Health Care Disparities, Neurologic Risk Factors, and COVID-19

- Diversity

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The Science Explained

Article In Brief

Blacks and Latinos who often are working “essential” jobs have been disproportionately impacted by COVID-19—both in cases and mortality rates. Experts discuss the factors—poor access to health care and comorbid conditions, for example—that make them more vulnerable to the novel coronavirus.

Leilani Jordan was one of the people who should have been staying home on lockdown to protect herself during the coronavirus pandemic. The 27-year-old grocery store worker from Largo, MD, had been born with cerebral palsy, was visually impaired and had other challenges. She worked at a Giant Food supermarket as part of a program for people with disabilities.

But Jordan saw it as her mission to help others even more vulnerable than herself, like the elderly shoppers who came to stock up during the frantic early days of the pandemic, and refused to miss even a day of work.

“She was doing everything for them: Helping them put their groceries in their walkers, to helping them get into lifts,” her mother, Zenobia Shepherd, told CNN. “She said, ‘I've got to help the older people.’” But she also told her mother, “Mom ... I have to take my own hand sanitizer because there's none available, there's no gloves available.”

In mid-March, Jordan, who was African-American, became ill with COVID-19. She was admitted to Walter Reed National Military Medical Center on March 26, and on April 1, she died. Her last paycheck was $20.16.

Jordan's story is a microcosm of the COVID-19 pandemic, which has disproportionately affected communities of color and other disadvantaged populations, laying bare in an intensified, sped-up fashion the inequities that have always existed in the American health care system. The statistics tell the story in part.

- In Illinois, 43 percent of people who have died from COVID-19 are African-Americans, a group that makes up just 15 percent of the state's population.
- African-Americans, who account for a third of positive tests in Michigan, represent 40 percent of deaths in that state even though they make up 14 percent of the population.
- In Louisiana, about 70 percent of the people who have died are black, though they represent only a third of that state's population.
- In Utah, Latinos are being infected and hospitalized at three times the rate of white people. Latinos make up 14 percent of Utah's population, but 29 percent of the patients who tested positive for COVID-19 in the state identified as Latino.
- Latinos make up 19 percent of the population in New Jersey, but nearly 30 percent of the state's coronavirus patients.

Social Determinants of Health

“We are seeing the social determinants of health writ large and writ quickly with this pandemic,” said Mitchell Elkind, MD, FAAN, professor of neurology at Columbia University Vagelos College of Physicians and Surgeons, past Chair of the Advisory Committee of the American Stroke Association, and the incoming president of the American Heart Association.

“We have known for a long time that social factors like income and education, where you live, the air that you breathe, how much pollution there is in your neighborhood—all of these things contribute to increased risk of stroke and cardiovascular disease, and that's something we as neurologists have been focused on. But it had been playing out over the course of years or decades. The speed with which the COVID-19 pandemic has happened illustrates before our eyes exactly how those factors play a role in vulnerability to illness.”

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And because of disparities in access to testing, it's likely that the numbers that we do have *under*estimate the burden of the disease on black, Hispanic and other minority populations.

“Just as with access to health care in general, black people and other minority groups face barriers to testing,” said Charles Flippen, MD, FAAN, the Richard D. and Ruth P. Walter Professor of Neurology at the David Geffen School of Medicine at UCLA. “Even though we live in the 21st century, many communities are largely segregated, and when testing sites are established, they have not necessarily been placed in areas that are accessible to people of color.”

For example, data from late March showed that most coronavirus testing sites in Shelby County, TN, were located in predominantly well-off white neighborhoods in the Memphis suburbs, with few in predominantly black, lower-income neighborhoods.

“As we move forward, testing needs to be distributed as equitably as possible so we can understand the true extent of the pandemic,” Dr. Flippen said. “That is something that we as neurologists can join our medical colleagues in advocating for. Here in Los Angeles, for example, as things have evolved, we now have more testing sites in minority neighborhoods.”

Nicte I. Mejia, MD, MPH, FAAN, assistant professor of neurology at Harvard Medical School and assistant neurologist at Massachusetts General Hospital, who serves as director of the MGH Neurology Community Health, Diversity and Inclusion Initiatives, described efforts to ensure more equitable access to COVID-19 testing and information in the Greater Boston area, which has a long history of segregation.

“Our hospital is caring for a large number of patients with COVID-19 who have limited English proficiency, particularly Spanish-speaking individuals from lower-income Latino communities within our catchment area,” she said. “We have an innovative COVID-19 testing site at the MGH Chelsea Community Health Center, manage a hotel in Revere, MA, for people who are not able to quarantine safely because of housing challenges, and run a 24/7 Spanish Language Care Group in which I and several other neurologists are engaging to better support patients, families, and clinical teams.”

She explained that the health system is also partnering with Boston Health Care for the Homeless and the state to manage Boston Hope, which includes 500 beds for people affected by COVID-19 who experience homelessness. In addition, the health care community has actively advocated for the state to offer their education and outreach, including a text alert system that is now available in several languages. Medical students have also engaged, including through the creation of the COVID-19 Health Literacy Project, which serves as a repository of COVID-19 education offered in several languages.

Dr. Mejia also leads a team of volunteer clinicians who are translating and continuously updating the MGH COVID-19 Treatment Guidance into Spanish for clinicians across Latin America and Spain.

Shared Risk Factors

Many of the underlying health conditions that either increase an individual's risk for becoming infected with COVID-19 or of developing a more severe case of the disease (or both), are the same risk factors that put people at risk for stroke, such as hypertension, obesity, and diabetes. Due to historic and ongoing health inequities in the United States, those conditions are also more prevalent in black, Latino and Native communities.

“It's a quintessential example of how complex the health disparities issue is and how we have to think about it on so many levels in terms of contributing factors,” said Charlene Gamaldo, MD, FAAN, associate professor of neurology at Johns Hopkins University School of Medicine and medical director of the Johns Hopkins Sleep Disorders Center.

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“Many of our patients in these underserved communities who have chronic neurologic conditions, especially stroke, also have many other pre-existing conditions that put them at risk for COVID-19 that are not being treated,” says Gillian Gordon Perue, MD, chief of neurology and stroke at Jackson South Hospital in Miami and assistant professor of vascular neurology at the University of Miami Miller School of Medicine.

“And many neurologic patients, such as those with multiple sclerosis (which is also more common in black women than other groups), are on immunosuppressant drugs, which also puts them at higher risk for the disease.”

The Privilege of “Social Distancing”

To protect ourselves from the virus, we are advised to stay home and “socially distance”: work from home while at the same time caring for children who cannot go to school and day care; avoid going out for all but the most essential errands; isolate family members who may become ill with the virus in their own spaces; and access our doctors through telehealth rather than in-person appointments. All of those measures are easier for people of means.

“Our ‘essential workers’—those who cannot stay home and ‘socially distance,’ are often people of less means, and often people from minority populations, including immigrant populations. For so many reasons, they are bearing the brunt of this disease,” said Dr. Elkind.

“People in underrepresented communities are more likely to have jobs that they can't just leave,” said Dr. Gordon Perue. “My family is blended, and I have a mom and a stepmom—one is a nurse and the other is a bus driver. They are both on the front lines and they don't have a choice to stay home.”

In a call to action published in *JAMA* on April 15, three health leaders summed up the litany of social determinants of health relevant to COVID-19. “Struggling in poverty with limited job and social mobility; working frontline jobs with lack of adequate personal protective equipment (eg, public transportation, pharmacy, grocery, and warehouse distribution workers); living in crowded apartments where social distancing is impossible; shopping in food deserts or swamps without access to healthful foods; being underinsured and using self-rationing of health care as a

strategy; relying on public transportation on crowded buses and subways; and having a public kindergarten through 12th-grade education that too often leads to functional health illiteracy," William F. Owen Jr., MD, Richard Carmona, MD, MPH, and Claire Pomeroy, MD, MBA, wrote.

Dr. Mejia described a patient of hers who is a transport worker in a hospital. "She's in her 70s and immune suppressed, but was asked to continue going into work because her job was essential. It's important that we as neurologists connect with our patients who may be at higher risk of COVID-19 and advise them on how to protect themselves—but we must also advocate for institutions and our government to implement systemic interventions that prevent higher risk employees from having to take risks because of the kind of work they do and their financial situation."

Minority populations are also more concentrated in urban settings, where social distancing is even more difficult. "You're more likely to have to take public transportation, for example," said Dr. Gordon Perue. "And families are often living in close quarters which do not permit isolation if someone becomes ill. There's no 'guest room' that a sick family member can quarantine in."

And while people are being counseled to use the internet to maintain contact with families and access telehealth services for all but the most urgent medical visits, that too poses access for less privileged communities, which are often composed largely of people of color.

"We have increasingly leaned on our internet access as a critical way to stay in contact with each other and normalize what we do, as well as to access health care," said David B. Clifford, MD,FAAN, the Melba and Forest Seay Professor of Clinical Neuropharmacology in Neurology at Washington University School of Medicine in St. Louis.

"We are seeing the social determinants of health writ large and writ quickly with this pandemic."—DR. MITCHELL ELKIND

"Folks who don't have access to good internet are clearly isolated in an even more profound way when we're leaning on that kind of information to make up for the direct contacts. This is a pressure test on our society, and sadly as usual disadvantaged populations and minorities are suffering more than anybody."

Even in ordinary times, patients with neurologic conditions may see their neurologist more often than their other physicians, something that may be heightened in times of crisis when it is even more difficult to access the health care system. "We often serve as the primary caregiver for these patients, seeing them much more frequently than they see their primary care provider," Dr. Gordon Perue said. "You may be the only care provider that this patient is talking to."

Although COVID-19 is not primarily a neurologic condition, Dr. Gamaldo advises her colleagues to be mindful of risk factors among their patients and be particularly proactive in reaching out to those with comorbid conditions and particularly those in vulnerable underserved populations.

"If they have hypertension, ask if they have touched base with their primary care provider. Is their diabetes being monitored? We need to do everything we can to advocate for them."

Dr. Clifford agreed, adding that advocacy should extend from individual patients to the community at large. "Neurologists must be advocates for our patients who have been disadvantaged by centuries of systematic discrimination that have resulted in physical and health problems and lack of access to care, which has put them at the center of a perfect storm of risk with this pandemic," he said. "At every level, we need to address the discrimination that has led to these problems, although it is really a daunting task."