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Perspective

Seeing in the Dark

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In a dark time, the eye begins to see. — Theodore Roethke

The clouds were heavier, the air thicker. The wind picked up. The news that the subways would be shut down at 7 p.m. spread quickly by word of mouth. The streets in our Greenwich Village neighborhood

were filled with people carrying food and water to their apartments. From my home, I could see the lights of LaGuardia and Kennedy airports and the imposing red-brick power station with its four smokestacks on 14th Street and the East River. We spent the weekend filling our bathtub with water and all available pots with drinking water and checking windows, flashlights, and battery-powered radio. We waited in a false calmness.

After dinner, my wife and I were watching talking heads dissect the upcoming election when the lights and TV suddenly went. We felt our way from window to

window watching the lights go out from the Hudson to the East River, from Midtown to as far south as we could see. Our cellular service was gone. The wind pulled and pushed at the windows. We lowered the blinds in case the glass splintered. It never occurred to us we'd have to leave.

The mega-transformer on East 14th Street had blown up. The 14-foot storm surge had scrambled the electrical grids and communication systems and filled the basements of everything on the East Side landfill with millions of gallons of seawater. All at-risk hospitals — including Bellevue, where I had recently stepped down as

medical director after 15 years — had been exempted from mandatory evacuations, though two hospitals in Zone A, the area with the highest flood risk, had opted to evacuate voluntarily. The flood zones were shaded blue on a map of the city. Long Island Sound and the Hudson River were perfect amplifiers for the surge.

Hospital-evacuation decisions are based on less-than-perfect information. Layers of agencies weigh in on an approaching storm, calculating both its trajectory and likely impact. This is the quotidian world of medicine — managing the unexpected, deploying local expertise in the face of complex considerations, front-line engagement. There are always questions about risk mitigation and viable alternatives.

Coastal New York's water had been inching up for some time. Decades of waterfront development had eroded 95% of the natPERSPECTIVE SEEING IN THE DARK

ural protective wetlands on which the hospitals sit. The city's infrastructure is outdated and vulnerable. So the decision process is complicated. Can the hospital tough out the tropical storm, bring in extra supplies, and use onsite generator power? Maybe the storm won't be as strong as predicted. The city had weathered Irene. It's a gamble. Or would it be prudent to evacuate in advance? There was bed capacity elsewhere in the city. The cost of an evacuation was not trivial; the cost of the wrong decision, incalculable.

The vast network of metropolitan New York hospitals opened their doors unconditionally to patients who needed to be triaged and evacuated immediately from hospitals under water. They were all short-staffed, their emergency rooms having doubled in volume overnight, and dialysis patients all needed urgent care. Prisoners, hundreds of psychiatric patients, neonates, new mothers, post-op surgical patients, ICU patients on ventilators — the breadth and depth of an acute care hospital in the flood zone needed to go, stat. The power went, the elevators filled with water, one generator after another failed. Firefighters, EMTs, and police officers helped hospital staff walk, carry, and slide patients down through darkened stairwells on hard plastic boards to waiting taxis, car services, and ambulances. Staff organized bucket brigades to take water to patient floors and fuel to generators.

A city hospital's patients face a multiplicity of social risk factors in their daily lives: economic fragility, limited social supports, marginal schools and housing, language and legal-status issues, a family member's brush with the criminal justice system, under-

diagnosed and undertreated mental and physical conditions, high unemployment. And the raw fact is that the election season's muchvalorized middle class has been gradually entering a blue Zone A of risk as its protective "wetlands" have eroded, like the rocky barriers around Manhattan now threatened by encroaching water. Loss of insurance, underinsurance, employment instability, bankruptcy, education debt, economic free fall - the risks accumulate. Increasingly, we have come to resemble the traditional city-hospital patients. Like an odd kind of nightvision goggles, the storm revealed, at least temporarily, our society's dependencies and vulnerabilities, its unacknowledged connections and what it chooses to make invisible.

Perhaps equally fundamental in terms of risk is climate change — and the question of whether it will stick with us and be discussed nationally and rationally. Or will addressing it remain like broaching the topic of gun control: for a non-New York politician, certain career suicide? The environment has been treated as an externality not factored into the cost of doing business, but it encompasses much more than climate perturbation. Maybe we need to think of it as akin to the microbiome: another organ made up of trillions of cells sitting in and on our bodies - part of who we are. In the darkness of the storm, the interconnectedness of everything was somehow visible.

As the storm center moved steadily north, the news switched to the political spectacle of President Barack Obama arm in arm with Governor Chris Christie in New Jersey. Would his response pull Obama over the finish line at election time? The military was

releasing millions of gallons of gasoline. New York Governor Andrew Cuomo mentioned climate change and the storm in the same breath. The third-rail issue had been broached for the first time during this presidential election season. New York City Mayor Michael Bloomberg connected the dots and endorsed the Democratic incumbent President on the basis of his personal assessment of the storm damage and its probable cause. Federal Emergency Management Agency (FEMA) Administrator Craig Fugate appeared confident and, more important, competent - more than could easily be said for the FEMA leadership after Hurricane Katrina. Fugate had been an EMT with no college degree, just decades of onthe-ground experience in Florida. The New York City Marathon was still on.

After a few days, we had to evacuate to our son's apartment in North Brooklyn. The storm's damage extended along the city's Atlantic coast, took out Red Hook, Dumbo, parts of Queens, Staten Island, all of Long Island, and large swaths of New Jersey. Fire hydrants provided water, city housing projects were decimated, the homeless were invisible, the Rikers prisoners forgotten.

My last image a few days later, as I drove in the predawn cold along empty streets through a pitch-black Lower Manhattan toward the Lincoln Tunnel, was of hundreds of cars snaking around Lorimer Street in north Brooklyn heading for one of the few open gas stations. Two cop cars were idling away in the middle of the block — a quick flashback to the OPEC moment of the 1970s.

There was one patient left at Bellevue. After a myocardial infarction, a ventricular-assist device PERSPECTIVE SEEING IN THE DARK

— running on battery power with a functioning backup generator nursed by the National Guard — was keeping him alive. All the elevators were out. The heart-surgery team stayed with him around the clock until they could remove the VAD and transfer him to colleagues at a hospital unaffected by power failure and flooding.

They wrangled an OR into semifunctionality, and when a lone elevator was usable, the patient was hustled up the empty streets to a waiting ICU bed. Whatever it took, they could be counted on. The patient always came first that was a non-negotiable bottom line.

The marathon was canceled.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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