2025 Granite State Health Care Coalition Hazard Vulnerability Analysis

November 2025

The Granite State Health Care Coalition is an initiative of the Foundation for Healthy Communities financed under a contract with the State of New Hampshire, Department of Health and Human Services, with funds in part by the State of New Hampshire and/or such other funding sources as were available or required, e.g., the United States Department of Health and Human Services.

Acknowledgements

The Granite State Health Care Coalition would like to acknowledge its partners from the State of Connecticut Department of Public Health for sharing their Hazard Vulnerability Analysis and supporting materials to inform the new iteration of the HVA process that began in 2024.

The Granite State Health Care Coalition would also like to acknowledge the partners that contributed to this process along the way. Your input is significant and recognized.

Contents

Acknowledgements i
Background 2
Purpose 2
HVA Approach 2
Methodology 3
Approach 3
Participant Survey 4
Identified Hazards 4
Communities Most Impacted by Disasters 5
Meeting 6
Overview 6
Methodology 6
Hazard Vulnerabilities 6
Mitigation Strategy and Priority Actions 9
Mitigation Strategies 9
Priority Actions 10
Appendices 11
Appendix A Acronyms and Abbreviations 1
Appendix B GSHCC HVA Participants 1

Background

Purpose

This report presents and discusses the results of the 2025-2026 Granite State Health Care Coalition (GSHCC) Hazard Vulnerability Analysis (HVA).

An HVA is a systematic approach to identifying hazards or risks that are most likely to have an impact on the demand for health care services or the health care delivery system's ability to provide these services.[1] Through the identification of hazards and impacts to these systems, participants develop strategies to mitigate the impacts of the identified hazards. HVAs inform future planning and serve as a foundation for the implementation of mitigation strategies across the healthcare, public health, and behavioral health systems. The GSHCC has created an HVA process that can be built upon annually to show progress in mitigating top identified risks.

The goals of the HVA process are to:

- Identify and understand the overall likelihood, impact, and planning implications of identified hazards.
- Identify potential GSHCC systemwide mitigation strategies and review and update these strategies annually as required.
- Fulfill federal and state requirements to conduct an annual HVA.

Assumptions

This report considers several planning assumptions in its design:

- Not all staff are trained at the same level and training will remain an on-going priority for all organizations.
- Each organization should perform their own HVA to determine their greatest internal risks.
- Certifying agencies, stakeholder demand, and/or current events may require hazard specific planning not noted in this report. Planning efforts therein may require sector specific elements.
- Past and current event history around facilities and organizations may elevate certain planning initiatives over others.
- Staffing and funding needs may impact current and future risks which could alter overall hazard scenario importance.
- Environmental design may greatly impact hazard scenario ratings and should be closely considered.

HVA Approach

The GSHCC conducted the HVA following the general principles outlined in the *2017-2022 Health Care Preparedness and Response Capabilities*:

- GSHCC members and partners should participate in the HVA process.
- The HVA should be coordinated with state and local emergency management organization assessments (e.g., Threat and Hazard Identification and Risk Assessment [THIRA]) and public health hazard assessments (e.g., jurisdictional risk assessment [JRA]).

[1] U.S. Department of Health and Human Services, Administration for Strategic Preparedness and Response. (2016). 2017-2022 Health Care Preparedness and Response Capabilities. https://www.phe.gov/Preparedness/planning/hpp/reports/Documents/2017-2022-healthcare-pr-capablities.pdf

- Hospitals, emergency medical services (EMS), emergency management, public health, and other healthcare organizations should provide input into the development of the GSHCC HVA.
- Assessment components should include regional characteristics, such as risks for natural or man-made disasters, geography, and critical infrastructure.
- The assessment should address population characteristics (including demographics), and consider those individuals with access or functional needs, including people with disabilities, vulnerable populations, and those who may require additional assistance in an emergency.
- The HVA should be regularly reviewed (annually) and shared with members and partners.
- At least seven (7) hazards must be addressed in the HVA.

Methodology

Approach

The 2025-2026 GSHCC HVA process was built upon previous GSHCC HVA processes which were adapted from two similar HVA processes established by New York City and the State of Connecticut. The 2025-2026 GSHCC HVA process resulted in the following outcomes.

Table 1

Granite State Health Care Coalition 2025 Hazard Vulnerability Analysis Hazard Outcomes

Likelihood of Occurrence (over the next 1-5 years)	Human Impact	Property/ Infrastructure Impact	Business Operations Impact	Planning in Reducing Risk
Most to Least Probable	Most to Least Catastrophic			(High to Low Priority)
Extreme Winter Weather	Pandemic/ Infectious Disease Event	Hurricane/Tropical/Post-Tropical Cyclone	Cyber Attack	Pandemic/ Infectious Disease Event
Cyber Attack**	Extreme Winter Weather	Extreme Winter Weather	Pandemic/ Infectious Disease Event	Extreme Winter Weather
Pandemic/ Infectious Disease Event**	Armed Assailant/ Active Threat	Cyber Attack	Armed Assailant/ Active Threat	Cyber Attack
Armed Assailant/ Active Threat*	Cyber Attack	RDD/Radiological Incident	Hurricane/Tropical/Post-Tropical Cyclone	Armed Assailant/ Active Threat
Hurricane/Tropical/Post-Tropical Cyclone*	Chemical Incident	Armed Assailant/ Active Threat	Extreme Winter Weather	Chemical Incident
Chemical Incident	RDD/Radiological Incident	Chemical Incident	RDD/Radiological Incident	Hurricane/Tropical/Post-Tropical Cyclone
RDD/Radiological Incident	Hurricane/Tropical/Post-Tropical Cyclone	Pandemic/ Infectious Disease Event	Chemical Incident	RDD/Radiological Incident

***Several hazards' likelihood of occurrence and impacts have been updated from the 2024-2025 HVA. Cyber Attack and Pandemic/ Infectious Disease Event swap places, as do Armed Assailant/ Active Threat and Hurricane/ Tropical/ Post Tropical Cyclone. Additionally, Property/ Infrastructure and Business Operation Impacts are new to the 2025 HVA.

The 2025-2026 GSHCC HVA process was comprised of three phases including a survey sent to GSHCC partners, a virtual meeting, and an HVA Report. At the meeting participants were briefed on results of the HVA survey, including hazard vulnerabilities, and discussed priority actions to build and sustain capabilities as well as identified potential mitigation strategy actions. A discussion was held on how to close the gaps presented utilizing polling mechanisms.

Participant Survey

Participants from across the GSHCC membership were invited to complete a brief survey. Eighty-eight (88) participants completed the survey. The survey evaluated whether the planning priority hazards rankings established in the 2024-2025 HVA remain accurate. The survey also assessed Planning, Organization, Exercise, Training, and Equipment (POETE) vulnerabilities associated with each of the seven identified hazards.

Survey responses determined the hazards prioritized for planning efforts in order from highest to lowest priority are pandemic/infectious disease event, extreme winter weather, cyber-attack, armed assailant/active threat, chemical incident, hurricane/tropical/post-tropical cyclone, and RDD/radiological incident. The survey response data determined that the likelihood of occurrence for Cyber Attack and Pandemic/ Infectious Disease Event switched, as well as armed assailant/active threat and Hurricane/Tropical/ Post-Tropical Cyclone switching places with each other. Survey respondents were asked to assess the severity of the identified threats and hazards and their human impact. Responses were weighted to reflect the severity of the human impact of disasters (including “communities most impacted by disasters”). These impacts remained similar to last cycle’s, with only Chemical Incident and Hurricane/ Tropical/ Post-Tropical Cyclone switching places from the previous year.

Additionally, the above table was updated to reflect the impacts on property/ infrastructure and business operations that the identified hazards would have.

Identified Hazards

Natural

- Extreme Winter Weather
- Hurricane/ Tropical/Post-Tropical Cyclone
- Pandemic/ Infectious Disease

Human-Caused

- Armed Assailant/ Active Threat

Technological

- Chemical Incident
- Cyber Attack
- Radiological Dispersion Device/ Radiological Incident

Communities Most Impacted by Disasters

According to the 2020 U.S. Census, the population of New Hampshire was 1,377,529; 21.5% of which were 65 or older. Additionally, 17.6% of New Hampshire's population is under the age of eighteen and 4.4% is under the age of five[2]. It is important to note the age makeup of a state's population as both geriatric and pediatric patients may require specialized medical care before, during, and after a disaster. The Granite State Health Care Coalition, in collaboration with the New Hampshire Department of Health and Human Services, as well as Coalition partners, conducts an annual review and update of the *New Hampshire Granite State Health Care Coalition Pediatric Surge Annex*. New Hampshire does not have a Level I Pediatric Trauma Center, with Boston Children's Hospital being the closest Level I. The state's sole Level II Pediatric Trauma Center is located at Dartmouth Health Children's at Dartmouth Hitchcock Medical Center.

Based upon 2024 American Community Survey Estimates, 14.3% of the population of the state are considered disabled, similar to the national average. This includes persons with hearing, vision cognitive, ambulatory, self-care, and/ or independent living difficulties[3]. Persons with disabilities require special consideration during a disaster as they may require specialized medical needs to include medical equipment or transportation needs. 8.1% speak a language other than English at home with 2.4% of the state's population speaking English less than "very well" according to Community Resilience Estimates provided by the U.S. Census Bureau[4]. Those with limited English proficiency may have difficulty in accessing or comprehending emergency communications during a disaster. The State of New Hampshire Homeland Security and Emergency Management and local emergency management coordinators and public health officials work to ensure community messaging; to include press releases and public health and safety information, is available in multiple languages. Community Resilience Estimates also note 15.4% of the state's population is considered vulnerable; with that percentage of the population experiencing three or more components of social vulnerability. The areas of the state with the highest levels of vulnerability are Grafton and Coos counties in the northern part of the state, as well as Hillsborough County, where Manchester and Nashua sit; the two largest cities in the state.

41.6% of the population of the state resides in rural areas.[5] Those residing in rural areas may experience difficulty during an emergency as access and transportation routes may be impacted preventing evacuation, receiving medical care, or attention from first responders. A lack of personal and reliable transportation may also affect those before, during, and after an emergency.

According to data provided by U.S. Department of Health and Human Services (HHS) emPOWER, New Hampshire has over 10,000 at-risk Medicare beneficiaries, with the greatest number of at-risk beneficiaries living in Rockingham, Strafford, Merrimack, and Hillsborough counties. Medicare beneficiaries rely on electricity-dependent durable medical and assistive equipment (DME) and devices to live independently in their homes, and some of those individuals also have health care service dependencies. Severe weather and other emergencies, especially those with prolonged power outages,

[2] U.S. Census Bureau https://data.census.gov/profile/New_Hampshire?g=040XX00US33#populations-and-people
[3] U.S. Census Bureau https://data.census.gov/profile/New_Hampshire?g=040XX00US33#health
[4] U.S. Census Bureau https://data.census.gov/table/ACSST1Y2024.S1601?g=040XX00US33
[5] U.S. Census Bureau, Community Resilience Estimates, https://data.census.gov/table/DECENNIALCD1182020.P2?q=rural+population+new+hampshire

can be life-threatening for these individuals[6]. It is paramount that emergency planning and response efforts consider at-risk individuals impacted by a disaster to ensure their needs are met during an emergency event. The GSHCC works closely with all partners and members to ensure that they have the support that they need during an emergency.

Meeting

Overview

A total of forty-nine partners participated in the virtual meeting representing hospitals, EMS, emergency management, public health, long-term care, home health care and hospice, as well as additional sectors. A full list of participant sectors is available in Appendix B- GSHCC HVA Participants.

Methodology

Meeting participants were brought together to accomplish the following objectives:

1. Review 2025 HVA survey results
2. Identify Planning, Organization, Exercise, Training, and Equipment (POETE) vulnerabilities associated with each of the identified priority planning hazards
3. Reaffirm Priority Actions to build and sustain preparedness, response, and recovery capabilities
4. Identify mitigation strategy actions
5. Propose potential solutions for closing gaps

Strategies, suggestions, and thoughts were captured through discussion, Microsoft Teams chat, and Easy Retro Boards. Participants were asked to vote on potential recommendations to build and sustain priority actions.

Hazard Vulnerabilities

The GSHCC team and HVA meeting participants identified vulnerabilities associated with the established hazards through open discussion. Vulnerabilities for each identified hazard were separated into Planning, Organization, Exercise, Training, and Equipment (POETE) vulnerabilities. It should be noted that staffing and funding were pervasive vulnerabilities associated with all seven priority hazards.

Pandemic/ Infectious Disease

Participants noted leveraging lessons learned and best practices, and implementing these into plans, such as staffing sustainment and response, effectively remained difficult and may impact future preparedness and response efforts. Additionally, the entire healthcare continuum continues to reel from funding, staffing and turnover, and engagement issues related to the COVID-19 pandemic that may inhibit the ability to deliver patient care for a future pandemic or infectious disease event.

Participants also noted that trained volunteers continue to be underutilized across the healthcare and public health fields as barriers continue to persist in effectively incorporating them throughout the healthcare continuum. Participants highlighted limited access or stockpiles of supplies and Personal Protective Equipment (PPE), as well as continued supply chain weaknesses. Further vulnerabilities

[6] U.S. Department of Health and Human Services, Administration for Strategic Preparedness and Response. (2024) https://empowerprogram.hhs.gov/empowermap

discussed related to a pandemic/ infectious disease event consisted of infection prevention training and credentialling. Participants noted additional robust infection prevention and inventory management training was needed for staff.

Extreme Winter Weather

Meeting participants acknowledged existing plans were inadequate and outdated. It was also noted that such plans neglected cascading effects brought about by an extreme weather event. Staffing poses a potential vulnerability as inclement weather and road conditions could impact the ability of staff arriving for their shifts, which in turn may impact patient care. Additional vulnerabilities were a lack of emergency response equipment and supplies, as well as poor pre-positioning of these resources prior to an event. These are also exacerbated by existing vulnerable infrastructure.

Vulnerabilities in disaster sheltering roles and responsibilities were also prevalent. Housing and sheltering during an extreme winter weather event poses a public health and safety issue. Further discussion highlighted the inadequacy of exercising for these types of events within the healthcare continuum, especially regarding secondary weather specific impacts such as carbon monoxide, power outages or disruptions in utilities. Minimal weather appropriate equipment for Medical Reserve Corps (MRC) and Community Emergency Response Team (CERT) members working outdoors during extreme winter weather may present additional health and safety vulnerabilities in such an event. Participants also noted that additional exercises involving off-hours contact/ communications plans, transportation impacts, and sheltering were further needed.

Cyber Attack

Participants discussed that a lack of robust Cybersecurity plans, policies, and procedures remained the primary vulnerability associated with this hazard and would inhibit their ability to respond to such an event within the healthcare continuum. Such an event may affect electronic and digital systems or other operations systems within a healthcare facility, such as Electronic Medical Records (EMR), which may impact the ability to provide patient care or facility operations. Insufficient staff awareness, expertise, or understanding of cyber also proved to be a vulnerability, as did the potential use of third-party vendors for bad actors to gain unauthorized access to a facility's systems.

Other vulnerabilities noted were outdated computer hardware and software, a lack of downtime forms and tools, and potential delays in facility communications for staff that may inhibit limiting negative effects and exacerbating facility vulnerabilities. Discussion also highlighted the lack of cyber-attack/ security centered trainings on extended downtime procedures and manual backup systems. Participants discussed that additional cyber-related exercises utilizing related trainings and focusing on real-world operational impacts are necessary in preparing or responding to such an event. Further impacts and vulnerabilities associated with a cyber event have been identified and presented in the *2025 GSHCC Cybersecurity Assessment.*

Armed Assailant/ Active Threat

Through discussion, participants noted a vulnerability was a lack of well-developed facility plans, policies, and procedures associated with an armed assailant/ active threat. Participants noted that in some cases, inadequate threat assessments posed further vulnerabilities. It was also discussed that, organizationally, issues exist with community and regional coordination as well as systemwide standards

for lockdowns. Vulnerable access points needed improvements to security measures, such as locking doors, cameras, and communication systems, as well as accessible first aid kids were also seen as necessary improvements. In terms of training and exercising, participants noted active threat, first aid, and lockdown procedure training would be beneficial, however, within the healthcare setting there is a risk/ benefit to conducting exercises related to this type of hazard, which has the potential for posing a greater risk to patients and visitors unaware of exercises being conducted. A lack of staff buy-in or fatigue, or collaboration with local law enforcement was also seen as barrier to such a hazard. Discussion also touched upon infrequent or unrealistic exercises would limit the benefit of both trainings and exercises.

Chemical Incident

Participants noted that a lack of updated plans, policies, and procedures existed for a chemical incident, as did poor hazard identification and assessment, especially surrounding cascading effects. Organizationally, a gap in knowledge of roles and responsibilities of a chemical incident poses potential vulnerabilities is response, as does an unclear command structure and gaps in trained HazMat personnel. Additionally, Insufficient PPE, decontamination systems/ kits, and HVAC systems present a gap in readiness for a chemical incident. An overall lack of responder and staff training, limited HazMat awareness and training, and infrequent or unrealistic chemical-centered exercises present potential vulnerabilities.

Pediatric patients remain a vulnerability associated with a potential chemical incident. Partners noted that pediatric patients were usually not represented in chemical incident exercises. Additionally, healthcare staff discussed that limited training existed relative to pediatric patients within a chemical incident. Pediatric patients create a different set of challenges as they require specialized medical treatment due to their anatomical characteristics, mental health and behavioral considerations. According to U.S. Census Bureau 2024 American Community Survey Estimates, 17.6% of New Hampshire's population is under the age of eighteen and 4.4% is under the age of five. This poses a significant vulnerability to a sizeable proportion of the state's population.[7]

Hurricane/ Tropical/Post-Tropical Cyclone

Insufficient plans were more are seen as a vulnerability as inclement weather, impassable roads, and vulnerable infrastructure may inhibit staff from reporting to shifts and affect the provision of patient care and medical operations. Emergency response and debris removal equipment may be insufficient to deal with major impacts brought forth by such an event, as well as disruptions in the supply chain which may affect the ability of healthcare facilities to provide care. Additionally, established plans may not adequately account for patient movement under extreme weather conditions should a facility need to transport or evacuate vulnerable populations. Again, the secondary impacts from a hurricane, tropical/post-tropical cyclone, such as multiple system failures, a lack of redundant and backup communications, disruptions in utilities, and the impacts from flooding pose further vulnerabilities as the exercising of these impacts are limited. Further gaps in shelter management and operations training

[7] New Hampshire Granite State Health Care Coalition Pediatric Surge Annex, January 2021

and exercising, along with gaps in staff readiness and public information contribute to potential vulnerabilities.

Radiological Dispersion Device (RDD)/ Radiological Incident

Participants noted a need to better define local vs. state roles and responsibilities during a radiological incident. Insufficient planning and integration of state policies and procedures were also seen as a potential gap in radiological preparedness. Insufficient staff knowledge and engagement between public health, external agencies and stakeholders further exacerbate gaps in organizational readiness. Participants also discussed insufficient access to appropriate radiological detection gear and equipment and an overall lack of understanding of what supplies would potentially be needed for such an incident. Further public and staff education is needed as is coordinated radiological specific exercises.

Should a radiological incident occur, a primary vulnerability that was noted was the lack of medical facilities specializing in radiation related injuries within the state. New Hampshire maintains one Radiation Injury Treatment Network (RITN) Transplant Center- Adults Only, located at Dartmouth Hitchcock Medical Center (DHMC) in Lebanon, NH. This center does not serve pediatric patients. The closest RITN facilities serving pediatric patients are Dana Farber and Boston Children's Hospital, both in Boston, Massachusetts.; Seabrook Station Nuclear Power Plant located in Seabrook, NH and Portsmouth Naval Shipyard, located just over the Piscataqua River in Kittery, Maine are located across the state from DHMC. Should a radiological incident occur at either facility, transportation or specialized treatment may need to occur at facilities out of state. Other Level II Trauma Centers in the state may not have bed availability to treat an influx of patients from a radiological event.

Mitigation Strategy and Priority Actions

The GSHCC team reviewed previously identified mitigation strategies, planned activities, and barriers/challenges, and priority actions to build and sustain preparedness, response, and recovery capabilities.

Mitigation Strategies

Mitigation strategies were reviewed and validated in the previous year's HVA process. Mitigation strategy actions and activities were discussed at the meeting and will be reviewed in subsequent Hazard Vulnerability Analyses.

Mitigation Strategy #1: Provide additional trainings of value to all partners.

- Maintain a GSHCC Training and Exercise Calendar on the coalition website.
- Disseminate upcoming webinars and State, Federal, and partner-sponsored training and education in member email updates.

Mitigation Strategy #2: Provide additional planning guidance to all partners.

- Conduct workshops or seminars that address changing planning priorities, expectations, and requirements.
- Post guides, trainings, and other aids on the GSHCC website for members to access.

Mitigation Strategy #3: Strengthen partner engagement in GSHCC exercises.

- Provide planning support with regard to scope, scenario, and objectives development.
- Participate in and/ or support member after-action review process.

Priority Actions

The GSHCC team and HVA meeting participants updated and reaffirmed potential priority actions to build and sustain preparedness, response, and recovery capabilities across the healthcare continuum in the state. These potential priority actions were reviewed and validated by the GSHCC Leadership Team.

Preparedness

Build Capabilities

1. Conduct a comprehensive Cybersecurity Assessment.
2. Create Emergency Preparedness Tools for members and partners.
3. Provide and share templates and support for facilities to optimize their Communication Plans.

Sustain Capabilities

1. Invite all healthcare sectors to participate in GSHCC exercises, trainings, meetings, and events Develop a statewide Training and Exercise Plan.

Response

Build Capabilities

1. Develop and exercise a statewide Patient Movement Plan.
2. Develop a statewide Medical Operations Coordination Center (MOCC).
3. Increase EMS assets trained in Special Pathogen Infectious Disease.

Sustain Capabilities

1. Exercise MOCC concepts.
2. Continue providing Incident Command System (ICS) training to partners.

Recovery

Build Capabilities

1. Develop Mental and Behavioral Health Wellbeing Teams.

Sustain Capabilities

1. Further develop Infectious Disease Annexes.
2. Maintain and update Statewide Recovery Annex.
3. Provide Recovery Support Function (RSF) and Emergency Support Function (ESF) education to partners.

Appendices

Appendix A Acronyms and Abbreviations
Appendix B GSHCC HVA Participants

Appendix A Acronyms and Abbreviations

CERT	Community Emergency Response Team
DHMC	Dartmouth Hitchcock Medical Center
EMS	Emergency Medical Services
ESF	Emergency Support Function
FQHC	Federally Qualified Health Center
GSHCC	Granite State Health Care Coalition
ICS	Incident Command System
HVA	Hazard Vulnerability Analysis
JRA	Jurisdictional Risk Assessment
LTC	Long-Term Care
MOCC	Medical Operations Coordination Center
MRC	Medical Reserve Corps
MRSE	Medical Response & Surge Exercise
NHHCA	NH Health Care Association
NH HSEM	NH Division of Homeland Security & Emergency Management
NIMS	National Incident Management System
PHEP	Public Health Emergency Preparedness
PIO	Public Information Officer
POETE	Planning, Organization, Equipment, Training, and Exercise
PPE	Personal Protective Equipment
RDD	Radiological Dispersal Device
RITN	Radiation Injury Treatment Network
RDHRS	Regional Disaster Health Response System
RSF	Recovery Support Function
SME	Subject Matter Expert
STEP	Statewide Training and Exercise Program
THIRA	Threat and Hazard Identification and Risk Assessment
TTX	Tabletop exercise

Appendix B GSHCC HVA Participants

HVA Survey Response Participants

Total number of participants: 88

Sector	Number of Participants
Ambulatory Surgical Center	2
Association Level Organization	2
Dialysis	6
Educational Health Center	1
Emergency Management	5
Emergency Medical Services	1
Community Health Center/Federally Qualified Health Center	2
Home Health Care & Hospice Care	11
Hospital	15
Long-Term Care, Assisted Living, Nursing Home	24
Mental Health Care, Behavioral Health Care	3
Outpatient Rehabilitation Care	2
Public Health	13
Primary Care	1

HVA Meeting Participants

Total number of participants: 49

Sector	Number of Participants
Association Level Organization	4
Dialysis	2
Emergency Management	6
Emergency Medical Services	1
Home Health Care & Hospice Care	5
Hospital	15
Long-Term Care, Assisted Living, Nursing Home	5
Mental Health Care, Behavioral Health Care	2
Public Health	7
Other	2