Foundation *for* Healthy Communities

2019 Novel Coronavirus: Recovery Phase

After-Action Report

Granite State Health Care Coalition

September 2023

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.

Foreword

Through this phase, considered the recovery phase of the pandemic, from July 2022 through June 2023, health care, public health, emergency medical services, and emergency management partners have shifted COVID-19 efforts from that of response activities to that of recovery.

Report Scope

This Report does not evaluate response capabilities or functions in sectors outside of healthcare and public health, except for when response activities directly impacted GSHCC members and partners. The After-Action Report (AAR) addresses the activities and key decisions made throughout the recovery phase of the COVID-19 pandemic response in the State of New Hampshire from July 2022 through June 2023. Broadly, this time period accounts for the ending of the Federal Public Health Emergency and State of New Hampshire Public Health Incident on May 11th, 2023.This Report serves as a continuance of the prior evaluation efforts documented in the 2019 Novel Coronavirus Response Mid-Event After Action Report that analyzed initial COVID-19 response through September 2020, Extended Response After-Action Report that analyzed COVID-19 response efforts from October 2020-June 2021, and Phase 3 After Action Report which analyzed COVID-19 response efforts from July 2021 through July 2022.

GSHCC membership and partners represent a broad spectrum of agencies and facilities across the healthcare continuum. At a minimum, the GSHCC membership includes representation from four core disciplines: hospitals, public health, Emergency Medical Services (EMS), and emergency management. Other members and partners represent a wide variety of healthcare and public health organizations.

Understanding and Use of Report Findings

Each GSHCC member or partner differs in size, capabilities, and responsibilities. Therefore, not all findings or recommendations contained within the Report will or should apply universally. Instead, members and partners are encouraged to use the information and recommendations described in this Report to inform or assist with individualized improvement planning efforts. This Report also calls out systemwide strengths and areas for improvement.

The after-action analysis and review of recovery focuses on identifying and evaluating recovery plans, policies, procedures, guidance, and systems. This After-Action Report seeks to assess multiple, diverse agencies' collective recovery activities to a single, long-term, complex incident. This Report uses observations from multiple members and partners to inform high-level, systemwide, or strategic findings that represent and respect the diversity of member and partner capabilities. Observations identified throughout the analysis component of the Report represent the recovery experiences of numerous members and partners. Identified strengths and areas for improvement reflect a collective understanding or impression of recovery capabilities.

This Report does not offer specific evaluations of any single agency or organization’s performance. Instead, relevant information contained within this Report should inform ongoing internal assessments and evaluations that address specific capabilities and capability targets. Agency or organizational plans, policies, procedures, and systems that impact other stakeholders may be appropriate for consideration.

Any recommendations offered in response to areas for improvement are not prescriptive but offer individual agencies and organizations options to take steps tailored to their organization to achieve systemic changes. Some recommendations may be short-term in nature, addressing COVID-19 through

the transitional and recovery period. In contrast, others may address long-term initiatives to better prepare New Hampshire's healthcare system to prepare for and respond to future pandemics and other emergencies as members and partners can rededicate time to preparedness and comprehensive systemic changes.

Some areas for improvement may require multiple corrective actions, agencies, and coordination to implement. Some corrective actions may also address multiple areas for improvement. The corrective actions included in the Improvement Plan are intended as recommendations for continued improvement at a system level, incorporating the knowledge, experience, and capabilities of partners and members from across the healthcare and public health sectors. Identified corrective actions should be considered as suggestions for enhancing future planning, response, and recovery efforts.

This After-Action Report is a reference that attempts to provide a body of knowledge pertaining to the fourth phase summarized as Findings and Observations from GSHCC members and partners developed through surveys and interviews. The purpose of this Report is to assist members and partners in assessing their recovery activities and impacts of critical decisions to make appropriate modifications to plans, policies, procedures, or systems for continued and future recovery efforts.

Recovery from the COVID-19 Pandemic is still ongoing across sectors throughout New Hampshire and requires continued evaluation and assessment during the transition away from pandemic response. However, this Report contributes to the Granite State Health Care Coalition's effort to support members and partners in improving emergency preparedness, response, and recovery capabilities statewide.

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Executive Summary

Event Prologue

Since 2020, health care, public health, emergency medical services, and emergency management agencies have continued to develop and implement strategies to control and mitigate the impacts of COVID-19. While some partners begin to see a much-needed reprieve and move toward recovery and a "new normal", planning for subsequent surges of COVID-19 infections as well as potential future emerging special pathogen diseases. At the writing of this Report, partners, and members continue to fight to protect the public's health, more than 36 months into the pandemic.

The purpose of the 2019 Novel Coronavirus: Recovery Phase After-Action Report is to:

1. capture and share the recovery activities and experiences of GSHCC members and partners;
2. offer an updated analysis of recovery from July 2022 through June 2023; and
3. provide recommendations to enhance current and future planning and recovery efforts.

It is important to note that there are variances in every GSHCC member and partner organization's capabilities and resources. Not all recommendations contained within this Report will apply to every organization. The GSHCC will make the Report and Executive Summary available to members and partners.

To provide context to recovery, the Event Overview illustrates several major decisions and key events that shaped response in New Hampshire. It is presented as a summary to provide context for the Report findings and is not meant to be a comprehensive list of all event activities. Appendix C- Detailed Event Timeline outlines a more comprehensive timeline with additional detail and context.

Background

The scope and challenges of the COVID-19 pandemic continue more than three years later and requires the opportunity to understand further why and how recovery activities have been successful or require improvement. The goal of this report is to identify opportunities to enhance subsequent COVID-19 recovery activities and to inform future preparedness, response, and recovery efforts. This Report is an artifact of recovery that observes the successes and barriers experienced throughout the past year of response. This Report serves as a tool for members and partners to benefit from shared experiences and lessons learned along the way.

An initiative of the Foundation for Healthy Communities, the Granite State Health Care Coalition has led the development of this Report. The State of New Hampshire Department of Health and Human Services (NH DHHS), under contract by the United States Department of Health and Human Services (HHS), financed this Report's development. The After-Action Review has been conducted in partnership with and support from the New Hampshire Department of Health and Human Services (NH DHHS), Division of Public Health Services (DPHS), Bureau of Emergency Preparedness, Response, and Recovery in accordance with guidance provided by the United States Department of Health and Human Services (HHS), Administration for Strategic Preparedness and Response (ASPR), Hospital Preparedness Program (HPP) and the United States Department of Home land Security (DHS), Federal Emergency Management Agency (FEMA), Homeland Security Exercise and Evaluation Program (HSEEP) standards.

This Report provides a qualitative and quantitative account of recovery perceptions and experiences and offers an analysis of recovery activities and capabilities. By design, the Report identifies strengths and areas for improvement, provides an analysis of member and partner experiences, and proposes recommendations for continued improvement, focusing on GSHCC members and partners' collective recovery efforts. This Report should complement subsequent After-Action Reports for COVID-19 response in the State of New Hampshire and a continuation from previous GSHCC COVID-19 AARs.

Methodology

The GSHCC team lead the review process and composition of this Report. The GSHCC team collected data and feedback from various sources using multiple methods. Each subsequent activity aimed to gather additional detail on emerging themes and shared experiences while considering strengths and areas for improvement identified through the last year of response and recovery.

GSHCC COVID-19 Recovery AAR Online Questionnaire
The questionnaire included roughly 30 questions organized by HPP-PHEP Preparedness Domain that characterized the participant's direct involvement in the COVID-19 response, including specific questions regarding vaccination operations and vulnerable populations. The questionnaire included open-ended responses and multiple-choice questions.

Key Informant or Stakeholder Interviews
Members of the GSHCC team conducted one-on-one interviews with select individuals that played a vital role in COVID-19 recovery activities. Interviewees represented hospitals, public health, EMS, Emergency Management, and other healthcare and public health stakeholders and also included perspectives from state, regional, and local jurisdictions. The one-hour interviews conducted in a conversational format included specific talking points and inquiries used to focus the discussion. These talking points were informed by themes identified in the GSHCC COVID-19 Recovery AAR Online Questionnaire. The review team assured participants their response would not be subject to attribution to support a candid dialogue.

The GSHCC team also reviewed open-source information to develop a common picture of response throughout New Hampshire. These sources include:

- NH DHHS Press Releases,
- NH DHHS Health Alert Network (HAN) Messages,
- NH Governor-directed Emergency Orders,
- NH State Emergency Operations Center (SEOC) Situation Reports, and
- Other Open-Source Reports and References.

Organization of Report

The findings in the Report address Incident Management and Information Management.

Successes and areas for improvement may not be universally experienced across every sector. For some, a listed success was experienced as an area for improvement. Key findings are associated with a domain based on a root-cause analysis of participant observations and experiences. Additional analysis of identified strengths and areas for improvement with accompanying observation statements and narrative provides a further context within each key finding statement.

The Report also contains several appendices to provide additional references and supporting data.

Event Update

Throughout **August** and **September 2020**, NH DHHS and healthcare partners across the state began the process of transitioning from community-based testing sites operated by the New Hampshire Air National Guard, to testing sites at hospitals, pharmacies, and urgent care centers.

In September 2020, planning for fixed vaccination sites statewide was underway with state partners and the New Hampshire Air National Guard leading the charge. State testing sites continued to perform testing for the public. In **December 2020**, vaccinations were authorized in New Hampshire for persons over age 65, first responders, healthcare workers, and eventually other identified essential workers. By late winter, 2021, mass vaccinations began for the general public in a phased approach separated by age. By **February 2022**, COVID-19 variants began to appear in NH.

In early spring, vaccination allocations continued to slowly increase, allowing the state to move to subsequent tiers of eligibility. Multiple mass vaccination sites (fixed sites) were mobilized to vaccinate thousands of NH residents. Regional Public Health Networks (RPHNs), hospitals, and other providers began to administer vaccine to some of those most vulnerable within the state. In **early April 2021**, state distribution of Personal Protective Equipment (PPE) to healthcare partners had scaled down with stabilizing supply chains, decrease in demand, and the temporary respite or quarantine housing program for healthcare and first responders was terminated. New Hampshire opened vaccine eligibility to anyone over the age of 16 by **April 2, 2021.**

By **late April**, the Centers for Disease Control and Protection (CDC) updated guidance that relaxed recommendations for mask wearing, permitting anyone who is fully vaccinated to remove masks outside, other than in certain crowd settings. On **April 16th**, Governor Sununu did not renew the NH Mask Mandate in public places.

By **Memorial Day 2021**, all individuals interested in receiving vaccine were able to do so. State fixed sites were in the process of planning for demobilization, and programs supporting various population groups were asked to think about demobilization or how to sustain efforts.

On **June 7, 2021**, the NH State of Emergency concluded. The State Emergency Operations Center began demobilizing, and staff began to transition programs or initiatives into normal workflows. Over 500 equity clinics were completed from February 4th through June 19th. The homebound vaccination program ended by June 30th. As of **June 30, 2021**, the NH SEOC and Joint Information Center (JIC) were closed, leaving the NH COVID-19 Call Center operated by 2-1-1 to remain open.

By **mid-November 2021**, New Hampshire was in the midst of rising COVID-19 cases, spurred by the Delta Variant. During this time, the state saw a 60% increase of COVID-19 cases[1]. This late 2021 surge was also shown to be much more contagious than previous variants of COVID-19.

On **December 11, 2021**, the first of two "Booster Blitz" vaccination clinics were held at multiple sites across the state. More than 10,000 shots were available for those looking to receive their COVID-19 booster shots. "Operation Booster Blitz" aimed to tackle the surge of COVID-19 cases New Hampshire was experiencing, as well as uncertainty caused by new variants, such as Delta.

On **December 30, 2021**, locations for a second "Booster Blitz" were announced for January 8, 2022. Being held at 15 locations throughout the state, more than 13,000 doses of COVID-19 booster vaccine became available for this event.

Early **January 2022** saw the deployment of three FEMA monoclonal antibody teams to three hospitals in the state: Elliot Hospital, Alice Peck Day Memorial Hospital, and Concord Hospital. These teams expanded capacity to administer needed antibody treatments with hopes of reducing patients needing hospitalization from COVID-19.

By **mid-January 2022**, Governor Sununu announced that the state was entering the beginning of the Omicron surge. This time saw a large increase of COVID-19 cases. Though considered to cause milder illness than the Delta variant, concern remained over the potential for hospitalizations and pressure on the hospital systems.

On **May 11th, 2023**, the Federal Public Health Emergency ended, as did the State Public Health Incident, which saw the expiration of certain types of data collection and funding associated with COVID-19.

Summary of Notable Successes and Areas for Improvement

Notable Successes

The COVID-19 pandemic resulted in an unprecedented response effort by hospitals, healthcare, public health, EMS, and emergency management. Extraordinary response efforts transitioned to an unprecedented recovery. In general, inter-agency collaboration and communication contributed to cross-sector statewide recovery activities. This collaboration must continue to sustain mitigation efforts and preserve partner and member ability to maintain essential healthcare services.

The review team identified the following examples that represent notable successes throughout the healthcare system:

- Locally forged relationships have been, and continue to be, successfully leveraged to fill gaps in healthcare and public health infrastructures.
- Inventory Management as a priority enabled organizations to more effectively address supply needs.
- Partners and members exhibited creative problem solving and out-of-the-box thinking to stabilize healthcare delivery in conjunction with shifting resources and regulations.

[1] https://www.nbcnews.com/data-graphics/new-england-covid-cases-rise-delta-hits-unvaccinated-rcna5653

Areas for Improvement

Recovery from the COVID-19 pandemic also required GSHCC members and partners to implement plans and supporting procedures during a demanding and resource-intensive event. There are several key opportunities for improvement (not all-inclusive) that may improve future recovery needs if addressed.

- Inconsistent alignment between state and CDC guidance caused partners to be caught between state, healthcare accreditation organizations, and Center for Medicare & Medicaid Services (CMS) rules.
- A lack of inclusion of appropriate stakeholders in recovery and planning efforts created significant challenges for partners between jurisdictions and for those seeking guidance.
- Lack of recovery-focused guidance and priorities left partners confused and unsure of next steps transitioning away from over three years of response.
- Frequent turnover of staff, including those in key positions across response organizations, led to a loss of historical knowledge as well as a drop in organizational capabilities.

Key Findings

Findings presented in this section are organized by Incident Management and Information Management. Within each section are key findings with strengths, areas for improvement, and recommended activities to strengthen additional healthcare response. Aggregate data from survey responses, additional narrative from survey responses, and stakeholder interviews support the identified strengths and areas for improvement.

Incident Management

"Incident management" is the ability to establish and maintain a scalable operational response structure with processes that appropriately engage all critical stakeholders and support the execution of core public health and health care capabilities and incident objectives during the recovery phase.

Strengths

1. **Organizations continued to engage concerned members of the community during the COVID-19 Recovery Phase.**

   The GSHCC COVID-19 After-Action Review Survey: Recovery indicated that the vast majority of partners (89.86%) continue to engage with community partners throughout the recovery phase and offered methods and opportunities for the community to be involved. In many instances, public action drives response and recovery activities. Public feedback is important as COVID-19 response and recovery actions remain. Relationships with professional associations, affiliated agencies, and public safety that were built and strengthened during the response phase continued into recovery and were essential to communications and information sharing as well as implementing various activities.

   Such activities included participating in state led informational calls, Public Health meetings, and regularly scheduled publications and dissemination of information to concerned community

members, as well as maintaining collaboration with healthcare sector partners and improved relationships with the Community Emergency Response Teams (CERT), which has seen increased membership. Courses and training or preparedness have seen increased enrollment and interest.

Continued engagement and maintaining interest in Medical Reserve Corps (MRC) has been made a priority among partners. Many organizations utilized volunteers when available and needed to assist in recovery efforts, which benefited community participation and buy-in. Improvements within volunteer management and regular training courses have improved community resilience and preparedness across communities and the state. Such engagement is important as it allows community members and organizations to provide feedback and participate in the events and activities of their respective communities.

2. **Loosening of COVID-19 Response restrictions eased organizations' operational burdens.**

With the ending of the Public Health Emergency, certain COVID-19 response restrictions were rescinded which allowed responders to rethink PPE processes and policies as well as provided positive mental benefits to staff. Staff and responders across sectors experienced fatigue during extended COVID-19 response and into recovery relating to PPE usage and masking. As COVID-19 response was winding down, staff felt more comfortable with the lifting of masking policies and other precautions. This allowed healthcare facilities, which partners felt were lagging behind other organizations, to catch up. This assisted in interactions between healthcare staff and families/ visitors who were frustrated that precautions were still required in healthcare settings, although precautions were lifted in public settings.

3. **Inventory Management as a priority enabled organizations to effectively address supply needs.**

Inventory and supply management had been an ongoing challenge for many during the height of COVID-19 response. Throughout response, there were constant concerns over the availability of PPE and stockpiling of supplies. As organizations have transitioned to recovery and "normal" operations, inventory management lessons learned, and best practices have been implemented to manage supplies more effectively indefinitely. Partners have created additional management tools such as inventory release forms for order distributions to streamline the process. Through extended COVID-19 response, many realized that they lacked the necessary supplies and PPE for the incident at hand. With the transition to the recovery phase, organizations have been able to revisit their supply and stockpile needs. Throughout the COVID-19 Pandemic, healthcare facilities have struggled to understand their PPE burn rates in order to know how much to carry in stock. Partners have created rotation plans for supplies when there were none previously in order to pivot based upon potential future response needs.

Additionally, those without warehouses of their own have noted that they now have better relationships with the state warehouse. Many partners have indicated that better communication with the warehouse is essential to future planning and supply needs, such as having a plan for rotation of supplies and delivery support.

Areas for Improvement

The following areas for improvement were identified through multiple survey responses and stakeholder interviews. Not all areas for improvement will apply to every organization, and individual experiences may differ. Collectively, the identified areas for improvement will provide a high-level overview of where additional effort may lead to more well-developed response capabilities.

1. **Expiration of the Federal Public Health Emergency and State Public Health Incident affected patient care flexibilities and recovery activities.**

   The expiration of the State Public Health Incident led to the end of certain patient care flexibilities among emergency responders and those providing patient care. Under the Public Health Incident, certain flexibilities were allowed such as; patient transfers, testing, vaccination, and PPE to name a few. Among these flexibilities that ended was the one AEMT per transport rule for medical transport. During COVID-19, instead of the pre-response two AEMT per transport rule, only one was needed for patient transport between medical facilities. As the transportation flexibility ended, additional stress was put on already understaffed providers. No plan was in place to assist in the transition from response to recovery, and the ending of certain protocols stressed departmental capabilities, especially for smaller communities.

   The expiration of the Federal Public Health Emergency affected organizations in other ways, through loss of funding and staff positions. This loss of funding affected organizations' abilities to continue to respond to COVID-19 as well as recovery activities. To continue programs, additional funding opportunities needed to be discovered and utilized. Similarly, staff positions funded through COVID-19 dollars were no longer funded. Organizations across all sectors saw a decrease in staff, resulting in a loss of capacity to respond and recover. A future emergency would see difficulty in surge capacity forcing a facility to either respond understaffed or to pull staff away from other assignments.

2. **Allocation and shifting of resources have been challenging for certain healthcare entities.**

   Throughout the COVID-19 incident, PPE and resource allocation has been important for organizations to maintain and manage their inventories and stockpiles. Many partners have discussed the distinction between for-profit and non-profit organizations and the availability of supplies and funding. This difference in governmental approach has been an issue and consistent cause for frustration. While both types of organizations have been responding to the same event and experiencing the same challenges, for-profit organizations were not provided similar opportunities for PPE and funding. For-profit organizations had to explore separate avenues to obtain resources and supplies even when providing medical care for patients that were receiving government benefits such as Medicaid and Medicare or the same patients that non-profits serviced but received direct government assistance for PEP and supplies.

3. **Frequent turnover of staff contributed to a loss in Institutional knowledge and capacity.**

   The extent of scope and length of the incident continues to raise significant issues for partners. Staff across disciplines experienced burnout and fatigue, abuse from disgruntled patients and visitors, and many other competing priorities and issues that in one way or another caused their departure from their agency or healthcare workforce altogether. Loss in staff, especially in key roles, contributed to a significant loss in historical knowledge among partners. Frequent turnover and hiring forced many agencies to spend time recruiting, training, and retraining new staff. New staff who were onboarded may not have been as knowledgeable or aware of agency policies, contacts, partners, and/ or historical understanding. Much time was spent on training and recruiting new hires.

   Additionally, there was a lack of trained staff to fill key positions. Agencies contributing to recovery activities did not have sufficient time available to devote to training staff to fill key vacant positions. These vacancies may have caused agencies and partners to operate under optimal capacity for the needs of the incident.

Information Management

"Information management" is the ability to develop systems and procedures that facilitate the communication of timely, accurate, accessible information, alerts and warnings and exchange health information and situational awareness with federal, state, and local levels of government, healthcare coalitions, and individual agencies or facilities.

Strengths

The following strengths were noted as contributing to the performance of capabilities associated with information management:

1. **COVID-19 strengthened the relationships between healthcare entities and created a mechanism by which resources can be shared across the state.**

   Frequent and regular meetings facilitated information sharing and communication among healthcare partners across the state**.** The incident caused major stressors for healthcare entities throughout the state. Consistent communication between healthcare partners allowed for increased collaboration and cooperation. Facilitated calls by the State of New Hampshire Department for Health and Human Services (NH DHHS) as well as the New Hampshire Hospital Association (NHHA) and the Granite State Health Care Coalition (GSHCC) fostered relationship building as well as information sharing. Strong relationships across these facilities created a structure where resources and information were able to be shared more freely. This improved recovery activities as well as innovation and creativity to help ensure communication was maintained across healthcare systems.

2. **Virtual meeting platforms such as Zoom and Microsoft Teams continued to provide tremendous opportunity for partners to meet while balancing conflicting priorities.**

   Virtual and hybrid opportunities to meet allowed partners flexibility in fulfilling the needs of continued response and recovery activities, while balancing competing priorities and service delivery. These models allowed staff to continue to work remotely. Virtual offerings also increased the opportunity of attendance at various meetings and supported information sharing and discussion. Even as the public health incident expired, facilities continued to battle outbreaks and look after the health and safety of their patients, residents, staff, and clients. Virtual platforms made available appointments that allowed for the continuation of medical services. Virtual platforms increased capacity among some organizations as remote and telehealth capabilities were expanded and improved upon to better meet the needs of shifting program and organizational models.

Areas for Improvement

The following areas for improvement were identified through multiple survey responses and stakeholder interviews. Not all areas for improvement will apply to every organization, and individual experiences may differ. Collectively, the identified areas for improvement will provide a high-level overview of where additional effort may lead to more well-developed response capabilities.

1. **Guidance and guidelines for recovery did not address care equally across all healthcare sectors.**

   The COVID-19 pandemic recovery has tested members and partners in new and different ways. The duration of this event has challenged response activities, and as we transition towards recovery confusion remains among partners on how they should proceed. Guidance was ever changing and forced partners to continuously digest information. Multiple external points of communication contributed to confusion and inconsistencies. Certain types of healthcare entities were not directly addressed within state guidance, which had healthcare facilities following the guidance of different facility types and in some cases guidance for facilities from outside NH. This lack of clear guidance led some facilities to become confused in the areas of financial and patient care management offerings. Additionally, healthcare partners mentioned that it was difficult to find reliable information from state and federal partners surrounding masking policies for visitors and families. These policies were inconsistent across healthcare facilities and contributed to patient/visitor frustration. The difference between community standards and medical standards contributed to confusion and frustration among visitors, as well as staff who frequently move between healthcare facilities where standards and guidelines differ.

   Recommendations:

   - Coordinated effort among partners for communication consensus.
   - Single source for threat situational awareness and information dissemination.
   - Phased withdrawal of services and messaging, as opposed to quick separation.
   - More proactive and timely communication and responses.

2. Partners lacked sufficient understanding and guidance regarding recovery efforts and priorities.

Concluding an extended response to the COVID-19 Pandemic with constant communication of guidance and shifting of priorities, partners stated that the recovery process lacked similar guidance and communication of priorities. Direction and priorities from the state shifted frequently, often with little to no advance warning to partners. Partners indicated that they felt that there was a severance from COVID-19 and a desire to move on from extended COVID activities. Originally, what has been dubbed "COVID Fatigue", where facility staff are experiencing burnout associated with extended response, partners feel as though state and federal decision-makers are experiencing a similar COVID fatigue and have been quick to move past the pandemic. Partners have indicated that this lack of guidance and severance from COVID-19, especially while some are still involved in response activities, has made this transition difficult and unclear. Guidance that was available was outdated and no longer applicable, or difficult to locate in general. For partners with facilities in multiple states there was confusion on which guidance to follow as there was little available from the State of New Hampshire. This lack of messaging, coupled with minimal recovery-centric planning has led to undefined roles, responsibilities, and processes for the transition away from response to recovery.

Recommendations:

- Complete NH state level Recovery Support Function Plan to define roles, responsibilities, and processes for recovery.
- Develop greater awareness of processes for recovery.
- Investment in recovery planning.
- Continued support for the MRC State, Territory, and Tribal Nations, Representative Organizations for Next Generation (STTRONG) Grant.
- Provide clear deliverables and definitive plans for recovery; to include training and exercising of a recovery plan.

Conclusions and Next Steps

Sustained response to the COVID-19 pandemic has demanded a conscious focus and effort from partners and members from across the health care and public health continuums, and it has extended into the recovery phase. The toll of extended response, over 36months of being in a response posture, has not gone unnoticed and is felt by all. However, what was accomplished throughout the response phase is only as good as how we move forward and what was learned from it. The perseverance, grit, and dedication of health care workers, public health practitioners, EMS, first responders, and emergency managers to serve the residents and visitors of the State of New Hampshire is commendable.

Through this evaluation effort, the GSHCC team has gained insight into what has contributed to success and strength in recovery. The team also identified areas for improvement that should be addressed to continuously enhance healthcare and public health response capabilities, both as a system and within communities. The overarching themes that characterize this phase of recovery include:

- Success in community and healthcare partner involvement continued to foster engagement across sectors.
- Staffing continues to be of great concern across the healthcare continuum and has led to a breakdown in organizational knowledge and capability.
- Inconsistently applied policies, processes, guidance throughout the response and recovery led to frustration across healthcare and recovery partners.
- A lack of communication of recovery guidance and priorities as well as input from recovery partners.

The strengths and areas for improvement identified within this Report contribute to a body of knowledge surrounding the COVID-19 pandemic recovery in New Hampshire. It also supports the ongoing efforts of the Granite State Health Care Coalition, the NH DHHS, DPHS, Bureau of Emergency Preparedness, Response, and Recovery, and the healthcare and public health systems to improve recovery capabilities to all hazards.

Next Steps

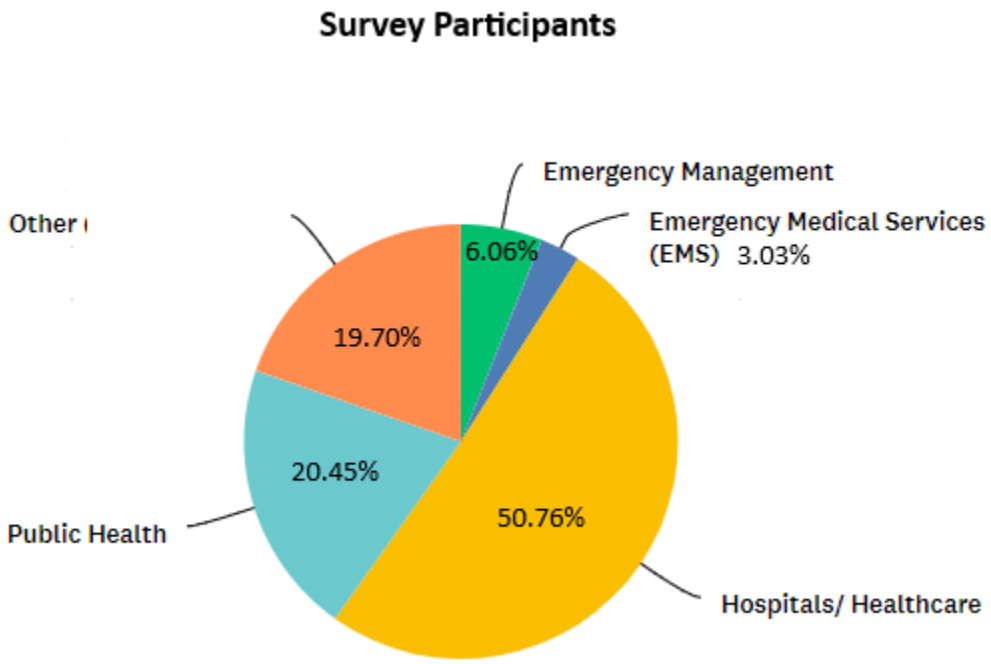
The *2019 Novel Coronavirus Response: Recovery Phase After-Action Report* is intended as a reference for a complete and comprehensive after-action review process regarding recovery efforts and activities related to the COVID-19 Pandemic and transition from response. GSHCC members and partners are encouraged to develop internal after-action reports and improvement plans that summarize and evaluate recovery capabilities specific to their organization's recovery efforts as well as begin the process of identifying and implementing corrective actions to build and sustain future recovery capabilities.

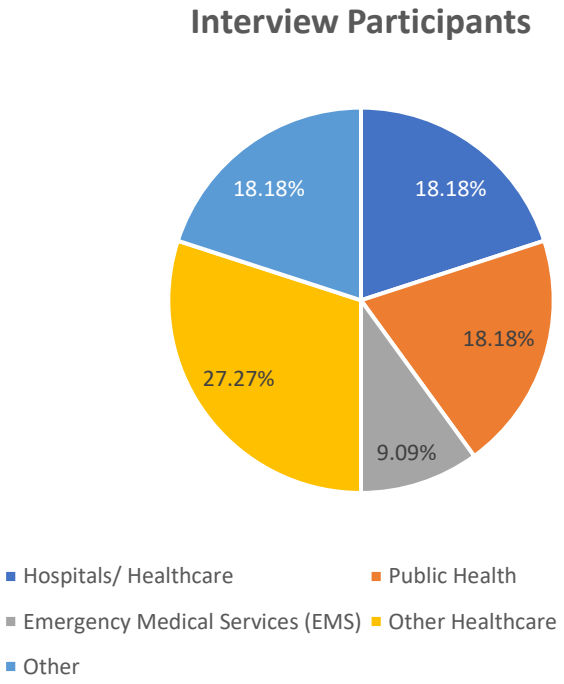
At the time of writing this report, the COVID-19 pandemic recovery process is ongoing as communities and organizations continue to address hospitalizations while actively transitioning back to pre-pandemic operations.

Appendix A Abbreviations and Acronyms

AAR	After-Action Report
ACIP	Advisory Committee on Immunization Practices
ASPR	Administration for Strategic Preparedness and Response
CDC	Centers for Disease Control and Prevention
CERT	Community Emergency Response Team
COVID-19	Novel Coronavirus Disease 2019
CMS	Centers for Medicare and Medicaid Services
DHS	United States Department of Homeland Security
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FDA	United States Food and Drug Administration
GSHCC	Granite State Health Care Coalition
HAN	Health Alert Network
HCC	Health Care Coalition
HHS	United States Department of Health and Human Services
HPP	Hospital Preparedness Program
HSEEP	Homeland Security Exercise and Evaluation Program
JIC	Joint Information Center
MRC	Medical Reserve Corps
NH DHHS	New Hampshire Department of Health and Human Services
NH DPHS	New Hampshire Division of Public Health Services
PHEP	Public Health Emergency Preparedness
PPE	Personal Protective Equipment
RPHN	Regional Public Health Network
SEOC	State Emergency Operations Center
STTRONG	State, Territory, and Tribal Nations, Representative Organizations for Next Generation
VAMS	Vaccine Administration Management System
VINI	NH Vaccine and Immunization Network Interface

Appendix B Participant Snapshot





Appendix C Detailed Event Timeline

The following timeline is intended to provide context for the findings presented in the Granite State Health Care Coalition 2019 Novel Coronavirus: Recovery Phase After-Action Report. This timeline is a continuation of the summary events outlined in the GHSCC Phase 3 After-Action Report, outlining key decisions beginning July 1, 2022 through June 30, 2023. This is not meant to serve as a comprehensive listing of all events.

Date	Event Details
9/30/2020	Governor Chris Sununu extends **Emergency Order #52** that proposes public health guidance for business operations and advising Granite Staters that they are safer at home.
10/14/2020	NH DHHS issues a Health Alert Network (HAN) message cautioning of increasing rates of community transmission of COVID-19.
11/13/2020	NH DHHS issues a HAN announcing the FDA has issued an EUA for the use of bamlanivimab to treat mild to moderate COVID-19.
11/20/2020	Governor Chris Sununu announces **Executive Order # 74,** implementing a mask mandate for all persons over the age of 5 when in public spaces.
11/25/2021	The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) for casirivimab and imdevimab to be administered together for treatment of mild to moderate COVID-19.
12/3/2020	NH DHHS DPHS announces via **HAN #27** changes to quarantine periods for those potentially exposed to COVID-19 from 14 to 10 days.
12/8/2020	A pandemic high of **963** daily COVID-19 cases are reported in NH. The 7-day average of new cases is **868**.
12/11/2020	NH DHHS DPHS releases **HAN #28**, outlining Frequently Asked Questions regarding the vaccine allocation and administration guidelines for those in Phase 1a.
12/13/2020	The Pfizer-BioNTech COVID-19 vaccine receives **FDA Emergency Use Authorization** and CDC and ACIP issue recommendations for use.
12/14/2021	The first shipment of Pfizer/ BioNTech COVID-19 vaccine arrives in New Hampshire.
12/15/2020	The **first doses** of COVID-19 vaccine are administered in New Hampshire.
12/18/2020	The FDA authorizes the use of Moderna's mRNA-1273 vaccine for those 18 years and older under **Emergency Use Authorization**.
12/23/2020	**Emergency Order #77** reinstates Emergency Order #37, temporarily freezing hiring for state positions, with exceptions for those related to COVID-19 response.
12/30/2020	**Emergency Order #78** is issued, allowing for EMT-Basic, Advanced EMT, any Paramedic, as well as current and former military services members to apply for and receive a temporary license as a licensed nursing assistant through the Office of Professional Licensure and Certification.
1/1/2021	Hospitals report **334** patients are hospitalized with COVID-19 statewide. This is the highest number of hospitalizations to date.
1/4/2021	**Emergency Order #79** authorizes registered and certified pharmacy technicians to administer COVID-19 vaccines under certain conditions.

Date	Event Details
1/11/2021	NH DHHS DPHS updates the **COVID-19 Vaccination Allocation Plan** and quarantine guidance, adopting CDC quarantine guidance for persons who are fully vaccinated or who have been previously infected with SARS-CoV-2.
1/17/2021	NH DHHS DPHS announce through **HAN #34b** that those in Phase 1b will be eligible for vaccination starting on January 22, 2021. NH 2-1-1, medical providers, and VAMS are used to register and schedule those in Phase 1b.
Week of 2/1/2021	Governor announces NH residents under Phase 1b of the vaccine allocation strategy will be automatically scheduled for second doses.
	Planning occurs to move drive-thru fixed sites to indoor super-sites. Staff would be a combination of National Guard and RPHN staff/volunteers. RPHNs are given 1 day to propose possible locations within regions that could be used long-term (June 2021), as public vaccination clinic sites.
	NH DHHS launches an effort with the New Hampshire Hospital Association to publish hospital data on interactive dashboards.
	Johnson & Johnson submit vaccine candidate to FDA for Emergency Use Authorization. The application will be reviewed February 26, 2021.
Week of 2/8/2021	NH staff are manually reaching out to thousands of individuals who may experience difficulty with second dose scheduling at fixed sites due to errors in initial registration or incomplete second dose appointment cards.
	Th first person with **Delta** variant strain of COVID-19 (sequenced by CDC) is identified in NH and is said to be related to high-risk travel.
	State leadership begins to work through planning for Phase 2a and Phase 2b vaccine roll out in March/ April 2021.
	NH DHHS **resumes contact tracing** for all COVID-19 cases.
	NH enters into contracts with local pharmacy services to support ongoing vaccination efforts in Long Term Care facilities.
2/19/2021	**Executive Order #85** requires schools to offer in-person instruction to all students at least two days a week starting March 8, 2021.
Week of 3/1/2021	**Executive Order #86** authorizes certain retired health care workers to administer COVID-19 vaccines
	J&J vaccine candidate receives **Emergency Use Authorization** on March 4, 2021.
	NH prepares for Mass Vaccination "**Super Site**" operations between March 6th and March 8th at Loudon Racetrack using the J&J vaccine.
	A homebound vaccination strategy is released.
	Governor Sununu announces **Phase 2a** vaccinations will begin on March 12, 2021.
	Governor Sununu announces **Phase 2b** vaccination will begin on March 22, 2021.
Week of 3/8/2021	Governor Sununu announces a new vaccine registration system, **VINI** to manage scheduling of public vaccination appointments.
	President Biden signs American Rescue Plan Act of 2021.
Week of 3/22/2021	Governor Sununu announces vaccination eligibility will be open for **the general population**, in phases based on age (3/29/2021- ages 40 to 49, 3/31/2021- ages 30 to 39, 4/2/2021- ages 16 and up).

Date	Event Details
4/16/2021	The **mask mandate** in effect from November 20, 2020, **expires**.
5/10/2021	The FDA expands the EUA for the Pfizer/BioNTech COVID-19 vaccine to include adolescents 12 to 15 years of age. Regional Public Health Networks begin school-based clinics to complete 2-dose vaccination series for students and staff prior to summer break.
5/13/2021	The first 12-year-old receives a vaccine in New Hampshire.
5/22/2021	A vaccination clinic is held for the deaf/hard of hearing population as a collaboration between Elliot Health System and NH DHHS.
6/30/2021	The State Emergency Operations Center and Joint Information Center close.
Mid 11/2021	Rise in COVID-19 cases across the state spurred by rise in **Delta Variant Surge**
12/11/2021	First **Booster Blitz** clinic was conducted at 14 sites across the state
12/30/2021	Based off of the success of the first Booster Blitz, locations for a **second Booster Blitz** were announced
1/3/2022	Three **FEMA monoclonal teams** deployed to three hospitals in the state: Elliot Hospital, Alice Peck Day, and Concord Hospital.
1/8/2022	Booster Blitz round II was conducted at various sites across the state
Week of 1/17/2022	Announced that the state is entering **Omicron Surge** spurred by increase in COVID-19 cases brought about by the variant
3/15/2022	State run **COVID Testing sites close**
9/6/2022	NH DHHS releases **HAN #65** recommending persons 6mo of age and older receive complete primary COVID-19 Boosters series and updated bivalent boosters are available for those 12 years of age and older.
5/9/2023	NH DHHS releases **HAN #70**, alerting of the **ending of the U.S. Public Health Emergency**. NH facilities, laboratories, and providers no longer need to submit positive COVID-19 case reports.
5/11/2023	COVID-19 Federal Public Health Emergency Ends, NH State Public Health Incident expires.

Appendix D References

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