

I. Background Information


"We have been driving all night. We would have been here sooner, but we were stopped by tribal police officers twice. You know, the curfew.¹ Also, my grandmother and kids are in our truck bed.² They will be in the waiting room," Joseph Martinez says as he and Ashley Martinez, his wife, walk into the ED of the Tuba City Regional Health Care Corporation (TCRHCC),³ a regional hospital in the Navajo Nation.⁴


Dr. Santiago, the U.S. Public Health Officer⁵ recently assigned to TCRHCC, is working in the emergency department and attends to the couple. He started working at TCRHCC after the Indian Health Service relocated a more senior officer to another facility in New Mexico. In addition, his coworker is self-isolating at home after returning from a deployment to New York.⁶


He takes a look at the nurse's note:


"Ashley Martinez is a 50 y/o F with a history of HTN and T2DM, presents with fever, progressive dyspnea, and new-onset anosmia. Her husband found her asleep on the couch with a "pale blue" facial appearance. In ED, T 101.7 RR 19 O2 sat inhaled O2 85%."


Dr. Santiago suspects that she has COVID-19, which has made its way across the Navajo Nation.⁷ He wants to order a chest x-ray, but the machine is currently out of service. The tech will be driving from Phoenix tomorrow afternoon. It will take them over 3.5 hours to get there.


¹  The Navajo Nation has carried out multiple 57-hour weekend curfews to curtail COVID-19 on the reservation ([Arizona Republic, 2020](#)).


²  "In multigenerational homes, eight people could be sleeping in one room—from very little children to much older adults and elders," making social distancing impossible, says Johns Hopkins SPH Center for American Indian Health Director Dr. Allison Barlow ([JHSPH, 2020](#)).

³  TCRHCC is one of 12 health care centers in the Navajo Nation providing services to a 6,000 mi² area in NE Arizona, an area larger than CT, DE, and RI, and has a bed capacity of 73 ([Tuba City Health](#), [Navajo Indian Health Service](#)).

⁴  The [Navajo Nation](#) is the largest Indian reservation in the United States, comprising about 16 million acres or 25,000 mi². It is approximately the same size as West Virginia.

⁵  Close to 1,900 U.S. Public Health Service Commissioned Corps Officers are assigned to the Indian Health Service. In 2018, the Trump Administration proposed reducing the size of the Commissioned Corps by 40% ([White House](#)).

⁶  As of May 18, 2020, the Public Health Service has deployed 176 officers away from their IHS assignments for COVID-19 response activities across the US ([IHS COVID-19 FAQ](#)).

⁷  The Navajo Nation has surpassed New York and New Jersey for the highest COVID-19 per capita infection rate ([CNN, 2020](#)).

II. Challenges within the IHS

While Ashley waits for the results of a rapid diagnostic test for COVID-19,⁸ Dr. Santiago starts IV fluids. He moves her to an older part of the facility that has been repurposed for patient isolation due to the COVID-19 pandemic.⁹ The test returns positive. Dr. Santiago discusses with Ashley and Joseph that she will likely need to be ventilated. However, there are no ventilators at TCRHCC.¹⁰ Dr. Santiago calls the Arizona National Guard. They will fly Ashley to a larger hospital in Phoenix, where she can receive appropriate care for COVID-19.¹¹

Dr. Santiago reviews an excerpt of her history as he contacts the team in Phoenix.

“Ashley is seen by a PCP at an IHS clinic 2 hours from her home. Her previous PCP recently left the clinic for a better paying position in Salt Lake City.¹² This is her third PCP in 4 years. Her blood sugars are poorly controlled. She endorses missing regular doses of her diabetes medication. When asked about her overall health, Ashley said “yá’ánisht’ééh” – “I am well.”¹³ She has had difficulty breathing for the past 2 weeks, and it has progressively gotten worse.”

⁸ 🗣️ The White House Coronavirus Task Force announced that the Indian Health Service and rural areas would have priority access to rapid coronavirus tests ([Politico, 2020](#)).

⁹ 🚧 The average age of IHS healthcare facilities is greater than 37 years. At current rates of funding, if a new IHS facility were built today, it would not be replaced for 400 years ([National Indian Health Board, 2018](#)).

¹⁰ 🏥 In mid-March, the IHS reported that they had 625 combined hospital beds, 6 ICU beds, and 10 ventilators at their facilities nationwide. While those numbers have increased since then, they are still low. ([Politico, 2020](#)).

¹¹ 🚚 The Arizona National Guard was activated by Governor Doug Ducey on March 19, 2020. They have been assisting the Navajo Nation with COVID-19 ([Arizona Republic, 2020](#)).

¹² 💼 The Navajo Nation has a 30% physician vacancy rate ([Government Accountability Office, 2018](#)). IHS salaries are less than the VA and the competitive market in the United States ([National Indian Health Board, 2019](#)).

¹³ 📝 Please read this essay written by Dr. Walter Hollow, President, Association of American Indian Physicians: [The Role of Traditional Indian Medicine in the COVID-19 Pandemic](#).

III. Navajo Nation

Chronic Conditions

In the Navajo Nation, 1 in 5 individuals have diagnosed diabetes, and a significant number have prediabetes.¹⁴ This high burden of chronic disease is due to a number of factors that center around a lack of federal investment and public health infrastructure on the reservation.

Access to Food

There are only 13 grocery stores on the reservation. This means that some residents have to drive close to 3 hours to reach a grocery store, which may or may not have fresh produce available.¹⁵

Access to Electricity

10% of residents live without electricity. This makes it harder to store food, keep, charge devices, and manage medical care.^{16,17} Many, especially the elderly, also lack regular access to the internet, which makes it difficult to receive updates from state, federal, and tribal authorities.^{16,17}

Access to Water

Somewhere between 30 to 40% of households do not have access to running water.¹⁸ Residents routinely drive to wells or secure bottled water in bulk. If someone does not want to go as far, they can use a water pump that is closer to their home. However, there is a significant risk that the water is contaminated by uranium and other toxic substances.^{19,20} These contaminants are linked to increased rates of cancer and other chronic conditions on the Navajo reservation.^{19,20} Lack of running water also makes it hard to follow hand washing guidelines.

¹⁴ □ The IHS estimates that 75,000 community members in the Navajo Nation have prediabetes ([Shiprock Health Promotion Program, 2017](#)). It is estimated that one in three on the reservation are diabetic or prediabetic ([Partners in Health, 2019](#)).

¹⁵ 🌿 The Navajo Nation, like many Tribes with reservations, is classified as a food desert. The arid climate also makes it difficult to maintain community gardens ([Planet Forward, 2019](#)).

^{16,17} ✂ It costs \$40,000 on average to connect a home on the Navajo Nation to the electrical grid. A poll conducted by NPR, RWJ, and Harvard found that more than a quarter of Native Americans have experienced problems with electricity, the Internet, and the safety of their drinking water ([NPR, 2019](#)).

^{16,17} □ Many Navajo elders do not speak English. They speak the Navajo language Diné Bizaad. The Fort Defiance Indian Health Board has created a series of videos that translate information from the CDC into Navajo ([Fort Defiance Indian Hospital Board, 2020](#)).


¹⁸ 🚗 Individuals can drive for over an hour to access potable water. Other water sources are contaminated and are only used for livestock and household chores. ([NPR, 2020](#)).

^{19,20} ☢ Mining companies blasted 4 million tons of uranium out of Navajo land up until 1986. Many residents have died of kidney failure and cancer due to exposure from residual contamination from neighboring mines. ([NPR, 2016](#)). Uranium can have chemical and radiation effects on the human body and has also been linked to high blood pressure and autoimmune problems ([EPA, 2014](#)).

^{19,20} 🧪 Dr. Monica Yellowhair studies the effects of uranium exposure on the Navajo Nation ([University of Arizona College of Pharmacy](#)).

IV. Social Distancing Considerations

All of the above factors make social distancing much more difficult. Not only do families live in close quarters, but limited resources, like water and food, force people to leave their homes for groceries or internet access. Many families also have to use the same water pumps.²¹ All of these issues put people at a higher risk of contracting SARS-CoV2.

²¹  With limited locations available to get water, residents have to choose between accessing these resources or abiding by social distancing guidelines ([CBS News, 2020](#)).

V. Case Conclusion

Ashley Martinez had a long and complicated hospital course in Phoenix. When her oxygen levels continued to drop, she was sedated and placed on a ventilator for 10 days. While she was hospitalized for several weeks, she ultimately recovered and went home.

Please visit the Navajo Nation Department of Health for more information about COVID-19:

<https://www.ndoh.navajo-nsn.gov>

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