was not to be by his grandfather's side to comfort, translate, and explain processes to him. Although they knew he was in good hands, they worried about him being in the hospital alone in an unfamiliar environment, unable to see, communicate, and restrained to a bed. Haziq's family requested that the administration allows one visitor to be with his grandfather in hopes he would come off sedation and be released from restraints. They argued that video chats would not be sufficient

due to his condition. The medical staff agreed to let Haziq's grandmother stay with him as a caregiver. As soon as Haziq's grandfather heard his grandmother's voice, he perked up. The changes in his behavior allowed him to come off restraints and sedation. A few days later, the hospital decided that the presence of Haziq's grandmother was unnecessary and that she was at risk for covid. Haziq saw for himself the benefits of visitation for his grandfather's health. Although he understands the importance of infection control, he also knows that having one caregiver at the bedside aids in improving a patient's health and well-being (Siddiqi. H, 2020).

Hospital Capacity Concerns

“Pandemics can lead to an increasing spread of disease, with irregular and suddenly increasing patient demands that can affect hospitals' capacity and the overall functioning of the health system” (Muhammet, G., & Melih, Y., 2021). Capacity concerns emerged as covid cases increased, and the need for specialty beds or isolation rooms became necessary for treatment (Grimm, C., 2020). Cancellation of all elective surgeries was the first step towards freeing up hospital beds and preserving medical equipment for those critically ill with the covid-19 virus.

In a study beginning in March 2020, hospital admissions fell, operating at about 50 percent. This analysis reflected data taken from 201 hospitals out of 36 states. Volumes declined due to cancelations of elective surgeries and other noncritical medical services. Hospitals also reported a drop in acute illness admissions during this time, leading to a revenue crisis (Barnato, A., Bessler, R. et al., (2020).

Figure 3. (Birkmeyer, J., Barnato, A., Birkmeyer, N., Bessler, R., & Skinner, J., 2020)

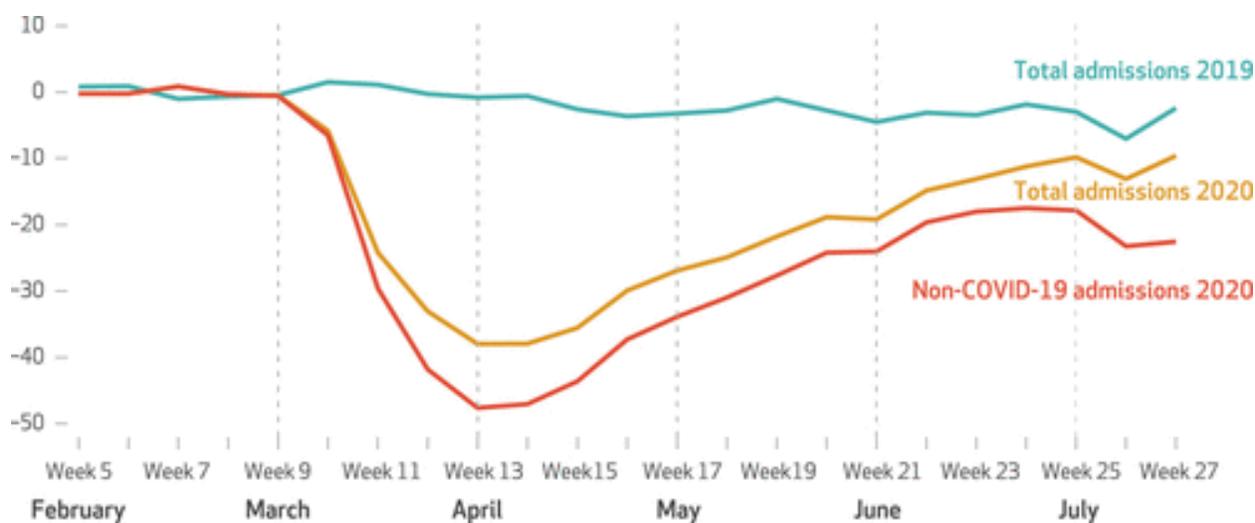


Figure 3. Represents the trends in hospital admissions starting in January 2019 through 2020. In 2020 there was a significant drop in hospital admissions, including non-covid related admissions beginning in March. The data provided in the graph was collected from 1,056,951 admissions in 201 hospitals across 36 states. A decrease in hospital admissions was reflected by fear of exposure to the covid virus and due to orders to stay at home (Birkmeyer, J., Barnato, A., Birkmeyer, N., Bessler, R., & Skinner, J., 2020).

Healthcare systems feel stretched for capacity to accommodate the surge of covid cases. Hospitals are designed for an average patient volume, not a national disaster. Hospitals worldwide are trying to increase bed capacity and outsourcing procedures to accommodate the surge of covid cases. As the number of covid cases increased, so did the need for unfavorable air pressure rooms to avoid intubation. Patients critically ill with the covid virus require up to 13 days of respiratory support. This creates an extended stay for covid positive patients and results in more occupied hospital beds. The lengthy treatment time for patients with covid-19 limits room availability and healthcare staff to new patients needing medical attention in the ICU.

In order to prepare for a future national disaster, hospitals should plan for worst-case scenarios (Cavallo, J., Donoho, D., & Forman, H. 2020). The United States and the United Kingdom developed Alternate Care Sites (ACS) to care for patients ill with the covid -19 virus. These sites provided a safe and comfortable setting for patients who can quarantine and be monitored by healthcare staff. In order to prepare for the surge in covid cases, a hospital in India divided a nursing unit into two zones, a covid care zone and a non-covid care zone. They designated one building of their hospital as a stand-alone covid care facility. Although not all hospitals have the space for this implementation, new processes were developed to limit the spread of the virus within the healthcare facility. Covid triage areas were placed away from other nursing areas. Patients presenting with fever, sore throat, and respiratory complaints were directed toward this area for treatment. Areas dedicated to patients positive for the covid virus were equipped with ventilators and ultrasound and dialysis machines. Dedicated covid teams were developed to staff all isolation areas. These teams included nurses, physicians, respiratory therapists, pharmacists, phlebotomists, and other healthcare workers. Due to less likelihood of severe risk of infection, young healthcare workers, less than 45 years of age, were recruited to staff covid areas. All major entrances in the hospital were staffed with trained employees to screen all patients for symptoms such as fever, cough, and dyspnea of visitors entering the facility (Jog, S., Kelkar, D., Bhat, M., Patwardhan, S., 2020). These covid care areas are very beneficial in reducing the risk of infection to other patients and healthcare staff.

Conclusion

The purpose of this project is to provide my audience, using supportive research, a better understanding of the epidemiology and origin of the covid-19 virus and the challenges healthcare professionals faced during the covid-

pandemic. My goal for this project is to recognize frontline healthcare workers for their commitment and spread awareness of the obstacles hospitals are still facing today from the covid pandemic. While the states mandated everyone to stay at home, healthcare workers still went to work in a stressful environment. This topic is exceptional because I worked in a hospital during the covid pandemic as a Laboratory Technician. I got to witness firsthand the fear of the many unknowns. I remember, during the pandemic walking into work every morning feeling anxious about entering the hospital with patients positive for covid. I would stay in my department my entire shift to avoid others and possibly become exposed to the virus. The hospital would send out daily volumes of hospital capacity and those who were positive for the virus.

I went about my day just waiting for new updates and more changes in procedures. As a healthcare professional, I grew tired of hearing about covid and anything associated with the virus. I respect frontline healthcare staff for their roles and commitment during the pandemic. The bruises left on frontline workers' faces from wearing masks and respirators for 12-14 hour shifts multiple days in a row, the inability to breathe while wearing a mask, and the fears leading to anxiety causing physical distress all negatively impacted healthcare professionals' physical well-being. I feel it is essential for all hospital workers, no matter what department they work in, to receive acknowledgment for risking their health and well-being while working as a team to provide quality care for their patients. The many unknowns, mandates, risks, changes in policies and procedures, staff and supply shortages, long shifts, and psychological effects leading to burnout have

taken a toll on our healthcare workers globally. Important decisions were made quickly by hospitals that affected hospital staff and patient care. Healthcare professionals have learned to adapt quickly to changes in policies and procedures. Many nurses were fearful they would lose their licenses. Due to the negative impacts of the covid pandemic, many healthcare professionals are looking for other occupations outside of healthcare. I am compassionate about spreading awareness of healthcare workers' psychological challenges and how they overcome those issues during the covid-19 pandemic. Some frontline healthcare professionals have yet to take time off work due to the heavy workflow and commitment they have in their role. Most hospitals offer psychological support to their staff suffering from pandemic stressors. Healthcare administrators are responsible for recognizing warning signs for possible burnout among staff and ensuring their staff is equipped with the appropriate protective supplies to keep them safe. It is essential for healthcare staff to have coordination, confidence, and knowledge working with patients who are favorable for the Covid-19 virus.

Hospitals are encouraging employees to take as-needed breaks and promoting employee wellness by exercising to clear their minds, reduce stress, and improve their overall health. They must also ensure that healthcare staff is equipped with the necessary medical equipment to care for their patients. In my paper, I provided concerns about the misuse and surge in demand leading to a shortage of PPE. Hospitals are still battling supply chain issues and trying to devise alternative ways to obtain supplies and PPE. The cancellation of “elective” procedures resulted in hospital revenue burdens and delays in patient care. My project has provided statistics based on the cancellation of elective surgeries. Although some mandates have been lifted since the

beginning of the pandemic, such as vaccine and visitation mandates, hospitals are still trying to make a comeback on revenue, staffing shortages, handling supply chain issues, and developing new processes to care for patients in isolation who are positive for covid-19. I have found this research project to be very beneficial for my field of study in Healthcare Administration. I have learned how the covid pandemic impacted healthcare staff working on the clinical side and those negatively affected the business side of healthcare organizations. I would also like to give laboratories worldwide the credit they deserve for developing covid collection sites and collecting and testing covid samples. Hospitals would not have been successful without the laboratory. Laboratory staff worked behind the scenes making sure patients were treated promptly. Healthcare professionals have worked hard to develop new processes for managing the covid virus and have not received the recognition they deserve. I hope for all healthcare organizations to overcome these challenges caused by the covid-19 pandemic. It brings me joy to see healthcare professionals join in providing the best care possible during such a challenging time. I am honored to say that I am a healthcare professional contributing to my patient's care during the covid-19 pandemic.

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