

IV fluid supplies dwindle as Helene closes N.C. manufacturing plant

It is a reflection of the far-reaching consequences of Hurricane Helene and the resulting supply chain interruptions.



An aid group set up tents for patients needing oxygen therapy outside a hospital in Boone, N.C., after the region was devastated by the remnants of Hurricane Helene. (Jonathan Drake/Reuters)

Hospitals across the country are facing disruptions in the availability of some sterile intravenous fluids, a reflection of the far-reaching consequences of Hurricane Helene and the resulting supply chain interruptions.

[Baxter International](#), the country's largest manufacturer of IV solutions, alerted hospitals that a Marion, N.C., manufacturing plant was temporarily closed because of flooding. Baxter produces [1.5 million bags](#) of IV solution a day, according to the American Hospital Association.

“We continue to work around-the-clock to assess the full extent of the impact and minimize potential supply disruptions to help ensure patients and providers have the products they need,” Baxter said in a statement.

As a result, hospitals are adopting measures to maximize use of supplies.

At Mass General Brigham in Boston, Paul Biddinger, chief preparedness and continuity officer, said hospital administrators hope to avoid disruptions to patient care despite being told the health-care system will receive only a partial shipment of IV bags.

Mass General Brigham uses more than 100,000 liters of plain IV solution a month, Biddinger said, not including bags used for dialysis or in some surgeries. He said the hospital network is calculating the number of patients who need peritoneal dialysis — when fluid is put into the abdomen to flush out waste — and developing contingency strategies.

“I would characterize this as one of the bigger shortages that we’ve been through in the last decade or so,” Biddinger said. “We acted early to make sure we’re conserving as quickly as we possibly can.”

In 2017, Mass General Brigham experienced a shortage of IV fluids during Hurricane Maria but returned quickly to normal operation.

For health systems in the path of the storm, the consequences were more immediate — and more devastating. Helene’s deluge overwhelmed Unicoi County Hospital in Erwin, Tenn., which is “deemed a complete loss,” said Eric Deaton, chief operating officer for Ballad Health, the parent organization of the hospital.

Patients who could not be moved by boat or a vehicle had to wait on the hospital’s roof before being airlifted to safety.

“It was something that we were not expecting,” Deaton said. “We see flooding [from] time to time but nothing of this level.”

Deaton said 58 people, including 11 patients, were evacuated Friday after water levels started to rise.

North Carolina’s mountainous terrain poses additional challenges for relief efforts, said Ryan Spellman, director of operations at [Operation Airdrop](#), a nonprofit that airlifts supplies and conducts rescues in regions affected by natural disasters.

With limited landing spots for helicopters and a lack of intact roads, “you have to create a community’s ability to survive and shelter in place,” Spellman said.

Operation Airdrop has been delivering generators, chain saws and tents to the region, alongside standard water and sanitation resources.

Spellman and his team are also responding to North Carolina's need for insulin and over-the-counter medications, including Benadryl, Pepto-Bismol and ointment for wasp stings, which are afflicting people as they shelter in place in the mountains. They have also encountered a significant need for infant supplies, including formula and clean feeding bottles.

On the main campus of Mission Hospital in Asheville, N.C., Brian Pedersen, an ICU nurse, said Thursday marked the first time workers were instructed to use IV liquids more sparingly. While the hospital was not experiencing a shortage in IV fluids, workers were encouraged to give electrolytes by mouth or feeding tube when possible.

"They're just kind of foreseeing that there is going to be some supply chain issues," Pedersen said.

During the first few days of the storm, the emergency department was so overwhelmed that the patient-to-nurse ratio reached 1 to 10 at some moments, Pedersen said.

"It was a madhouse down there," he added.

The Federal Emergency Management Agency set up tents within the emergency room to handle less severe injuries, which alleviated the load on the department, Pedersen said.

He said that as of Wednesday, the hospital had running water for handwashing, bathing and toilet flushing only, but he is not sure how long it will last as officials figure out how sewage will not overwhelm the city's damaged water system. Even after the region's health-care system rebounds, the deleterious consequences of Helene are likely to persist.

A study [published Wednesday](#) in the journal Nature revealed that death rates in regions affected by tropical cyclones remain elevated for up to 15 years after storms have passed. As people direct money to rebuilding their homes, there's often less left for taking care of health, relief workers say. The havoc wreaked by a storm can also spark stress that exacerbates mental and physical illness.

As a result, experts say, regions affected by Helene don't need only immediate relief and resources — they require long-term support as they rebuild.