Rural Matters — Coronavirus and the Navajo Nation

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I stand in the parking lot of our emergency department and watch three men on horseback trot up the shoulder of the highway. They wear bandanas over their faces, a traditional accessory here in northwest New Mexico, where spring is wind-and-dust season. Normally, this spot is where we peek out of the hospital to see whether the white pickup truck is selling mutton sandwiches on the roadside. But there are no vendors now, just huge trucks hurtling north to Colorado, and this parking lot has become our newly christened "Fever Clinic." The men pass by every day at this time, exercising their horses.

Cars pull into the lot, and I approach them in personal protective equipment (PPE). I hear a driver explain matter-of-factly "I know. We're supposed to be 6 feet apart, but this was the only way to manage today." There are seven people in the car, and they have driven 50 miles to get here. The driver is in charge of the family and is ill. One of the passengers, diagnosed with Covid-19 several days ago, has been getting increasingly short of breath. A few others came to be tested; young children and a grandmother couldn't be safely left at home. My colleague whisks the sickest patient away for admission to the hospital. I reach through the window and push a viral swab into the grandma's nasopharynx, making her cough, while a surge of wind shoves the bottom of my gown up, through the open window, into the car. I picture the virus particles bouncing on my gown, swirling in the wind eddies. I marvel at how far this virus has traveled to get here.

The Navajo Nation, Diné Bikéyah, is 27,000 square miles of high-altitude desert, steep canyons, red rock spires, and extinct volcanoes, which, at this time of year, are still spotted with snow. The population density is among the lowest in the contiguous United States: seven people per square mile. If you didn't know better, the vast landscape would seem a perfect setup for social distancing.

But where cell-phone service is spotty and broadband nonexistent, human networks are strong and extensive. On the Covid ward, I ask a patient about her family contacts. She uses her breakfast tray to explain. The applesauce container is the home she shares with her kids, the milk carton is where her sister's family stays nearby, and the cup is her mother's hogan, the traditional Navajo dwelling. Other family members stay there part-time. There are many people under each roof, even if this tight cluster of roofs is 20 miles of dirt road away from anyone else.

The national media reports on the severity of the Navajo Nation outbreak and hits the usual notes of poverty, isolation, and lack of running water. These reports are factually accurate: the virus penetrated towns that utility companies have never managed to reach. But I yearn for stories that mention the diversity of talent and experience here, the resourcefulness. Outsiders seem surprised that the rural landscape hasn't protected us. I don't think the Navajo are surprised. From smallpox to H1N1 influenza, infections from the outside have always found their way here. It's just infrastructure that hasn't. It's not news.

The president of the Navajo Nation has issued a curfew. A graffiti artist covered the burned-out hardware store where I used to buy irrigation supplies with a striking mural of a woman in traditional Navajo dress wearing an N95 mask. "Stay strong, stay safe everyone," it exhorts (see photo). Memes on social media depict the 6 feet of social distancing as two sheep-lengths or as five sacks of Bluebird flour, the local favorite. Here, as everywhere, the recommendations sometimes clash with necessity. There is no public transit besides hitchhiking. Distances are long, and gas money is short; families travel together.

The Fever Clinic continues in the parking lot. It is meant for SARS-CoV-2 testing, but we end up treating ear infections and even giving the occasional Depo-Provera shot through a car window. Our Incident Command organizes a home-testing team so families don't have to travel to us. Along with the tests, the team brings boxes of donated supplies: bleach, paper towels, canned

Covid-19 Mural in Shiprock, New Mexico, in the Navajo Nation.

goods. So many people work behind the scenes to make this happen — anything to reduce the likelihood that someone will have to leave home or come inside the hospital.

In our small hospital, the leadership and Incident Command are not faceless administrators. The people making the Covid policies are the same people donning PPE and taking care of patients. They order hand sanitizer for the hospital and two liters of oxygen for their patients. They are exhausted. Our bureaucracy has never been nimble. It still takes far too many signatures to purchase a pallet of nitrile gloves, but we are masters of the work-around, the get-it-done approach. It's the only way to handle an epidemic in which everything changes by the hour.

This practicality is inspired by our community. Like our patients, we manage each day with the resources we have. Many of our staff — secretaries, doctors, therapists, nurses — are locals. Some balance their day jobs with ranching, farming, and making art. On my first day in the Fever Clinic, my colleagues show me how to doff my gown into the correct garbage bin, and in between patients they discuss how to call a coyote (there's a device) and how to get a stubborn bull away from your house (a bucket of food). Many people know how to fix cars, cut hair, and buy a month's worth of shelf-stable groceries on a budget. So it's no surprise that my boss, the best doctor I know, offers to draw blood if we're short-staffed. She's reorganized our entire outpatient clinic and is setting up emergency housing, but apparently she also used to be a phlebotomist.

Our public health nurses make daily phone calls to people diagnosed with Covid who are still at home. Are they short of breath? Do they have food? The nurses listen carefully to how easily each person can speak. Meanwhile, our clinician epidemiologists, with dozens of other responsibilities, review our data. The Centers for Disease Control and Prevention refers to Persons Under Investigation for infection but we shift our mindset to Families Under Investigation. Cases increase rapidly, still clustering in families. Usually, in an outbreak, contact tracing makes way for community mitigation when spread becomes extensive. Here, it is hard to find a line between family and community spread.

A few family networks have been particularly devastated. The virus landed in the middle of the reservation and exploded outward, from a remote region with an emergency department but no hospital. Many patients were transferred 100 miles east to our facility, but others were sent equally far in the opposite direction. Some were transported south to Albuquerque or Phoenix. Over the ensuing weeks, these families have had sick and dead members spread along an 800-mile circuit. Family members who are healthy enough are trying to coordinate hospital discharges, home oxygen delivery, transport of bodies, and memorials, all while grieving the loss of multiple relatives, young and old. The impact of this collective trauma is hard to grasp.

The virus takes advantage of the expansive Navajo definitions of "auntie" and "cousin-brother." I have always loved this generosity. My elder patients ask me about their grandbabies, meaning my own school-aged sons. I refer to them as grandma and grandpa, *shimá* and *cheii*. Elders are revered as keepers of knowledge and tradition, which makes this virus especially ominous. Now, between shifts, I call my *shimás* on the

Mural and photo by I.C. Lee.

phone. Over a terrible cell connection, I explain to one patient that a cancer has metastasized. With another, I review the results from her Holter monitor, futilely illustrating her heart arrhythmia on a notepad she can't see. I worry about them. As we say goodbye, they tell me that they are worried about me. "Be careful" they say. "We're praying for you." I am surprised to hear my voice crack as I reply.

I don't know what will come next. A month ago, our first cases alarmed us; a week ago, our hospital was at surge level three: a series of tarps separated our Covid ward from the rest of the hospital. Now we are at level five: the whole hospital is essentially the Covid ward. At level six, we may expand to a school gymnasium. By the time you read this, everything will look different, but it won't be over. The news cameras will have gone, but we will still be here. The men on horses, if they don't get sick, will be trotting up the highway each morning. They will still be wearing masks.

The views expressed in this article are those of the author and do not necessarily represent those of the Indian Health Service.

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

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