When Hurricane Maria made its way to Puerto Rico in September 2017, the Category 5 hurricane pummeled the island—uprooting trees, flattening buildings, dumping up to 30 inches of rain in just three days, and laying waste to island infrastructure.

In Washington Heights, the disaster brought together members of the Columbia Mailman School community intent on buffering the storm’s effect on the health and well-being of the 3.3 million Americans who call the island home. The Dean’s Office charged a network of concerned faculty, students, and staff—many with professional, familial, and social connections to Puerto Rico—with compiling an inventory of the public health skills that might be needed as soon as word arrived to inform their efforts.

Due to the storm’s unprecedented destruction, that guidance was slow to come. “For almost a week, we didn’t have any communication,” says Professor of Sociomedical Sciences Marita Murrman, EdD, MS, the principal investigator of the Region 2 Public Health Training Center, a federally funded program responsible for educating public health workers in New York, New Jersey, Puerto Rico, and the U.S. Virgin Islands.

Finally, on Sept. 27, fully 10 days after the storm first made landfall, Murrman received an email from Maria Levis, CEO of Impactivo, a public health consulting firm on the island that serves as a liaison between the Region 2 Center and Puerto Rico’s Department of Health. Levis’s report was grim: The health department building in San Juan had been destroyed, and many public...
health workers had lost their homes. The Impactivo office had intermittent power and Internet access, and that was only because of its proximity to a nearby hospital. Meanwhile, residents, devastated by the storm, were struggling to find clean water, food, and fuel to run generators.

The first order of business, said Levis, was educating the general public on topics such as how to disinfect water, administer mental health first aid, and safely dispose of dead animals. Picking the right conduit for dispersing such information was no small matter, given that cable service and cell phone towers had been knocked out by the storm and most people were relying on communication mediums like ham radio and Twitter. “The information we use for training healthcare workers was complicated and too jargon-y,”

Flag day: For 61 years, the National Puerto Rican Day Parade has celebrated the island and its culture. In June 2018—more than eight months after Hurricane Maria struck—the annual procession along Fifth Avenue furnished a national stage to grieve the more than 4,600 lives lost in the storm’s aftermath and highlight how federal economic policies had set the stage for an ongoing humanitarian crisis. Organizers included a special tribute to el Pueblo de Puerto Rico (the people of Puerto Rico) for their resilience and fortitude and honored the efforts of first responders and those whose relief work has been ongoing. AP Photo / Bebeto Matthews
Murrman says, “We had to turn it into one-pagers, using conversational language translated into Puerto Rican Spanish.”

Within a day, a team at the School had created four fact sheets, had them translated by collaborators at the University of Miami, and emailed them to Levis, who printed the sheets in her office for her staff to distribute on the street, at pharmacies, and through local media.

When Levis wrangled a pro bono agreement with the Puerto Rican media to broadcast public health messages, School staff wrote radio copy and designed image-based messages for newspapers, social media, posters, and brochures. To sustain the distribution of those messages, faculty, staff, and student groups, including the Black and Latino Student Caucus, would ultimately raise more than $11,000.

Puerto Rico’s plunge into darkness and widespread wreckage after Maria capped years of adverse economic policies imposed by federal and local legislators. Tax incentives coaxed industry to the island in the 1970s, but when they were revoked in the 2000s, companies left and unemployment skyrocketed. The Great Recession exacerbated the damage. By the time Maria hit, the Puerto Rican government was more than $72 billion in debt, 45 percent of the island’s residents were living in poverty, and the infrastructure—power grid, water treatment plants, roads, bridges—had been crumbling for decades.

“The disruption that comes with a major hurricane makes a society as a whole vulnerable and certain components of the population more so,” says Associate Professor of Environmental Health Sciences Jeff Shaman, PhD, who heads Columbia’s Climate and Health Program. “People who don’t have the resources to buffer themselves—and those resources could be financial, infrastructure, familial—those are the people for whom...
WE WERE MOTIVATED BY COMPASSIONATE HEARTS AND A WILLINGNESS TO SHARE OUR SKILLS.”

the morbidity and mortality risk is going to be greatest.”

Drawing on the School’s extensive experience in addressing health needs in the wake of disaster, the team worked with Levis to formulate a public education campaign coordinated with the Puerto Rico Department of Health, the National Network of Public Health Institutes, and the CDC Foundation. This past summer, a small group of students traveled to the island as part of their practicum experience, helping to document the ongoing health effects of the 2017 hurricane season.

“There were a lot of people involved,” says Diana Hernández, PhD, an assistant professor of Sociomedical Sciences who is a co-investigator with an ongoing National Institute on Drug Abuse–funded study in San Juan. “We were motivated by compassionate hearts and a willingness to share our various skills—there were in-kind supports, like the fact sheets, as well as the monetary support, from across the School community—students, staff, faculty, and administration. Further, it was all in response to on-the-ground requests through collaborations established prior to the storm.”

As time has passed and local capacity has slowly come back online, the Columbia Mailman School team has begun recording their efforts for future reference. “We all knew there was something unprecedented and unique about this,” says Hernández. “Should something like this happen again—and with climate change being what it is, that’s not unlikely—we have documented our steps, learning from this experience to be prepared for others.”

In the dark: Maria cut power to more than 3.3 million Puerto Ricans and set off an ongoing political and economic battle over the local power authority’s governance and function. While power has been partially and intermittently restored, the ongoing blackout—the longest in U.S. history and the second largest in the world—has been blamed for a housing shortage, a spike in the rates of murder and suicide, and thousands of deaths due to lack of access to medical care and life-sustaining equipment. AP Photo / Carlos Giusti

NANCY AVERETT writes about science and the environment from Cincinnati. Her work has been published in Yale e360, Pacific Standard, Audubon, Discover, and others.