

From Katrina to COVID-19: Hard-Learned Lessons and Resilience



See also Kim-Farley, p. 1448, and the *AJPH* Hurricane Katrina 15 Years After section, pp. 1460-1503..

During March and early April 2020, Louisiana experienced a surge in the number of cases and deaths from COVID-19—and New Orleans quickly became an epicenter for the pandemic. With Carnival season came 1.4 million visitors to New Orleans, and with them came COVID-19. Unfortunately, the Mardi Gras celebrations were some of the most populous events in the United States at the very time the virus was circulating and before the spread had been widely understood or acknowledged. Almost two weeks to the day after our Fat Tuesday celebration, Louisiana identified the first case of COVID-19, and the state quickly began to realize that our celebration of life would leave a trail of thousands of deaths in its wake.

The federal government mismanaged public health surveillance efforts. The lack of widespread testing and contact tracing and the poor communication in the early days of the pandemic were catalysts for exponential viral spread. Although many would exclusively blame national leadership, our failures are also owing to chronic underfunding and poor engineering of national public health systems combined with a highly infectious virus that can spread

even from people without symptoms.

Louisiana is not new to bad luck, perfect storms, tragedy, or poor engineering. We are a resilient people. Our unique culture and celebrations unite us, and our tragedies level and teach us. In the aftermath of Hurricane Katrina, the state developed some of the most robust public health data collection systems and disaster preparedness infrastructures in the nation. While I was the secretary of the Louisiana Department of Health (LDH), I led disaster recovery and preparedness efforts and witnessed these systems in action. The lessons learned from our experiences with natural disasters can serve as a roadmap to other states to navigate back to normalcy.

HURRICANE KATRINA

In 2005, Hurricane Katrina tore a path through New Orleans that laid bare the social fabric of our city. Water, like COVID-19, spread quickly through New Orleans before the city had a chance to defend itself. Much of the medical infrastructure in south Louisiana flooded, and contracts and plans assumed to be in place for buses and shelters were inadequate.¹ The federal government failed to act

quickly and was not helped by a reportedly panicked mayor and indecisive governor. This convergence of ineffective leadership, poor engineering, and lack of coordination contributed to the deaths of more than 1100 people.²

As a result of Katrina, \$14 billion was spent bolstering the levees.³ Our public health infrastructure, as well, has been bolstered. Louisiana has a public health unit in each parish (or county) with doctors, nurses, and public health professionals that can be activated into an incident command system immediately in the face of a disaster. Our data systems are sophisticated and give us real-time information on bed and ventilator availability, adequacy of generators in hospitals and nursing homes, and the number of patients in each facility. LDH operates a command center that links directly to the Governor's Office of Homeland Security and Preparedness. In turn, this office is aware of federal assets as well as the needs of other

state entities, such as the Department of Transportation and Development and Child and Family Services.

BATON ROUGE FLOODS

In 2016, as a new secretary of health, I witnessed how the groundwork that had been put in place helped us overcome the disaster. Baton Rouge, our capital city, flooded and a large swath of the state was underwater after several days of heavy rain saturated local waterways. More than 110 000 buildings and homes were destroyed.⁴ Several state and local agencies, including LDH and the Governor's Office of Homeland Security and Preparedness, swiftly organized and executed preexisting plans for medical and general population shelters. The federal government responded quickly, and within days medical teams from the US Public Health Service were in the trenches helping us to staff medical shelters. As a result of these efforts, the response to the crisis was effective and there was minimal loss of life. This same responsive infrastructure used in 2016, such as operationalizing the Governor's Office of Homeland Security and Preparedness, has

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enabled Louisiana to effectively combat COVID-19.

COVID-19 CRISIS

The crisis we are currently experiencing is different from a weather event. Although hurricanes and floods can be unpredictable, they do not hit an entire nation at once. Governor John Bel Edwards is using the hospital and public health reporting systems to plan the deployment of needed resources. The city and state quickly mobilized to reduce hospital capacity burdens by working with the National Guard to set up a 2000-bed temporary hospital in the New Orleans convention center. A robust vital records system and infectious disease registry, made better by LDH's recent efforts to eliminate hepatitis C, allow leaders to have near real-time understanding of the impact of measures such as social distancing and areas where greater resources are needed. Testing capacity bolstered by our state's retooled public health lab has allowed Louisiana to rank first in the nation on numbers of citizens tested. LDH rapidly built a publicly available COVID-19 dashboard that shows the rate of testing, the number of deaths, the spread of disease by parish, and the availability of hospital beds and ventilators. These data help leaders such as Governor Edwards and New Orleans mayor Latoya Cantrell make informed decisions and help the public understand the need for measures such as school closures and shelter in place orders. Now, as we move to reopen, this early legwork in using existing infrastructure and learning from past experience has paid dividends in ensuring public health.

Unfortunately, Louisiana has experienced disproportionate deaths from infections, owing predominantly to racial disparities and a high burden of chronic disease. Louisiana has some of the highest rates in the nation of obesity, hypertension, and diabetes, which makes our most vulnerable citizens even more susceptible to this virus. Tragically, we now know that 54% of those who have died in our state have been African Americans, almost double the percentage of African Americans who live in our state. Essential workers, such as grocery store clerks, bus drivers, and food delivery service workers, who are unable to social distance, have had to choose between personal safety and a paycheck, as businesses have been slow to provide protective gear. Another way Louisiana is leading by example is Governor Edward's efforts to set up a health equity task force to evaluate the underlying and systemic causes of health disparities in our state.⁵

Although Louisiana has greater vulnerability than most states, we have strengths that complement our resilience. In 2016, Governor Edwards expanded Medicaid. He was the only Deep South governor to do so. Medicaid expansion means that more than 480 000 low-income working Louisianans have access to primary and preventive care instead of simply an emergency department. Our hospitals can focus on COVID-19 patients and true emergencies instead of being a source of primary care for individuals who have no insurance.

Months into this crisis, the people of Louisiana understood the importance of staying home and other social-distancing measures, as evidenced by the declining rates of hospitalization and the need for ventilators.

Despite more than 4000 deaths, data indicate that the situation is gradually improving. At the time of this writing, we are now moving into reopening in accordance with federal guidelines. Although Louisiana was hit hard by this pandemic, our reopening strategy is putting our citizens in a better position than neighboring states to weather the rise in caseloads as the United States reopens. The public health infrastructure that has been bolstered after Katrina is serving us well and has allowed Louisiana to lead the nation in testing and develop a statewide contact tracing strategy that is superior to that of many states.

There is no better way to learn than from experience. Our new emergency and disaster response infrastructure is guiding us through this pandemic and will navigate us through the storms to come. **AJPH**

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CONFLICTS OF INTEREST

The author declares no conflicts of interest in the conceptualization, drafting, and development of this editorial.

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