

The Pivot to Vaccines: An Evolution of COVID-19 Work Throughout the Pandemic

BY TERRA OSTERLING

As of the time of this interview in April 2021, 216 million people had been vaccinated in the U.S., including 5.74 million in New York state, and 242,050 in Monroe County, New York.

Nurses are always on the front line. That fact has been especially clear during the past year of the COVID-19 pandemic. Carla Jungquist, PhD, ANP-BC, FAAN, associate professor and adult/gerontology program coordinator at UB School of Nursing, who has been a nurse for 39 years, has been serving on the front line from a unique angle: as a volunteer in underserved communities that have been impacted the hardest.

Jungquist's work for Visiting Nurse Services early in her career as a registered nurse brought her to an assignment at a University of Rochester HIV clinic in Rochester, New York. It was the 1990s and she served as a hospice nurse for AIDS patients, many of them also living with drug addiction. The rates of transmission among certain groups, and the biases these people faced, were gut-wrenching.

"This set the stage for the rest of my career," Jungquist said, "and I decided I wanted to make an impact on the lives of people who are underserved."

A job with the Health Association's short-term rehabilitation and detox center in downtown Rochester reinforced that goal. Newly graduated with her master's degree, Jungquist began providing care for patients of lower socio-economic status living in urban zip codes – groups, she observed, who were not represented in research studies (AIDS studies, in particular). At this point, her patient load had spanned from persons of color, people living with drug addiction, and the poor, to white, educated, affluent men who could afford health care.

Addressing Needs Among Underserved Communities

It is owing to this background that when the COVID-19 pandemic first unfolded, Jungquist knew underserved socio-economic populations and people of color would be more likely to get sick. She also understood the vital role nurses play in addressing infectious disease prevention and treatment.

"As a community health nurse, I had worked closely with the Monroe County Department of Health in initiatives that put

nurses on the street to more directly address drug addiction and the AIDS epidemic," Jungquist said. Knowing this history in outreach using nurses, she registered through the county's COVID-19 volunteer opportunity webpage.

They called immediately.

At this point, in spring of 2020, families of discharged COVID-19 patients still had to quarantine for a month. Many people lacked social supports to deliver groceries and other necessities, especially if they lived in underserved communities. Jungquist and other

“I thought, ‘I have to do something; I can’t just sit home and not do anything. I need to get in there and do whatever I can.’”

volunteers were tasked by the county with on-the-street work to pay home visits to these households. The well-being checks included delivering supplies, which helped people to maintain quarantine.

Once the COVID-19 infection rate escalated, however, there were not enough volunteers or PPE to sustain that program, so the health department pivoted to provide surveillance and support to these families via phone calls.

Battling COVID-19 with Science and Technology

Care resources were overwhelmed, so decreasing hospitalization was a goal, but Jungquist knew that to get people home or keep them there would require devices that could measure pulse oximetry and transmit that data to providers. It was here that she began to connect some dots.

Jungquist's current research centers on monitoring respiratory depression in patients taking opioids for acute and chronic pain. A crucial aspect of her work is teaching nurses how to prevent mortality in the hospital setting by personalizing care through proper respiratory monitoring.

"I could see what was really needed, and that is home medical equipment that transmits patient data, but I already knew about all the monitoring equipment and knew that there was not a device out there that was FDA-approved to monitor patients at home," Jungquist said.

Around this time, mid-year 2020, Jungquist was tapped by the University at Buffalo Business and Entrepreneur Partnerships team that connects UB faculty and staff with startups or tech companies in need of research partners who, for example, may be able to help bring their products before the FDA for approval, and eventually to market.

"A couple in Houston, Texas, had developed a simple device to monitor their child, who has febrile seizures, and send the data to a smartphone. It was developed, ready to manufacture, user-friendly and very timely," Jungquist said.

The device is an electronic strip that sticks on the skin of the upper tarso and transmits data via Bluetooth. It monitors temperature, pulse oximetry and respiratory rates. "That's what we really needed (for COVID-19 patients)," Jungquist said.

But the vitals-monitoring device was not yet FDA-approved. So, Jungquist wrote to the FDA with a letter of support specifically citing the literature and correlating the device's usefulness in the COVID-19 pandemic. Now approved, the product, developed by the Houston-based company VITLS, is currently being manufactured and deployed in Texas, which has been hard-hit by the pandemic.

Vaccines: The Road Forward

Jungquist was not done volunteering. Next came Pfizer's vaccine trial, in which she enrolled after educating herself on all the vaccines being developed. Then, F.F. Thompson Hospital in Canandaigua, New York, where Jungquist lives, put out a call for volunteers to set up the first vaccine clinics in Ontario County.

"As soon as vaccines were available, we started with the nurses at the hospital," Jungquist said. She fulfilled dual roles of administering vaccines to other nurses, and provider-level clinic oversight for safety and patient monitoring.

This kind of volunteer effort was crucial as all the hospital system's nurses were already deployed caring for patients inside the hospital. Once hospitalizations decreased, hospital nurses could be allocated to administering vaccines in the community.

As vaccinations wrapped at the Canandaigua hospital, the Monroe County Department of Health called again. They wanted Jungquist back to administer vaccines within Monroe County. She volunteered at clinics vaccinating the elderly, teachers, school bus drivers, police officers, and other

frontline workers. (The United Way of Greater Rochester stepped forward as a logistical partner, sharing their web-based scheduler in organizing the County's huge volunteer vaccination effort).

By early spring, the county had federal funding to pay nurses, so Jungquist stepped back to pass that work on, and to look for other volunteer roles.

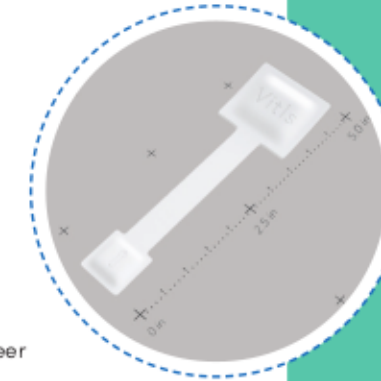
Monroe County had by then set up zip code-specific vaccine sites in communities hardest hit by infection rates – City of Rochester neighborhoods with higher underserved populations, including Black, brown and elderly community members. To promote vaccination within these communities, Jungquist teamed up with a friend, who is a social worker, to volunteer for Rochester-based Common Ground Health. Together they walked the city's neighborhoods to knock on doors.

"We visited 108 houses that day – in the rain – and it was rare that people didn't want the vaccine, so we signed up quite a few," Jungquist said. To help people feel more comfortable with callers at their door during a pandemic, Jungquist and her friend wore a card over the front of their coats explaining, in big letters, that this was a COVID-19 vaccination education visit.

"We wished we had the vaccines in-hand because we met people who absolutely would have taken it on the spot," she said.

Jungquist's serial volunteerism over the past year was inspired by more than altruism and career experiences. Many of her students in the online MS to DNP program were front line in New York City hospitals during March and April of 2020. Pivotal for Jungquist was hearing about their experiences being called up to provide patient care as hospitalists while managing, and protecting, their own families at home.

"Their stories were absolutely devastating. I was in tears and just so touched by what they were doing," Jungquist said. "I thought, 'I have to do something; I can't just sit home and not do anything. I need to get in there and do whatever I can.'" And she did.



When Carla Jungquist learned about the home-monitoring device developed by VITLS, she wrote to the FDA to encourage its approval.

