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Brief communication: A radiology resident’s experience with COVID-19 in New York City

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ABSTRACT

The COVID-19 pandemic impacted New York City severely. As a radiology resident, I was unsure how my role would change as the pandemic unfolded. Like many hospital systems in New York City, my department was asked to assist in the clinical care of patients during the dramatic surge of admissions related to COVID-19. I placed invasive central lines for critically ill patients in the intensive care unit to help reduce the workload on already overwhelmed critical care teams. I also performed direct patient care within dedicated COVID-19 inpatient floors.

1. COVID-19 impacts New York

My first recollection of COVID-19 in the United States was in early February. As a resident applying to an interventional radiology fellowship in the 2020 application cycle, I was preparing for my presentation at the Society of Interventional Radiology (SIR) annual meeting when news started to break about the first COVID-19 cases on the west coast. The first few weeks in February passed and cases began to rise in New York. As it became clear that the virus was rapidly spreading, SIR made the decision to cancel the annual conference. In a few short weeks, the nation itself shutdown and suddenly the COVID-19 pandemic impacted everyone in the United States. Within a matter of days, the radiology department pivoted from sending several residents to a national conference to preparing for redeployment during the surge of COVID-19 cases that were straining the healthcare system in New York City.

My hospital system was immediately impacted by surge admissions related to COVID-19. In early March, admissions to the intensive care unit (ICU) rose rapidly. The hospital reflexively reduced elective surgeries, endoscopy and angiography cases to increase nursing and technologist availability to the rest of the hospital. When cases continued to rise, the operating room, endoscopy and angiography recovery rooms became surge ICU rooms to handle the sudden volume of critically ill patients. At this point, the hospital system began the process of increasing on site medical staff.

2. Radiology residents assisting critical care teams

Initially, there was a tremendous amount of uncertainty about how radiologists would be able to assist during the pandemic beyond image interpretation. As the influx of hospital admissions for critically ill COVID-19 patients rapidly rose, interventional radiology and general surgery attendings collaborated to create a consult service to assist in the pandemic. The vascular access support team (VAST) would place emergent invasive lines such as a radial arterial lines, Cordis central lines or non-tunneled dialysis catheters. To streamline and expedite the process, the critical care team could page VAST when any invasive line was needed. This service significantly offloaded the already overwhelmed temporarily created critical care teams and facilitated rapid stabilization of patients.

During my time with VAST, I placed most of the lines during the overnight period when the overnight primary team was handling new admissions or unstable patients. I felt a sense of apprehension as I placed my first line in a COVID-19 positive patient. We were asked to reuse available PPE for procedures such as eye shields and N95 masks. I realized in the back of my mind as I noticed the straps becoming looser on my reused N95 mask and vaguely wondered how protected any of us really were. Seeing firsthand the incredible number of patients each intern was covering gave a realistic glimpse into the myriad of media clips showing doctors and nurses strained in their battle against COVID-19 on evening news. Initially thought my role with VAST was a trivial and inconsequential part of patient care as I watched other residents...
deal with unstable and highly infectious patients during grueling 12 to 14 h shifts. However, I was greeted with tremendous appreciation from residents, fellows and attendings who now had one less task to worry about. In addition, my proficiency with ultrasound became highly sought after, and even senior medical residents came to observe my technique and attempt to improve their skills. Being able to teach other residents and improve their ability to complete essential procedures instantly made me an integrated member of the team.

3. Redeployment of radiology residents as the pandemic worsens

Initially, the medicine and surgery services staffed the surge floors and ICUs as the number of COVID-19 cases rose. As ambulatory services closed, residents were reassigned from elective to inpatient rotations. With each newly created COVID-19 unit, the medicine and surgery residents were increasingly strained. By the end of March, despite all medicine and surgery residents dedicated to COVID-19 units, the workload created by the influx of patients was too great to be managed safely. By the end of March, it was clear to the radiology department leadership that medicine and surgery alone would not be able to handle the increasing patient load. It was agreed that radiology residents and attendings would be redeployed to COVID-19 floors.

Although VAST gave me a glimpse into the care of COVID-19 patients, I received firsthand experience when redeployed to the COVID-19 floors. Two radiology residents were redeployed to the medicine service each week for six consecutive day shifts. As I walked onto the third floor, appearing unprepared. Under the supervision of a senior medical resident, I was assigned five patients.

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