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Perspective

Harnessing Our Humanity — How Washington's Health Care Workers Have Risen to the Pandemic Challenge

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In early March 2020, Ms. B., a woman in her mid-70s, was admitted from her nursing home to Seattle Harborview's medical ICU with suspected Covid-19. When she rapidly decompensated, the ICU team resuscitated her as they would any patient: central line, fluids, pressors. But when it became clear that her death was imminent, providing supportive end-of-life care proved more difficult. Because Ms. B. had been quarantined in the nursing home for several days, her family was already quite distressed about not being able to see her. And the hospital's strict visitor policy meant that even if they could get there quickly enough, their time at her bedside, if they were allowed any at all, would be severely limited.

For Courtney Enix, a senior resident who cared for Ms. B. and other patients with Covid-19 during her recent ICU rotation, Ms. B.'s clinical course exposed the difficulty of maintaining standards of care amid the pandemic's constraints. In an effort to limit exposure, ICU team members alternated time at the bedside, so Enix spent the majority of the time outside the room, admitting other patients, returning pages, and updating Ms. B.'s family. She was on the phone with Ms. B.'s son, eyeing the telemetry, when the patient's heart slowed and she died. Though this experience was particularly wrenching, the sense of disconnectedness was not unique to Ms. B. "We're still trying to figure out how to give these patients a 'good death,'" Enix told me. "Watching patients spend their remaining days isolated and alone is devastating."

Recognizing the resulting moral distress, the hospital began involving the palliative care service as soon as a critically ill patient with Covid-19 was admitted. But determining how best to care for patients at the end of life is just one of countless challenges Seattle-area health care workers faced as they bore the initial brunt of the U.S. epidemic. Though the challenges are diverse, behind them all lies a fundamental tension: How do we effectively care for patients with Covid-19 while protecting ourselves, our other patients, and our communities from further viral spread? Health care workers on the front lines must not only constantly grapple with this unusual calculus, but also somehow manage the resulting emotional dissonance.

Describing the chaos caused by constantly changing and conflicting guidance, the challenges related to shortages of tests and personal protective equipment (PPE), and the terrifying uncertainty about what's coming next, Megan

Reitz, a Seattle family medicine doctor, said, "It's like a wave about to break, but you're not sure which way it's heading or what's in the way."

One theme that emerged from my conversations with health care workers on Seattle's front lines was the need for clear leadership and guidance. As Jennelle Badulak, a University of Washington (UW Medicine) intensivist and emergency medicine physician who has helped lead her institution's response, told me, "In a time of fear and uncertainty, the best thing to have is a protocol." Badulak's general advice to hospitals is to be nimble in developing these protocols, given the rapid pace of learning. But she also warns that protocol modifications cause more anxiety than solace when they reflect the need to ration resources rather than reflecting data on safest practices. The consternation among health care workers when the Centers for Disease Control and Prevention recommended using bandanas when no masks are available was a case in point.

Those tasked with leading their institutional charge find themselves juggling the imperative to offer their workforce clear guidance on best practices, thereby allaying some fear, with the need to be transparent about resource constraints. Reviewing the practices of China, for instance, suggests that far more extensive PPE use can dramatically reduce infection rates among health care workers.[1] Though under normal circumstances, we would reject guidelines that did not reflect the highest-quality evidence, in the face of dwindling resources, the workforce seemingly has no choice but to make the most of what is available.

How do these constraints affect patient care? Mark Wurfel, one of the first intensivists at Seattle's Harborview Hospital to care for patients with Covid-19, said one of the biggest challenges involved diagnostic tests. Even obtaining something as routine as a chest x-ray was difficult because it required a radiology technician to enter the room, consuming precious PPE, and rendered the machine unusable for other patients without a deep cleaning. But with some ingenuity, the nurses and radiology techs developed a workaround. The nurse would move the bed up to the window of the door and sit the patient as upright as possible, with the plate behind the patient, allowing the tech and the machine to stay outside the door.

CT scans, however, proved more difficult. As Wurfel explained, in the best-case scenario, you send someone to the scanner, the scan's done in 15 to 20 minutes, and the machine is disinfected (though long cleanings after patients with Covid-19 disrupt workflow for the rest of the hospital). Unfortunately, critically ill patients who most need imaging also tend to be the most unstable. Wurfel told me about a patient who had respiratory decompensation inside the scanner, necessitating bag–mask ventilation. "It's the worst place to have to manage copious endotracheal secretions that are potentially infectious," he said. This scenario also highlights the need for hypervigilance among patients who are presumed not to have Covid-19. This patient, for instance, initially presented with stroke symptoms, but a further history obtained from the family raised suspicion for Covid-19 infection, which was later confirmed.

Given mounting PPE shortages and the rising death toll from Covid-19 among health care workers globally, such scenarios induce terror and necessitate rethinking of routine standards of care. Should we run to codes of patients with known or suspected Covid-19? Should physicians refuse to intubate a patient unless they have adequate PPE? Should we offer bedside comfort to the elderly patient with possible Covid-19 who becomes increasingly delirious as unrecognizable health care workers speed in and out of the room while TV coverage of the pandemic drones on in the background? The clarion call of the profession — to put our patients' needs above our own — is far less directive when meeting one patient's needs may leave us too ill to care for the next. As David Walton, a hospitalist at Boston's Brigham and Women's Hospital who has been on the front lines of infectious disease outbreaks in Africa and Haiti, pointed out, negotiating these trade-offs is highly unusual, particularly for U.S. clinicians. "The challenge of taking really good care of patients with the precautions we need to care for ourselves is new for us."

To Nick Mark, an intensivist at Seattle's Swedish Medical Center whose young physician colleague was critically ill with Covid-19 when we spoke, the threat to health care workers is palpable. Predicting a workforce shortage, Mark likened the epidemic to a marathon, emphasizing that "we are only on mile 2 or 3." Particularly worrisome to him are the intense ventilatory needs of patients with Covid-19–associated acute respiratory distress syndrome (ARDS). "People tend to think of machines as magic and under-

value the people who [operate] them," Mark said. Noting the widespread calls for physicians from other specialties to pitch in, Mark noted how few among us actually know how to intubate, manage ventilators, or insert chest tubes.

Reflecting on other challenges, Mark lamented the absence from the hospital of patients' family members, who provide comfort and often translate for critically ill patients who can't communicate. "Everyone is worried about not having sufficient ventilators," he said. "I am worried about not having sufficient compassion and not having sufficient people."

When it comes to protecting the workforce from infection, an adequate supply of PPE is the first priority, and it is unconscionable that supplies are lacking. But many people I spoke with emphasized that even if physical risk is minimized, we need to tend to the workforce's emotional well-being in the face of pervasive and well-warranted fear. Given concerns about inadequate protection, knowledge that we might expose other people, and awareness that people we love will die, telling people on the front lines not to be scared is like asking them not to breathe. But if compassion has sometimes been a necessary casualty of our attempts to save as many lives as possible, what struck me about Washington's front lines was how clearly the workforce's fundamental humanity shone through.

EvergreenHealth, just east of Seattle, is the hospital where the nation's first influx of coronavirus patients received care. David Reed, the environmental services manager there, told me that though his team is used to "cleaning up all kinds of icky, scary stuff," anxiety about Covid-19 compels him to tend more to his staff's emotional needs. So Reed spends more time than usual checking in with the workers who clean rooms, making sure they feel confident in their ability to protect themselves. The supportive spirit trickles down to his team leaders: Warren Julve, who leads the day-shift team, is highly attuned to his team's fears. One typically fearless team member, for instance, entered a room that had been occupied by a patient with Covid-19 and just stopped. "I'm scared," she told Julve. "I can't do this." So Julve cleaned the room with her, reminding her that they know how to protect themselves, the staff, and patients. "That sort of sensitivity to what people are feeling is more important now than ever," Reed told me.

Sensitivity to the well-being of medical trainees was emphasized by many people as well, and it will continue to be a nationwide focus of discussion if workforce shortages intensify. Though initially UW Medicine intended to keep trainees from caring for patients with Covid-19, it quickly became clear that that was operationally impossible. Mindful of trainee well-being, however, the residency program created a "no questions asked" policy, allowing house staff to opt out of caring for infected patients. Nevertheless, as Douglas Leedy, one of UW Medicine's chief residents, told me, residents overwhelmingly preferred to be on the front lines. Leedy said he had been inundated with email from house staff offering to help by, say, coming off elective rotations or giving up vacation. Leedy was not surprised by the outpouring of support. "A lot of us health care workers go into medicine for moments like this," he said.

Sharukh Lokhandwala, an intensivist at EvergreenHealth, was similarly struck by the nearly universal urge to help the community get through this crisis. Lokhandwala recalled, in particular, a patient in her 70s with refractory ARDS. After he'd explained to her family, on the phone, the terminal nature of her disease, they agreed to transition to supportive care. A morphine infusion was started and the patient was extubated. A few minutes later, Lokhandwala looked up from his workstation and saw a nurse in PPE, comforting the patient. The nurse rubbed the patient's arm, told her that her daughter wished she could be with her, and held her hand until she died.

As the pandemic spreads around the world, we'll continue to be plagued by resource constraints that will compromise our ability to protect ourselves, our patients, and our communities. But as Seattle's response to Covid-19 reminds us, the professional spirit marches on, unconstrained.

Disclosure forms provided by the author are available at NEJM.org.

Dr. Rosenbaum is a national correspondent for the *Journal*.

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1. Gawande A. Keeping the coronavirus from infecting health-care workers. The New Yorker, March 21, 2020 (https://www.newyorker.com/news/news-desk/keeping--the-coronavirus-from-infecting-health-care-workers).

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