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*CVMC staff assist the community after the historic flood. Photo courtesy of CVMC Communications.*

## Supporting the Community through Historic Flooding: Central Vermont Medical Center's 2023 Experience

The State of Vermont experienced significant flooding in July 2023, when already soaked soil received 3-5 inches of rain on July 7 followed by up to seven inches of rain in some areas between July 9-11. Anna Tempesta Noonan, President and Chief Operating Officer of the University of Vermont Health Network – Central Vermont Medical Center, met with ASPR TRACIE to share how her facility, located in central Vermont, remained open and continued to serve their community during this historic weather event.

### ■ John Hick, ASPR TRACIE Senior Editor (JH)

Tell us more about Central Vermont Medical Center and its role in the community and state.

### ■ Anna Tempesta Noonan (ATN)

CVMC is in Berlin and is part of the University of Vermont Health Network System. We serve more than 69,000 individuals in our region served by our acute care hospital, a 153-bed long-term care rehabilitation facility, and 27 practices located in towns and cities across our catchment area. There are two critical access hospitals about 45 minutes away from CVMC. Like most hospitals in the state, CVMC is the largest employer in the community; we support the community as both an employer and as healthcare providers. We have a large primary care and offer 21 specialty services. We stabilize trauma patients then transfer them via ground or air to the University of Vermont's Medical Center in Burlington, which is a Level 1 trauma center and part of our health network.

### ■ JH

Describe what happened before the flood; had your team given much consideration to similar events? How did this historic event unfold?

### ■ ATN

We had routinely conducted emergency response preparedness trainings and we have had flooding events after Hurricane Irene and other storms, but the flood that happened on July 10 was the most significant emergency response event we've experienced other than the COVID-19 pandemic. CVMC is located on "hospital hill," on high ground. What quickly became very apparent was that people were coming to us because we were on high ground, and not just for medical care. Some of our waiting rooms were filled with central Vermont residents whose homes flooded, who lost medication, or lost their oxygen and needed support to maintain their health. Virtually all local pharmacies were impacted by the flooding and were forced to close. We became the only option for many people.



It began raining heavily on the 10th, I activated our incident command center from my home at 8:00 PM, which is about 30 minutes away from the hospital. I-89, the main interstate that goes through the center of Vermont, was closed for the first time in recent memory. This interstate is the main corridor to our trauma center and serves as a major supply chain passage from the northern VT and Canada. Flooding made many roads impassable, creating a challenge for staff to travel to and from our health system's care sites.

In the early morning hours of the 11th, the situation was worsening. At that point, we understood that the physical location of the state's incident response was also flooded, and the information we would typically get from them was not flowing. We had to call our state contacts to gain situational awareness; most information in the early hours of our response came from our staff and emergency medical services (EMS).

## ■ JH

**When staff couldn't come in or go home, what did you do?**

## ■ ATN

When it became apparent the rain wasn't dissipating, we activated our emergency response process. We connected with staff already in the hospital to determine if they could stay additional hours. To accommodate them, we turned unused rooms (e.g., infusion and ambulatory care space) into sleeping areas and contacted a nearby hotel to request rooms for our staff. Our primary concern was ensuring staff were safe and those who were willing to stay had a place to rest.

Early on we ensured CVMC had the critical human resources we needed (e.g., a surgeon, obstetric and emergency department (ED) staff, and support services); these healthcare providers came in as early as possible and were prepared to stay as long as needed to provide essential services. The National Guard was ready to help our staff travel to our acute care hospital if needed (thankfully it was not needed). We used incident command to check on our 27 practices in our catchment area; most of them were not significantly impacted by the flooding. None of our facilities experienced issues with utilities or potable water, we made sure our backup systems were in place and functional.

I personally could not make it into the main hospital until the early afternoon when the interstate was re-opened. When I arrived and was rounding, what was amazing and a credit to the team, was the number of staff who found ways to get to work despite the disruption to our roadways. Our team did whatever it took to care for our patients and our community, despite the fact that many of their homes were also impacted by the flooding.

## ■ JH

**How did you continue to support your staff in the days and weeks after the floods?**

## ■ ATN

We leveraged our human resource division and employee health to support our team members who were most impacted by the flooding. Where appropriate we connected them to resources set up to facilitate applications for state and federal support and grants. CVMC is the backbone organization to our health service areas (HSA) accountable community for health, named THRIVE. THRIVE is a group of 20 social and human services organizations, during this event they helped our community members with mental health support, shelter, housing, food security and other social services. They were an extension of our incident command and helped us understand what was happening in the communities we serve, which is also where our staff live.

## Related ASPR TRACIE Resources

[After the Flood: Mold-Specific Resources](#)

[Healthcare Facility Evacuation/ Sheltering Topic Collection](#)

[Hurricane Resources Page](#)

[Natural Disasters Topic Collection](#)

- [Lessons Learned: Floods and Landslides](#)
- [Plans, Tools, and Templates: Floods and Landslides](#)

## Other Resources

[National Weather Service United States Road Conditions](#)

[The Great Vermont Flood of 10-11 July 2023: Preliminary Meteorological Summary](#)

■ JH

**You mentioned residents came to the hospital because they lost their medication or needed supplies to continue their oxygen therapy. How did you address these needs?**

■ ATN

We worked very quickly with our state pharmacy team and the board of pharmacy to stand up a medication distribution system in our facility within 24 hours. This enabled us to help those community members who had lost their medications in the flood until local pharmacies were up and running again. We also facilitated the provision of oxygen therapy with our vendors. As I mentioned, nearly every local pharmacy was flooded and forced to close. We became the safest and most reliable source for vital medications.

■ JH

**How did you and other community organizations work to address other needs?**

■ ATN

Partnering with THRIVE we were able to help residents deal with housing issues, utilizing emergency shelters. In the days following the flooding, we set up first aid tents in the communities we serve. We staffed these pop ups, with healthcare providers and provided medical treatment for volunteers and those who were injured supporting the cleanup efforts. We also provided community members with personal protective equipment for use while volunteering in the cleanup efforts, such as gloves, masks, and goggles.

■ JH

**How did your coordination with other jurisdictions and the rest of the state go?**

■ ATN

The communication challenges we encountered in the early hours of the emergency response were addressed by 10:00 AM on the 11th, and we were able to connect with state via telephone and virtual statewide meetings thereafter. These working relationships served us well again in December (during a separate, less intense flooding event), and during the 2024 solar eclipse, where we proactively stood up our hospital's incident command. All of us coming together over these incidents has continued to strengthen local and state response efforts.

■ JH

**Are you aware of any impacts the July floods had on local EMS?**

■ ATN

Our EMS is primarily volunteer; some of those individuals were working 24-48 hours straight in the early days of the response. At one point, when we realized that some of them had been going nonstop, we provided resources like food and beverages and encouraged them to take breaks. They encountered challenges reaching people because so many of the roads and bridges in our rural communities were washed out. The early days were pretty intense for them. Their efforts, along with our state and federal response, were tremendous.

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We almost always activate incident command virtually now. We had a lot of practice during the pandemic, and it has become our norm. We had another (smaller) flooding event in December that impacted some of our infrastructure and we activated and managed the entire response virtually.



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## ■ JH

**Once patients were picked up, how did EMS manage accessing your facility with all of road closures? How did they find out about road closures?**

## ■ ATN

EMS staff used the website [New England 511](#) which allowed them to view real-time closures and detours throughout the area. We had the website projected on our screens in our incident command, which helped our situational awareness as conditions changed by the hour. They had plenty of challenges, but there were no untoward events as a result.

## ■ JH

**How did you share information about the facility with staff and patients?**

## ■ ATN

Internally we conducted incident command huddles several times a day and met with local and state emergency response teams to share what we were experiencing. Our incident command huddles included updates from our peri-op, ED, practices, nursing units, long term care, facilities team and other key areas of our organization. This system became a critical part of our incident command during the pandemic, email does not work very well in these situations. These virtual emergency response huddles enabled by-directional exchange of critical information that facilitated our ability to maintain our operations and services for our community. Our communications team shared regular emergency response updates throughout our organization.

We communicated with our patients through MyChart®, and shared frequent updates with the community at large via social media, referring residents to sites with the latest information.

## ■ JH

**How did you handle getting your dialysis patients in for treatment?**

## ■ ATN

In the early hours, we paused dialysis because patients could get to us. The dialysis staff contacted patients individually to check on their safety and ability to travel. In a few cases, staff voluntarily drove out to get patients who were not able to reach us on their own. Our care providers have long-standing relationships with these individuals, knew where they lived, and at that time, knew they could reach them. This is another example of our team going above and beyond to ensure our patients received the care they needed.

## ■ JH

**How was the rest of the state affected?**

## ■ ATN

In addition to federal and State of Vermont emergency response we stayed connected with other hospitals through the Vermont Association of Hospitals and Health Systems. We learned that central Vermont was impacted more than other areas of the state. When you left our county, you could see just how localized the flood was.



I couldn't be prouder of the whole organization and how we responded, knowing that they were also impacted as individuals. When a team member had to manage issues at home, another one leaned in to cover their shift.



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## ■ JH

**What communications lessons have you incorporated since the event?**

## ■ ATN

For our practice division we now use a SharePoint site that takes less time to update and allows us to be able to monitor each practice in real-time. We use a cascading approach with our practices that determines who we contact and how those messages cascade to practices around the communities we serve. We then leverage our leadership staff across the enterprise to proactively check on various practices.

For example, in December when we had another (less impactful) flooding event, we asked leaders to reach out to their staff to determine availability and ask about school status, daycare status, and other factors that might influence their ability to report for work (in addition to weather). We then discussed whether we needed to reach out to a second line of staff as backup. I give our management team kudos for being able to get that information out to incident command and providing us with a clear picture of what our staffing looks like in those situations throughout the health care system.



These environmental emergencies are happening more frequently. We need to plan from both the healthcare delivery and the community sustainment perspectives. The 100-year flood is no longer; we are now dealing with frequent flooding events, and we need to be present with and connected to our communities to support joint resilience going forward.

