

Before I begin, I would like to express my gratitude and appreciation for this opportunity, and to all of the healthcare workers I encountered at the AOI Nanasawa Rehabilitation and Universal Hospital.

A Report of the Internship at AOI Universal Hospital and AOI Nanasawa Rehabilitation Hospital

8/30/2023

Introduction

From June to July, I participated in an internship at the AOI Nanasawa Rehabilitation Hospital and AOI Universal Hospital to discover my passions in the medical field. This report focuses on my experiences and the values I learned while shadowing medical professionals. In addition, the report highlights the struggles of medical professionals during the Covid-19 pandemic. As of May 8, 2023, the Japanese government reduced the classification of Covid-19 from class 2 to 5, and Japan is inching closer to normality. For this reason, I was interested in learning about the struggles and sacrifices of individuals on the frontline of the breakout of Covid-19. The last part of the report will focus on what makes each medical profession worthwhile.

Surgeons (Neuro/Cardiac/Blood)

Experience/Values: I had a one-in-a-lifetime experience, observing three surgical operations throughout my internship: arteriovenous malformations (AVM), chronic subdural hematoma, and abdominal aorta aneurysm (AAA). During a briefing before the AVM surgery, surgeons explained that AVM is one of the most challenging operations in neurosurgery. Midway through the operation, the chief surgeon allowed me to look through the surgical microscope. The intricate veins and arteries running across the brain were an unforgettable sight. With my initial interest in neuroscience, I was glued to the monitor showing the complex

brain, and the 7 hours flew by instantly. Shortly after, I observed a brain angiography of the AVM patient, seeing the malformation beautifully removed. The following day, I observed an emergency operation of the chronic subdural hematoma, learning about drainage and cranial perforators. The entire operation was 30 minutes long, and I was surprised by the fast-paced yet precise techniques of the surgeons. I observed the AAA operation, learning about the diseased aorta and the process of sewing a synthetic graft. Throughout the internship, I observed multiple percutaneous coronary interventions in the catheterization rooms, learning about the risks of myocardial infarction and angina. I characterize surgeons at the Universal Hospital as individuals with humility, precision, constant concentration, endurance, and collaboration, all skills beyond medical knowledge.

Operating Room (OR) Nurse

Experience/Values: I resided with several OR nurses during the three surgeries. The OR nurses are in the operation room preparing the instruments, tables, and sterile field before the operation begins. OR nurses are split into two categories: scrub and circulating. Scrub nurses work in the OR's sterile field and pass out various instruments quickly upon command. The scrub nurse seemed to be a few steps ahead of the operation, knowing beforehand what instruments would be required next. The circulating nurse logs the surgical steps and

tracks gauze counts. I realized that concentration and composure are necessary for OR nurses to respond to unexpected situations.

Covid-19: Surgical instruments and materials are sterile, and nurses wear head-to-toe personal protective equipment (PPE) during the operation. The OR nurses recalled minimal changes during the pandemic. Still, they had to have the mindset of limiting exposure to people outside of their workplace.

Nurse in Acute-phase Ward

Experience/Values: “We nurses collaborate with other allied health professionals like a multidisciplinary team.” I witnessed this collaboration during a Nutrition Support Team conference in which the doctors, nurses, and nutritionists discussed every patient on the ward floor and provided insights on each patient's progress. Furthermore, nurses in the acute phase ward utilize all spare time available. From helping patients take a bath, changing IVs, rechecking monitors, and logging the patient's conditions, the nurses rarely have a moment to even sit down.

Covid-19: The nurses in the acute-phase ward recalled that whenever there was a nurse call, putting on and off the PPE during the pandemic was tiresome. Additionally, there was an instance where a Covid-19-positive dementia patient came out of their quarantined room, causing a commotion in the ward.

Nurse in Recuperation Ward

Experience/Values: Room after room, bedridden patients were hooked up to ventilators with a number of IVs. Most patients only had eye movement, and visiting the recuperation ward made me realize the reality of patients

even after the initial surgery. The recuperation nurse also discussed families wanting to ease their family member's suffering by limiting life-prolonging treatment. The recuperation ward nurse notes, “There is no one correct answer.” The nurses respect the decisions and help families through these emotional reckoning instances.

Covid-19: “For just one patient, many health professionals and wards are interconnected and involved.” For this reason, the spreading of the virus is fast, and almost all floors of Universal Hospital have undergone a cluster during the height of the pandemic. With quarantined wards, it was tough for recuperation nurses to move around the floors when needed.

Endoscopy Nurse

Experience/Values: I observed multiple removals of polyps in the large intestine using an electrical current while the endoscopy nurses cared for the patient's discomfort. The nurses later described the functions of an endoscope camera and taught me how to maneuver the camera. I realized the difficulty of handling such devices and realized the dexterity of endoscope surgeons.

Covid-19: As the entirety of Japan was under the Declaration of a State of Emergency, the healthcare workers continued to work at the hospital as usual. The endoscopy nurse recalls, “I felt a sense of duty to keep coming to work while the streets were a ghost town.” Endoscopy nurses were the middleman between the doctor and the patient and had many instances where medical examinations were over a phone call or from a car.

ICU Nurse

Experience/Values: The number of machines and ventilators hooked up to the patient was a never-before-seen sight for me. The ICU nurses check blood pressure and vital signs every few hours, as ICU patients can exhibit sudden changes in their condition. Also, ICU nurses pay attention to patients' mental health as some develop delirium from living through bedridden days that seem to be repeating an infinite cycle.

Covid-19: Patients in the ICU ward are those in critical condition who already present weakened immune systems. The ICU nurse recalls, "It was stressful to fight an invisible virus, but we worked hard to limit any potential spreading of the virus to the ICU patients."

ER Nurse

Experience/Values: As the phone goes off, all eyes of the ER room dart in the same direction. I observed the speed, teamwork, and delegation of tasks while the nurses raced against time. The ER nurses assess each patient with the acronym AMPL (allergies, medication, past medical history, last meal). ER nurses follow the patient to further testing such as CT, pass over information to the ward nurses, and return to the ER room ready for another emergency call.

Covid-19: The ER is directly connected to the outside, with doors opening and closing as nurses run out to guide the ambulances. For this reason, especially in the summer, wearing PPE while attending to their tasks was a challenge.

Rehabilitation Nurse

Experience/Values: I learned from the rehabilitation nurses at the Nanasawa Hospital that nurses must draw a line to the extent of their help "not to disregard the abilities the patient already has." Rehabilitation nurses create and adjust the biological clocks of often bedridden patients. Furthermore, nurses change the patient's resting position on the bed to alleviate the pressure ulcers and increase blood circulation.

Covid-19: As many of the patients at the Nanasawa Hospital are elderly, one positive patient soon became the source of clusters. The elderly have a weakened immune system, and the rehabilitation nurses said they felt a sense of responsibility to avoid crowds as much as possible when the numbers were soaring.

Nephrology Nurse

Experience/Values: It was my first encounter to see rows of patients with dialysis machines. The nurses alleviate any discomfort as patients at the Universal Hospital require 4 to 5 hours of dialysis three times a week. The nephrology nurse discussed the importance of building trust, as patients require dialysis for the rest of their lives.

Covid-19: Dialysis patients must filter their blood even if positive for Covid-19 to avoid kidney failure. In those cases, the positive patients were placed in a quarantined room. However, the nephrology nurses recall that the number of isolated spaces quickly became limited at the height of the pandemic.

Palliative Nurse

Experience/Values: “We nurses help the patients to live their life to the fullest.” Patients in the palliative ward at the Universal Hospital have terminal cancer, and palliative nurses physically and emotionally support them to improve their quality of life. With the colorful designs on walls, curtains, and a garden of flowers and vegetables, the palliative ward had a positive atmosphere.

Covid-19: The nurses discussed the difficulty of gradually seeing the patient's condition worsen while the restriction on family visits remained. Also, events for patients to converse and engage in activities with other palliative patients were canceled due to the pandemic.

Radiologist

Experience/Values: I resided with several radiologists, observing X-rays of different bones and joints, barium enemas, CT scans of the brain and abdominal area, and MRI brain scans. Radiologists and their machinery handling skills are crucial to producing images that lead to doctors detecting abnormalities. As the chief of the radiologist department at the Universal Hospital said, “If radiologists do not find the problem, medical treatments cannot begin.”

Covid-19: Radiologists had patients who were rushed from the ER, and although the patients exhibited symptoms of Covid-19, they still had to presume with the testing. Since the radiologist department has many patients coming in daily for tests, they wore PPE to avoid becoming the source of the outbreak across the hospital.

Clinical Technician

Experience/Values: The clinical technician department conducts physiological and pathological tests and examinations ranging from electrocardiogram, ultrasound, and respiratory function tests. Clinical technicians examine for the effect of medicine and the presence or absence of risk factors. They value precise examinations that connect to accurate diagnoses in other clinical departments.

Covid-19: The clinical technician department at Nanasawa Hospital discussed the struggles when the PCR tests of patients and employees surpassed over 100 per day at the height of the pandemic.

Medical Engineer (ME)

Experience/Values: At the ME department, I learned the mechanisms of often-seen machinery in the ER and ICU, such as infusion IV and syringe pumps. While their name is an engineer, their profession is extensive, as MEs can be found from the bed wards to the operating room, assisting nurses in shower rooms, ICU, and catheter rooms. The chief explained that “MEs often work right next to the doctors,” which makes their profession intriguing.

Covid-19: As mentioned, MEs reside in different hospital wards to ensure the machines are working correctly. At times, the MEs were short-staffed due to clusters, and it took a lot of work to make sure various machines were performing adequately in the different wards.

Pharmacist

Experience/Values: The pharmacists noted four critical components of a pharmacist: prescription, dispensing, guidance, and quality control of the medicine. Just like a patient has a medical history, every patient has a medicine history, and pharmacists ensure that no drug-to-drug interaction occurs in the patient's body. To eliminate human error, pharmacists double-check before delivering the medicine to the wards.

Covid-19: Since prescribed medicine is organized and delivered to different wards from one pharmacy, the pharmacist ward can quickly become a source of outbreaks. One pharmacist notes, "I felt the responsibility to reduce my time outside in my private time, so I don't put patients at risk."

Speech-Language Therapist (ST)

Experience/Values: I shadowed an ST practicing pronunciation of words with an aphasia patient at the Universal Hospital. At times, the patient started to give up on his sentence, but the ST encouraged and reassured them to take their time. The ST noted, "Since STs are with patients for an hour daily, we can build trust and strong relationships with patients."

Covid-19: STs expressed their challenges of training with patients for the correct pronunciation of words over a mask. STs utilized phrases like "position your lips as if you are whistling" to convey their message over face shields. During the pandemic, STs adjusted to understand their patient's feelings through their eyes and body position.

Occupational Therapist (OT)

Experience/Values: The OTs at both Nanasawa and the Universal Hospital showed me the necessity of stretching and flexing the joints and muscles before rehabilitation. The activities and exercises focused on improving daily living (ADL) activities, with goals varying for each patient. OTs value creating habits and reasons for patients to continue their rehabilitation.

Covid-19: OTs utilize group therapy sessions, but they have been discontinued due to the pandemic. Furthermore, OTs utilize several communal materials (laundry clips, cups, writing utensils), and disinfecting after each use was quite challenging.

Physical Therapist (PT)

Experience/Values: "Physical rehabilitation is a long process. We're here to support them physically, but we also try to make the rehabilitation something patients look forward to." PTs explain that physical rehabilitation is necessary for patients to progress from the acute phase to the recovery ward. PTs aim to inch closer to the patient's rehabilitation goal with a positive mindset.

Covid-19: PTs face difficulties when their rehabilitation patient is positive for Covid-19 and has to quarantine as "one week of no rehabilitation, especially for the elderly, can cause joints and muscles to weaken and harden." Since physical contact during rehabilitation is unavoidable, PTs were mindful to take precautionary measures outside the hospital.

Nutritionist

Experience/Values: Nutritionists value providing individualized menus for the patient's medical condition. Such conditions include dysphagia, diabetes, dialysis, pneumonia, anemia, gallstones, nephrosis, nephritis, and high blood pressure. The nutrition department incorporates seasons and holidays through food by having Christmas, New Years, and local cuisine-themed menus to have patients look forward to their meals.

Covid-19: As the PTs mentioned, Covid-19-positive patients could not participate in rehabilitation. The lack of movement caused patients to be less hungry and they could not finish their meals, which led to nutrient-deficient problems. The nutritionists had to plan and cater supporting food supplements for each patient to meet their dietary needs.

Social Worker

Experience/Values: At the Nanasawa Hospital, I shadowed a social worker for a house evaluation of a patient who recovered from a car accident and was finally discharged from the hospital. Seeing the patient tearing up slightly as she reunites with her neighbors and finds herself at home, I realized the importance of helping patients “return” to their once-had lifestyles. On the way back to the hospital, the social worker told me, “We social workers carefully think and map out the life after discharge with the patient and their families.”

Covid-19: Family visits to the wards have been heavily restricted with the pandemic. The social

workers found it difficult to hear about patients whose conditions worsened day by day, yet the families were still unable to visit. Also, due to Covid, the house evaluations were difficult as they were done over video calls and back-and-forth emails.

Regional Medical Cooperations

Experience/Values: Though patient interactions are rare, they ensure patient records are private and foster connections between nearby clinics, hospitals, and other regional medical facilities. One explains, “It's clerical work, but I don't forget that I am in a profession involved with patient lives.”

Covid-19: The regional medical department organizes downstream hospital systems between neighboring medical facilities. However, with Covid-19, some patients had to remain in quarantine, halting the downstream transport.

Medical Affairs Division

Experience/Values: The medical affairs division lessens the work of doctors by preparing medical charts and explaining the flow of hospitalization to patients and families. One employee in the division discussed how they gained medical knowledge while accomplishing office work. I realized that there are many crossovers of professions within medical care.

Covid-19: For the medical affairs division, trying to keep up with preparing medical charts for the growing numbers of Covid-19 positive patients and healthcare workers was challenging.

Below are quotes from healthcare workers responding to the following question.

What keeps you going as a ○○?

“Hearing the patient’s life stories, and seeing them happy and energized is more than enough to keep me going” - Social worker

“Being grateful when the day ends with no trouble” - Nurse director

“Moved by patients with aphasia being able to say words and receiving letters from patients”
- Speech-language therapist

“A sense of accomplishment after consulting the doctor and seeing the prescription changes benefitting the patient” - Pharmacist

“Seeing and hearing that through nutritional guidance and diet control the conditions of the patient’s improved” - Nutritionist

“Facing each patient with sincerity”
- Cardiac surgeon

“Being thankful every day” - OR nurse

“It’s rewarding when you hear from the patient’s family that they were glad the patient spent the last moments here.” - Palliative nurse

“A sense of responsibility for machines that patients rely on for every minute of their day”
-ME

“To not drag on to things for long. Have a mindset to do your best for patients as well as the medical team”- Endoscopy nurse

“Hope and anticipation from patients”
- Nephrology nurse

“Seeing little improvements one day at a time”
- ICU nurse

“Being able to see medical images first and find the reason” - Radiologist

“Identifying the issue through testing and connecting it to treatment”
- Clinical technologist

“Everything. Seeing or hearing patients recovering a few days after their arrival in the ER room is a relief” - ER nurse

“Patients praising me and thanking me and seeing the improvements after the sessions”
- Occupational therapist

Conclusion

The internship at the AOI Nanasawa Rehabilitation and Universal Hospital flew by an instant, yet it was an unforgettable and valuable experience. As an intern shadowing various health professionals, I realized that team medicine is integral to providing the best care for patients. I learned that working in a healthcare environment requires quick adaptability to unexpected situations, a positive mindset, and a smile to assure the patients. Through this internship, my feelings and aspirations to enter the medical field were reassured, if not stronger. I intend to explore my curiosities in high school and continue in University in hopes of inching closer to the day I enter the medical workforce.