

The Role of Radio and Ham Radio When Everything Else Fails During Crisis: Lessons Learned from Hurricane Helene

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Abstract: The second-deadliest storm in U.S. history, Hurricane Helene wreaked havoc on communities across the Southeast including Western North Carolina and Upstate South Carolina. In addition to the massive physical devastation, crisis responders faced a daunting communication challenge: No power, no phones, no internet, and no cell service. Crisis communication plans built on websites, social media, and mobile messaging were insufficient, at least initially. This case study highlights the critical role of broadcast radio and ham radio as essential and reliable channels of information during crisis. Moreover, radio and ham radio served as a conduit to connect people in need with emergency and disaster responders. Lessons learned and recommendations for how organizations can prepare for and utilize radio and ham radio during crises in the future will be shared.

Keywords — Hurricane Helene, radio in crisis, ham radio in crisis

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INTRODUCTION

The second-deadliest storm in U.S. history, Hurricane Helene wreaked havoc on the mountain communities of Western North Carolina and Upstate South Carolina. Prior to its arrival on September 27, 2024 the region had experienced days of record-setting rain, with totals reaching 30 inches in some areas. Flooding, rock and landslides, strong winds and tornadoes combined to produce a major disaster. The impact was catastrophic: As of April 30, 2025, 107 confirmed deaths, more than 100,000 homes damaged, more than 1,500 roads impacted, including I-40 and I-26, sewer and water systems decimated, healthcare facilities evacuated, businesses lost, and personal property destroyed. Not only were communities cut off physically by downed trees and washed-out bridges and roads, people also lost access to major utilities and communication services. All three of the fiber-optic communication trunk lines in Western North Carolina were badly damaged or destroyed. Not only did crisis responders face a devastating physical challenge, they faced a daunting communication challenge. It was a blackout: No power, no phones, no internet, and no cell service. As Yancey County Emergency Management Coordinator Jeff Howell described in an interview with 60 Minutes [1], “We started getting the entrapments, the landslide calls, and the most worrisome thing about it was when the calls stopped because we had no radio

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communication, no cell phone, no internet. You couldn't talk to anyone, and it was terrifying." This article shares how two broadcast radio stations helped fill this information void, as well as connected community members impacted by the storm to resources and emergency responders.

LITERATURE REVIEW

In an era when crisis communicators rely heavily on social and other online media to communicate during a crisis, it is important to examine the role of traditional media, such as radio, in crisis response. This is especially salient when internet-based technologies fail. This brief literature review highlights key findings related to the role of radio in crisis response, including accessibility of radio for the public, reliability and continuity of operations, the expectation that radio operates in the public's interest, and the emotional impact of crisis coverage on broadcasters.

Historically, radio is a trusted and reliable source of information during crises. Governmental agencies rely on radio stations to broadcast lifesaving emergency alerts during major weather events. Spence et al. [2] goes further to characterize radio as a "preferred medium in instances characterized as disasters," p. 680.

Radio is a simple technology that is readily accessible across diverse groups of people. The public can access information with inexpensive battery-operated radios. Radios are standard in cars. With a monthly reach of 91 percent of the U.S. population, radio reaches more American consumers, including Blacks and Hispanics, than any other platform, linear or digital, according to Nielsen's 2023 Audio Today Report [3].

Reliability and continuity of operations during crisis is another important aspect. Spence et al. [2] surmises that "radio may be especially resilient to disaster conditions that would compromise the viability of other resources," (p. 682). Because radio stations can utilize generators during power outages, they can continue to broadcast. Additionally, radio stations can use inexpensive, simple, Starlink satellite uplinks to maintain internet connectivity.

Radio stations are required by law to operate in the public interest. Among other activities, radio broadcasters exercise their civic duty during a crisis by connecting emergency responders and resource providers with people impacted by the crisis. The degree to which radio broadcasters' view their response as part of their civic duty is an important consideration [4].

A final line of research highlighted here focuses on the emotional impact crisis coverage has on radio broadcasters. Nieves-Pizarro et al. [5] found that radio broadcaster-journalists covering Hurricane Maria in Puerto Rico sacrificed their own personal well-being to fulfill their sense of responsibility in the moment. Ripe areas for further research include how media professionals cope with the trauma associated with crisis coverage and how crisis educators and trainers may help prepare professionals for crises.

METHOD

This paper utilizes the case study method to highlight the crisis communication response of two radio stations in the aftermath of Hurricane Helene. The first case study highlights how a university FM radio station in the mountains of Western North Carolina with a regional reach of 157,000 responded. Although the university was closed due to the hurricane, two faculty advisers and six students remained at the station. The station produced open-ended hourly news updates the first week after the storm and twice daily updates in the weeks following the storm. The second case study features the response of iHeart Radio in Upstate South Carolina. After an engineer was helicoptered in to reconnect 8 stations via Starlink, iHeart Radio became a lifeline for the community. For 2 ½ weeks, iHeart Radio broadcast from its Asheville, NC and Greenville, SC studios non-stop from 6 a.m. until midnight. The radio stations helped connect people in need with emergency managers and first responders. The case study method is a time-tested approach that helps both scholars and practitioners learn what to do--as well as what not to do--when managing crises. Ten recommendations will be provided to help crisis communicators prepare and respond to similar disasters in the future.

95.3 WWCU

In anticipation of Hurricane Helene hitting Western North Carolina on September 26, Western Carolina University closed on Thursday, September 25 and stayed closed through Friday, October 4 under Condition Level 3, Closed. Classes were canceled, and all non-mandatory offices were closed. However, administration, university public safety, dining, and residential services remained operational. Beginning Friday, October 4 through October 20, the University moved to Condition Level 1, Reduced Operations.

As a Carnegie Community Engaged university, WCU demonstrates its commitment to the region in numerous ways, including investing one million dollars for a new tower, power, frequency, and coverage area upgrades for the university radio station, 95.3 WWCU. The university also worked with Jackson County Emergency Management to design special mounts on the new tower to accommodate the county's emergency management radio transmitters.

95.3 WWCU FM was on air throughout Hurricane Helene and its aftermath. 95.3 WWCU serves more than 157,000 people in four rural counties of North Carolina. Coverage includes 15 complete postal zip codes and five partial zip codes. When the university closed, the 95.3 WWCU student general manager and program director stayed behind to work at the radio station. They were joined by four journalism students who provided news coverage of the storm. No one asked the

students to come to the station. No one asked them to stay on campus. As the student general manager said, “When we heard the station on the air, we knew what we had to do.” The faculty adviser to the radio station and the faculty adviser to the journalism program, both with extensive professional experience, including with natural disasters, mentored and coached the students to meet the informational demands of the crisis.

When the storm took out the electrical grid, 95.3 WWCU automatically switched to its generator system. The station has a 60-kilowatt Caterpillar diesel generator with 1,000-gallon fuel reserve. The station remained on generator power for approximately 100 hours until the electrical grid was restored. The faculty and student team broadcast 23 Emergency Alert System emergency messages about flood, flash flood, and tornado warnings in less than 24 hours. They provided more than 85 hourly Hurricane Helene news updates on weather, road and bridge closures, the status of medical care, fuel and water, ATM cash availability, and updates on the status of power, phone and internet outages regionally and across the state.

Additionally, the radio station team coordinated and broadcast long-form interviews with university and regional experts. Examples include: WCU Provost Richard Starnes provided university updates on classes and university operations; WCU communication alumnus, Tanner Holland, public information officer with the North Carolina Department of Transportation, provided details about road and bridge conditions and conveyed a “do not travel” advisory to the region due to bridge collapses and more than 390 roads impacted in the rural region; Robert Young, WCU professor of geology and director of the Program for the Study of Developed Shorelines, explained the power of water and the why of what had just happened in the mountain communities; and Quinn Manning, a WCU emergency and disaster management major and former AmeriCorps volunteer and FEMA Corp team leader, shared his experiences responding as a volunteer to the disaster in the Asheville, NC, area. Manning described what he saw as “unfathomable” and “like a war zone.” Segments from these interviews, as well as other updates, were also shared on the student-produced, digital news site, *The Western Carolina Journalist*.

On Tuesday, October 8, Western Carolina University Chancellor Kelli Brown wrote to faculty and staff: “Our students have lost housing, cars, computers, and income they need to pay their bills. Further, hundreds of our faculty and staff live in counties that were devastated by the storm. They, too, have lost houses and goods-and tragically, some have lost loved ones.” (K. Brown, personal communication, October 8, 2024)

IHEART MEDIA/ASHEVILLE, NC & GREENVILLE, SC

In the early morning of September 27, the seven iHeartMedia radio stations in Asheville, North Carolina lost all connectivity. It was assumed storm damage had taken them off air. An iHeart engineer from Atlanta with a Starlink satellite uplink and equipment headed to Asheville. Aaron Michael, air personality with iHeartMedia’s Virginia-Carolina Region, went to the iHeart studios in Greenville, South Carolina to try to establish contact with Asheville. Michael discovered the news director and producer from iHeart’s Asheville news-talk station had been there through the entire storm broadcasting critical news and information. With the Starlink, all seven Asheville stations and the Greenville station joined in a regional simulcast.

Critical to iHeart’s success, on the first day of the storm an individual brought two ham radios to the Asheville stations. The ham operator instructed staff on how to use the radios. The ham radios enabled iHeartMedia staff to understand the severity of the situation from the beginning and alert first responders to where emergency help was needed.

iHeartMedia was on the air for two weeks helping Western North Carolina. “We did updates from 6 in the morning until midnight. Nonstop. We only ran three-minute breaks top and bottom of the hour, so we could all run to the bathroom and get something to drink and come right back,” Michael said. (A. Michael, personal communication, November 18, 2024).

“Looking back, none of us would change anything . . . I personally, and I know a lot of the others that were on air, still have the phone calls ringing in our head. We can hear the voice of terror, we can hear the voice of panic of people trying to check in on their loved ones, and the voices of please help me, we need help here. All of us went through a very traumatic two weeks, so it gets all of us very emotional when we talk about it . . . but, no matter what, none of us at iHeartMedia Asheville or Greenville would change a thing we did after Hurricane Helene,” Michael concluded. (A. Michael, personal communication, February 28, 2025).

When asked to reflect on the extent to which the staff believed it was their civic duty to be at the radio stations during the crisis, Michael said: “Honestly, it wasn’t even a doubt in any of our minds. The talent that lived locally fought through hell and high water to get back to the station to get on air. For example, my brother hiked about a mile carrying his dialysis equipment so he could get there. For those of us in Greenville, we didn’t blink an eye at the long hours or technical difficulties to keep the broadcasts on the air. Once we started hearing from the listeners, and could hear their voices, we knew we had to work even harder for them.” (A. Michael, personal communication, April 28, 2025).

LESSONS LEARNED & RECOMMENDATIONS FOR THE FUTURE

Before the crisis occurs:

1. Plan for the worst possible things you can think of. That will never happen. Oh yes it can.
2. Revise crisis communication plans that rely entirely on the internet, cell service, landline phones, or social media.
3. Inventory connectivity. Think of the “what ifs” and then think some more.
4. Know your regional or statewide electrical grid.

5. Develop contacts with broadcasters, media, and emergency management. Cell, home, work, and unlisted “backdoor” newsroom and control room phone numbers.
6. Develop a relationship with the nearest American Radio Relay League ham radio club in your region or the international Amateur Radion Union.
7. Have battery powered or “wind up” portable radios.
8. Develop a list of public WI-FI locations.
9. Consider the purchase of SpaceX Starlink satellite uplinks and satellite phones.
10. Provide training for staff on the emotional and psychological aspects of crisis response.

Ater the crisis:

1. Provide post-traumatic event counseling for staff responding to the crisis.
2. Review and update the crisis communication plan to reflect lessons learned.

CONCLUSION

Hurricane Helene took out the three major fiber-optic trunk lines in Western North Carolina--something that was “never going to happen.” The resulting blackout included the loss of the internet, landline phones, reverse 911 calls, cell phones, mobile messaging, websites, and social media.

Radio has a 100-year-plus history of local and regional service in times of disaster. Radio is a simple, reliable, technology to transmit and to receive information. Battery powered, “wind up,” and automobile radios were communication lifelines during Helene. The combination of the two traditional media of radio and ham radios became a powerful resource to disseminate critical information and connect people in need with emergency responders.

Additionally, Helene demonstrated the need for communication methods not tied to “mother earth.” An inexpensive Starlink portable satellite uplink was used to connect eight iHeartMedia radio stations together for a regional simulcast and provided the stations internet connectivity.

Helene exposed at least two weak links in crisis communications. First, crisis communicators should not rely on crisis communications plans based primarily on social media, websites and mobile messaging. Second, emergency operations centers, medical, fire, rescue, sheriffs and police departments, as well as radio stations should have satellite connectivity.

Helene also provided the opportunity for broadcasters and journalists, including students, to not just exercise their civic duty, but to go above and beyond to meet the moment, to connect people in need to critical information and lifesaving services. In the future, more attention should be given to educating and training communication professionals on the psychological and emotional demands of crisis coverage.

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