

POLICY FORUM: INVITED COMMENTARIES & SIDEBARS

# From COVID-19 to Hurricane Helene: Rethinking the Role of Nursing Students in Crisis Response

Jill Forcina, PhD, RN, CNE<sup>1</sup>, Terrica Durbin, DNP, PhD, CRNA, FAANA<sup>2</sup>, Katie Neligan, MSN, RN, CNL, PCCN<sup>3</sup>

<sup>1</sup> North Carolina Area Health Education Center, <sup>2</sup> School of Nursing, Western Carolina University, <sup>3</sup> Mountain Area Health Education Center

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Western Carolina University (WCU) nursing students, alongside faculty and licensed nurse volunteers, played pivotal roles in the community's response to Hurricane Helene's devastating impact. Drawing on WCU's experience, this article examines the successes and challenges of integrating nursing students into emergency response efforts and emphasizes the need for strengthened pre-planning and academic-practice partnerships, the implementation of readiness checklists, and the development of a centralized registry to clarify student roles and identify preceptors during emergencies.

## Introduction

On September 26, 2024, Hurricane Helene made landfall off the northwest coast of Florida, bringing record-breaking rainfall and winds of up to 60 mph as it moved through Georgia, South Carolina, Tennessee, and the North Carolina mountains. Some areas of Western North Carolina received up to 20 inches of rain in just two days, triggering catastrophic flooding, landslides, and mudslides that destroyed homes, businesses, roads, and bridges; contaminated water systems; disrupted communication; and claimed over 100 lives.<sup>1</sup>

In response, the Federal Emergency Management Agency (FEMA) designated 28 counties or territories in Western North Carolina as disaster areas.<sup>2</sup> According to the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill, over 15% (36,849) of the state's health care professionals tracked in the NC Health Professions Data System work in these affected areas.<sup>3</sup> More than 23,000 (63%) of them are licensed nurses, including Licensed Practical Nurses (LPNs), Registered Nurses (RNs), and Advanced Practice Nurses.<sup>4</sup> This region is also home to 21 schools with one or more programs for diploma in practical nursing, associate degree nursing, and/or baccalaureate nursing programs with full approval from the North Carolina Board of Nursing (NCBON), for the combined potential enrollment of nearly 3500 nursing students.<sup>5</sup> Given the significant presence of licensed nurses and nursing students in the affected areas, it is important to examine their mobilization and engagement in the immediate response to Helene.<sup>6</sup>

The purpose of this paper is to share the experiences of nurses, nursing faculty, and nursing students who provided health care support to these communities following the hurricane's initial impact. Our goal is to build upon these efforts to enhance disaster preparedness and response. This account is not an exhaustive record of all efforts or experiences, nor is it intended as a critique of the extraordinary work carried out by the countless professionals and community members who came together in response. Instead, it offers an opportunity to reflect, learn, and plan future responses to public health crises.

## **Expanding the Nursing Workforce in Emergencies**

In advance of Hurricane Helene's arrival in Western North Carolina, Governor Roy Cooper declared a state of emergency on September 25, 2024. On October 3rd, the NCBON utilized its existing statutory authority following the state of emergency declaration to issue initial waivers to increase the nursing workforce in the designated disaster areas.<sup>7</sup> These waivers included the emergency temporary reinstatement of inactive, expired and retired RN and LPN licenses, and emergency temporary RN and LPN licensure by endorsement. All of these waivers required eligible nurses to complete an application; however, associated fees and background checks were waived.<sup>8</sup>

On October 5th, Governor Cooper issued an executive order granting health care licensure boards the ability to expand emergency waivers by authorizing "skilled but unlicensed volunteers" and "students at an appropriately advanced stage of professional study" to provide care.<sup>9</sup> Within one week, in addition to collaborating with the NC Medical Board to waive certain requirements for Nurse Practitioners practicing in Western North Carolina, the NCBON issued an additional waiver allowing increased flexibility in the curriculum of the 21 affected nursing schools to support continued matriculation of students.<sup>10</sup> Shortly after, the North Carolina General Assembly passed The Disaster Recovery Act of 2024, which extended and solidified these waivers until March 1, 2025.<sup>11</sup> On March 19<sup>th</sup>, Session Law 2025-2 (House Bill 47) extended the state of emergency, and the NCBON updated all waivers to reflect a new expiration date of June 30, 2025.<sup>12</sup>

Many of the waivers passed during Hurricane Helene mirrored those enacted during the COVID-19 pandemic, reflecting lessons learned. Despite these regulatory adjustments, a major gap in the COVID-19 response was the lack of a structured approach to integrating students into emergency efforts.<sup>13</sup> While waivers expanded the licensed workforce and supported the student pipeline, no centralized plan existed to directly incorporate students into the emergency response. The absence of early planning may have led to missed opportunities for securing additional support and created challenges in distinguishing between student volunteer and training roles, verifying

competencies, and clarifying faculty and preceptor responsibilities. These challenges were particularly evident at sites without established partnerships with schools.

The experiences of faculty and students at the School of Nursing at Western Carolina University (WCU) after Hurricane Helene reflect the challenges seen during COVID-19 while highlighting progress made. WCU's experience serves as a valuable case study on how academic and practice partners can proactively plan for student involvement in future emergency responses while maintaining safety, effectiveness, and regulatory compliance.

## **Western Carolina University's Experience in Hurricane Helene Response**

Part of the University of North Carolina (UNC) System, WCU's School of Nursing was established in 1969 and is renowned for its comprehensive nursing education programs and exceptional graduate success rates. As a result of the damage caused by Helene, WCU experienced a significant operational disruption, closing on September 30th and not resuming classes again until October 21<sup>st</sup>. Despite its closure, the faculty at the School of Nursing quickly recognized an opportunity to integrate nursing students into disaster response efforts. Faculty mobilized students, other faculty, and regional nurses to provide care for medically fragile adults and displaced nursing home residents.

### ***Coordinated Response Through Clinical Partnerships***

On October 1<sup>st</sup>, after assessing the situation and recognizing that WCU students and faculty were eager to contribute, WCU nursing leadership began reaching out to practice organizations to determine how their students and faculty could assist. They identified a local shelter serving as a primary site for displaced individuals with medical needs and coordinated with clinical and administrative leadership to deploy students and faculty. Even with established relationships with both clinical and administrative leaders at the shelter, uncertainty quickly became evident regarding the appropriate scope of student practice, faculty supervision requirements, and preceptor qualifications. These questions persisted throughout their two-week service. Continued liability concerns added to the complexity and made decision-making more difficult, while communication around the roles and need for nursing students shifted multiple times as the situation evolved.

### ***Structuring Student Involvement for Maximum Impact***

As leadership navigated challenges related to scope and liability, faculty identified the need for a structured operational framework. They implemented a process to track student participation and verify the licensure of volunteer community nurses, which involved purchasing a subscription and rolling out an online sign-up system. Faculty oversaw participation,

assigned students based on their education level and competencies, and created shift schedules with the support of North Carolina Area Health Education Centers (NC AHEC) to ensure seamless integration into health care teams.

Beyond coordinating students and faculty, WCU also oversaw the registration and coordination of RN volunteers who reached out to the school directly. These nurses were vetted using the NCBON license verification system and strategically assigned roles as preceptors for students, improving both patient care and student learning experiences.

### ***Defining Student Roles and Responsibilities***

Students played crucial roles in the response efforts at the shelter. They assisted with patient hygiene and mobility, ensuring that shelter residents had access to basic care despite the lack of running water and external bathroom facilities. Under faculty supervision, students monitored vital signs, provided emotional support, and in some cases, administered prescribed medications. Licensed nurses and students in their third and fourth semesters of education took on leadership roles, such as organizing and overseeing patient care zones and coordinating shift changes. These coordinators ensured that each of the 3 designated patient care zones was managed by a fourth-semester student or RN to maintain continuity of care and efficient patient support.

### ***Faculty Oversight and Leadership in Action***

To maintain quality care and provide a structured learning environment, faculty members played a crucial role in supervising student activities. However, due to limited faculty numbers, direct oversight was not always possible. Instead, faculty coordinators were assigned to oversee student engagement remotely and provided guidance as needed. Faculty coordinators facilitated decision-making and acted as liaisons to site leadership and clinicians. At the end of each experience, faculty conducted debriefing sessions with students to review patient outcomes, discuss challenges, and provide constructive feedback.

### ***Outcomes***

[Figure 1](#) illustrates the on-site response needs and coverage, which resulted in the engagement of 130 total unique nursing participants, including 93 WCU prelicensure students, 17 WCU faculty, and 20 community volunteers or WCU alumni or graduate nursing students (already licensed nurses) over 16 days. These volunteers collectively filled 211 of 279 available nursing shifts (75.6%), demonstrating strong engagement in providing care. Including the shift-change coordinator role, WCU students filled a total of 161 shifts, contributing nearly 2000 hours of service at the site. WCU faculty participated in 28 shifts across various roles, totaling nearly 250 hours. Among the 248 available 12-hour student and RN shifts, only 66 (27%)

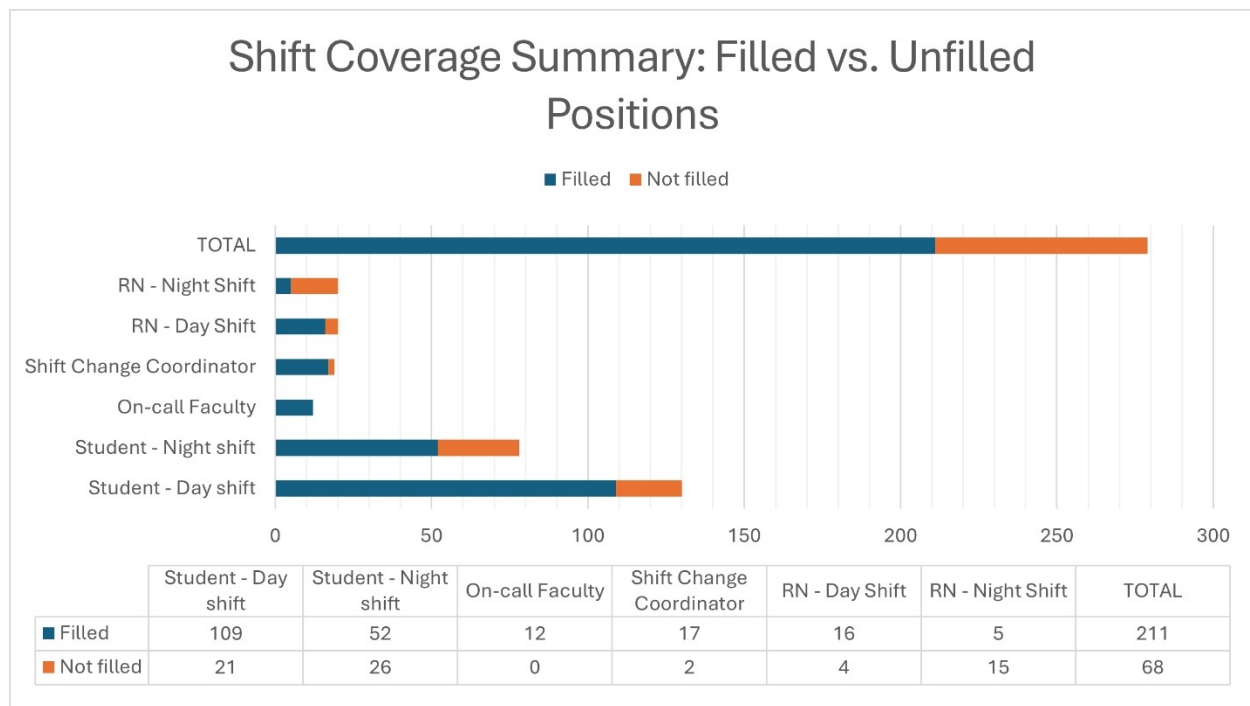


Figure 1. Response Data

Note. The numbers in this figure are approximations, as the sign-up system was not intended for rigorous data collection.

remained unfilled, with the majority (62%) of unfilled shifts occurring at night. Additionally, a pre-licensure student volunteer remotely verified the licenses of 53 out of 61 RNs who signed up to assist. However, only 20 (37%) ultimately worked one or more open RN shifts. Many were WCU faculty, graduate students, and alumni, demonstrating the commitment of RNs to their alma mater and the community at all levels. In debriefing sessions, students reported increased confidence in their clinical abilities and a greater appreciation for nursing's role in disaster response. This data underscores the dedication of nurses and nursing students in responding to a crisis, with the majority of shifts successfully filled despite the significant challenges they faced in their own lives during the disaster. At the same time, it highlights areas for improvement in coordination, communication, and role clarity to better support future response efforts.

## Recommendations for Addressing Gaps and Leveraging Opportunities

Across both the COVID-19 pandemic and Hurricane Helene crises in North Carolina, two common nursing workforce challenges emerged: (1) the availability of nursing personnel, and (2) disruptions in nursing student training.<sup>14</sup> WCU's experience demonstrates how strong relationships with clinical partners can support an effective response, enabling teams to navigate uncertainties around student practice, faculty oversight, and clinical site agreements. While these connections helped facilitate participation despite evolving conditions, the experience also revealed opportunities to improve

the efficiency and impact of future emergency responses involving nursing students. Even months later, schools in central and eastern North Carolina with available nursing resources—including graduate students and licensed professionals—continue to express interest in supporting recovery and rebuilding efforts as part of their training programs. However, without a clear framework for engagement, these schools struggle to find a clear path to contribute.

Clinicians at another shelter involved in regional recovery efforts report challenges that mirror those described in WCU's experience, particularly regarding student scope of practice. When the demand for nursing support surged, they hesitated to integrate students into the response, primarily due to liability concerns. With multiple institutions and clinical leaders from different disciplines contributing to the shelter's formation and operation, no unified system was in place to facilitate student involvement to full capacity. While their contributions were considered valuable, the situation underscored the need for pre-planning and coordination to maximize students' skills and competencies.

Addressing these challenges requires building an infrastructure for nursing school engagement in crisis response. Strengthening pre-planning and partnerships; implementing readiness checklists for both schools and clinical partners; and establishing a centralized registry to verify nursing student competencies, student roles, and identify preceptors during emergencies are essential steps toward a more effective, coordinated system.

### ***Pre-planning and Partnerships***

Partnerships between nursing schools and health care organizations are well-established to provide students with clinical learning experiences and exposure to potential future employers. However, to ensure faculty and students have the opportunity to effectively and promptly contribute during crisis situations, these contracts must explicitly include provisions outlining safety protocols, activation procedures, and clearly defined role expectations during states of emergency.

This type of contract represents a deeper academic-practice partnership than traditional agreements, requiring leadership from both sides—and the students themselves—to recognize students as essential personnel. Clear criteria should be established to define how crisis service hours can count toward students' clinical training requirements versus service hours and/or faculty service towards promotion and tenure, ensuring that their contributions in emergency situations are both meaningful and properly recognized.

Creative, “outside-the-box” thinking should also be encouraged when defining nursing students' roles in emergency response.<sup>15</sup> While direct care experience is essential for nursing student training, other responsibilities,

such as organizational logistics and personnel management, also fall within the nursing scope of practice.<sup>6,16,17</sup> For example, in the WCU case study, a contract with clinical partners could contain provisions in an emergency that outline a structured operational approach to nurse staffing, with WCU serving as the primary coordinator. Such a provision could include ensuring efforts are made to secure adequate personnel coverage for each shift, establishing a framework for assigning nursing care responsibilities, and verifying the competencies of both students and volunteer nurses. By taking on such roles, nursing students could contribute in ways that extend beyond direct patient care, further integrating them into the emergency response system, granting them opportunities for leadership training, and allowing emergency personnel to focus on critical response efforts.

### ***Resource and Readiness Checklists for Schools and Practice***

#### ***Partners***

Schools must also ensure that student and faculty safety remains a priority and that their well-being is addressed, particularly in public health emergencies that directly impact their personal lives. One potential solution is for schools to collaborate with practice partners or the larger state emergency response system to establish school-based student service corps that could be activated during emergencies with partners on a volunteer basis. Students involved in the corps could participate in regular disaster relief simulation training to keep them engaged, trained, and ready. A student corps model proved effective at UNC-Chapel Hill during the COVID-19 response<sup>12</sup> and has been implemented in other states, such as Massachusetts.<sup>18</sup>

Activation procedures should establish emergency communication and leadership structures, while role expectations must be integrated into annual training programs for both academic and clinical partners. Additionally, contracts should incorporate a clear mechanism detailing their status if one or more partnering organizations close, either due to the closure of the physical location or changes in operational status. This mechanism should specify whether the contract remains in effect, is suspended, or is terminated in these circumstances, or how expectations and roles shift. Standardized safety assessments that schools can use to evaluate the ability of students and faculty to participate in an emergency response—and in what capacity—are essential. Community engagement protocols that include the contact information and role of local fire departments, pharmacies, and durable medical equipment (DME) supply sites are also key to a comprehensive response.

#### **Student Competency Verification**

Another challenge identified during the immediate Hurricane Helene recovery effort was the inability of clinical sites to verify student competencies, particularly if engaging in a volunteer capacity. Currently, no required, readily accessible system for students to formally document their

competencies exists—unless they are listed on the Nurse Aide (NA) I or II registries. This lack of a centralized, mandated verification system across schools limits progress toward a more efficient and coordinated use of nursing students in emergency response efforts.

Ensuring an efficient mechanism for listing students with appropriate training and competencies in the NA registries is one solution, particularly for those who wish to volunteer during crisis situations. Additionally, two other potential solutions are available for students who could deploy in a learning capacity under faculty oversight, utilizing skills acquired beyond the NAI level. First, working with partners to establish a system that regularly tracks and documents student competencies, while considering Family Educational Rights and Privacy Act (FERPA) compliance, would allow for real-time verification of student qualifications during emergencies. For example, nursing programs could align around collectively identifying common competencies that students should acquire upon completing specific coursework and share this information with State Emergency Management officials or other coordinating organizations. While this would not relieve faculty members of their oversight responsibility, it could help emergency management organizers better understand students' abilities based on their progress in the program. Over time, this could evolve into a badging or credentialing system that provides a more accessible way to verify competencies during emergency deployments. Second, strengthening academic-practice partnerships by integrating students into health care organizations as employees or interns could allow for pre-documented competencies, ensuring that students are already credentialed within the practice setting before a crisis occurs. For both solutions, existing infrastructures—such as the NC Department of Public Safety's Preparedness Map<sup>19</sup> and the NC Center on the Workforce for Health<sup>20</sup>—could be leveraged to identify needs and coordinate student deployment effectively.

Existing models such as Washington State's "Earn While You Learn" program and Patient Care Technician (PCT) programs align closely with nursing apprenticeship programs, which are not new to North Carolina<sup>21</sup> and have been identified as one solution to North Carolina's nursing workforce shortage.<sup>22-25</sup> Exploring these models in collaboration with the NCBON, accreditation agencies, health departments, and emergency management agencies—with a specific focus on integration into emergency response—could help establish a "ready-to-deploy" nursing student and faculty registry. Such an infrastructure would streamline student involvement in crisis response, ensuring they can contribute effectively and safely when needed.

## Streamlining Preceptor Processes

Another significant challenge is the identification of available, qualified preceptors. A nurse-driven approach could integrate preceptor recruitment into the nursing license renewal process. Those meeting preceptor qualifications<sup>26</sup> but lacking formal training in the teaching-learning process could complete the free NC AHEC Clinical Precepting Series course<sup>27</sup> or an equivalent program. Alternatively, a partnership between NC AHEC, the NC Center on the Workforce for Health, and the NCBON could explore the proactive identification of potential preceptors. This partnership could help establish a structured process for maintaining and updating a list of preceptors who meet key qualifications, including licensure, relevant experience, clinical competence, participation in professional learning, and an interest in precepting. In emergency situations where on-site faculty or preceptor agreements are unavailable, these “emergency preceptors” could provide instruction and training for nursing students with indirect faculty supervision, ensuring students can contribute effectively while maintaining safe and competent practice.

Additionally, in both COVID and Helene responses, no waivers expanded preceptor qualifications across professions or permitted interprofessional preceptorship during emergencies. Exploring the use of an interprofessional education (IPE) framework may help identify settings or patient populations where supervision by licensed professionals from other disciplines could be appropriate—particularly in settings where shared competencies align with the majority of care provided—while still respecting professional scopes of practice. This approach could help address gaps in preceptor availability and enhance student integration into response efforts while ensuring appropriate oversight. By proactively identifying and preparing preceptors, North Carolina can enhance the flexibility and responsiveness of its health care workforce in times of crisis.

## Key Challenge Areas and Future Considerations

North Carolina was forced to put lessons learned from COVID-19 to the test through efforts to support the health care workforce in communities impacted by Hurricane Helene. The School of Nursing at WCU’s response to Hurricane Helene demonstrated that integrating nursing students into disaster relief efforts is valuable, though it required substantial effort, coordination, and commitment from faculty, students, and clinical partners. While progress was made, many of the same challenges from the COVID-19 response persisted, particularly in the areas of student role clarity, operational coordination, infrastructure readiness, and preceptor engagement ([Table 1](#)), underscoring the need for more streamlined systems to support student engagement in disaster response.

Table 1. Lessons from WCU's Use Case: Nursing Student Integration in Disaster Response – Comparing COVID-19 and Hurricane Helene

| Key Challenge Areas                       | Challenges Identified in COVID-19                                                                                                                               | Lessons Applied & Changes in Hurricane Helene                                                                                                                                                                                                         | Persistent Challenges in Helene Response                                                                                                                               | Future Considerations                                                                                                                                                                         |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regulatory measures & workforce expansion | No centralized plan for integrating students into emergency response; waivers expanded licensed workforce.                                                      | Experience from COVID-19 enabled a more rapid implementation of waivers and executive orders, not only to expand the nursing workforce but also to prevent academic disruptions by ensuring students could meet clinical requirements for graduation. | Structured processes for engaging students effectively remain lacking                                                                                                  | Establish clear student engagement processes and predefined roles in emergency response plans, including draft waiver language, triggers, and processes for operationalizing waivers.         |
| Operational coordination of students      | No system for tracking or deploying students in emergency settings.                                                                                             | Experience from COVID-19 provided a foundation for utilizing technology, virtual classrooms, and digital tracking systems to monitor student involvement and ensure continuity in education and clinical training. <sup>a</sup>                       | No standardized statewide or regional system exists, leading to inconsistencies in student engagement, particularly in direct patient care.                            | Develop a standardized statewide system for tracking and deploying students, utilizing digital platforms for real-time coordination.                                                          |
| Communication & role clarity              | Unclear roles for students, faculty, and preceptors led to inconsistent or nonexistent engagement.                                                              | COVID-19 helped establish some pre-existing roles and processes for assigning and training students for emergency response, but these efforts took time to implement because they were not preplanned.                                                | Concerns about liability, supervision, and scope of practice continue to limit student utilization in many settings.                                                   | Create clear, preplanned role definitions and training pathways for students, faculty, preceptors, and organizational leadership to improve utilization and reduce liability concerns.        |
| Infrastructure & readiness planning       | Emergency response plans existed within schools and health care organizations but were often developed in silos rather than through collaborative partnerships. | Experience from COVID-19 helped streamline the volunteer participation of licensed professionals, but there was no clear framework for integrating students into disaster response efforts.                                                           | The lack of predefined emergency protocols developed across partnerships led to variability in student engagement and utilization.                                     | Strengthen pre-planning and partnerships between schools, health care organizations, and emergency response agencies through structured readiness checklists.                                 |
| Preceptor & faculty oversight             | Limited availability of preceptors and faculty made student involvement difficult.                                                                              | Increased use of pre-existing faculty and regional volunteer nurses helped fill gaps, but unclear or ill-defined clinical contracts during school closures created uncertainty about student placement.                                               | No centralized preceptor database existed for emergencies, and while many volunteers were willing to serve as preceptors, there was no formal structure for oversight. | Develop a centralized preceptor database for emergencies and draft waivers to expand preceptor qualifications during crises to allow interprofessional oversight.                             |
| Clinical contracting & partnerships       | Many schools had difficulty establishing rapid partnerships with health care organizations for clinical experiences.                                            | Experience with student integration during COVID and pre-existing contracts and partnerships helped, but emergency-related clinical agreements were still unclear.                                                                                    | Some clinical contracts became questionable due to school closures or shifting site operations; no standardized crisis agreements.                                     | Standardize clinical contracting agreements to ensure continuity during disasters and define emergency-specific agreements.                                                                   |
| Student competency verification           | No formal registry for student competencies, making it difficult to match skills to needs.                                                                      | Without a standardized system, sites relied heavily on pre-existing partnerships and faculty oversight to verify competencies.                                                                                                                        | The absence of a statewide real-time verification system, combined with concerns over liability and scope of practice, continued to limit student involvement.         | Utilize existing NA-I and II registries and/or establish a centralized registry for real-time student competency verification beyond NAII skills to facilitate rapid and expanded deployment. |
| Quantifying the value of nursing students | No formal system to measure the impact of student contributions in emergency response; contributions were often overlooked.                                     | Acknowledgment of students' potential role increased, but no structured mechanism was in place to quantify their contributions.                                                                                                                       | Difficult to quantify student impact in clinics and emergency response efforts; reliance on anecdotal evidence rather than structured data.                            | Develop formal systems for tracking and documenting student contributions in disaster response to quantify impact and justify student involvement.                                            |

<sup>a</sup> As a lesson learned from COVID, effective March 1, 2024, new NCBON rule language as contained in 21 NCAC 36. 0302(b)(11) states an application to establish a new nursing program must include “an emergency preparedness plan for addressing situations which shall include a reduction in the availability of clinical agencies, a transition from in-person to virtual learning platforms, and a need for increased use of simulation.” Established prelicensure programs are encouraged to develop plans as well, given the potential impacts to student learning and progression. Additionally, 21 NCAC 36. 0321(b)(1) now requires programs to provide content and supervised clinical experience[s]...in emergency preparedness. Programs were already engaged in these efforts prior to COVID, and it is now reinforced in rule language.

## Conclusion

Moving forward, formalizing the role of students and faculty in emergency response efforts through clinical contracts, standardized readiness checklists, competency verification systems, and proactive preceptor engagement will be critical. However, achieving these solutions will require true collaboration among key stakeholders to ensure that any solution is both practical and widely accepted. Academic-practice partnerships and collaborations across sectors are key to building a system where students are recognized as essential personnel, strengthening both emergency preparedness and workforce resilience in North Carolina.

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