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How One NYC Hospital Handled the COVID-19 Pandemic: The Chief 'Residents' Perspective

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In March of 2020, life as we knew it changed in a series of seemingly insurmountable challenges. The inpatient medicine ward of New York-Presbyterian Brooklyn Methodist Hospital (NYPBMH), a large Weill Cornell Medicine university hospital located in Park Slope, New York, is a high volume and high acuity institution. On March 5th, 2020, the hospital confirmed its first case of Covid-19 pneumonia. From that day on, the number of Covid-19 hospitalizations grew exponentially, and by mid-April, the hospital peaked at 403 admitted positive patients with nearly 110 on mechanical ventilation. We completed 356 COVID swabs in March with 207 positive results, a 58% positivity rate. In April, we completed 468 swabs with 232 positive results, a 49% positivity rate. This number fell to 10% in May as individuals isolated.

The biggest challenge in managing a residency program was taking care of such a high volume of patients coupled with an increasing number of residents and faculty falling ill in the early months of the pandemic. At the pandemic's peak, one-third of house staff and faculty were unable to work due to a Covid-19 infection. The department responded by redistributing residents, creating a more significant inpatient resident force to accommodate the volume. Outpatient clinics adopted a new remote "virtual-only" option, and residents on elective rotations were deployed to assist the ward teams. Support came from pediatrics, podiatry, and medicine subspecialty fellows, who became substitute medical residents. To reduce burnout, we developed a "flex schedule." Residents in a critical care unit worked for five days (instead of previously scheduled 6), followed by one day off. Their day off was covered by elective and clinic residents and ensured them a break. The hospital expanded from 28 to 138 makeshift critical care capable beds. Initially, the Centers for Disease Control did not guide safely discharging and following these patients. Eventually, the recommendation was to obtain two negative Covid-19 swabs several days apart before discharge, increasing LOS. We worked with a remote monitoring company using pulse oximeter data and regular check-ins to ensure patients were safe at home.[1] Unsafe patients were escalated to virtual appointments or referred to the ED.

Studies showed that most residents reported a negative impact on their professional and personal lives.[2] Furthermore, residents and fellows expressed feeling overwhelmed with increased anxiety and fear of death.[3] As the pandemic spread, there was a shortage of personal protective equipment (PPE), creating tension shared by residents across the United States.[4] Many healthcare workers who lived with families were unable to return home. One-third of NYC-based residents and fellows endorsed psychiatric symptoms based on positive MDD, GAD, and PTSD screens. A similar portion had burnout; data showed that internal medicine and surgical trainees had increased risk.[5] The RECOVERY collaborative group showed many residents were demoralized by the lack of effective therapies early on.[6] By mid-April, the inpatient wards were experiencing 10-15 cardiac arrests per day. We held goals of care discussions with distraught family members via phone. We coordinated abridged conversations via iPads for heart-breaking prayers and goodbyes. With many restaurants and exercise facilities closed, residents became isolated.

Strict social distancing guidelines disrupted traditional medical education activities,[7] and conferences moved to virtual platforms. The graduating residents struggled as they prepared for their medicine boards; our emergency medicine colleagues shared this challenge.[8] We canceled many didactic sessions to care for decompensating patients. Despite this, graduating residents achieved a 100% board pass rate. Our neighboring community provided inspiring support, supplying food donations from restaurants. Each evening, the neighbors cheered and banged pots to show support at shift change. NYPBMH also provided daily meals for all shifts and rewarded staff with two $1500 bonuses.

The pandemic created a vacuum for innovative and swift responses to maintain adequate education. Telemedicine became a mainstay of safe communication with patients. Weill Cornell Medicine provided training for remote visits, including a virtual physical exam in an appropriate setting. Research showed telemedicine, and virtual didactics provided an opportunity for increased accessibility, anonymity, self-directed learning, and flexibility not previously seen.[9] In spring 2020, we peaked at 80% of all clinic visits as telemedicine. In July 2021, we welcomed a new class that completed an entirely virtual application for residency during the 2020-2021 cycle. With this coming application season, we are leveraging our available resources to allow applicants to assess the "feel" of our program objectively, as the lack of an in-person interview deprives them of this opportunity.[10] The new supplemental application is a hopeful solution for programs.

As we transitioned into our chief resident year, our unorthodox residency training prepared us to adapt to issues and create innovative solutions. We plan to keep this new in-person/virtual hybrid model in our residency, to provide high-value care and robust medical education, and to utilize virtual learning in grand rounds.[11] COVID cases are declining due to vaccinations, PPE, and social distancing. 100% of our 112 medicine residents and 100% of our faculty are vaccinated. At NYP, all full-time employees must show proof of vaccination status as of September 2021 as a condition of employment. As chief residents, we are grateful to have grown as physicians and human beings during this tumultuous time to support our community and make a difference in our patients' lives.

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