Deployed: Pediatric Residents Caring for Adults During COVID-19's First Wave in New York City

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Stepping onto a busy coronavirus disease (COVID-19) unit for the first time can elicit trepidation for any medical provider. For a group of deployed pediatric residents at a New York City hospital in the spring of 2020, it was also the first time caring for adults since medical school. Imagine a pediatrician receiving this handoff: "77-year-old female with a history of diabetes, peripheral vascular disease, and COPD admitted with COVID-19 pneumonia, now intubated and proned with O2 saturations in the 80s. To do: DNR discussion." General anxiety around COVID-19 was compounded by the discomfort of being thrust into adult medicine. But the doctoring instinct we have been honing throughout training kicked in, and we acted.

A NEW ORDER

As the COVID-19 crisis escalated in New York City, it became evident that staff from other specialties would be essential to manage the surge of patients. Hospital administrators selected a group of trainees for deployment based on their clinical experiences and willingness to volunteer. Almost overnight, a group of senior pediatric residents became adult providers, honoring the oath we each took to "remain a member of society with special obligations to all . . . fellow human beings."[1]

This health crisis brought different clinical disciplines together like never before. Entire wings of the hospital were converted into new COVID-19–dedicated wards and intensive care units (ICUs), and teams were built to optimize providers' skills and capabilities. For example, one third-year pediatric resident was grouped with an outpatient endocrinologist—who had not practiced inpatient medicine in a decade—and a medicine intern. Hospitalists provided crucial support and guidance to these ward teams of deployed providers who were eager and willing to work but often not very knowledgeable about inpatient adult medicine.[2] In new ad hoc COVID-19 ICUs housed in other ICUs, where most pediatric residents were deployed, critical care attendings and neurointensivists led teams that also included anesthesiology, radiology, and neurosurgery residents, as well as nurses and advanced practice providers trained in various subspecialties of adult medicine.

PEDIATRICIANS IN AN ADULT WORLD

Although we wanted to help in any way we could, the prospect of entering this new world was incredibly daunting. We had not treated adults in several years, and during that time, our clinical experience with pediatric medicine greatly surpassed our adult training from medical school. We dug out materials on adult diseases, watched impromptu lectures on COVID-19 given by our critical care attendings, taught ourselves ventilator management in adults, and reviewed advanced cardiac life support (ACLS) protocols. But putting this all into practice was entirely different. Nothing can truly prepare you for arriving at the bedside of a hemodynamically unstable patient suffering from a virus that no one really understands.

When we arrived and introduced ourselves, we occasionally encountered surprise and curiosity from other providers. We felt that there was a perception that pediatricians do not often take care of critically ill or complex patients. Some of us were reluctant to disclose our specialty, lest it cloud perceptions of our capabilities. However, sick patients awaited us, so we got to work.

There was a steep learning curve over the first few days, from adjusting insulin for type 2 diabetes to troubleshooting renal replacement therapy issues. Accustomed to pediatric weight-based dosing, we were very anxious about ordering medications. The adult providers on our teams oriented us and helped us with many of these concerns. But the mystery of COVID-19 was a great equalizing force, leaving providers of every background with questions: Should we anticoagulate? How about steroids? Could this clinical change be another effect of the virus or a new infection?

We were pleasantly surprised that many aspects of our pediatric training proved beneficial in caring for adults. The focus on family-centered rounds and shared decision-making in pediatrics had imprinted on us the paramount importance of good communication. We were very cognizant of involving loved ones in discussions, now conducted by telephone or video call because infection-prevention guidelines precluded visitors. Family members were thankful for frequent updates, and as a result, largely embraced us as the doctors treating their loved ones. On one occasion, an internist, whose mother was a patient, was delighted to learn that the provider was a pediatric resident, saying, "I know you'll take such good care of her."

With the hospital inundated with sick adults, colleagues were

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grateful for our help. More so, they seemed appreciative of our compassion and ability to maintain a sense of humanity during the pandemonium of the pandemic despite feeling vulnerable, scared, and often powerless against COVID-19. In pediatrics, we do our best to truly engage with patients, from playing games with a 6-year-old with perforated appendicitis to holding and soothing a newborn in the neonatal ICU. We carried those skills over to the adult side. The team appreciated when a pediatric resident, with the help of an occupational therapist, used a letter board to communicate and receive assent for a tracheostomy from a nonsedated, intubated patient, directly answering the patient's questions and addressing concerns rather than relying solely on a family member's consent. And, though we had not previously led end-of-life discussions, we found that we were capable of doing so with the compassion instilled in us from our pediatric training. It had prepared us to face the universal challenge of communication in times of grief.

COVID-19 CHALLENGES

Besides grappling with our insecurity in treating adults, we, like all medical providers, had to balance our desire to provide care while keeping ourselves safe from COVID-19. To reduce our risk of exposure and preserve the dwindling supply of personal protective equipment (PPE), the flow of rounding, bedside care, and interventions was adapted to better cluster examinations, blood draws, and bedside tasks. Although efficient, this meant we did not enter rooms as frequently, creating an unfamiliar distance between provider and patient.[3] We feared missing moments of clinical decompensation, and for pediatricians who value close patient contact, this made for a deeply uncomfortable reality.

We considered every plausible treatment for critically ill patients, sometimes unsure if they were beneficial or instead complicating the course further. Was lack of improvement a treatment failure or just the natural progression of this new illness? Unfortunately, most of the time, treatments were to no avail. Watching the respiratory, cardiovascular, renal, and neurologic devastation of COVID-19 on so many patients was horrifying. Seeing patients die without their loved ones beside them and at an alarmingly fast rate was simply crushing, as other trainees have similarly described.[4] It was unlike anything we had ever experienced in pediatrics. Though we had begun to see a few pediatric COVID-19 patients in the hospital, their disease course was less severe. And, in the rare cases when pediatric patients die, they are almost invariably surrounded by family. One pediatric resident, who had never performed a single death examination before, did three in 1 week. It was emotionally trying, yet we had little time to mourn, as deathbeds were only briefly empty before the next gravely ill patients filled them.

Deployment took a toll on our bodies as well. We padded our faces to alleviate skin breakdown from 12-hour shifts spent entirely in N95 masks. We sanitized and washed our hands constantly, developing cracked skin and dermatitis, and showered meticulously after every shift. We isolated ourselves from our families and loved ones to protect them from the virus.

MOMENTS OF POSITIVITY

Despite these challenges, positive moments emerged. We worked with many wonderful colleagues from different disciplines we likely never would have met, let alone work alongside. We valued each other's skills, talents, and knowledge. On an overnight shift in one of the ICUs, among the "ragtag team of deployees," as one pediatric resident phrased it, each presented a topic from his or her respective specialty that might interest others. The pediatrician presented Kawasaki disease, as adult colleagues were beginning to ask questions about its cousin, the emerging multisystem inflammatory syndrome in children (MIS-C). This collegiality promoted a culture of collaboration and respect for other specialties that will hopefully continue.

A strong drive toward teamwork and shared responsibility flourished during deployment. No one was above any task. Residents and even fellows performed typical frontline tasks, such as ordering laboratory work and coordinating imaging. We all helped the proning team turn patients. Everyone shared insights, perspectives, and information gleaned from friends in different wards and hospitals and the ever-evolving literature. As we grappled with unpredictable disease courses, the traditional hierarchical roles of medicine—attending, fellow, resident—often blurred. We felt like we were all in this together.

Patient triumphs were celebrated. We danced with an 80-year-old patient admitted for almost 2 weeks when she was informed of her discharge and gave a standing ovation for a 91-year-old woman as she headed home. Music played over the hospital loudspeaker for every patient discharge. We also tried to create moments of lightheartedness. In the ICUs, we ate donated meals together and posed for pictures to express our gratitude to restaurants. Camaraderie blossomed during deployment.

ADVICE FOR THE FUTURE

Answering the call to help during the COVID-19 surge in New York City indelibly shaped our experiences as trainees and physicians. We will carry with us the lessons that we learned, both in the short term for the possible resurgence of cases and in the long term for ongoing patient care for the rest of our careers. For those residents who may be called upon next, the experience will be challenging, but rewarding. Each trainee has a foundation of knowledge, abilities, and instincts that will be useful, so trust in your training. Do not be afraid to ask questions or for help. You may be leaving your comfort zone, but you will not be alone, and families and other clinicians will be grateful to have you there. You are resilient, and you will make a difference.

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