The NEW ENGLAND JOURNAL of MEDICINE

Perspective

Am I Part of the Cure or Am I Part of the Disease? Keeping Coronavirus Out When a Doctor Comes Home

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Last year, after a month of dry cough and shortness of breath while walking up the steep steps of Fillmore Street in San Francisco, Mary, my mother-in-law and housemate, noticed that she was becoming more and more easily winded. When her symptoms didn't improve over the next several weeks, her doctors at the University of California, San Francisco, ordered a CT scan. They found bronchiolitis obliterans, a chronic, progressive lung condition that leads to gradually worsening lung disease and respiratory collapse. There is no treatment for this disease, whose natural history ends in lung transplantation for patients who are young and healthy enough to undergo it. Mary has spent every day of the past year and a half focused on respiratory physiotherapy, practicing breathing techniques that ease her symptoms but do little to slow disease progression.

"What can Mama do to stay safe?" my wife asks, in light of the coronavirus cases now cropping up in San Francisco. There are many things we don't yet know about Covid-19. We do know, however, that like many viral illnesses, it is most deadly to people who are elderly, already ill, or immunocompromised. And it is especially dangerous to those with lung conditions, given the predominance of pulmonary complications. I recommend the guidelines from the Centers for Disease Control and Prevention, telling my wife, "She can stay home, cover her coughs, and practice good hand hygiene."[1]

Mary and I discuss the situation in the kitchen of the multigenerational home we've shared since I moved to San Francisco as a new doctor a few years ago. In a city with housing costs that skyrocketed with the tech boom, young professionals like me have had to rethink our definitions of personal space. In our home, we have balanced everyone's needs well, managing odd hours, grocery shopping, and cooking out of sync with each other's schedules. My friends ask Mary, a history professor at San Jose State University, for reading recommendations to help them compare the current rise of nationalism with that of the early 20th century, and in turn she asks us for Ruth Bader Ginsburg memes to show her class. We watch Netflix together, on mail-order DVDs, after long days.

We take long walks in the neighborhood, through the San Francisco streets Mary has called home since childhood, and her childhood friends join us along the way. She treats each step as

part of her physiotherapy. It seems to make this convalescent period that much more bearable for her, to be able to reexperience her transitions from girlhood to womanhood, from motherhood to grandmotherhood, while maintaining some form of normalcy. Though the stairs up to the poetry section at City Lights have gotten harder to climb, at least Ginsberg and Kerouac are still there when she arrives.

But now that coronavirus has crept into San Francisco like Karl the Fog, visiting a bookstore can feel like a risk. *Is it worth it?* Mary wonders before stepping out the door. *What if someone at Cal-Mart has it? Has my student who was coughing in the back row been traveling?* "I'll need to cancel my trip to Berlin," she says, imagining the recirculated airplane air and the crowds moving through travel hubs and responding to evolving travel restrictions. Travel — especially to that once-war-torn city with its famous wall meant as a form of barrier protection from the infectious spread of capitalism — is one of Mary's passions.

She is undeterred, however, since she has some control over these risks, and she vows to keep living her life and being involved in her community, if even remotely, until she's told she can't. The only restriction she is sure that she'll avoid, at all costs, is visiting the hospital, where viruses jump around waiting rooms and hide in white coats and Half Windsors. "We've always said the real point of entry for coronavirus is a busy emergency room," noted Mike Ryan of the World Health Organization's Health Emergencies Program. All Mary has to do is avoid the places where sick people go.

There's only one problem: every day when I return home from work, I'm coming back from a busy emergency department (ED).

The irony is that despite health workers' being "the glue that holds the health system and outbreak response together," per Tedros Ghebreyesus, director-general of the WHO, 41% of the Covid-19 cases in Wuhan resulted from hospital-related transmission.[2] Health care providers are at increased risk for developing the condition and spreading it.[3] Work stress is believed to weaken their immune systems, and close, intimate care of patients can lead to exposure to a higher viral load. Despite performing selfless work on behalf of their communities, health care workers have faced social stigma during this outbreak.

As a colleague and I go through the 17 steps for donning personal protective equipment and the subsequent 11 steps for safely doffing it in the back corner of the ED, Coldplay's "Clocks" comes through on my overnight playlist: *Am I a part of the cure, or am I part of the disease?* We wonder whether our commitment to our community puts our families at risk at home. But who would manage the triage tents, resuscitate the respiratory failures, and manage the intensive care units if health care professionals steered clear? Who would study the disease spread, investigate novel therapies, develop the disaster plans, or manage all the other health issues that continue to occur without regard for the virus? If some physicians or nurses or physician assistants stop coming to work, the health care system will face further stress, and patient outcomes will suffer.

Nevertheless, I see the horror in my wife's face whenever I scratch my nose with the end of my glasses or sneeze into my elbow. It's as though she's hearing the police tell her that "The call is coming from inside the house!" The virus's threat is as ominous as a gun's — both far more dangerous to you when they live in your home than when wielded by an invader. Yet the wounds these pathogens inflict and the diseases they spread are what my colleagues and I have devoted our lives to treating. Are we being irresponsible to our families and friends by going out to dinner, by hugging or kissing them good night?

Mary and I talked about what it would mean if she were to become infected. Breathing might be as difficult as marching up Mount Everest without an oxygen tank. She might cough so much that her chest would feel like she had just ducked out of the ring with Muhammad Ali. She might need to be hospitalized. Her lung reserve is so low that she would most likely wind up on a mechanical respirator in an intensive care unit, probably on the 13th floor at UCSF, where I trained several years ago. Perhaps the team would attempt extracorporeal membrane oxygenation (ECMO), hoping that more time would be the answer. It is not unlikely that she would die, that this invisible invader, this microscopic enemy would be the end of her story. All this just because I came home.

I stand in the ambulance bay outside the hospital at 6 a.m. and begin to call friends from resi-

dency. I'm looking for a room where I can stay: last night, I was exposed to a patient with possible Covid-19 who needed intubation. The music still plays in my head: *Home, home, where I wanted to go.* "I have space at my apartment, and if you're exposed, I guess I am, too," Sam, my fellow overnight doc, says as she walks through the sliding doors behind me. Times like this can leave physicians stranded between our commitment to the community and responsibility to our families — a no man's land where a colleague's spare bed may be the closest approximation of *home* that we can find.

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

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This article was published on March 18, 2020, at NEJM.org.

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DOI: 10.1056/NEJMp2004768