Special Committee on COVID Response Efficacy – Minority Report

The Democratic members of the Special Committee on the Efficacy of the COVID Response join the Republican members in thanking those who testified before the committee for their time and sharing their thoughts with our committee. We understand that for many who came before the committee, the time of the pandemic was extremely challenging both personally and professionally. It was a time of confusion, fear, intense work, grave illness and, for too many, their lives. Even for the committee members, reliving aspects of the pandemic through the testimony was difficult.

No one can deny the pandemic was an extraordinary time for this state and our country. Nor can anyone deny that we can and should learn a great deal from the upheaval. The Democratic members of the committee are extremely grateful to the state, municipal and school employees and volunteers, members of the National Guard and all those who worked so diligently for untold hours to protect the public health. Notwithstanding the amount of time devoted to hearings, the mission assigned to the committee was enormous and perhaps, impossibly difficult, with no staff, limited time and no particular expertise in the subject.

Other than the members of the state's executive branch, those who testified before the committee were those who largely disagreed with the approach taken by our federal and state public health officials or felt their treatment or that of their families was unfair or inappropriate. Other than state executive branch employees, no one came before the committee presenting positive aspects of the state or the federal government response. There were general discussions during the hearings of potential changes in the event of another pandemic, but few specifics regarding state actions from testifiers outside the executive branch. We respect the opinions of all who came before us and have compassion for those who testified regarding their experiences, but feel that the testimony received did not present the full picture of the state's COVID response. In fact, much of the testimony of non-executive branch specialists focused on federal policy and actions, something over which New Hampshire has no control. Please see attachment A with the list of testifiers prepared by House Committee Services.

In the fall, we obtained the state's COVID-19 After-Action Report (AAR), which was prepared by an independent consultant for the state and contained extensive analysis of the state's response. Please see Attachment B for the AAR. The AAR, based on information from many individuals deeply involved with the pandemic response, was overall very positive on the efficacy of the state's response. The AAR also contained very specific recommendations for the future. For obvious reasons, given time, staffing and financial constraints on the committee, the consultants were able to interview many more individuals than we were and collate their responses to draw conclusions. We feel it is a better overall assessment of New Hampshire's COVID response. The AAR was not alone in concluding that NH's COVID response was sound. See, for example, the assessment of Council on Foreign Relations.

The Republican members have issued a detailed report of their conclusions and recommendations. The Democratic members do not agree with many of the assertions, findings and recommendations in their report with respect to the efficacy of the state's COVID

response. For this reason, respectfully, the Democratic members of the committee do not concur with the Republican committee members' report.

Respectfully submitted,
Rep. Karen Ebel (Vice Chair)
Rep. Jaci Grote
Rep. Gary Merchant
Rep. Trinidad Tellez
Rep. Jacqueline Chretien

November 13, 2024

<u>Special Committee on COVID Response Efficacy</u>

Testimony before the Committee, by date:

<u>February 9, 2024</u>:
- Patricia Tilley, Associate Commissioner, NH Department of Health and Human Services

<u>February 23, 2024</u>:
- Patricia Tilley, Associate Commissioner, NH Department of Health and Human Services

<u>March 15, 2024</u>:
- Stephen E. Petty, P.E., C.I.H., C.S.P.
- Martin Kulldorff, Ph.D.
- Frank Edelblut, Commissioner, NH Department of Education
- Joseph Mirzoeff, Resident of Keene, NH

<u>April 12, 2024</u>
- John Beaudoin, MBA, Author of "The CDC Memorandum | Notice of Criminal Liability."
- Tara Hafey, Resident of Brentwood, NH

<u>4/26/2024</u>
- No witnesses

<u>May 10, 2024</u>
- Representative Timothy Horrigan
- The Honorable Betty Gay, Resident of Salem, NH
- Representative Emily Phillips
- Diane Lachance, Resident of Contoocook, NH
- Julie Smith, Resident of Nashua, NH

<u>May 16, 2024</u>
- Aaron Siri, Attorney, <u>Siri & Glimstad, LLP</u>

<u>May 17, 2024</u>
- Representative Jonah Wheeler
- Taylor Caswell, Commissioner, NH Department of Business and Economic Affairs

[June 7, 2024](#)
- Robert Buxton, Director, NH Department of Safety, Division of Homeland Security and Emergency Management

[September 6, 2024](#)
- Alicia Houston, Resident of Nashua, NH
- Representative Alicia Lekas

[September 27, 2024](#)
- Attorney Risa Evans[1], Resident of Contoocook

[October 18, 2024](#)
- Dr. Benjamin Chan, State Epidemiologist, NH Department of Health and Human Services

[October 25, 2024](#)
- Dr. Jordan Vaughn, Internist, Birmingham, Alabama

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[1] (Powerpoint not in file)

NEW HAMPSHIRE
STATE EMERGENCY
OPERATIONS CENTER

State of New Hampshire
COVID-19 After-Action Report

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ADMINISTRATIVE STATEMENT

ADMINISTRATIVE HANDLING INSTRUCTIONS

1.   The title of this document is **State of New Hampshire COVID-19 After-Action Report**.
2.   This record is non-public and exempt from public disclosure pursuant to RSA 91-A:5, IV and VI. The information gathered in this AAR/IP is classified as **INTERNAL USE ONLY** and should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from New Hampshire's Division of Homeland Security and Emergency Management is prohibited.

POINT OF CONTACT

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GOVERNOR'S INTRODUCTION

STATE OF NEW HAMPSHIRE
OFFICE OF THE GOVERNOR

CHRISTOPHER T. SUNUNU
Governor

June 26, 2024

COVID-19 was an unprecedented challenge, yet through it all, New Hampshire led the nation. In ranking after ranking, New Hampshire's approach was heralded for our groundbreaking vaccine and testing distribution, reopening guidelines that put stakeholders in the drivers seat, supporting our small businesses, and getting kids back in classrooms.

Throughout the pandemic, we emphasized clear communication and data-driven decision-making. Our response was characterized by rapid adaptation to evolving circumstances, from the early days of curbside pickups and testing shortages to the later stages of vaccine distribution. Each phase of our response was marked by efforts to mitigate the spread of the virus while supporting the physical, mental, and economic health of our residents.

As we reflect on our journey throughout the pandemic, it is crucial to recognize the extraordinary efforts of countless individuals across this state who rose to the occasion. Our health care professionals, first responders, educators, business leaders, state employees, and community members all played vital roles in our collective response. Their unwavering commitment and sacrifice are a testament to the strength and resilience of the Granite State.

This COVID-19 After Action Report aims to provide a comprehensive analysis of our state's response to the pandemic, highlighting both our successes and opportunities for growth. By documenting our efforts, decisions, and outcomes, we seek to ensure that the lessons learned from this experience can be applied to any large-scale challenge that the State may face today or in the future.

The insights and recommendations contained within this report are intended to provide a roadmap for enhancing the state's preparedness and response capabilities. It is my hope that future leaders will build upon these foundations to safeguard the well-being of New Hampshire and all our great state has to offer.

Together, we have faced one of the most unique challenges of our time, and we have emerged stronger. Let this report serve as both a record of the efforts we put forth and a guide for a more resilient future. My sincerest appreciation goes to everyone who made tremendous contributions to our pandemic response and recovery. Your hard work and dedication made all the difference.

Sincerely,

Christopher T. Sununu
Governor

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EXECUTIVE SUMMARY

INCIDENT SUMMARY

The United States had not experienced a public health crisis equivalent to the scale of the Coronavirus Disease 2019 (COVID-19) pandemic since the 1918 influenza pandemic. In January 2020, the United States confirmed its first case of COVID-19, the disease caused by a novel human coronavirus, Syndrome Coronavirus 2 (SARS-CoV-2).

From the outset, New Hampshire leadership recognized the potential impact of a pandemic and anticipated the possible repercussions. In early 2020, key agencies began collaborating closely with hospitals, clinics, and other health providers to monitor and strategize for the spread of COVID-19 in New Hampshire. In early February 2020, the New Hampshire Department of Health and Human Services (DHHS), Division of Public Health Services activated its Incident Management Team, and on March 13, 2020, New Hampshire's State Emergency Operations Center (SEOC) was activated in response to the COVID-19 outbreak. Throughout the response, the State of New Hampshire dedicated substantial effort and resources to combat the pandemic. This After-Action Report / Improvement Plan (AAR/IP) intends to capture response outcomes, strengths, areas for improvement, and recommendations from the period of January 1, 2020, to July 31, 2021. This report categorizes observations into specific themes based on data collected during the pandemic.

REPORT METHODOLOGY

Between June 2023 and June 2024, the AAR planning team (consulting team) engaged state employees and external partners across New Hampshire in an extensive information-gathering process. This process included stakeholder meetings, document analysis, surveys, and interviews to inform the report. The Project Management Team (PMT) was comprised of representatives from the Office of the Governor, Division of Homeland Security and Emergency Management (HSEM), DHHS, and New Hampshire National Guard (NHNG). During its engagement, the AAR planning team convened over 20 times to strategize and provide updates on the report's development.

The team actively sought relevant documents from agencies and departments related to pandemic planning and response. These documents included agency-specific AARs, public health and emergency response plans, COVID-19 meeting summaries and briefings, and memoranda related to pandemic response. In total, 105 source documents were categorized based on priority. An in-depth response survey received 169 responses from various stakeholder respondents. Additionally, the team conducted 37 interviews with 31 interviewees representing 16 state agencies/departments. Throughout the process, the team exercised discretion and sensitivity, recognizing different perspectives among interviewees and survey respondents based on their roles and involvement in the response.

The team critically analyzed diverse observations, considering their potential impacts on state functions. The views and statements expressed within this report were validated by multiple independent sources. The resulting observations and recommendations serve as a guide for New Hampshire agencies and departments as they reflect on their COVID-19 response experiences. The AAR/IP will help to inform future preparedness and planning, policy, and procedure development throughout the state.

OBSERVATIONS

This report organizes all findings into specific themes generated from data collected in response to the pandemic and identifies strengths and areas of improvement identified by and captured from State agency and departmental employees. Recommendations for improvements are listed in each focus area of the report and summarized in the IP.

Focus Area	Strengths	Areas for Improvement
Preparedness	• High level of state agency preparedness • Integrated response leadership • Consistency in approach	• Continuity plan gaps • Training and engagement • Community preparedness
Command	• Whole-state approach • Strong leadership with robust relationships	• Operational coordination challenges • Shared situational awareness • Training and process clarity
Communications	• Strong communication • Frequent inter-agency coordination	• Mass notification system • Limited WebEOC redundancy
Compliance and Decision-Making	• Proactive guidance development • Effective executive order methodology • Expanded unemployment benefits	No challenges observed
Financial Management	• Expedited administrative and financial processes • Effective federal funds distribution	• FEMA reimbursements
Health and Medical	• Ensuring workforce safety • Non-congregate sheltering for first responders • State-led vaccination efforts and community partnerships	• Electronic immunization registry implementation challenges • Unplanned vaccination modalities and locations • Complexities in providing information to public safety agencies

Focus Area	Strengths	Areas for Improvement
Logistics	• Supply distribution • National Guard operational support	• Resource request processes • Distribution roles and responsibilities
Public-Private Partnerships	• Nonprofit and private sector relationships	No challenges observed
Public Information	• Comprehensive daily reporting • Joint Information Center • Use of temporary staffing	• Timing of information release • PIO capacity across state agencies

Notable Best Practices

During challenging circumstances, effective response strategies are crucial for managing emergencies and safeguarding public health. New Hampshire repeatedly demonstrated strong leadership and sound judgment when coordinating resources, implementing policies, and communicating with the public. In this context, understanding and implementing best practices are essential for an efficient and impactful response. This AAR uncovered some key practices that contributed to the State's effective response to the COVID-19 pandemic.

1 Leadership established expectations for a comprehensive statewide response, which State employees diligently executed.

2 The State's staff reallocation strategy bolstered surge capacity in the call centers and facilitated cross-agency experience for those individuals.

3 Leveraging resources and strategic partnerships with private companies played a crucial role in New Hampshire's achievements.

4 Preexisting relationships contributed to a cohesive dynamic amongst key leaders.

5 Proactive investment in technology supported the transition to remote work

6 State-specific guidance was developed and distributed expeditiously.

7 Benefit programs were reviewed and expanded early in the process.

8 Large-scale, state-led vaccination clinics resulted in efficient distribution.

LOOKING AHEAD

Throughout the pandemic, New Hampshire demonstrated leadership, forethought, and consistency to support the 1.4 million residents of the state. Its leaders swiftly adapted to the evolving situation, positioning the state well for stronger collaborative efforts moving forward. As New Hampshire looks ahead, it recognizes the value of this document as a learning and improvement tool. By aggregating the experiences gained during its response to the COVID-19 pandemic, the State aims to enhance awareness and better prepare state-level agencies and departments. These lessons learned will not only inform continued responses to future pandemics and other public health emergencies but also contribute to the readiness for future large-scale events and statewide coordination efforts.

Next steps to close identified gaps and improve future responses are detailed in the report and the IP. The IP converts lessons learned from the COVID-19 response into clear actions that result in improved capabilities to create a more resilient and response-ready New Hampshire.

INTRODUCTION

REPORT PURPOSE

Due to the magnitude and length of the COVID-19 response the New Hampshire Department of Safety, Division of Homeland Security and Emergency Management (HSEM) and its partners commissioned the development of this After-Action Report / Improvement Plan (AAR/IP). The purpose of this AAR is to describe the events and memorialize the actions related to the State of New Hampshire's response to the COVID-19 pandemic, constructively evaluate and assess the actual or perceived effectiveness of those actions and identify the unique successes and challenges of the event during the period of January 2020 through July 2021. The report will serve as an unbiased information product to inform the state's improvement planning goals and objectives moving forward and to influence future disaster planning and preparedness initiatives within the state.

SCOPE

The State of New Hampshire dedicated significant effort and resources to address the COVID-19 response. With increased access to vaccines, treatments, and testing, COVID-19 no longer presents a significant threat to the majority of people, although it remains a public health priority. This report addresses the time frame from January 2020 through July 2021 and focuses on the state's role in the COVID-19 response and recovery activities and coordination with their partners throughout the state during that time. It does not assess the responses of specific agencies or jurisdictions.

COVID-19 required a highly complex response involving numerous agencies. Therefore, to produce a manageable and constructive AAR/IP, the State of New Hampshire and the report authors deliberately targeted the topics addressed by the report. This report concentrates on the operational activities of the COVID-19 response and does not delve into policy-level decision-making. The consultant team used a directed approach, including pre-identified participants and focus areas, to determine the scope of the project. Entities not covered by this report are encouraged to develop their own AARs.

PARTICIPATING DEPARTMENTS AND ORGANIZATIONS

The following State of New Hampshire response personnel and cooperative partners participated in this process:

Participants		
• Office of the Governor • Department of Administrative Services • Department of Business and Economic Affairs • Department of Corrections • Department of Education • Department of Health & Human Services • Department of Information Technology	• Department of Justice • Department of Safety • **Department of Safety** Division of Fire Safety • **Department of Safety** New Hampshire Emergency Services and Communications • **Department of Safety** Division of Fire Standards and Training and Emergency Medical Services	• **Department of Safety** Homeland Security and Emergency Management • New Hampshire Association of Fire Chiefs • New Hampshire Insurance Department • New Hampshire Employment Security • New Hampshire National Guard

This AAR/IP is organized into strengths and areas of improvement based on focus areas. Focus areas in the report were determined by identifying critical aspects of the response that required in-depth evaluation. These areas were chosen based on their significance in achieving response goals, potential for improvement, and relevance to overall effectiveness and preparedness for future emergencies. Each area of improvement includes recommended actions to complement the state's existing emergency response capabilities, rectify the identified areas of improvement, increase the overall resiliency of the entire community, and continue building a safer and better-prepared future for the entire state of New Hampshire.

FOCUS AREAS

The following focus areas represent the categories of information that were targeted for collection and analysis to inform the AAR development process.

Preparedness
Evaluates the capabilities to execute, develop, train, and exercise emergency plans, address incident planning, respond to past incidents, implement interoperability plans, pre-stage resources, and activate State Emergency Operations Centers (EOCs) along with assessing staffing levels.

Command
Evaluates the use of ICS, command and general staff coordination, duration of ICS, establishment of Unified Command, transition of command, and gaining situational awareness.

Communications
Evaluates communication processes within state government including the use of public safety communications networks, cross-discipline interoperability, collaboration among local, state, and federal partners, utilization of Communications Lead (COM-L) and Communications Unit (COM-U) programs and identifying resource and capabilities gaps.

Compliance and Decision Making
Evaluates and reviews emergency orders, operations and programs, re-opening taskforce activities, and the issuance and lifting of guidance.

Financial Management
Evaluates financial management challenges, securing and utilizing emergency funding, and implementing cost recovery strategies.

Health and Medical
Evaluates EMS protocols, 911/PSAP protocols, hospital surge capacity plans, epidemiological surveillance, resource gaps, laboratory and testing, vaccine distribution, medical supplies management, and responder health and safety.

Logistics
Evaluates the ability to deliver essential commodities, equipment, and services.

Public-Private Partnerships
Evaluates the contributions of non-profit and for-profit organizations during the response.

Public Information
Evaluates multi-agency coordination of messaging, emergency alerting systems, social media usage, public notification tools, press release development, rumor control, call center operations, response to media reports, and frequency of communication for collecting and distributing accurate information to the public.

INCIDENT OVERVIEW

INCIDENT BACKGROUND

In the early stages of the pandemic, cases of the novel coronavirus were first reported in Wuhan, China, in late 2019. It was later identified as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), causing Coronavirus Disease 2019 (COVID-19). In the initial findings of COVID-19 in the U.S., it became evident that the virus was highly contagious and had the potential to spread rapidly within communities. As the virus spread worldwide, the World Health Organization (WHO) declared a Public Health Emergency of International Concern on January 30, 2020.

In the beginning, there was a lack of comprehensive knowledge about the novel coronavirus, including its transmission, severity, and long-term effects. New Hampshire reported its first case of COVID-19 on March 2, 2020, and on March 11, 2020, the WHO elevated COVID-19 to a global pandemic. In response to the growing threat, Governor Chris Sununu declared a state of emergency and activated the state's Emergency Operations Center on March 13, 2020. In the weeks and months immediately following, the governor and other decision-makers collaborated to establish coordination between the state, federal agencies, local emergency management officials, and the New Hampshire's healthcare system.

To combat the virus, decision-makers swiftly implemented various public health measures, including stay-at-home directives, social distancing guidelines, and the closure of nonessential businesses, to mitigate the spread of COVID-19. Testing facilities were established and contact tracing efforts were heightened to contain the virus. Throughout 2020, the state faced critical decision points as the Office of the Governor and other key state agencies navigated a delicate balance between public health and economic stability.

By early 2021, hope emerged with the rollout of COVID-19 vaccines. New Hampshire swiftly initiated vaccination campaigns, prioritizing health care workers and high-risk groups. The Office of the Governor actively communicated the importance of vaccination with the intention of building public trust. As the year progressed, the state faced another set of crucial decisions. Decision makers carefully assessed the evolving situation and made determinations about easing restrictions, considering factors like vaccination rates and hospital capacity. New Hampshire's private sector partners played a pivotal role in providing resources and support for these endeavors.

From January 1, 2020, until July 31, 2021, Governor Sununu issued 28 executive orders and 90 emergency orders focused on mitigating against COVID-19 transmission. This response called for innovative, multifaceted strategies beyond the scope of conventional emergency management. The complexity of COVID-19, including its asymptomatic spread and the need for extensive testing and contact tracing, demanded a level of coordination, resources, and expertise that surpassed the requirements of many traditional emergencies. State-level coordination with federal agencies, particularly the Centers for Disease Control and Prevention (CDC), played a crucial role in accessing resources and guidance, fostering a unified effort between agencies, health care professionals, businesses, and the community.

By July 2021, the state saw progress but also remained vigilant against emerging variants. The community's resilience, combined with the dedication of health care workers, nonprofits, and government agencies, reflected New Hampshire's unified response to this unprecedented public health emergency.

Timeline

The New Hampshire COVID-19 timeline below catalogs critical state, national, and international events, against the backdrop of total number of daily cases, during the COVID-19 pandemic between January 2020 and July 2021. For a timeline related specifically to Key Events, please see Appendix D.

12/19
First human cases of COVID-19 identified in Wuhan, China.

3/2/20
First confirmed case of COVID-19 in the state.

3/13/20
State of emergency declared in response to COVID-19.

3/26/20
Stay-at-home order issued, closing non-essential businesses, and requiring residents to stay at home.

4/12/20
Governor's Office for Emergency Relief and Recovery (GOFERR) established.

4/16/20
Schools closed for remainder of the year.

5/4/20
Phased reopening begins, allowing some businesses to resume operations with restrictions.

7/1/20
Stay-at-home order is lifted, and most businesses are allowed to reopen with capacity limits and safety measures.

11/19/20
Statewide mask mandate implemented.

12/15/20
First COVID-19 vaccine administered in the state.

3/6/21
First mass vaccination clinic held at New Hampshire Motor Speedway.

4/16/21
Vaccine eligibility expands to people 16 or older regardless of residency.

4/19/21
Public schools required to offer full-time in person instruction.

06/11/21
State of emergency ends.

METHODOLOGY

To capture New Hampshire's COVID-19 response as thoroughly as possible, this AAR/IP was developed using multiple sources of information. Key stakeholders consisting of personnel from multiple agencies and departments across New Hampshire were routinely engaged during the data collection period from May 2023 to September 2023.

DOCUMENT REVIEW

A state Project Management Team (PMT), comprised of representatives from HSEM, DHHS, and the NHNG, were invited to submit relevant documents to assist in the preparation of the NH COVID-19 AAR/IP. These representatives provided source documents considered pertinent to each agency/department's planning and/or response to the COVID-19 pandemic, such as previous agency-specific AARs, public health and emergency response plans, COVID-19 meeting summaries and briefings, and memoranda related to pandemic response.

Each of the 105 source documents collected was categorized by an assigned priority level.

- **HIGH** – Significant content regarding how state agencies/departments responded, communicated, and coordinated activities during the overall pandemic response.
- **MEDIUM** – Some relevance to state agency / departmental pandemic response and coordination.
- **LOW** – Not significant enough to inform findings regarding pandemic response.

The consultant team completed a preliminary review of all document submissions and categorized 15 as "High" priority due to their relevance, completeness, and connection to the state response. All documents were reviewed to identify connections to the AAR's Focus Areas and highlight content indicative of successes and challenges experienced throughout the state in response to the pandemic. Documents classified as "Low", or "Medium" priority were not subject to additional assessment. The team developed a crosswalk matrix to depict the process to prioritize and categorize uploaded documents.

SURVEY

The consultant team also designed an online survey using Microsoft Forms to incorporate quantitative data points about New Hampshire's COVID-19 response into the AAR/IP and to solicit input from a broad cross-section of stakeholders. The HSEM Project Sponsor distributed the survey to ~1,186 pre-established State Emergency Operations Center (SEOC) contacts, inclusive of local emergency management directors and Emergency Support Function (ESF) partners. In addition, the DHHS distributed the survey to its distribution lists, targeting stakeholders from the DHHS, the Department of Public Health Services, and the Regional Public Health Networks. Finally, the NHNG distributed the survey to its Guardsmen, who were activated to support the response. The survey response period ran from August 4, 2023, to September 15, 2023, and yielded 169 responses. Appendix B: Survey Results provides the full survey question set, demographic insights, and response trends across the Focus Areas.

1,186
Received the survey from HSEM

169
Responses received

INTERVIEWS

The consultant team conducted interviews with key state partners to provide a qualitative analysis of New Hampshire's COVID-19 preparedness and response efforts as derived from first-hand accounts. The team developed an interview question set (provided in Appendix C), drawing from the pre-identified Focus Areas and sub-topics identified by the Project Sponsor. From July 28, 2023, to November 8, 2023, 37 interviews were conducted with 31 interviewees. These interviewees represented 16 agencies/departments. The Project Sponsor identified the initial list of interviewees and relevant Focus Areas, which was augmented by the PMT's input. The consultant team scheduled approved interviewees for a 60-minute interview, either in-person or virtually, through Microsoft Teams. Appendix C: Interview Results provides a list of participating agencies/departments and the count of interviews completed by the organization.

Once scheduled, each interview was assigned an interviewer and notetaker. Prior to each interview, the consultant team researched the interviewee's job function and publicly available information to customize the interview questions when feasible. Interviews were electronically recorded only with the permission of all interviewees in each session; absent this consent, the notetaker captured interview notes manually. When available, recorded interviews were used to generate a transcript, serving as a secondary point of reference for interview analysis.

37
Interviews conducted with

31
Interviewees representing

16
Agencies / Departments

Varying viewpoints are expected and valued in the AAR/IP process. Viewpoints shared by state employees and external stakeholders during interviews are based on individual perspectives and personal and lived experiences and are provided in the AAR/IP without attribution. Of note, interviews represent stakeholders' recollections and analyses of events and actions. Interviewees represented agency teams through their participation but may not have incorporated every viewpoint or event of the agency or team in their responses.

EVALUATION APPROACH

Upon the completion of the data collection period, the consultant team leveraged a coding process to identify, highlight, and organize emerging high-level themes across the Focus Areas. For each interview, the team leveraged an analysis tool to identify the key observations raised by the interviewee/s. Next, the team organized observations by focus area, categorizing them as best practices, strengths, and/or areas for improvement. Due to the volume of observations gleaned from interviews, only those most pertinent to the pre-identified Focus Areas and within the confines of the statewide AAR/IP scope are included in this report. The PMT prioritized the observations that impact multiple departments/agencies for subsequent analysis and corrective action planning to ensure a viable and sustainable scope.

OBSERVATIONS AND RECOMMENDATIONS

FOCUS AREAS OVERVIEW

The report organizes all findings into specific themes generated from data collected in response to the pandemic through document analysis, surveys, and interviews. The output is a thorough review of the response, including what was done well, what could be improved observations, and overall lessons learned to help inform the future development of preparedness, policy, and procedures for agencies statewide.

General Observations

As the New Hampshire COVID-19 After-Action Report/Improvement Plan (AAR/IP) took shape, several overarching observations emerged that resonate beyond New Hampshire's response, but rather reflect experiences on a regional or national level. The ensuing general observations are not categorized as strengths or areas for improvement, as they pertain to broader aspects and do not pertain to specific agencies or departments. These insights provide valuable context for understanding the broader implications of the pandemic response efforts.

- On a national scale, the pandemic's inherent uncertainty and the evolving scientific understanding, coupled with virus mutations, led to frequent shifts in state and federal health guidelines and regulations. This dynamic environment demanded a constant need for adaptation, as strategies had to be adjusted in response to emerging threats and updated information.

- Rolling back guidance was a universal challenge across the nation during the COVID-19 response for several key reasons. Firstly, once safety measures were implemented, they became entrenched in societal norms, making any alteration a sensitive issue. Secondly, the need to balance economic recovery with public health concerns added complexity to the decision-making process. Lastly, the ever-evolving nature of the pandemic created uncertainty, necessitating a cautious and phased approach to prevent potential spikes in cases. These factors combined made the rollback of guidance a complex and delicate task nationwide.

- Challenges in personal protective equipment (PPE) procurement during the early stages of the COVID-19 response were symbolic of broader nationwide issues. Procurement issues presented significant challenges stemming from supply chain disruptions, increased demand and competition, and a high degree of uncertainty associated with most planning factors.

- Extensive emergency management and public health planning had taken place across the state prior to the COVID-19 response, but due to the unparalleled nature of the pandemic, existing plans were unable to adjust to the scale and scope of the response.

- Staffing shortages in the government sector were prevalent across the nation during COVID-19 primarily due to the unprecedented demand for healthcare and public health services. The surge in cases overwhelmed existing personnel, leading to burnout and fatigue among frontline workers. Additionally, quarantine and isolation measures, coupled with potential exposure risks, led to absences, and further strained available staff resources.

PREPAREDNESS

The Preparedness focus area identifies state agency/departmental strengths and areas for improvement relevant to their incident planning capabilities, interoperability plans, and alignment of state and local plans. In addition, this focus area captures insights related to previous responses, and initial preparedness actions for the COVID-19 response, such as pre-staging resources and State Emergency Operations Center (SEOC) activation and staffing.

Survey Insights

When asked to rate New Hampshire's ability to manage simultaneous disasters, 82% of respondents felt the State is very or somewhat prepared should that set of circumstances occur in the future (i.e.: pandemic and severe winter weather). Numerous respondents highlighted pre-pandemic preparedness as a valuable asset in the State's response, commenting that, "undoubtedly, relationships-built pre-pandemic through preparedness activities such as workshops, drill, and exercises proved too critical in this response" and that "we are a small state with talented people who have planned and exercised together." Multiple stakeholders voiced the need to "continue those [planning and exercise] activities and find new ways to bring stakeholders to the table" and highlighted the need for additional funding to support preparedness initiatives (planning,

82%
of survey respondents felt the State is very or somewhat prepared should that set of circumstances occur in the future.

training, etc.) at the community level. Specific to planning, several survey respondents felt public health network plans were underutilized, while another noted plans required updates, training, and exercise to be effectively leveraged in a pandemic scenario.[1] Additionally, feedback was shared that medical surge plans require refinement; however, efforts are already underway to update them.

Strengths

New Hampshire has a high level of emergency preparedness across most state agencies.

Interviewees commended state agencies' engagement with HSEM in advance of the pandemic. Senior decision makers from state agencies participated in exercises and demonstrated their buy-in for preparedness initiatives.

New Hampshire's shift in pandemic response from solely public health leadership to integrate emergency management was consistent with large scale statewide responses.

During the onset of the pandemic, public health agencies nationwide led initial response efforts, drawing from expertise in infectious disease control, contact tracing and disease surveillance. As the pandemic grew in scope and complexity, it required coordination across sectors, resource mobilization, and community engagement (among other elements) and emergency managers began working alongside public health agencies, shifting towards an integrated response. Interviewees noted that in previous public health incidents, New Hampshire Department of Health and Human Services (DHHS) maintained autonomy in strategy and communications, but the COVID-19 pandemic required an integrated, multi-disciplinary integrated approach.

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[1] Regional public health networks' role in the COVID-19 response is addressed in Observation 6.3.

New Hampshire's proactive investment in technology for remote work yielded significant benefits.

Interviewees highlighted that in early 2020, amidst the initial news and preliminary discussions about COVID-19 and the potential impacts to the United States, the New Hampshire Department of Information Technology (DoIT) anticipated a need to migrate some state employees to remote work. DoIT purchased more than $1M of the necessary technology, all of which was used during the pandemic. Had these purchases been made later in the pandemic response, supply chain constraints may have prohibited these deliveries and hindered state remote work.

As a result of the COVID-19 pandemic, the state has an improved understanding of what the future workforce is looking for. All state agencies are now equipped with remote work guidelines and resources, increasing the state's readiness for future emergencies, supported by a workforce proficient in managing operations remotely. The centralized structure of state government, managed through a central virtual private network (VPN) system by DoIT, facilitated a smooth transition to remote work, supported by pre-purchased technology and strong vendor partnerships for adaptable solutions.

Areas for Improvement

Observation 1.1: The COVID-19 response uncovered existing gaps in state agencies' continuity plans.

Interviewees noted that continuity of government plans created pre-COVID-19 primarily focused on how a single agency could relocate or adapt in a continuity scenario. However, they did not account for the possibility of one agency devolving to support another state agencies' business model, or to adjust their own business models to provide new capabilities to state government required during a dynamic incident. Interviewees recommended several elements be considered in future continuity plans, including pre-identified staffing levels necessary to maintain onsite services, required software/hardware to support devolution to a virtual operation, pre-identifying which departmental public services can be delayed or adapted beyond face-to-face, and mechanisms to roll out just-in-time training for staff in these environments.

Recommendations

1.1.1   Develop/revise the standard Continuity of Operations (COOP) / Continuity of Government (COG) template for state agencies. This template should consider:
- Pre-identified staffing levels necessary to maintain onsite services.
- Required software/hardware to support devolution to a virtual operation.
- Pre-identified departmental public services that can be delayed or adapted beyond face-to-face interactions.
- Mechanisms to roll out just-in-time training for staff in these environments that provides employees with relevant training material precisely when they need it, enhancing efficiency and knowledge retention.
- Additional resources required for both remote work and in-person work, such as infection control, Personal Protective Equipment (PPE), etc.

1.1.2   Encourage state agencies to collaborate and develop contingency plans that account for the possibility of one agency supporting another's business model during a dynamic incident.

1.1.3   Implement regular training and exercise sessions for staff to prepare them for dynamic incidents like a pandemic. This training should include protocols for transitioning to a virtual operation, reassigning staff to support other agencies, and adapting public services.

1.1.4   Regularly review and update continuity plans to ensure they remain relevant and effective. This process should consider changes in technology, staffing, public services, and potential threats.

Observation 1.2: Several state agencies found themselves unsure of their role in helping to manage the pandemic response.

Several interviewees commented they were unsure of how their agency could support the State's response at the onset. Prior to COVID-19, they were aware of the State's emergency response efforts during all hazard incidents, and the efforts of the State Emergency Operations Center, but were minimally impacted by previous incidents. The nature of COVID-19 impacted all agencies suddenly and required their engagement in the response (in some capacity). For some agencies that hadn't participated in a large-scale incident response previously, they were not sure how to engage during the onset of the pandemic.

Recommendations

1.2.1   Incorporate emergency preparedness information and resources during state employee onboarding to increase state employees' awareness of and familiarity with emergency preparedness and to strengthen a culture of resilience.
1.2.2   Incorporate emergency preparedness as a topic in information campaigns directed toward state employees (for example, National Preparedness Month in September).
1.2.3   State agencies should proactively define their specific roles and responsibilities during a pandemic or emergency. These efforts should align with and augment the state's overall response structure, as documented in the State Emergency Operations Plan.
1.2.4   State agencies should conduct and participate in regular training and exercises to familiarize staff with their roles, the agency's role, and the broader State Emergency Operations Center's role.

Observation 1.3: Response staff would benefit from additional training on general management principles and EOC concepts.

Interviewees highlighted situations during the pandemic in which state employees stepped into leadership roles in a response capacity, leading teams for the first time. Through no fault of their own, some of these employees were new in leadership roles and lacked experience to draw from, to anticipate challenges, and identify opportunities to maximize team efficiencies. Employees assumed challenging, dynamic positions during an unprecedented global pandemic. The focus of this observation is to suggest additional resources for staff facing similar challenges in the future, not to review individual job performances. Interviewees felt that experienced leaders may have the foresight to reallocate resources and personnel, which could be fostered through additional training or mentoring. Additionally, interviewees highlighted a significant need for training opportunities directed at SEOC staff to maintain readiness and increase familiarity with role-based processes and best practices.

Recommendations

1.3.1   Develop and provide documentation that describes the purpose, structure, and critical information for an individual serving in the SEOC (potentially for the first time).
1.3.2   Develop and provide an orientation (just-in-time or recorded) for individuals to complete prior to serving in the SEOC.
1.3.3   Consider an SEOC staffing capability assessment, to review the existing bench depth, training, and certifications and identify gaps and strengths.

1.3.4   In alignment with the National Incident Management System and the National Qualification System, determine the baseline training courses for SEOC roles (role-specific training), and follow-on courses for continued learning. Require or encourage completion of these training courses.

1.3.5   For SEOC leadership positions, provide targeted training on fundamental management and leadership principles in a response environment. This should cover topics such as decision-making, resource allocation, conflict resolution, and effective communication.

1.3.6   For SEOC leadership positions, pair new leaders with experienced mentors to provide ad-hoc guidance, insights, and recommendations.

1.3.7   For all SEOC staff, create peer support forums (digitally or ad-hoc as appropriate) where response staff can exchange experiences, seek advice, and learn from each other.

Observation 1.4: The New Hampshire National Guard's engagement at the forefront of the COVID-19 response may have resulted in misunderstandings about capacity in future disasters.

Across the United States, the National Guard's engagement in the pandemic was novel in its scale and scope. The New Hampshire National Guard had been used sparingly in disaster response previously, as a last resort due to the costs incurred from an activation. The pandemic presented unique challenges which required logistics support, surge staffing for just-in-time missions (call centers, state prison), and field operational support for vaccinations and testing sites which the Guard was well suited to support. This expansive activation of New Hampshire's National Guard was also in part due to available funding to financially support the activation. While the Guard's engagement in the response is a highlight noted in this report, interviewees hold a concern that in the future, there may be preconceived expectations to "call the Guard" amidst requirements for deployments and steady-state missions. National Guard mobilization during COVID-19, was one of the largest and longest direct federal assistance missions in history.[2] Nationally, this mobilization was possible in part due to unique processes to fast-track funding for the Guard's engagement in whole-of-government COVID-19 response efforts and 100% federal cost-sharing (superseding previous policies of 75% federal cost-sharing).[3]

Recommendations

1.4.1   Develop clear guidelines for when and how the National Guard should be activated during emergencies. These guidelines should consider factors such as the nature of the disaster, available resources, and cost implications.

1.4.2   Educate state and local agencies about the National Guard's role, capabilities, authorities, and limitations.

1.4.3   Organize joint exercises involving the National Guard, other response agencies, and community partners to test coordination, communication, and resource allocation.

1.4.4   Be transparent about the limitations and challenges faced by the National Guard. Manage expectations by communicating openly about capacity, to strike a balance between leveraging the National Guard effectively and avoiding unrealistic expectations during future disasters.

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[2] https://www.fema.gov/fact-sheet/transition-national-guard-activations-covid-19-response-activities#:~:text=At%20its%20peak%2C%20as%20many,facilities%2C%20sanitation%2C%20and%20security.

[3] https://crsreports.congress.gov/product/pdf/IF/IF11483

Observation 1.5: New Hampshire's local communities require additional preparedness support to enhance future response and recovery.

Interviewees felt that prior to the pandemic, preparedness efforts (such as developing an emergency operations plan, or exercising it) varied across New Hampshire based on community resources and capacity. In addition, local communities' challenges in successfully completing FEMA Public Assistance documentation have been identified as having the potential to negatively impact counties and the State of New Hampshire with cost reimbursement. Interviewees emphasized the necessity for more planning, training, and exercise support for local communities. HSEM is developing new baseline training for emergency management directors, providing an opportunity to enhance preparedness outcomes in the future.

Recommendations

1.5.1   HSEM should continue to coordinate and communicate with local emergency management directors to identify technical support and grant opportunities aimed at enhancing local preparedness efforts.
1.5.2   Provide technical support to local communities completing FEMA Public Assistance documentation. This includes understanding eligibility criteria, documenting costs, and submitting accurate claims.
1.5.3   Organize educational forums (webinars, training, or workshops) specifically focused on navigating the FEMA reimbursement process. Highlight common pitfalls and best practices.
1.5.4   Local emergency management directors should participate in the new HSEM baseline training course, to ensure familiarity with the available preparedness and response resources available to their communities.
1.5.5   Consider establishing a standing meeting for all local emergency management directors, in conjunction with HSEM and DHHS.

Observation 1.6: The consistent utilization of pre-existing plans, policies, and AAR/IPs was not practiced during the COVID-19 response.

Consistent with the survey insights presented for the Preparedness focus area and with the challenges felt nationally, interviewees felt that established plans, policies, and AAR/IP were not used. In part, staff may not have had an awareness or been trained to the plans. Moreover, the unprecedented magnitude of the COVID-19 response revealed gaps in the utilization of pre-established plans, policies, and AAR/IP, which may not have considered such a widespread and complex emergency in their assumptions and scope.

Recommendations

1.6.1   Ensure that established emergency plans and procedures are periodically reviewed and updated. This includes incorporating lessons learned from previous incidents.
1.6.2   Facilitate collaboration among different agencies and departments. Ensure that established plans are shared and understood across the entire response community.
1.6.3   Create a resource matrix that aligns with established plans. Clearly define resource requirements for various scenarios (e.g., surge staffing, medical supplies, medical countermeasures, and testing facilities).
1.6.4   Conduct AARs after each significant incident. Involve key players to assess plan utilization, identify gaps, and recommend improvements.

Observation 1.7: Initially, IT systems couldn't accommodate increased surges in use.

As an example of this observation, the demand on the unemployment assistance system increased dramatically early in the pandemic. The pre-2020 single sign-on system, inadequately designed, faced challenges as the volume surged from 4,000 to 120,000 claims per week. Timely resolution of IT issues occurred with the involvement of the right individuals who were aware of the problems.

Recommendations

1.7.1   Conduct load testing on critical IT systems to simulate high volumes of transactions or traffic. Identify bottlenecks and optimize system performance.

1.7.2   Encourage interdepartmental collaboration in similar situations in the future as a best practice. This should include technical experts (state and vendor), communication specialists, and decision-makers.

COMMAND

The Command focus area identifies strengths and areas for improvement relevant to New Hampshire's use of the Incident Command System (ICS), including its establishment, transition to a Unified Command, and demobilization. In addition, this focus area captures insights relevant to Unified Command's coordination with General Staff, communication, and ability to gain situational awareness and establish a common operating picture.

Survey Insights

The survey results demonstrate support for New Hampshire's implementation of the ICS in its COVID-19 response. Overall, 74% of respondents supported the statement that New Hampshire "effectively used the Incident Command System to effectively gain situational awareness, develop a common operating picture and communicate with stakeholders." Local respondents (78%) expressed a slightly higher level of agreement with this statement compared to respondents from the state (70%) or other (71%) subsets. Survey respondents commented on several strengths in this focus area, noting the coordination between Unified Command, state agencies, private entities and municipalities in a small state was effective, the Governor and Executive Branch demonstrated strong leadership during the pandemic, and finally that New Hampshire's command did an excellent job responding to challenges and adjusting to the changing landscape of COVID-19. Respondents also noted challenges associated with a lack of an established chain of command and some confusion regarding which entities held decision-making power for various lines of effort. Respondents raised the concern that at times, individuals coordinated outside the command structure, contacting leaders individually rather than escalating

74%

supported the statement that New Hampshire "effectively used the Incident Command System to effectively gain situational awareness, develop a common operating picture and communicate with stakeholders."

questions or issues through the proper channels, and proposed efforts to define the roles and authorities of entities to strengthen future response and coordination efforts.

Strengths

New Hampshire's establishment of Unified Command streamlined lateral communications and decision-making during the response.

Interviewees highlighted the establishment of a Unified Command, led by leadership representing DHHS, HSEM and the NHNG and coordinated out of the State Situation Room (co-located with the SEOC). The Unified Command reported to the Governor and oversaw the response operations coordinated through the SEOC. Interviewees report that the Governor was the ultimate decision-maker, with approaches informed by Unified Command and subject-matter experts as necessary. Interviews indicate the Unified Command demonstrated a unified front to New Hampshire's pandemic response, and it served as an effective mechanism to bring ideas and information to decision-makers at the table. The presence of a Unified Command enabled real-time decision making and problem solving with the Governor, and key leaders came to the Situation Room with the support of their respective teams.

Strong crisis leadership contributed positively toward New Hampshire's pandemic response.

Interviewees highlighted the crisis leadership capabilities demonstrated by the Governor, Unified Command, and state decision-makers. The COVID-19 pandemic was a disaster of unprecedented scale which required leaders to navigate through complexity and ambiguity. Interview participants felt that strong leadership at the forefront of New Hampshire's response led to sound (and difficult) decision-making. Additionally, interview participants felt the Governor empowered Unified Command with authority to effectively carry out response operations in alignment with the established objectives and allowing flexibility in their execution strategies. Finally, the Governor and Unified Command's presence at the SEOC on a frequent basis was highlighted as an example of this strong leadership, demonstrating support for the general staff coordinating the response.

Robust pre-existing relationships among New Hampshire's key leaders contributed positively toward the state's pandemic response.

Interviewees highlighted that the nature of New Hampshire's small geographic and government footprints resulted in a dynamic where key individuals from State agencies, the Governor's office, and federal response partners had familiarity and worked well together to serve the public. Described as a "tight-knit team" that works collaboratively toward missions, interviewees remarked that leaders worked in unison with the Governor. The COVID-19 response was regarded as a high point for cooperative communication for the state, where state government maintained open lines of communication with statewide partners. Additionally, New Hampshire's leaders were accessible to constituents, and maintained trust from the public.

New Hampshire's leadership set the expectation of a whole of state response, which state employees carried out.

Interviewees underscored the degree of buy-in by state employees to execute aspects of the COVID-19 response, highlighting, "nobody sat at the table and said, 'No, I can't do that' and instead, figured out a way." The willingness of New Hampshire's state employees, from leadership down, to go above and beyond was specifically raised as a strength that was essential to sustaining the response. When necessary, HSEM provided critical support in identifying personnel from state agencies to fill staffing gaps.

Areas for Improvement

Observation 2.1: New Hampshire's COVID-19 incident organizational structure was unclear, resulting in confusion among response partners.

Interviewees reiterated the communication and coordination challenges resulting from the organizational structures New Hampshire stood up in the COVID-19 response.

During the pandemic response, all participating entities maintained their distinct command structures. The State Emergency Operations Center (SEOC) served as the central hub, but department-specific coordination and activities outside of it also existed. For example, for the NHNG, operating at maximum capacity necessitated retaining their usual organizational structure to ensure functionality. While the command level coordination was effective, executing operations faced challenges. Within specific lanes of effort (such as the Guard and state employees), individual command structures were essential alongside the broader statewide organizational framework. Interviewee reports are conflicting but indicate the "competing" SEOC and DHHS Public Health Operations Center (PHCOC) operated simultaneously from separate locations, from their perspectives. DHHS managed a Public Health Incident Management Team, which did not directly integrate with the SEOC. During the development of this report, DHHS clarified the PHCOC was focused solely on the public health response compared to the broader mission of SEOC. For partners unaware of this distinction, the organizational structure

was unclear and in future responses, defining roles and objectives of the various organizational structures would be beneficial.

Additionally, from another interviewee's perspective, the SEOC maintained one command structure, while the NHNG managed a second command structure. Interviewee perspectives depict differing understandings of the organizational structure, but a consistent theme is the need for additional clarity in New Hampshire's large-scale responses in the future.

According to interviewees, the DHHS PHCOC was activated first in early February, staffed by the Public Health Incident Management Team to monitor the novel COVID-19 pandemic as it emerged. The SEOC was activated next, mid-March 2020, once state-level coordination became necessary. Unified command (co-located with the SEOC) contained representation from DHHS, HSEM, NHNG and established response objectives and strategies under the Governor's direction. Interviewees explained they lacked a clear organizational chart for the COVID-19 response, as they tried to determine which groups were actively coordinating together, and who was leading various efforts.

Recommendations

2.1.1   Conduct a workshop with DHHS, HSEM, and NHNG response staff with the intent of re-aligning organizational models for future responses. Review capabilities of Guard members to ensure they can be assigned to roles that meet the needs of the response as well as best match the expertise of the NHNG's members.
2.1.2   Develop a clear and concise organizational structure that outlines the roles, responsibilities, and reporting lines of all entities involved in state-wide response in the State Emergency Operations Plan (SEOP). This structure should be communicated to all stakeholders at the onset of the response and revised throughout its duration.
2.1.3   Conduct regular training sessions and simulation exercises to familiarize all stakeholders with the response structure and procedures.

Observation 2.2: Comprehensive operational coordination posed challenges during New Hampshire's pandemic response.

Interviewees suggested COVID-19 was one of New Hampshire's first large-scale disasters coordinated by the SEOC under a Unified Command. During the state-level operational response to COVID-19, multiple agencies assumed responsibility for different aspects of the response effort. At times, this dispersion in responsibility led to ambiguity in the lines of authority, particularly between agencies such as DHHS and HSEM.

During the pandemic's early stages, interviewees noted that DHHS focused on the policy and operations of testing, contact tracing, medical monitoring, and enacting appropriate policies for isolation and quarantine within the state. However, interviews indicate that DHHS's role beyond the SEOC was unclear leading to communication challenges.

Interviewees emphasized that the magnitude of COVID-19 warranted greater operational coordination through the SEOC from DHHS, including additional planning and logistics support. The activation of ESF 8 (Public Health and Medical Services) within the Health and Human Services Branch of the SEOC in addition to the activation of the PHCOC added complexity, as its role may not have been broadly understood or incorporated into the SEOC operations.

Operational partnerships between the SEOC and public health and healthcare sectors typically rely on Emergency Support Functions (ESF) 6 and 8. This incident required deviation from the usual ESF 6 and 8 categorization, originating instead from Unified Command, which introduced complexity and occasional confusion. This highlighted the need for improved operational coordination, especially during public health emergencies, where engagement with state-level health authorities is crucial. The scale and complexity of this incident underscored the necessity for enhanced collaboration and preparedness across multiple sectors.

Recommendations

2.2.1 Strengthen Inter-agency Coordination: Establish mechanisms for regular communication and coordination between DHHS and HSEM. This could include joint meetings, shared communication platforms, or designated liaison officers.

2.2.2 Clarify Roles and Responsibilities: Clearly define and communicate the roles and responsibilities of DHHS and HSEM.

2.2.3 Conduct training sessions or workshops to enhance understanding of the role and functions of ESF 8 (Health and Medical) among all stakeholders. This can help ensure that it is incorporated effectively into SEOC operations.

2.2.4 Continue to incorporate DHHS into meetings and training related to the planning and logistics capabilities that HSEM can provide. This can help enhance the operational coordination of future responses.

Observation 2.3: Vertical and horizontal coordination should be emphasized in future responses.

Reflecting on the response, interviewees indicated a need for greater coordination, including horizontal coordination in the SEOC (between Emergency Support Functions) and laterally between the SEOC and Unified Command. Interviewees reported that at times, Unified Command did not communicate downstream to the SEOC. It was suggested that in future responses, a mechanism should be established to identify and escalate innovative ideas and concepts from external partners into the SEOC.

Recommendations

2.3.1 Provide elected officials and senior state leadership with training on National Incident Management System (NIMS) and Incident Command System (ICS) principles (example: G402 training).

2.3.2 Designate a Continuous Improvement contact in the SEOC for large-scale or enduring activations to identify and escalate innovative ideas and concepts from external partners into the SEOC.

Observation 2.4: It was challenging for HSEM, DHHS, and NHNG to establish the shared situational awareness necessary to establish a common operating picture.

Interviewees consistently reported silos between HSEM, DHHS, and NHNG regarding shared awareness of the activities coordinated within each of the agencies' domains. DHHS and HSEM maintained varying cadences for situational awareness/operational rhythms. HSEM (through the SEOC) relied on WebEOC as the main tool to enhance situational awareness and monitor operations. Interviewees noted that tasks changed too quickly to be effectively logged in WebEOC as a "live" tool (operated by the SEOC), so it evolved into manual reporting from the NHNG's standpoint.

Interviewees also indicated a lack of clarity about day-to-day operational metrics among the three key agencies. Absent shared response metrics, the NHNG created an internal battle rhythm with briefings, operational priorities, and metrics.

Recommendations

2.4.1   Establish a unified operational rhythm across HSEM, DHHS, and NHNG during large-scale responses to ensure everyone is working in sync. This could involve aligning meeting schedules, reporting times, and other key activities.

2.4.2   Define clear, shared operational response metrics that all agencies can follow. This can help provide clarity about day-to-day operations and ensure everyone is working towards the same goals.

2.4.3   Implement cross-agency briefings to share updates and maintain shared situational awareness. This can help break down silos and foster better collaboration between the agencies.

2.4.4   Conduct joint training exercises to help all agencies understand each other's roles, responsibilities, and workflows. This can help improve coordination and collaboration during actual operations.

Observation 2.5: New Hampshire's National Guard-led Task Forces provided surge support for lines of effort but were not incorporated into the response structure to interface with the SEOC or Unified Command directly.

Under the direction of the NHNG, Task Forces were convened to focus on lines of effort for Medical, Housing, Distribution, Call Center, Vaccine, and Security.[4] The Task Forces supported operational aspects of New Hampshire's response which exceeded day-to-day business structures and capacity of state government.

Interviewees noted the Task Force leads met with the relevant ESFs, and a NHNG liaison coordinated between Unified Command and the Task Forces, however this was not documented in organizational structures or response documents reviewed.

Recommendations

2.5.1   Review National Guard plans and response organizational hierarchies, to ensure coordination with the SEOP and state-wide operating models and ensure the identified roles for the NHNG fit within existing capabilities and authorities.

2.5.2   Determine and document how supplemental incident command functions (Task Forces, or Incident Management Teams) tie into the larger incident management structure, with a particular focus on delineating the scope of responsibilities, chain of command, and decision-making authority. This should be incorporated into future emergency and pandemic response plans.

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[4] NHNG COVID History Document

Observation 2.6: Command and general staff would benefit from additional training and job aids.

Holistically, interview comments about partners' frustration with the state-level implementation of the Incident Command System underscore a need for additional training and socialization of those principles of incident management. Interviewees noted that for individuals used to working with specific partners or agencies, they felt frustrated when they needed to deviate from typical coordination channels to adapt to the COVID-19 response.

Interviewees highlighted the need for additional training at both the command and general staff levels within the SEOC. They emphasized the importance of enhancing knowledge of the Incident Command System and establishing clear lines of authority and effort, particularly in managing large-scale disasters. Furthermore, interviewees expressed concerns about individuals in leadership positions lacking incident-related experience or training. They suggested that general staff could benefit from role-based training and job aids, especially considering the operational tempo and duration of the response. Additionally, supervisors and managers within the SEOC environment may require management and leadership training tailored to the unique demands of their roles.

Recommendations

2.6.1   In alignment with the State NIMS coordinator, create and socialize opportunities for command and general staff to pursue ICS training.
2.6.2   Develop introductory job aids for all SEOC positions.
2.6.3   Offer management and leadership training and resources for SEOC staff serving as supervisors and managers.

Observation 2.7: Thresholds to activate and demobilize the SEOC were unclear.

The SEOC fully activated on March 23, 2020, in response to the pandemic, after the activation of the Joint Information Center.[5] Interviewees were not aware of the thresholds leveraged to determine when to activate the SEOC. The SEOC demobilized on June 30, 2021, to return to Steady State operations, in alignment with the end of the State of Emergency.[6] Interviewees were unsure if the SEOC closure was tied to achievement of response objectives, the ending incident period for Public Assistance reimbursement, or other thresholds. At a high level, several interviewees felt the mobilization and demobilization of the SEOC should be more clearly defined and communicated in future responses.

Recommendations

2.7.1   Establish (or refine) SEOC activation and deactivation thresholds in the SEOP.
2.7.2   Ensure a demobilization plan is established and communicated with SEOC staff and agencies for each activation.
2.7.3   Provide regular updates throughout the activation or demobilization process to keep personnel informed of any changes or developments. Utilize multiple channels such as email, text alerts, phone calls, and in-person briefings to reach all relevant personnel in a timely manner.

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[5] https://prd.blogs.nh.gov/dos/hsem/?p=9105
[6] https://prd.blogs.nh.gov/dos/hsem/?p=11980

COMMUNICATIONS

The Communications focus area refers to the state's ability to deliver timely and accurate communications inside state government in support of COVID-19 response, including general situational awareness for state employees. This focus area also encompasses interoperability among local, state and federal partners, and any communications-centric resource and capability gaps.

Survey Insights

The survey results demonstrate support for New Hampshire's communications with statewide partners throughout the COVID-19 response. Overall, 82% of respondents agreed that New Hampshire provided timely, accurate, and coordinated communications about COVID-19 to statewide partners using the available intelligence at the time. Local respondents (86%) expressed a higher level of agreement with this statement compared to respondents from the state (84%) or other (64%) subsets. Survey respondents highlighted consistent and transparent communications as a strength, appreciating the "open communication which allowed the local partners to share with our community and protect our responders." Conversely, communications challenges also rose between Emergency Support Functions and agencies, as "there were so many local, state and federal partners, which allowed for more opportunities for communication breakdowns… we were ultimately able to work through most… but it sometimes delayed or made things more difficult."

82% of survey respondents agreed that New Hampshire provided timely, accurate, and coordinated communications about COVID-19 to statewide partners using the available intelligence at the time.

Strengths

New Hampshire prioritized consistent, transparent, and timely communications.

The dynamic nature of the novel pandemic, coupled with delayed and often contradictory federal guidance were acknowledged hurdles during the response. The rapid pace of information requests was a challenge. The State focused on accurate, and consistent messaging which ultimately served as a stabilizing force in New Hampshire. The speed, efficiency, and transparency of state communications enabled partners to amplify messaging to the public regarding risk, mitigation actions, and public health guidance. **Interviewees acknowledged the challenging environment the state navigated in developing and disseminating communications, and felt New Hampshire did an exemplary job in this function.**

250+   **Press Releases** issued.

The SEOC maintained strong communication with municipal and state agency partners through WebEOC.

During the COVID-19 response, WebEOC worked well as a conduit for communications from the SEOC to local emergency managers, municipal partners (law enforcement, fire/EMS, public works, etc.), regional partners, state associations, and ESF partners. HSEM implemented new WebEOC status boards (example: first responder exposure boards) to consolidate information and disseminate it out to a broad audience. Additionally, the integration of WebEOC boards with call center inquiries provided insights on call trends for partners' situational awareness.

HSEM adapted its WebEOC training to a virtual, asynchronous model to meet end user needs.

Prior to the pandemic, HSEM facilitated a required, in-person training for WebEOC users. During the initial pandemic response, end users increased from approximately 100 monthly users to more than 600 monthly users as local emergency managers activated their response structures and pulled in additional staff members to support WebEOC tasks who may not have been familiar with the platform. To meet this need, HSEM adapted its training to a condensed, asynchronous delivery accessible on YouTube, allowing new end users to review it on demand.

Frequent conference calls were widely regarded as a best practice resulting from the response.

Daily conference calls during the COVID-19 pandemic played a pivotal role in effective communication. These calls provided a real-time and interactive forum for immediate updates, clarifications, and coordination among stakeholders. Unlike static emails, daily reports, and web-based platforms (such as WebEOC), conference calls allowed for dynamic discussions, quick problem-solving, and the exchange of nuanced information. Interviewees felt that conference calls were the most effective method to provide information across stakeholder groups.

Examples of these calls included:

- State agencies conducted external conference calls to brief their stakeholders, including local emergency management directors, fire chiefs, hospitals/healthcare, local public health officers, and school districts.

- State agencies conducted internal conference calls for leadership to brief staff on agency operations and focus for the next operational period (example: DHHS).

- Senior leaders representing New Hampshire's state agencies conducted inter-agency daily calls with the Governor's Office. For these senior leaders, they facilitated a more personal and immediate connection among team members, enhancing the efficiency of decision-making processes during a period of heightened uncertainty. The daily nature of these calls ensured a regular cadence for information sharing, enabling teams to stay informed, aligned, and agile in their responses to the rapidly changing circumstances of the pandemic.

Areas for Improvement

Observation 3.1: New Hampshire's WebEOC administrator capacity is limited, creating potential gaps in future responses.

Interviewees highlighted a lack of bench depth in state staff who are knowledgeable in management of WebEOC, the state's information sharing and situational awareness tool used in the SEOC. In a future response, interviewees felt that HSEM could be in a position without trained staff with the necessary expertise needed to manage the backend processes managed through WebEOC.

Recommendations

3.1.1   Implement regular training programs for state staff on the management of WebEOC to increase the number of staff members who are proficient in managing this tool and ensure continuity.

3.1.2   Consider hiring or contracting with specialists with WebEOC expertise. These individuals could manage the backend processes and train existing SEOC staff to increase overall capabilities.

Observation 3.2: New Hampshire's email mass notification system relies on entities to update their contact information regularly.

The state's email mass notification system is reliant on municipal leaders to add and update information as local contact change. Efforts are currently underway to increase outreach and local awareness of this important task, however manual processes to update contact information should be evaluated against more seamless methods in the future.

Recommendations

3.2.1 Send regular reminders to municipal leaders about the importance of keeping contact information up to date.

COMPLIANCE AND DECISION-MAKING

The Compliance and Decision-Making focus area pertains to New Hampshire's COVID-19 Emergency Orders. In addition, this focus area evaluates the process to issue and lift COVID-19 guidance, and the role of the Re-opening Taskforce.

Survey Insights

Survey respondents demonstrated support for New Hampshire's approach to compliance and decision-making during the pandemic. Overall, 80% of respondents supported the statement that New Hampshire issued Executive Orders and guidance in a timely manner to reduce the spread of COVID-19 statewide (using the best information available at the time). State respondents (85%) expressed slightly higher levels of agreement with this statement than their counterparts at the local level (81%) or within the other (64%) subsets. Survey respondents underscored the complexities of issuing guidance and Executive Orders in the pandemic environment, and trying to balance state, local and federal information during the development process, and the political divisiveness associated with pandemic executive orders nationwide. Specific to New Hampshire, respondents commended the Safer at Home guidance as being easily understood.

80%

of survey respondents supported the statement that New Hampshire issued Executive Orders and guidance in a timely manner to reduce the spread of COVID-19 statewide.

Strengths

New Hampshire acted swiftly to develop and publish state-specific guidance.

Several interviewees noted delays in federal guidance being issued during the onset of the pandemic. Rather than waiting for federal direction, New Hampshire's approach focused on publishing state guidance based on the knowledge of COVID-19 and best practices at the time for individuals, businesses, and organizations, ensuring a coordinated and effective response. This approach was applicable to guidance spanning multiple sectors and domains, including employment security, quarantine, housing, and public health precautions.

New Hampshire took a flexible approach to adapt business models in the COVID-19 environment.

Social distancing and other precautionary public health measures impacted state government operations which traditionally required in-person transactions and engagement. New Hampshire's executive leadership recognized the significant volume of decisions and guidance which would be necessary to adapt governmental business models. Interviewees appreciated the two-way communication to inform the approaches, as executive leadership/the Governor's office sought input from state agency leadership. Interviewees appreciated the cooperative approach, rather than a prescriptive one. The Governor's Office provided guidance to state agencies, which were provided with autonomy in how to adapt their services and internal operations. For agencies requiring state action to suspend services, they worked collaboratively with the Attorney General's office and the Governor's Office when needed.

New Hampshire expanded unemployment benefits early, providing essential relief to New Hampshire's residents impacted by the pandemic.

Recognizing the severity of impacts on individuals' work and livelihood, New Hampshire rapidly expanded its unemployment benefits, two weeks prior to federal expansion of these programs. At the executive level, the unemployment issue was identified as a priority and flexibility for those seeking benefits was at the forefront.

The School Transition Reopening and Redesign Taskforce brought together stakeholders from across the state to develop re-opening guidance.

The [School Transition Reopening and Redesign Taskforce](#) (STRRT) included more than 60 stakeholders focused of developing re-opening guidelines for New Hampshire's public schools. Interviewees recall the Taskforce providing recommendations to the Governor, the Department of Education, and school districts. The Taskforce's first publication of a best practices guide in May of 2020 for district use enabled many to reopen in the spring of 2020. To inform their work, the Taskforce distributed an online survey which garnered more than 54,000 responses. Interviewees recognized the importance of a transparent and inclusive process to develop education guidance to facilitate re-openings, a topic which was controversial nationwide. As anticipated in large collaborative efforts, interviewees did note the process to develop guidelines as a Task Force was time consuming.

New Hampshire's method for drafting, vetting, and publishing Executive Orders with multiple stakeholders was effective.

Interviewees reflected that the process to develop individual Executive Orders was challenging (uncharted territory) but largely worked well. In most instances, once the Executive Order content was developed and incorporated feedback from subject matter experts (such as public health or clinicians), reviews followed by the Attorney General's Office, the Governor's legal counsel and the Governor. This process loosely mirrored the steps to develop new legislation.

Areas for Improvement

Interviews did not yield any areas for improvement related to this focus area.

FINANCIAL MANAGEMENT

The Financial Management focus area identifies strengths and areas for improvement related to how State of New Hampshire agencies and departments navigated funding/budget constraints, procurement, purchasing processes, and financial execution during COVID-19.

Survey Insights

The survey results demonstrate overwhelming support for New Hampshire's management of COVID-19 federal funding and the distribution of federally funded services and programs statewide where 95% of survey respondents agreed with the state's financial management strategy. Local respondents (69%) expressed a higher level of agreement with this statement compared to respondents from the state (51%) or other (54%) subsets. Survey respondents commented on several strengths and challenges in this focus area, notably the disparity of grant-funded advertising efforts, which helped promote COVID-19 vaccination, treatment, and telehealth services. An additional respondent raised out-of-state procurements to secure COVID-19 supplies and assistance as a challenge, given the dynamic supply chain during the pandemic.

95%

of survey respondents overwhelmingly agreed with the state's financial management strategy.

Strengths

The State of Emergency simplified administrative and financial processes expediting the procurement of time-sensitive and critical pandemic supplies.

Interviewees highlighted the ability of emergency procurement processes, through the Governor's Executive Order authority, to operationalize decisions made by Unified Command, and execute necessary purchases efficiently during a global pandemic, while balancing applicable laws and regulations. One interviewee summarized that traditional procurement focuses on the lowest price, but during an emergency, speed and availability are paramount. New Hampshire's leaders had the authority and flexibility to capitalize on short-suspense procurement opportunities, enabling the state to access services and equipment that were in short supply globally.

Interviewees reported that when it came to necessary personal protective equipment or medical supplies, financial resource constraints were not an issue. If there was a need for something, the SEOC and state agencies were able to support sourcing. In addition, the Governor led efficient decision-making that enabled quick procurements without compromising on requirements.

The Governor's Office for Emergency Relief and Recovery (GOFERR)'s effectiveness in coordinating and efficiency in distributing federal funding contributed to New Hampshire's COVID-19 economic recovery.

Interviewees highlighted GOFERR's approach which balanced multiagency agency coordination and collaboration with expeditious legal reviews, development of program guidance and deployment of financial resources. Interviewees acknowledged that the federal funding programs were extremely complex, and often, "the money came first, and the [federal] rules came second." GOFERR served as a clearinghouse for accounting and compliance with federal rules and requirements, allowing state agencies to focus on implementing programs.

The timely distribution of these funds to local businesses was credited as an economic success, allowing employers to remain open and mitigating pandemic impacts on industry. Interviewees estimated that New Hampshire had allocated funding for the Main Street Relief program[7] (to support small businesses) earlier than most states were able to develop plans to disperse CARES Act funding, and that New Hampshire's programs were effective, resulting in fewer bankruptcies in 2020 than in 2019.

State-issued credit cards (P-card) enabled decision-makers at the department/agency level to execute necessary purchases quickly.

The expanded use of P-cards provided state agencies with a streamlined and more flexible procurement process for necessary purchases. This allowed decision makers to respond to urgent and/or unforeseen needs, as the response shifted quickly.

Areas for Improvement

Observation 5.1: FEMA's Public Assistance program reimbursement presented significant challenges.

Interviewees highlighted the challenges associated with local and state reimbursement through the FEMA Public Assistance (PA) program during the pandemic. At the onset of the pandemic, there was a lack of established federal guidelines for reimbursement for expenses related to a novel virus like COVID-19. As the national response evolved and federal policies and priorities shifted, PA reimbursement guidance shifted too, making it challenging for states and local entities to keep up with the shifting landscape[8]. Interviewees highlighted that experienced local emergency management directors successfully navigated the PA program, potentially due to their familiarity in submitting for funding in previous disasters. COVID-19 was New Hampshire's largest Public Assistance reimbursement process conducted in history. One survey respondent highlighted the "changing reporting requirements for reimbursement" to be a challenge, not at the State level, but as a nation-wide struggle.

Recommendations

5.1.1   Conduct workshops and webinars, tailored to state and local agencies, in conjunction with FEMA Region 1 staff, to provided education and guidance on topics such as eligibility criteria, documentation requirement, and the process for applying for Public Assistance.

5.1.2   Following a PA declared disaster, ensure regular communication with state agencies and local entities regarding eligibility and processes. Provide technical assistance and streamline processes for the submission process.

5.1.3   Include the FEMA PA process in recovery tabletop and functional exercises.

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[7] The Main Street Relief Fund allocated $100 million of New Hampshire's CARES Act funding to provide economic support to businesses interrupted due to COVID-19.

[8] FEMA's Initial Assessment Report found that "the federal government expedited funding…deferring the determination of funding sources that let to vary, and often unclear, cost-share requirements at the time…" and as a result, compliance was "complicated and confusing."

HEALTH AND MEDICAL

The Health and Medical focus area describes successes and areas for improvement encountered by New Hampshire regarding pre-hospital EMS service and protocols, hospitals/healthcare implementation of surge capacity plans, and responder health and safety. In addition, this focus area addresses COVID-19 epidemiological surveillance and investigation, laboratories and testing, vaccine acquisition and distribution, medical supplies management and distribution, and associated resources and capability gaps.

Survey Insights

The survey results demonstrate general support for New Hampshire's approach to COVID-19 Monitoring, Testing, Vaccinations, and Treatments. Survey respondents commented on several strengths and challenges associated with the Health and Medical focus area. Strengths including the state's robust mass testing efforts and innovative approach to mass vaccination using non-traditional and creative community resources, such as the NH Motor Speedway and fixed testing and vaccination site. Respondents recognized the efforts made to "prioritize equity throughout the entire initiative, for under-served communities in NH." Individuals who staffed vaccination clinics were proud of their contributions, and the role of EMS providers to administer vaccines was commended.

76% of survey respondents agreed that **COVID-19 Monitoring** was coordinated effectively. [9]	**85%** of survey respondents agreed that **COVID-19 Vaccinations** were coordinated effectively.
79% of survey respondents agreed that **COVID-19 Testing** was coordinated effectively.	**56%** agreed that **COVID-19 Treatments** were coordinated effectively. [10]

Another strength highlighted was the state's ability to adapt and learn from experience throughout the pandemic. For example, respondents noted the flexibility to pivot strategies mid-pandemic based on evolving knowledge about the virus and best practices. One specific example cited was the modification of plans for Alternate Care Sites (ACS) to better suit in-hospital capabilities during subsequent waves of the pandemic.

However, several challenges were also noted. Respondents flagged logistical challenges in vaccine tracking and distribution, citing a lack of scalable systems in New Hampshire. The need for clarity on ownership and use cases for ACS, as well as guidance on funding, staffing, and supply replenishment, was identified as a challenge for local entities.

Furthermore, respondents underscored the need for a more robust epidemiological surveillance system in New Hampshire to effectively monitor and respond to public health threats in the future.

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[9] COVID-19 monitoring references epidemiological surveillance and investigation.
[10] COVID-19 treatments reference monoclonal antibodies (or other available treatments). State agencies did not directly manage these treatments.

Strengths

Ensuring the safety of the workforce was paramount.

While New Hampshire did experience some supply chain constraints felt nationwide early in the response, state staff report being able to obtain necessary PPE and to extend its longevity as appropriate (N95s for example) using public health guidance which evolved as the response continued. Interviewees highlighted the Department of Corrections staff and NHNG staff working in hospitals/nursing homes for prioritizing personnel wellbeing.

911/Public Safety Answering Point (PSAP) and EMS response protocols were adapted to ensure the safety of dispatchers, providers, and patients.

Recognizing that remote work was not a viable option for New Hampshire's telecommunicators impacted by COVID-19, alternate arrangements were made. Leveraging pre-existing plans, a secondary call center was established to allow asymptomatic COVID-19 positive telecommunicators to continue working, and additional staff were cross-trained in 911 call-taking to ensure continuity.

For EMS providers, response protocols were adapted through the International Academy Dispatch System to ensure appropriate infection control measures and levels of PPE.

Non-congregate sheltering provided for first responders was regarded as a best practice.

Recognizing the need to reduce potential COVID-19 transmission from first responders in quarantine to their household members, New Hampshire arranged hotel rooms located around the state (engaging more than 30 hotels statewide) as a non-congregate shelter solution. This approach promoted adherence to quarantine guidance, provided a safer alternative to sheltering in their households, and most importantly, focused on ensuring the health of first responders and the staffing levels of their agencies. Initially, this program was managed by the Division of Fire Standards and Training & Emergency Medical Services (FSTEMS), transitioned to the Fire Marshal's Office, and then the SEOC.

New Hampshire quickly created essential planning documents to support testing and vaccination efforts.

To establish testing and vaccine clinics, the state needed to develop COVID-19 specific Standard Operating Procedures, update EMS protocols, and incorporate considerations for operating in outdoor environments. Interviewees felt that the development of these planning artifacts went smoothly overall and could be revised in the event of a future pandemic.

New Hampshire orchestrated state-led vaccination clinics on a scope and scale never seen before.

Interviewees described an all-hands-on-deck approach to pulling off New Hampshire's largest vaccination effort to date. Vaccination doses were managed through the DHHS laboratory, and Unified Command centrally determined the distribution process. To ensure minimal waste of any COVID-19 doses, the state maintained an on-call list for any unused doses through the regional public health networks, to maximize every vial of the vaccine based on the eligibility criteria at the time. Interviewees described New Hampshire's leadership as unified in decisions surrounding vaccine eligibility phases and distribution, and flexible with their approach in implementing and adjusting the vaccine distribution plan. States were not able to control how many doses of vaccine they received, but interviewees felt New Hampshire did an exemplary job of distributing the doses that were received.

Community and volunteer partnerships were essential to the success of vaccine clinics.

When highlighting the success of vaccine clinic, interviewees called attention to the key partners which made these efforts possible, including the NHNG, local fire/EMS agencies, volunteers, and the private sector. These partners provided staffing support, venues to host vaccine clinics, and coordination for the wraparound logistics associated with managing vaccine clinics.

New Hampshire's Emergency Medical Service (EMS) providers brought substantial and much-needed capacity toward vaccination efforts.

Interviewees highlighted the work of New Hampshire's EMS providers to staff vaccine clinics. EMS providers have expertise in administering medical interventions but required regulatory changes to provide the authorization to administer vaccines. Upon this authorization, EMS providers remained flexible and were willing to support vaccine clinics alongside the NHNG.

Areas for Improvement

Observation 6.1: New Hampshire's fully implemented lack of an electronic immunization registry during the pandemic resulted in just-in-time solutions which were problematic.

New Hampshire had procured the electronic immunization registry which was still under development when the COVID-19 pandemic began. During the initial phases of the vaccination efforts, the lack of a fully integrated and functioning immunization information system (IIS) impacted the ability of staff to administer the vaccine and track administration data (par levels, doses administered, etc.). [11] Interviewees noted at the time, the lack of a fully functioning immunization registry was a significant challenge in the COVID-19 vaccine rollout. To distribute the COVID-19 vaccine, New Hampshire had to create just-in-time systems to administer doses through the state government, rather than through the healthcare system, which was at capacity managing a significantly increased patient load. First, the state utilized the Vaccine Administration Management System (VAMS), a federally-provided solution which yielded its own challenges such as cancellations, double booked appointments, and appointments outside of clinic hours of operation.

Next, the state implemented the Vaccine and Immunization Network Interface (VINI) which also resulted in significant challenges reported by interviewees.[12] Interviewees report that the state announced the VINI website would be available to certain eligible demographics to register for vaccination appointments, and due to the volume of network traffic, experienced technical failures. To mitigate this issue, New Hampshire implemented website queuing and monitored website demand on the backend, allowing appointments to be scheduled at a consistent rate rather than an initial surge at an announced time. This just-in-time solutioning to identify website hotspots and remedy them would normally require months of work, but interviewees shared that this was completed in hours as it was high-priority.

At the state-managed vaccine clinics, interviews also indicate significant challenges resulting from the registry solutions used. Onsite at the supersite clinics, staff experienced VINI failures and challenges with wireless internet reception and reverted to paper forms to administer and process doses of vaccine. This required manual data entry to intake the information from paper forms, which was time-intensive and resulted in errors.

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[11] https://www.dhhs.nh.gov/programs-services/disease-prevention/immunizations/nh-immunization-information-system
[12] https://www.wmur.com/article/how-to-use-new-hampshire-covid-vaccine-appointment-scheduling-website/35854931

Interviewees suggested that a lack of a fully integrated, functioning IIS, pre-incident, created challenges during the pandemic response. New Hampshire was able to evolve through the course of the response and build just-in-time solutions, and since, has fully implemented a statewide IIS system.

Recommendations

6.1.1 Continue investment in the NH Immunization Information System, ensuring a secure, flexible, and scalable platform to accommodate future surges in patient data.

6.1.2 Work with local public health and healthcare facilities and providers to ensure seamless data exchange across the entire public health system.

6.1.3 Continue conducting training regularly to end users to ensure the system is understood and prioritizes the flow of data to the centralized platform.

Observation 6.2: Regional Public Health Networks were leveraged to the degree to which they had capacity, which varies across New Hampshire.

Interviewees suggested that many existing and new partnerships contributed to the pandemic response, but local and regional public health partners should have been engaged more. Local health officers were mentioned by interviewees as a subset of partners that could have been engaged to greater potential.

The regional public health networks (RPHN) made significant contributions during the pandemic response. They identified vulnerable populations, conducted home-based vaccinations, collaborated with community partners, and supported fixed testing and vaccine sites. Additionally, they participated in ACS (Alternate Care Site) planning, vetted volunteers, and engaged in information sharing. While their responsibilities were multifaceted, during the COVID-19 response, they actively participated in coordination calls, clinical training, and EOC (Emergency Operations Center) activities. DHHS also provided dedicated RPHN administration support throughout the pandemic.

While the RPHNs played an important role in the response, they lacked the staffing required to coordinate large-scale vaccination efforts required during the COVID-19 pandemic. During the pandemic, the RPHN plans faced underutilization due to several factors. These included the scale of the response, limitations in staffing capacity, and the need for plan updates. While the plans accounted for medical countermeasure distribution, they did not adequately address large-scale operations necessitated by the response. Additionally, RPHNs heavily relied on volunteers, many of whom fell into the COVID-19 "at-risk" category and were unable to support deployment requests. The existing plans also did not consider home-based populations, resulting in a gap during vaccination efforts. Although the RPHNs responded swiftly to assist with vaccinating this population, their staffing capacity constrained the number of doses able to be administered. Integration of the RPHNs into hospitals, primary care clinics, and other health care facilities faced challenges related to privacy concerns and limited access to electronic medical record systems. Moving forward, future planning should prioritize scalable models for mass medical countermeasure dispensing.

Recommendations

6.2.1 Clearly define roles and responsibilities, based on identified capacity and capabilities, of regional public health networks. Future use should focus on a scalable approach, based on community needs, that allows them to support vulnerable populations within their communities and audiences who would be unable to access services through alternate mechanisms.

6.2.2 Focus efforts on building relationships between regional public health networks and healthcare partners to serve as a bridge between state and local partners.

Observation 6.3: Providing information regarding potential or confirmed COVID-19 cases to public safety agencies was complex and challenging.

Early in the pandemic, public safety chiefs raised concerns about sending personnel to calls with potential or confirmed COVID-19 cases. As a result, DHHS provided information about COVID-19 cases, which was added to the state 911 system. Interviewees report tension regarding privacy concerns as well as the sharing of case lists with protected health information with public safety staff. Chiefs received locations of COVID-19 cases daily, to provide their personnel with situational awareness when responding to calls at those locations. This just-in-time process was resource-intensive. Interviewees noted that system errors (wrong addresses, etc.) created frustration and raised questions about the validity of the data. Ultimately, it was assumed every location presented COVID-19 exposure as the data couldn't be relied on and this process was phased out.

Recommendations

6.3.1 Working with public health experts, establish guidelines for when health data should be shared with public safety officials to ensure their safety and protection, defining the minimum information needed for core public health functions.

6.3.2 Implement standardized data formats and secure data sharing practices to ensure privacy is maintained and protected health information shared minimally.

Observation 6.4: The lack of public health data system integration at the state and national levels resulted in inconsistent reporting from various sources, leading to information discrepancies and public distrust.

Interviewees highlighted the critical need for robust and interconnected data systems in public health. This lack of integration pre-dated the COVID-19 response. Public Health data collection efforts during the pandemic engaged multiple sources and systems, including hospitals, lab reporting and contact tracers that did not all use electronic reporting systems.

While data modernization efforts including electronic lab reporting and electronic case management were implemented in real time during the response, the pandemic exposed vulnerabilities in pre-pandemic public health data infrastructure, integration, and preparedness, emphasizing the imperative for adaptive and interconnected systems in public health responses to ensure accurate, timely, and trustworthy information. It has been noted that DHHS did receive significant resources throughout the pandemic to improve capacity and improve data systems from the pre-pandemic steady state.

Recommendations

6.4.1 Assess current public health data systems to identify gaps and interoperability concerns and prioritization of solutions.
6.4.2 Define consistent data elements and standards across the state, utilizing national guidance and requirements.
6.4.3 Research a data modernization aggregation solution to improve cross disciplinary information and data sharing.

Observation 6.5: State-managed vaccination sites would benefit from additional structure to ensure consistency and real-time medical oversight.

Interviewees acknowledged the critical role that state-managed vaccination sites played in New Hampshire's response and recommended structural changes to increase effectiveness in the future. Each site operated under the state medical orders for vaccine administration. The vaccination site structure lacked on-call oversight, and medical staff in the field administering vaccines lacked a mechanism to obtain rapid feedback as unique vaccination situations arose at clinics. For example, medical staff administering vaccines were presented with unique vaccination scenarios during a time when medical guidance was still in development nationally regarding vaccination doses, timing, and whether individuals could receive different types of vaccines (Moderna, Pfizer, J&J) in a series.

While the medical orders for vaccine administration were prescribed, each state-managed vaccine site had their own approach to and differed slightly in its operations and logistics on the ground. Interviewees proposed a more standardized approach to state-managed vaccination sites, should they be necessary in the future.

Recommendations

6.5.1   Review and update state Medical Countermeasures plans to include local- and state-managed vaccination site models.
6.5.2   Create standardized operating procedures for all aspects of vaccination including registration, screening, administration, and post-vaccination observation. Ensure these procedures are trained and exercised regularly.
6.5.3   Establish a medical team to be involved in all aspects of the vaccination sites, from planning to operations, to ensure a system is created to address any medical concerns, including on-site challenges and consistent communication to DHHS/DPHS.

Observation 6.6: Outdoor vaccination clinics experienced operational challenges resulting from weather conditions.

Interviewees noted that drive-through vaccination sites worked well in theory during the planning stage but experienced some challenges when operationalized. Initial COVID-19 vaccination plans may have underestimated the logistics challenge posed by the winter weather conditions, such as check-in tablets and vaccine freezing. Vaccine sites learned quickly what did and did not work and adapted procedures.

Recommendations

6.6.1   Identify potential drive-through vaccination sites to include in pandemic/vaccination planning. Train and exercise these sites, alternating times of year to ensure impactful weather conditions can be addressed.
6.6.2   Maintain a redundant, manual back-up system to mitigate against challenges with the virtual platforms.
6.6.3   Exercise a variety of vaccination site locations annually for influenza vaccination.

Observation 6.7: In response to initial COVID-19 hospitalization surges, surge capacity plans needed to be refined and developed to support anticipated hospital and healthcare capacity.

Anticipating potential scenarios in which New Hampshire's healthcare facilities would lack the beds necessary to treat COVID-19 patients during a pandemic wave, the state refined existing surge capacity plans. While New Hampshire's surge capacity plans were fortunately not needed, the state took steps to plan for the allocation of constrained resources, utilizing licensing waivers and possible staff augmentation with the NHNG. The state prepared an Executive Order, should those plans be necessary. Interviewees stated that during the first COVID-19 wave, surge facilities (Alternate Care Sites) were set up in anticipation of the state's healthcare facility bed count being exceeded by demand. When New Hampshire's COVID-19 bed count approached the healthcare system's limits, the state lacked staff needed to staff surge facilities; a familiar challenge felt globally. Preliminary staffing models and strategies to license units and personnel were researched (including the use of Air National Guard staff for patient transportation) but not operationalized. Interviewees reported that during subsequent COVID-19 waves, the state's approach was to increase the bed count of hospitals rather than staff surge facilities (Alternate Care Sites) as a result.

Recommendations

6.7.1   Continue strong partnerships with hospitals and healthcare facilities across the state to ensure facility specific surge plans and establish communication channels to report potential challenges up to and during disasters.
6.7.2   Ensure statewide surge capacity planning is addressed in either a standalone plan or as part of an existing state plan. Conduct trainings and exercises on statewide plans.
6.7.3   Identify and plan for alternate care sites. Establish memorandums of agreement with identified locations, if appropriate. Conduct trainings and exercises with these sites.

LOGISTICS

The Logistics focus area describes the strengths and areas for improvement demonstrated in the delivery of essential commodities, equipment, and services in COVID-19 response efforts. This included sourcing supplies, vetting, and fulfilling resource requests, establishment and management of State warehouses, resource distribution and replenishment, and associated resource and capability gaps.

Survey Insights

The survey results demonstrate support for New Hampshire's logistics management system mobilized during the COVID-19 response. Overall, 72% of respondents agreed that New Hampshire effectively established and maintained an effective logistics management system to support the COVID-19 response. State respondents (75%) expressed a higher level of agreement with this statement compared to local (74%) or other (61%) subsets. Multiple survey respondents noted logistics as either the State's greatest strength or area for improvement in the response. While some respondents indicated that "*the greatest strength was the utilization of the National Guard*," and that "*logistics and operations of the response… were excellent*," others highlighted that New Hampshire's lean State government and National Guard footprints pose a challenge during initial response in scaling up logistics. Additionally, survey respondents proposed recommendations to include further logistics planning, training, and funding for smaller communities.

72%

of survey respondents agreed that New Hampshire effectively established and maintained an effective logistics management system to support the COVID-19 response.

Strengths

The state's distribution of pandemic supplies to the local level was essential.

Interviewees noted early in the response procuring supplies at the State level to be a challenge, however executive orders from the Governor were able to temporarily reduce some administrative burdens and facilitate procurement. At the local level, multiple survey respondents highlighted their ability to receive supplies from the State as the greatest strength of the response. This direct allocation ensured that essential supplies, equipment, and information reached communities on the frontline efficiently. It facilitated a coordinated approach, allowing locals to respond effectively to the evolving needs of their populations, demonstrating the critical importance of a well-organized and responsive state-level distribution system in managing the challenges posed by the pandemic.

The National Guard, in partnership with state agencies, played an integral role in operationalizing the logistics function of the state's COVID-19 response.

The scale of the COVID-19 pandemic exceeded the capacity to implement existing agency-specific logistics plans, including capacity for inventory resources and or the ability to calculate burn rates or personnel to manage warehouses and transportation. Interviewees reiterated the critical role that the National Guard played by augmenting staffing and providing subject-matter expertise. The National Guard provided the necessary expertise and staffing to support state logistics infrastructure and processes necessary to scale up for the COVID-19 response, resulting in vast quantities of PPE delivered to hospitals and first responders statewide.

~30%

New Hampshire National Guard members on mission supporting COVID-19 operations, at the peak of the pandemic.

Areas for Improvement

Observation 7.1: Resource request and inventory management processes should be synchronized to ensure effective resource allocation in future responses.

Initially, the resource request process lacked unit tracking, causing discrepancies in inventory counts. For example, initially municipalities submitted a resource request for gloves, and in the comments field, indicated the requested number units (boxes of gloves). The resource request process was modified so requestors would select the number of units, providing the SEOC with better data for tracking and managing purposes. In future responses, New Hampshire would benefit from aligning the resource request and inventory management processes, thus enabling accurate counts of available units as resource requests are in process.

Recommendations

7.1.1 Establish a statewide inventory management process and ensure alignment and integration with the statewide resource request process. This process should include a system and schedule for stock rotation to maintain expiration dates for existing stock.

7.1.2 Train and exercise the state-wide inventory management process to utilize when the SEOC is activated.

Observation 7.2: Additional integration between state agency workflows is necessary to streamline the broader resource request process.

DHHS and HSEM currently maintain independent Juvare platforms (also known as WebEOC). These platforms serve as a web-based tool for real-time information management and coordination, allowing multiple agencies to share information and submit requests to state agencies during emergencies. During the COVID-19 response, parallel Juvare products resulted in singular resource requests being submitted multiple times for processing. For example, a municipal fire department's request for N95 masks was routed through the SEOC's ESF 7 desk, then assigned to DHHS for processing. DHHS would replicate this request into their Juvare platform, simultaneously updating WebEOC to close the request to the municipal requestor.

Recommendations

7.2.1 Conduct a comprehensive analysis of the existing resource requests and distribution processes across the state agencies involved in emergency response.

7.2.2 Develop standardized processes and protocols to ensure consistency across state agencies, including standardized request forms that capture essential information about resource needs.

7.2.3 Implement a centralized system for all state agencies to submit, track, and manage resource requests. If no centralized system is possible, leverage the single vendor platform functionality to build connections between the existing Juvare (WebEOC) tools to identify and mitigate redundancy.

7.2.4 Document and socialize the centralized/coordinated resource request process with state agencies and local entities.

7.2.5 Train and exercise the state-wide resource request process to utilize when the SEOC is activated.

Observation 7.3: Improved planning to delineate roles and responsibilities in warehousing and distribution is essential for enhancing the state's logistics operations.

Interviewees recalled that pre-pandemic plans identified DHHS as responsible for managing warehousing and distribution operations. DHHS had existing relationships with the healthcare community to facilitate the rotation of expiring products and determine appropriate levels of inventory. During the activation of those functions, DHHS required additional support as the scale and pace of COVID-19 response exceeded existing resources and planning assumptions. As a result, the National Guard was mobilized to manage state warehousing operations in coordination with the SEOC, leveraging distribution plans created by HSEM. While this just-in-time solution effectively mobilized New Hampshire's logistics arm of the COVID-19 response, staffing and plans should be revisited to incorporate lessons learned and any capability changes.

Recommendations

7.3.1 Clearly define roles and responsibilities for warehousing and distribution and develop a functional annex in state EOP.
7.3.2 Develop job aids and just-in-time training for warehousing and distribution staff.
7.3.3 Consider centralizing emergency warehousing functions under one state agency control and coordination or utilizing a private vendor to contract with for warehousing services.

PUBLIC-PRIVATE PARTNERSHIPS

The Private Sector Coordination focus area describes strengths and areas for improvement regarding New Hampshire's partnerships with private entities and non-governmental organizations in response to COVID-19.

Survey Insights

The survey results demonstrate mixed support for New Hampshire's public-private partnerships throughout the COVID-19 response. Overall, 59% of respondents agreed that New Hampshire effectively collaborated with nonprofit and for-profit partners to strengthen COVID-19 response and recovery. The subset for other respondents (representing regional, private or non-profit entities) expressed a higher level of agreement (82%) with this statement compared to respondents from the state (64%) or local entities (46%). Several survey respondents highlighted public-private partnerships as the State's greatest strength during the response, stating, "*coordination - as a small state we were able to effectively coordinate between the Unified Command, state agencies, private entities and local municipalities.*"

Strengths

The success of New Hampshire was greatly bolstered by the resources and unique partnerships provided by private sector partners.

59%

of survey respondents agreed that New Hampshire effectively collaborated with nonprofit and for-profit partners to strengthen COVID-19 response and recovery.

New Hampshire made extraordinary efforts with public private partnerships to address PPE shortages, resulting in the establishment of a robust supply and distribution network that brought unprecedented capabilities to the state. Interviewees highlighted key partnerships with Dean Kamen to procure 91,000 pounds of PPE (resulting in New Hampshire's ability to provide a link in the supply chain to the Department of Veterans Affairs)[13], the New England Patriots to leverage a team plane for PPE delivery, and the New Hampshire Motor Speedway serving as a venue for a vaccine super site.

Nonprofit partnerships were critical in New Hampshire's efforts to provide public relief programs.

The nonprofit sector support of relief programs and deployment of funding was essential during the New Hampshire COVID-19 response. Interviewees highlighted collaboration with hospitals, Easter Seals, United Way, and many others. Interviewees reported routine coordination with nonprofit partners that complemented the efforts of government agencies. Additionally, interviewees highlighted the role these new and existing non-profit partners played in supporting vaccine staffing needs later in the response.

New Hampshire's Re-Opening Task Force, in coordination with Governor's Office and public health leadership, issued guidance documents for the private sector to inform re-opening protocols, and resulted in increased public-private collaboration that has continued after the COVID-19 response concluded.

The State's Economic Re-Opening Task Force brought together state officials, legislators, and representatives from the private sector (e.g., travel and tourism, retail, hospitals) to address industry challenges brought about by COVID-19. The state's approach, which involved seeking input through numerous calls and providing guidance as opposed to mandates, received positive feedback. Interviewees felt the guidance provided New Hampshire's businesses with a starting point for client/customer communications and had an important emotional and psychological impact.

Meetings involving with local Chambers of Commerce, state officials, municipal leaders, economic development officials, and regional planning commissions which were necessitated by the COVID-19 response, have persisted as valuable forum additional statewide collaboration and information sharing.

New Hampshire businesses pivoted their operating models to meet the needs of the State and their customers during the response.

An interviewee highlighted state officials' outreach and collaboration with businesses to adjust their production toward essential supplies, such as PPE and hand sanitizer. The ability of these businesses to pivot not only met critical needs of the State, but also enabled them to continue operations.

Areas for Improvement

Interviews did not yield any areas for improvement related to this focus area.

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[13] https://www.nhpr.org/nh-news/2021-07-22/dean-kamen-ppe-nh-va-segway

PUBLIC INFORMATION

The Public Information focus area evaluates strengths and areas for improvement related to New Hampshire's multi-agency coordination to develop external messaging for the general public, including the use of daily public reporting, emergency alerting systems, social media, public notification tools, and call centers. In addition, this focus area evaluates processes for developing press releases, rumor control, responding to media inquiries, and the frequency of communications.

Survey Insights

Overall, most survey respondents (78%) strongly agreed or agree that New Hampshire provided timely, accurate, and coordinated COVID-19 messaging. State (84%), local (78%) and other (61%) subsets of respondents expressed agreement with this statement. Survey respondents highlighted the State's multi-modal approach, leveraging press conferences, web-based dashboards information, social media, and call centers to provide information as the greatest strength of the response; the frequency of press conferences was highlighted by multiple individuals. Interviewees raised the challenge that community partners often were not made aware of updates before they were released during press conferences, resulting in a lack of partners' situational awareness and just-in-time process changes to adapt to the information shared during press conferences.

> **78%**
> of survey respondents strongly agreed or agree that New Hampshire provided timely, accurate, and coordinated COVID-19 messaging.

Strengths

The state established a comprehensive daily reporting site and published several microsites to provide specific information to the public.

Interviewees highlighted the microsites to provide focused information on COVID-19 programs and relief services. These microsites provide a focused, standalone web presence for state agencies and programs, without overhauling their traditional State of New Hampshire departmental websites.

The New Hampshire COVID-19 Response Dashboard provided significant information on COVID-19 case surveillance and vaccination data.

Data dashboards provided real-time, visually accessible information, allowing partners and the public to monitor the pandemic and vaccination efforts and aid in the effective management of the response and vaccination campaigns. An interviewee emphasized the dashboard as potentially being DHHS's most significant data portal to date. It was noted, however, that the dashboard was incredibility resource-intensive, and comparable efforts in the future should only be continued as long as needed to inform decisions made by partners and/or the public.

COVID-19 Vaccine Overview Dashboard

New Hampshire's communications approach leveraged multiple channels to reach populations effectively.

Interviewees called attention to the variety of platforms used by the State to disseminate public information, including social media posts, press releases, and alerts through Code Red. State agencies, including DHHS and HSEM, conducted multiple daily conference calls with stakeholder groups, to share information and answer questions regarding specific populations. The daily conference calls (conducted separately for each stakeholder group) included healthcare providers, schools, childcare providers, faith-based organizations, and summer camps. Interviewees noted these conference calls were a key conduit for receiving updated and real-time information. Several of these stakeholder groups used pre-established channels used during prior incidents, others were developed based on feedback from stakeholders and partners.

4000+ Department of Health and Human Services **social media posts** related to COVID-19 operations.

The Joint Information Center (JIC) assisted in aligning public information efforts across state agencies to ensure unified messaging.

The JIC served as a centralized hub for state agency public information officers to collaborate to ensure consistent, coordinated messaging during the COVID-19 pandemic. By sharing information, resources, and strategies within the JIC, these public information officers aligned messaging to provide a unified, accurate, and clear state response to the public and media. Interviewees highlighted multiple benefits from their state agency's participation in the JIC, including timely updates about incoming requirements and opportunities for state agencies (examples: PPE for staff, cleaning supplies, etc.) and consistency in their messaging to their constituents that was aligned with the state.

The JIC's COVID-19 activation enhanced operational processes and increased collaboration between New Hampshire's Public Information Officers.

Interviewees highlighted the JIC's well-established operational tempo. According to interviewees, the JIC convened 45 employees representing 19 state agencies and was potentially the largest multi-agency COVID-19 response outside of the SEOC. Responding to the needs resulting from the pandemic, the JIC established three lines of effort: information gatherers reviewing open-source media, call-takers intaking media requests to log in a WebEOC board, and individuals to draft responses to requests in consultation with relevant Subject Matter Experts. During its activation, the JIC incorporated continuous improvement approaches to refine existing processes and rethink workflows as the volume of media requests increased. Interviewees suggest the JIC provided the media with a central point of contact for requests and simplified the external process to obtain answers or clarity on new guidance or information disseminated by the State. As a result of the JIC's long term, high-operational tempo activation, interviewees commented there is additional collaboration and interest in baseline training for public information officers.

Once activated, the JIC reduced misinformation and miscommunication.

During the onset of the pandemic, the increasing scope of the emergency and volume of communication sources resulted in miscommunications and misinformation, according to interviewees. They remarked that once the departmental public information officer became engaged, and connected with the JIC, communications were routed through the appropriate channels and information sharing improved.

The COVID-19 pandemic prompted and continued inter-jurisdictional information coordination.

The pandemic's impact across jurisdictional boundaries created opportunities for Governor level and all agency leaders, including public information officers from the New England states, to convene for regular calls. Interviewees highlighted that the purpose of these calls was initially to share information about federal programs and their states' COVID-19 response efforts to increase situational awareness (for example, to provide advance notice that one state would be closing schools, enabling other states to update their communication materials in anticipation of questions in their jurisdiction). New England states are close-knit, so regional forums provided a lifeline for information sharing. Interviewees suggest this degree of collaboration among state agencies was novel during the pandemic and has continued beyond the response efforts.

New Hampshire's call centers were successful in coordinating and streamlining COVID-19 inquiries from the public.

Throughout the course of the pandemic, call centers were activated to meet the day to day needs of New Hampshire residents, including employment security, information about COVID-19 testing and contact tracing, vaccine appointment and transportation services, and 211 for other human services such as housing, healthcare, and food. Interviewees advised that call center capabilities had been built up in recent years on a smaller scale in previous incidents, and those lessons learned were incorporated into its approach during COVID-19. Additionally, the call

211,325,513

Calls logged into WebEOC

center technology, operations (call taker binders with job aids updated daily), and management were highlighted. Interviewees felt that in the call center environment, the leadership empowered line staff and middle managers to make decisions in pursuit of the mission; these individuals were accountable for their efforts but were able to streamline governmental processes and procedures that typically would hinder on-the-spot decision-making and systems improvement.

New Hampshire's staff reassignment approach supported surge capacity in the call centers and provided cross-agency experience for those individuals.

Out of necessity, New Hampshire leveraged volunteer state employees and reassigned state employees to support the call centers. This practice not only assisted with the surge capacity needed to operate the call centers, but it provided a valuable opportunity for those individuals to experience a greater role in the pandemic and work alongside new agencies/partners they may have not previously worked with. Interviewees were proud of their role; and reflected that it was a public service act to volunteer to serve as call-takers to support vaccine scheduling, and they were proud to play a supporting role in those efforts to get vital vaccines deployed in the state. In some instances, the volunteer staff members continued to work from their assigned workstations using pre-existing phones and software; their participation just required DoIT support to re-route the incoming calls to their workstations.

Maintaining temporary staffing capacity for call centers was regarded as a best practice for future incidents.

Interviewees reiterated the need to rely heavily on staff augmentation solutions to maintain call center operations within employment security, especially as the federal guidance changed significantly and call volumes increased. In this example, interviewees noted the employment security staff acted as Subject Matter Experts for the call takers, providing technical support on complex cases in a tiered system, drafting call scripts, and supporting access to necessary systems. Initially, the New Hampshire National Guard provided support for this call center as the call takers, until it was determined this was not a federally reimbursable mission. As a result, third-party vendors were hired to support call centers. The interviewee suggested it would be a best practice moving forward to maintain state contracts for vendor-led call center support.

Areas for Improvement

Observation 9.1: Interviewees provided conflicting perspectives on key information being disseminated during press conferences, highlighting a lack of prior notice to response partners.

Some interviewees felt that in advance of the daily press conferences, information was coordinated well laterally through Unified Command and the Governor's Office, but not horizontally across state agencies. While critical decisions and important communications should filter through leadership (such as Unified Command), it is anticipated this may create delays in some staff receiving the notice, but it will ensure consistency in the messaging being shared. Other interviewees felt this information was coordinated well across state agencies, but not internally with key personnel engaged in response efforts. Contradicting this, another interviewee felt information did not filter down through Unified Command, and staff learned about response updates through press conferences for the first time.

Interviewees highlighted examples of this challenge, sharing, "It took months to get them to understand the leadership needed to share information with us at our level. And the call center phones are ringing off the hook and we can't answer questions." This challenge created cascading impacts for call center staff as inquiries consistently increased following a press conference.

Several interviewees acknowledged the need to control information before it is announced publicly but expressed frustration with the result that decisions were not always communicated ahead of press conferences, internally, or to key partners. Recognizing the need to balance proper communication channels with the call center staff's desire for sooner notification, decision-makers should consider using automated methods to distribute automated FAQs and call-taking guidance at the same time announcements are made in the future.

Recommendations

9.1.1 Establish clear communication policies and protocols outlining how decisions are communicated internally and externally during emergencies.
9.1.2 When possible, conduct pre-announcement coordination ahead of press conferences with key stakeholders, including agency heads and key staff members, to discuss upcoming decisions and prepare them for potential public announcements.
9.1.3 Establish processes and internal communication channels to provide needed information to agency staff ahead of press conferences to prepare public-facing staff.
9.1.4 Conduct briefings with state agencies and response partners to allow for direct communication and interaction with decision makers.

Observation 9.2: Not all of New Hampshire's state agencies have an appointed PIO.

During the pandemic, some state agencies suddenly received significant media attention for the first time, in particular, employment security. Interviewees noted that not all state agencies currently have an appointed public information officer. In this instance, the Deputy Commissioner for employment security received just-in-time media training and input from the JIC to serve as the agency's public information officer.

Recommendations

9.2.1   Recommend all state agencies designate or appoint a PIO. These individuals should be able to communicate and disseminate information regarding agency operations during emergencies.

9.2.2   Encourage state level PIOs (or another agency designee) to attend PIO and media training.

9.2.3   Develop standardized communication protocols, procedures, and job aids for consistency and transparency in information dissemination, whether or not the JIC is activated.

9.2.4   Establish clear procedures for activating the JIC and ensure all agency-level PIOs are provided consistent guidance.

9.2.5   Include all agency-level PIOs in SEOC trainings and exercises.

9.2.6   Continue to maintain a contact list of all agency-level PIOs in the SEOC.

APPENDIX A – DEVELOPMENT PLAN

Please contact HSEM for the most current version of this document.

APPENDIX B – SURVEY RESULTS

SURVEY RESULTS/THEMES

The following is a summary of findings derived from the stakeholder survey. To ensure the anonymity of the respondents, questions and responses with identifying information are not included. Responses have been edited for grammar, spelling, and clarity. 169 responses were submitted during the survey period.

*Denotes required questions.

Demographic Questions

- Provide your first and last name.*

    o Responses to this question have been removed to ensure anonymity.

- Provide your email address.*

    o Responses to this question have been removed to ensure anonymity.

- Provide the name of the organization that you currently represent.*
- Which of the following best describes the discipline you are currently affiliated with?*
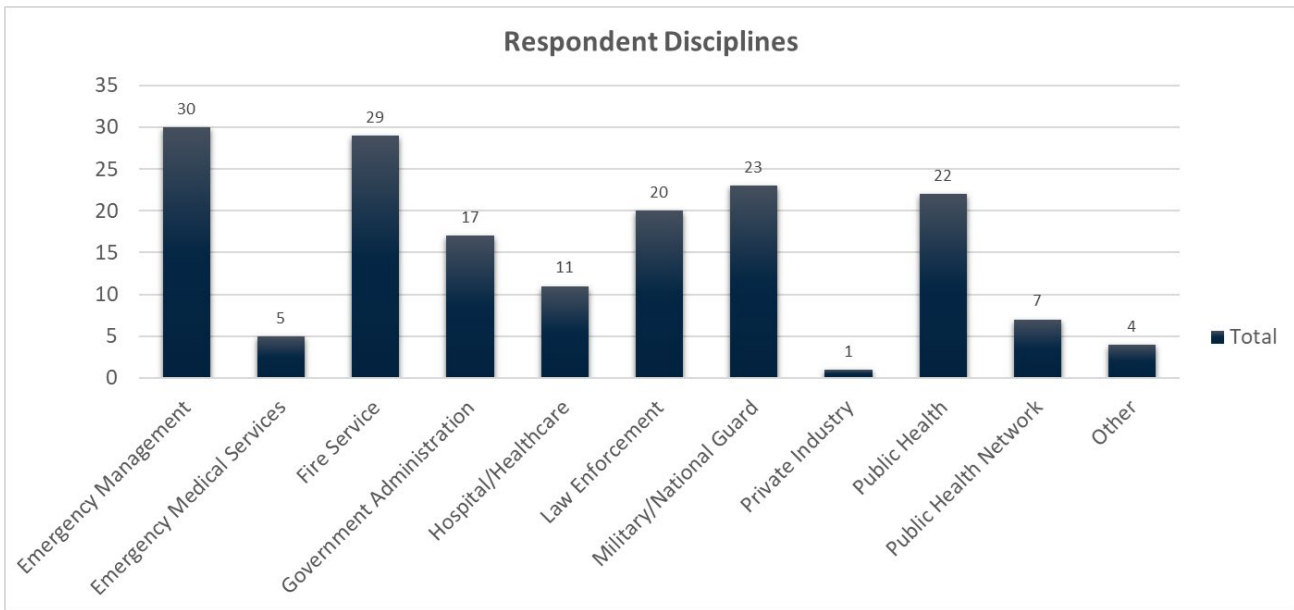
    o If you selected "Other," please provide your discipline.

- Which of the following best describes your current organization?*

Type of Organization
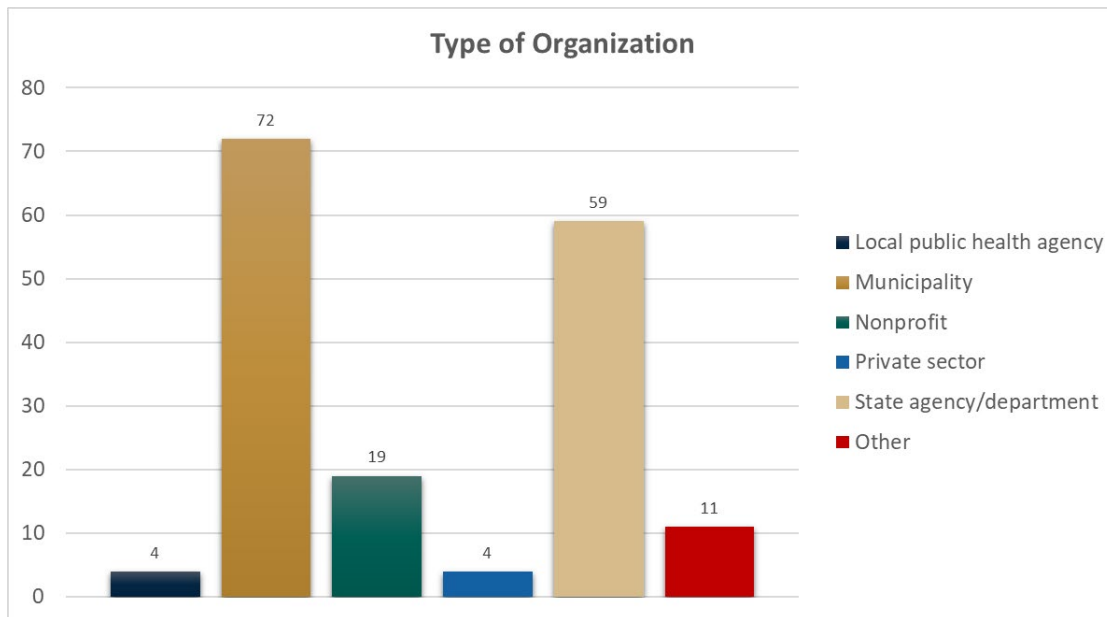
- o Add detail for "Other"
- o For municipal respondents only, please indicate the municipality you work for.*
- o Responses to this selection have been removed to ensure anonymity.

Response Questions

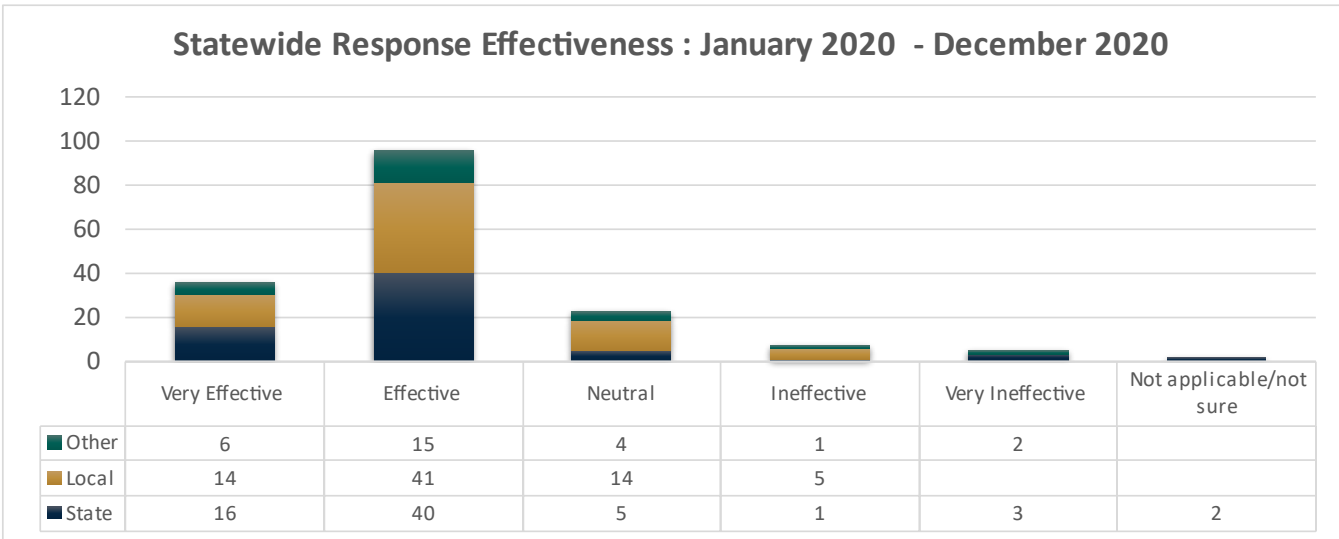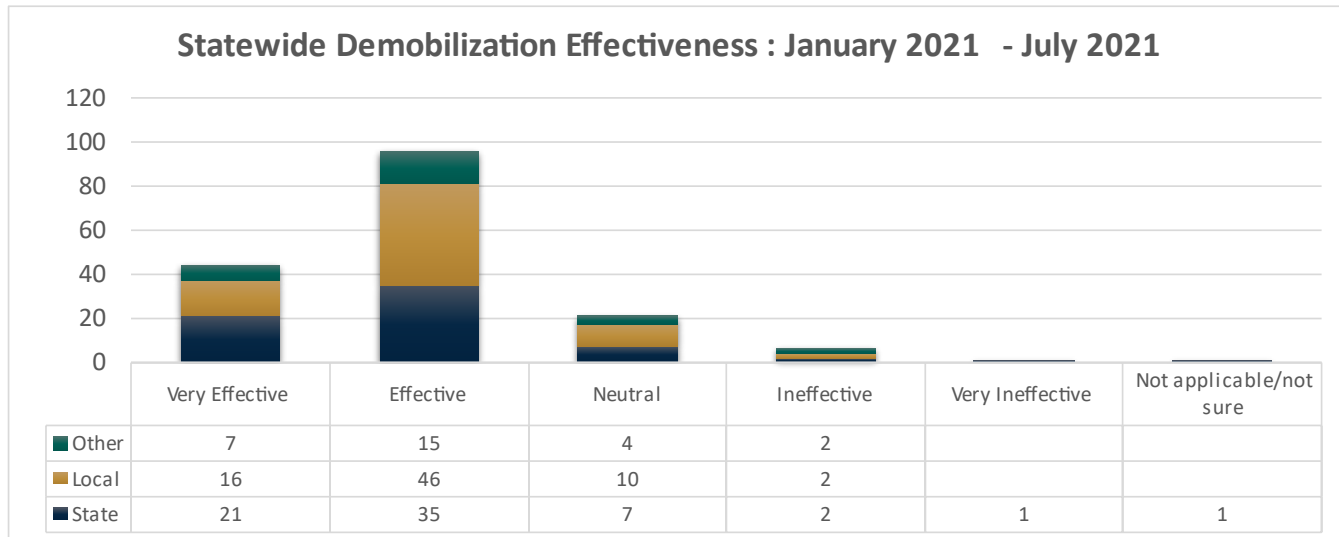For each of the following categories, respondents were asked to select a statement to rate statewide performance during COVID-19 response.

- New Hampshire established and maintained a statewide COVID-19 response for the period from January 1, 2020 - December 31, 2020. This period encompassed the initial statewide COVID-19 response prior to vaccine availability. Select one to describe how effective the statewide COVID-19 response was during this period.*

Statewide Response Effectiveness : January 2020 - December 2020

	Very Effective	Effective	Neutral	Ineffective	Very Ineffective	Not applicable/not sure
Other	6	15	4	1	2	
Local	14	41	14	5		
State	16	40	5	1	3	2

- New Hampshire maintained and demobilized an effective statewide COVID-19 response for the period from January 1, 2021 - July 30, 2021. This period encompassed the longer-term COVID-19 response and vaccine distribution. Select one to describe how effective the statewide COVID-19 response was during this period.*

Statewide Demobilization Effectiveness : January 2021 - July 2021

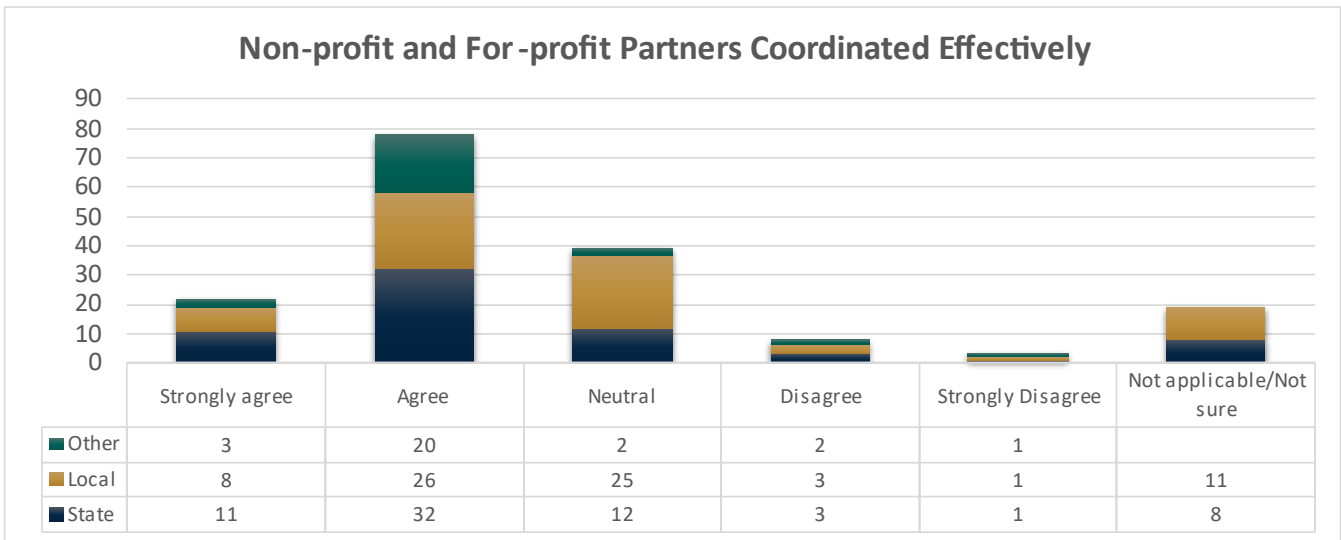|	Very Effective	Effective	Neutral	Ineffective	Very Ineffective	Not applicable/not sure
Other	7	15	4	2		
Local	16	46	10	2		
State	21	35	7	2	1	1

For each of the following Focus Areas, respondents were asked to select a statement to rate statewide performance during COVID-19 response.

- New Hampshire used the Incident Command System to effectively gain situational awareness, develop a common operating picture, and communicate that with stakeholders.*

New Hampshire Effectively Used the Incident Command System

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	5	15	3	3	2	
Local	17	41	11	2	2	1
State	19	28	6	5		9
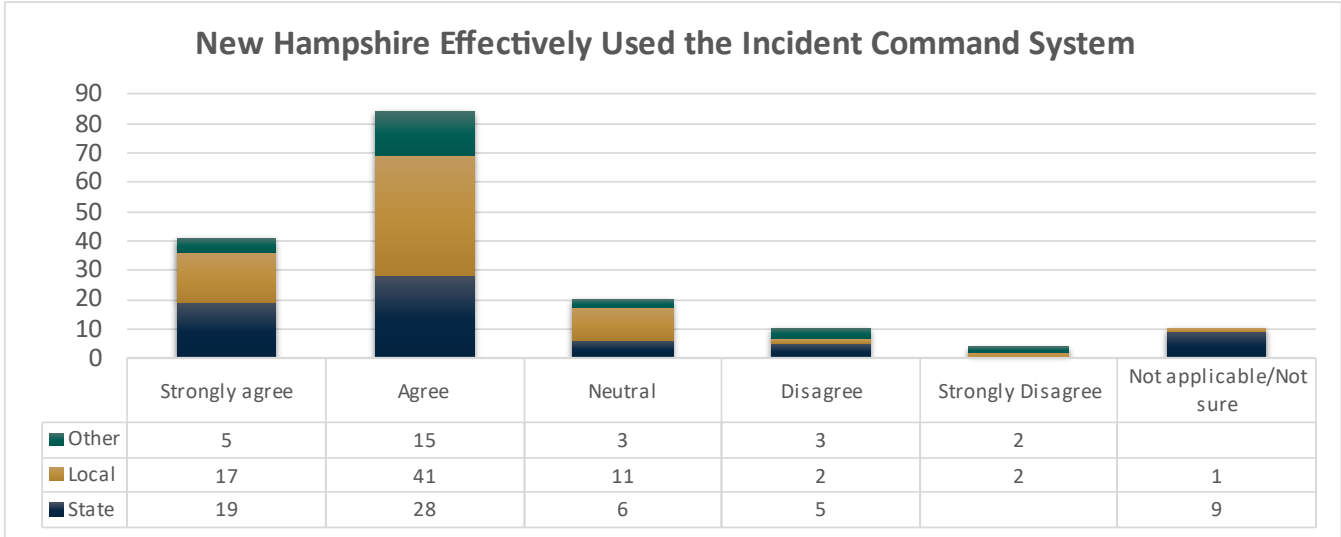
- Non-profit and for-profit partners coordinated effectively to enhance COVID-19 response and recovery efforts statewide.*

Non-profit and For-profit Partners Coordinated Effectively

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	3	20	2	2	1	
Local	8	26	25	3	1	11
State	11	32	12	3	1	8

- Compliance and Decision Making. Using the best information available at the time, New Hampshire issued Executive Orders and guidance in a timely manner to reduce the spread of COVID-19 statewide.*
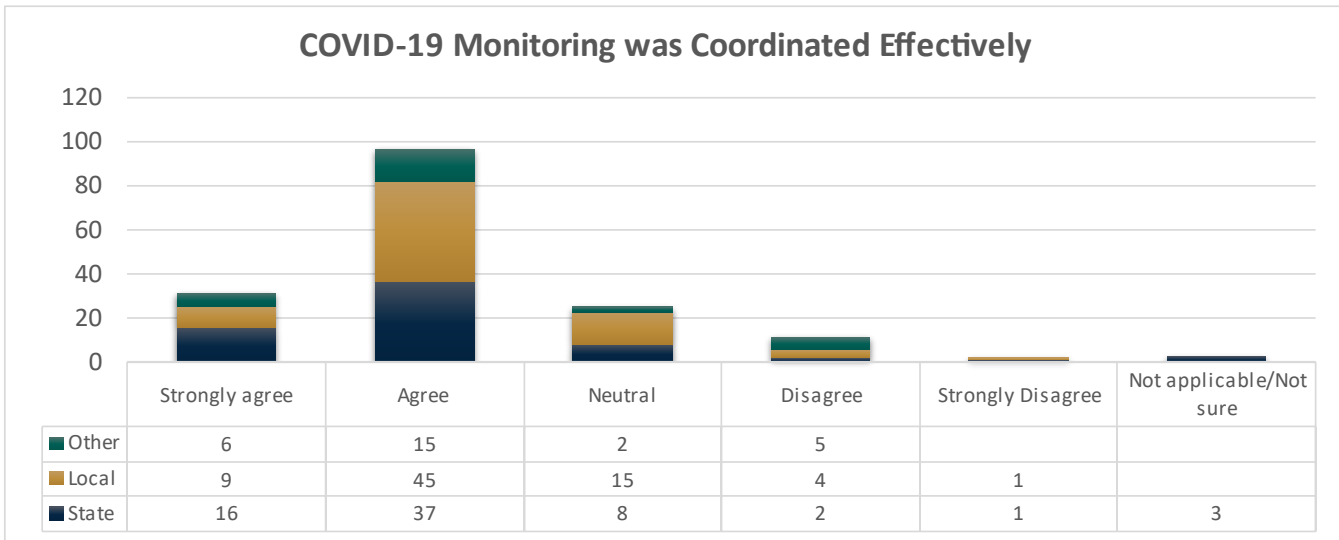
Compliance and Decision -Making was Effectively Managed

	Strongly agree	Agree	Neutral	Strongly Disagree	Disagree	Not applicable/Not sure
Other	8	10	6	2	2	
Local	24	36	10	2	2	
State	22	35	5		3	2
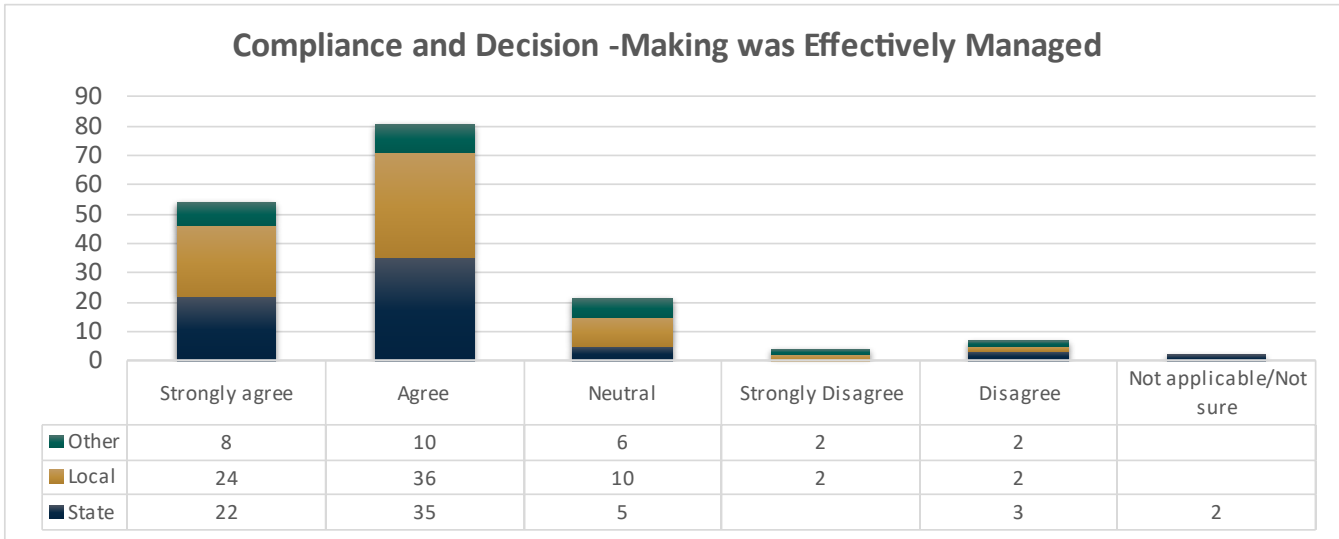
- Supply Chain Management. Procurement, distribution, and replenishment of emergency supplies necessary for the COVID-19 response were coordinated effectively.*

Supply Chain Management was Effectively Coordinated

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	8	11	5	3		1
Local	14	45	11	4		
State	15	34	11	4	1	2
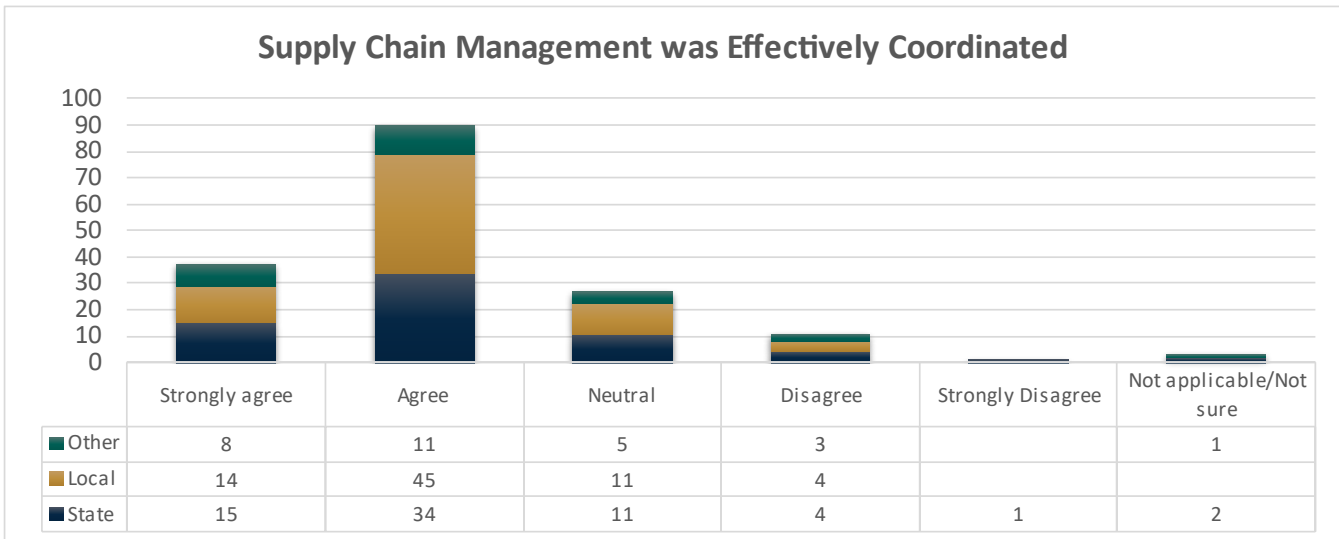
- Health and Medical. COVID-19 monitoring was coordinated effectively in New Hampshire.*

COVID-19 Monitoring was Coordinated Effectively

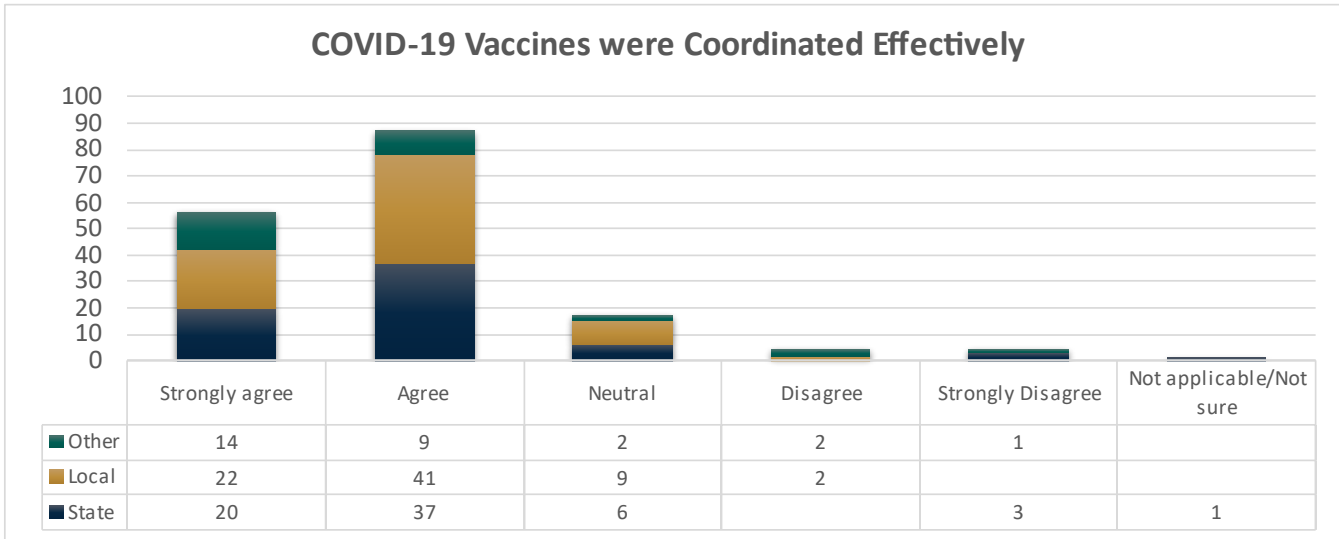|	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	6	15	2	5		
Local	9	45	15	4	1	
State	16	37	8	2	1	3

- Health and Medical. COVID-19 testing was coordinated effectively in New Hampshire.*

COVID-19 Testing was Coordinated Effectively

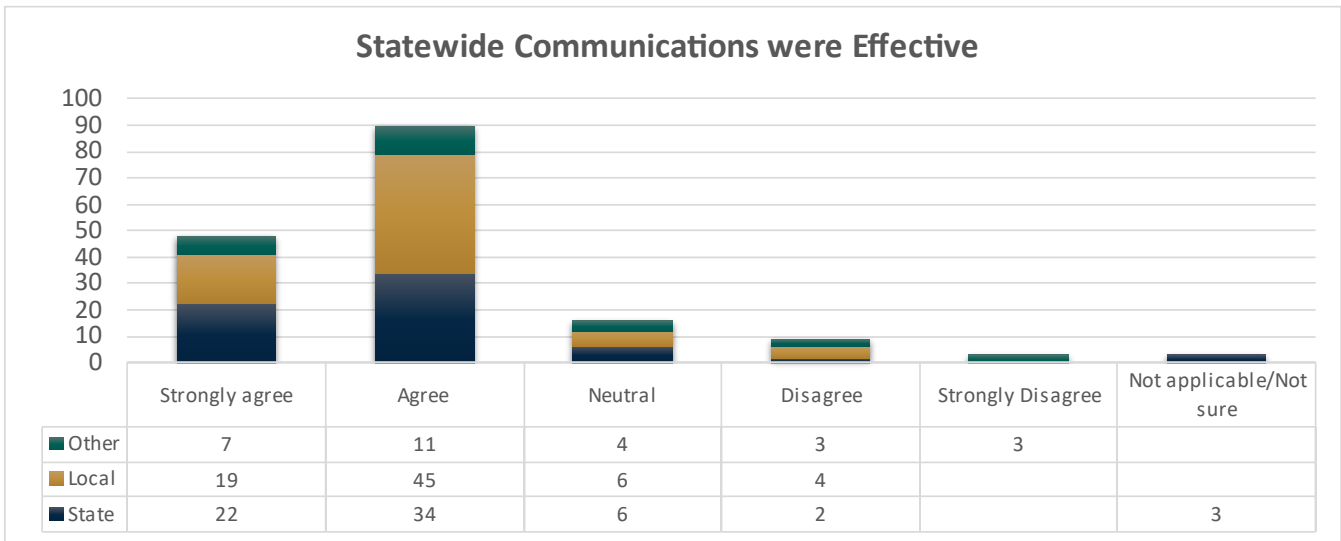|	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	9	10	4	3	1	1
Local	9	50	11	3	1	
State	22	33	6	2	1	3
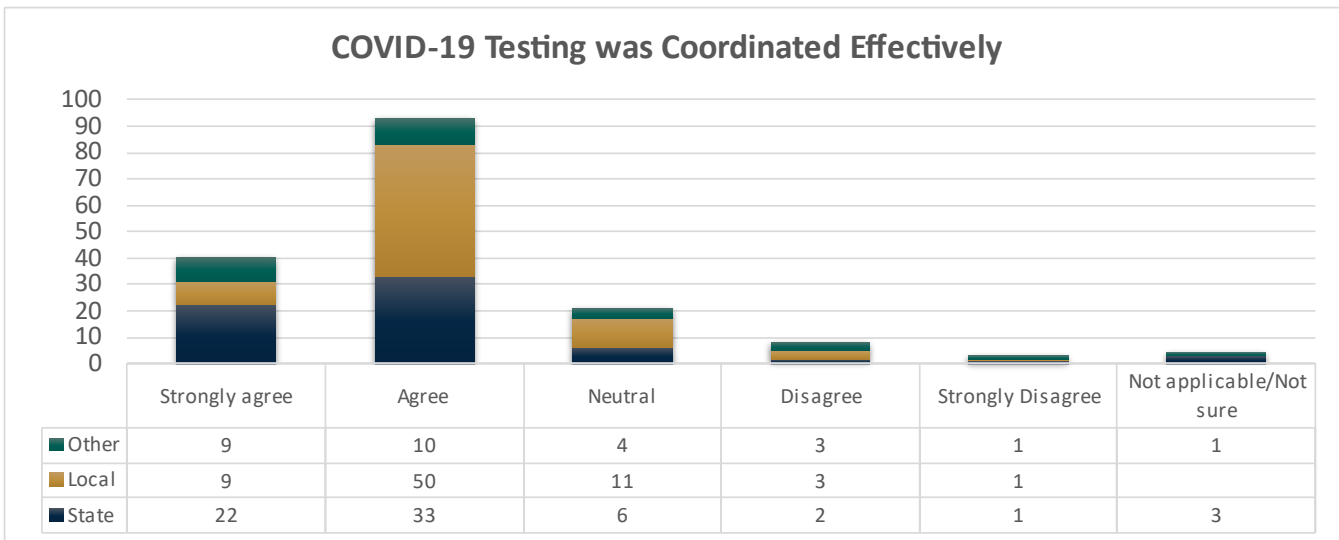
- Health and Medical. COVID-19 vaccines (access and distribution) were coordinated effectively in New Hampshire.*

COVID-19 Vaccines were Coordinated Effectively

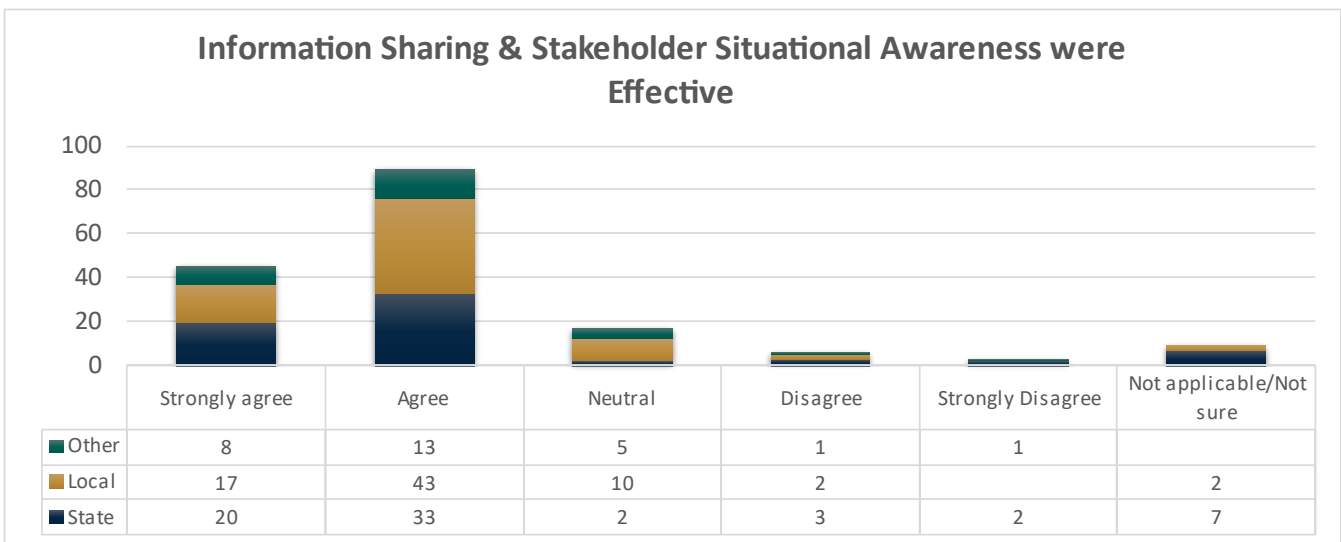|	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
■ Other	14	9	2	2	1	
■ Local	22	41	9	2		
■ State	20	37	6		3	1

- Health and Medical. COVID-19 treatments (antibodies and antivirals) were coordinated effectively in New Hampshire.*
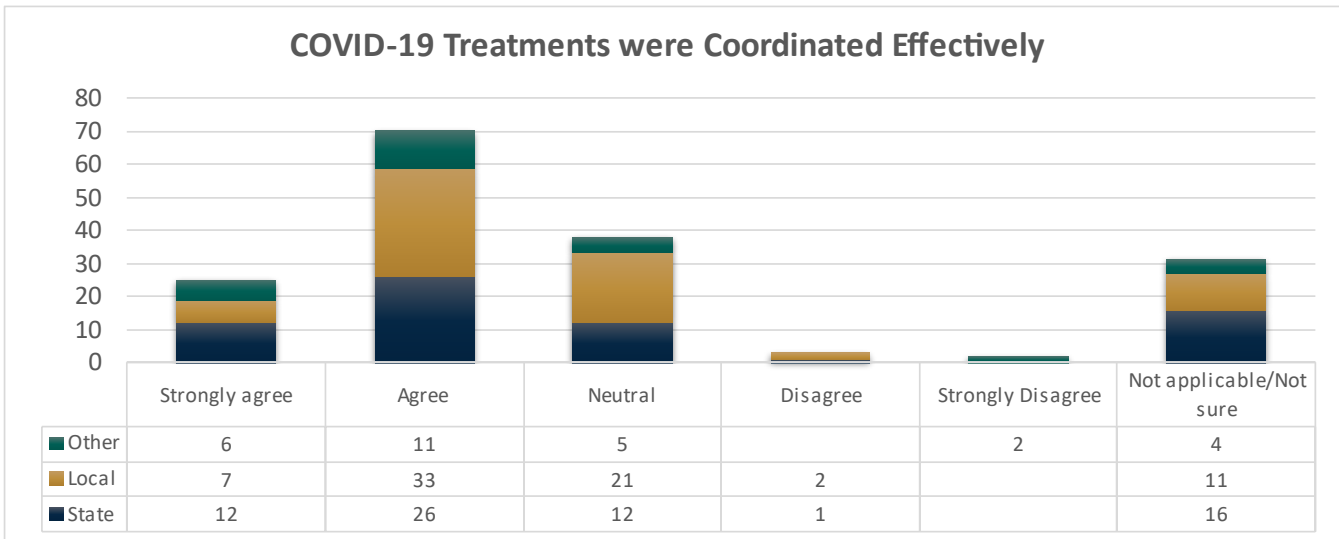
COVID-19 Treatments were Coordinated Effectively

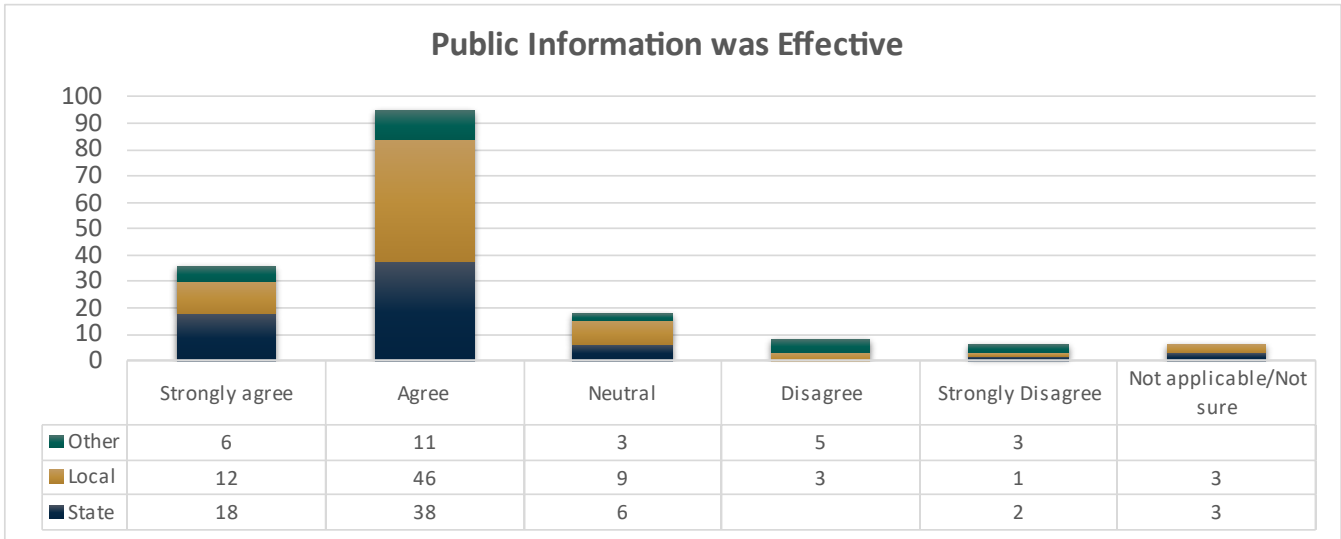|	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
■ Other	6	11	5		2	4
■ Local	7	33	21	2		11
■ State	12	26	12	1		16

- New Hampshire provided timely, accurate, and coordinated communications about COVID-19 to statewide partners, using the intelligence available at the time.*

Statewide Communications were Effective

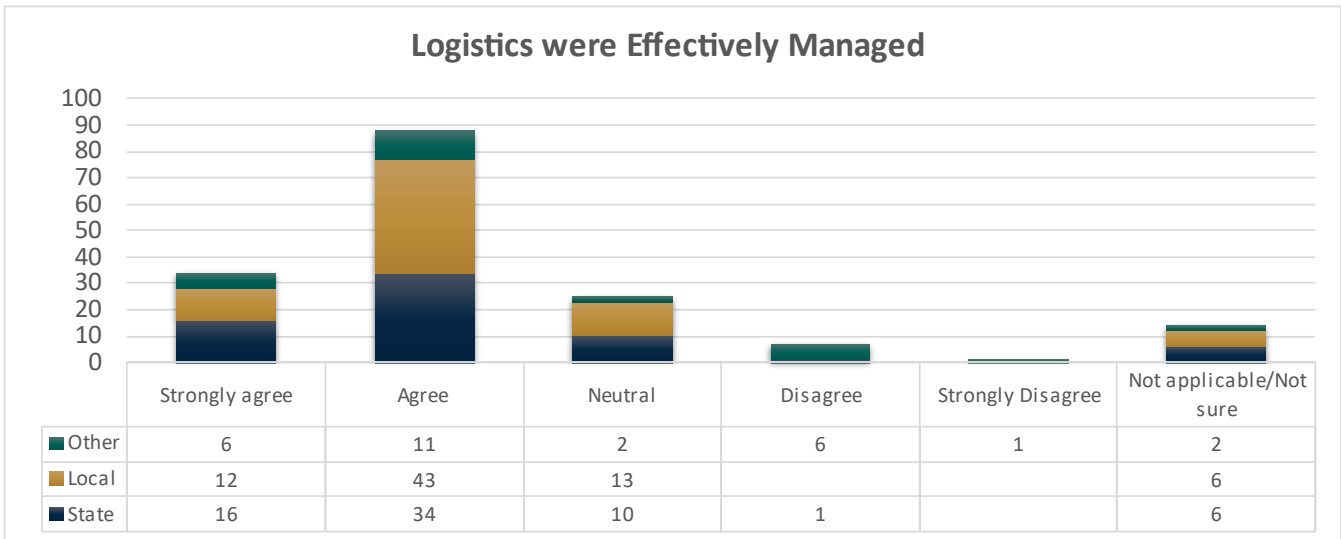|	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
■ Other	7	11	4	3	3	
■ Local	19	45	6	4		
■ State	22	34	6	2		3

- New Hampshire effectively leveraged processes and tools, such as the Health Alert Network or WebEOC, to share information and provide situational awareness to statewide stakeholders.*
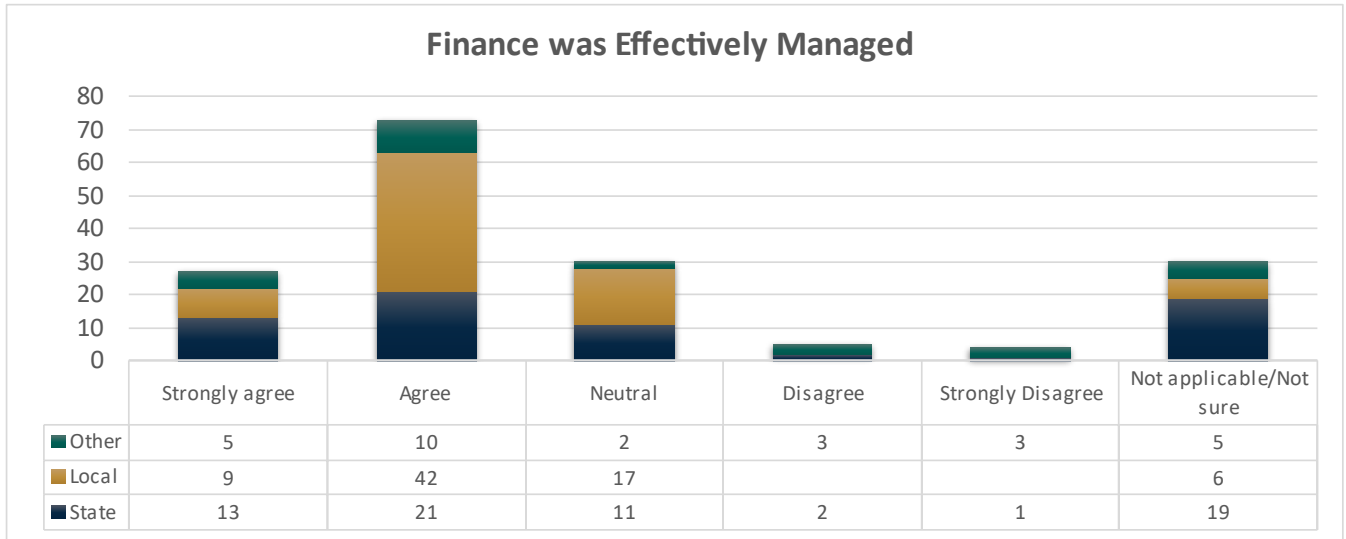
Information Sharing & Stakeholder Situational Awareness were Effective

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
■ Other	8	13	5	1	1	
■ Local	17	43	10	2		2
■ State	20	33	2	3	2	7

- New Hampshire provided timely, accurate, and coordinated messaging about COVID-19 to the public, using the intelligence available at the time.*

Public Information was Effective

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	6	11	3	5	3	
Local	12	46	9	3	1	3
State	18	38	6		2	3

- New Hampshire established and maintained an effective logistics management system to support the overall COVID-19 response.*

Logistics were Effectively Managed

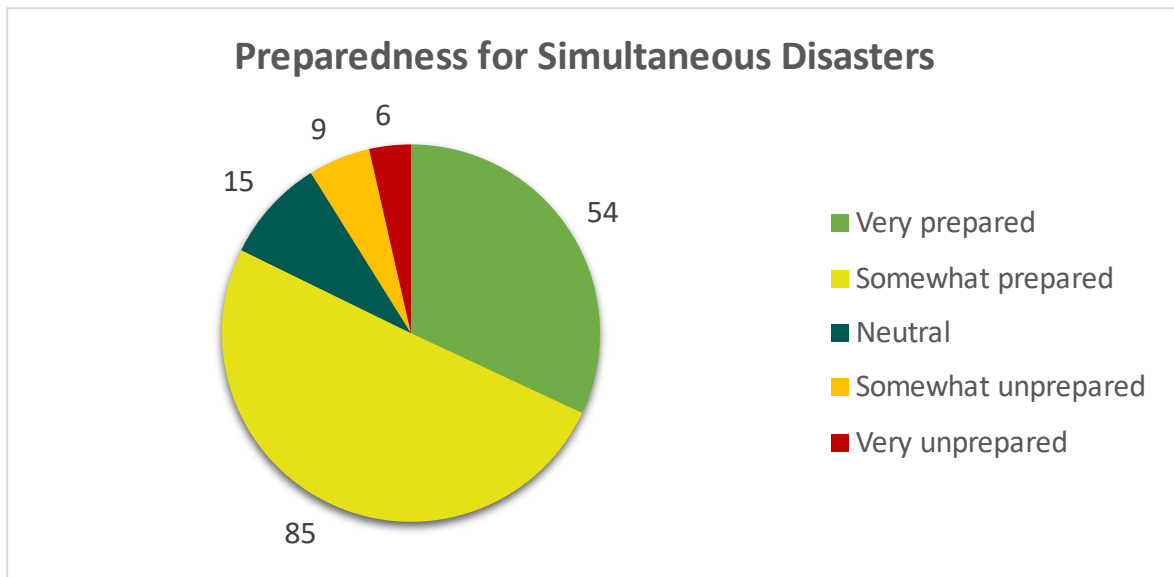|	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	6	11	2	6	1	2
Local	12	43	13			6
State	16	34	10	1		6

- Finance. New Hampshire effectively managed the receipt of COVID-19 federal funding and distributed valuable services and programs statewide.*

Finance was Effectively Managed

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable/Not sure
Other	5	10	2	3	3	5
Local	9	42	17			6
State	13	21	11	2	1	19

- Please rate the effectiveness of the State of New Hampshire's public information and warning (COVID-19) distributed through the following channels*:

Effectiveness of Public Information Channels
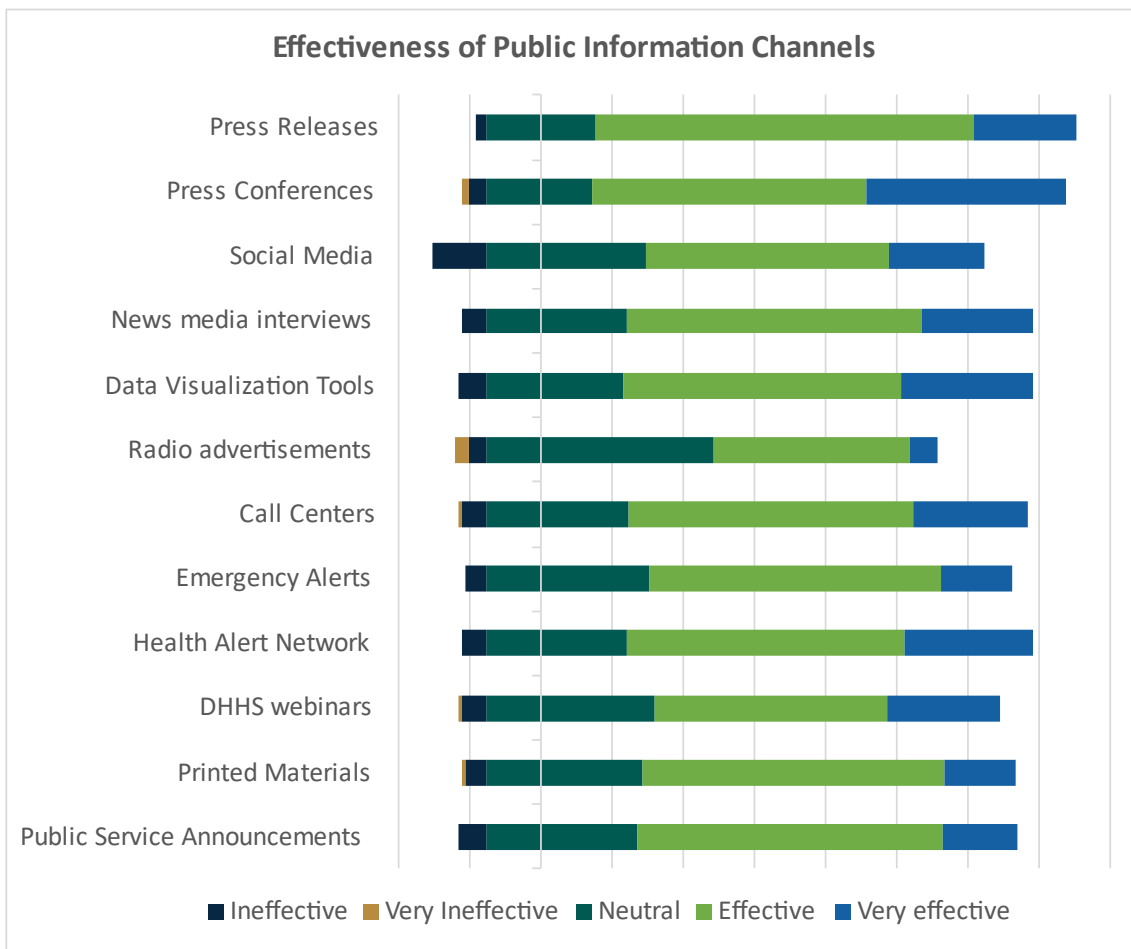
- What do you believe has been New Hampshire's greatest strength statewide in responding to COVID-19? Why? Participants are encouraged to consider the broader statewide response to COVID-19, rather than one individual agency's response actions or performance.*

- What do you believe has been New Hampshire's greatest challenge statewide in responding to COVID-19? Why? Participants are encouraged to consider the broader statewide response to COVID-19 rather than one individual agency's response actions or performance.*

- Today, how prepared is New Hampshire to handle simultaneous disasters? For example, a pandemic response and a severe winter storm response?*

Preparedness for Simultaneous Disasters

- Very prepared
- Somewhat prepared
- Neutral
- Somewhat unprepared
- Very unprepared

- Do you have anything else you would like to include?

APPENDIX C – INTERVIEW RESULTS

PARTICIPATING ORGANIZATIONS

The following departments, agencies, and organizations participated in the interview process:

Department / Agency / Organization	Number of Participants
Officer of the Governor	2
Department of Administrative Services	1
Department of Business and Economic Affairs	1
Department of Corrections	6
Department of Education	1
Department of Health & Human Services	10
Department of Information Technology	2
Department of Justice	1
Department of Safety	1
Department of Safety – Division of Fire Safety	1
Department of Safety – New Hampshire Emergency Services and Communications	1
Department of Safety – Division of Fire Standards and Training and Emergency Medical Services	8
Department of Safety – Homeland Security and Emergency Management	10
New Hampshire Association of Fire Chiefs	2
New Hampshire Insurance Department	1
New Hampshire Employment Security	1
New Hampshire National Guard	2

INTERVIEW QUESTIONS

General Questions:

- At a high level, please describe your role and your organization's role in the COVID-19 response in NH.
- What capability does your organization have to conduct incident planning? Has this changed since COVID-19?
- Describe your organization's involvement in initial SEOC activation for COVID-19 response. Note any observations about staffing levels.
- How would you describe communications among local, state, and federal partners during the COVID-19 response?
- Which online information-sharing and situational awareness systems did your organization use, and how were they employed to collect and share information? For example, WebEOC.

PREPAREDNESS	The first few questions today focus on preparedness. Please answer based on your organization's posture prior to/leading into COVID-19 response.
• State and local emergency plans and inclusion of contingencies for applicable scenarios	• Describe your organization's emergency plans prior to the pandemic (including, but not limited to: Emergency Operations Plan, Continuity of Government/Continuity of Operations Plans, Pandemic Annex, etc.). • (If applicable) Describe any training and exercise conducted on those plans.
• Response to previous incidents	• Prior to COVID-19, was your organization involved in incident response? If so, please describe the types of incidents and your organization's role.
• Interoperability plans	• Describe any interoperability plans your organization had in place. These plans may have outlined strategies and processes for internal and external communications.
• Pre-staging of resources	• Did your organization pre-stage any resources for COVID-19 response? (for internal or external distribution) Describe that process.

RESPONSE	The next set of questions today focuses on response.
Command	
• Use of the Incident Command System (ICS)	• Describe the implementation of the Incident Command System (ICS) in New Hampshire's response (within your organization and/or statewide).
• Command and General Staff coordination	• Was the ICS structure effective in coordinating across command (state executive government) and general staff (SEOC divisions/branches) roles?
• Duration of ICS • Establishment and unified command • Transition of command from preparation to response to post emergency	• Describe any adaptations or transitions to the ICS structure during response.
• Communication • Gaining situational awareness and establishing a common operating picture	• Was the ICS structure effective in developing and broadcasting situational awareness to establish a common operating picture?
Private Sector Coordination	
• Non-Profit contributions and role	• Describe your organization's engagement with non-profit organizations. How did those efforts contribute to the broader response efforts in NH?
• For-Profit contributions and role	• Describe your organization's engagement with for-profit organizations. How did those efforts contribute to the broader response efforts in NH? • Did the relationship between the state and private sector change during COVID?
Compliance and Decision-Making	
• Emergency Orders	• Describe the process to develop Emergency Orders. • How were Emergency Orders received externally?

• Operations and programs (IA, PA, CARES/GOFERR) impact	• How did Emergency Orders impact operations for your organization?
• Re-opening Taskforce	• Describe the organization, outcomes, and effectiveness of the Re-opening Taskforce.
• Education Guidance • Issuance of guidance • Lifting of guidance	• How was guidance drafted, issued, and lifted? • Which partners were/were not included in this process? • What worked well (and didn't work well) in this process?
Supply Chain Management	
• Pre-emergency supply management	• Describe pre-pandemic supply management strategies and capabilities (of your organization and/or the state).
• Supply distribution	• What were some of the strengths and challenges associated with supply distribution in NH?
• Stock replenishment	• What were some of the strengths and challenges associated with stock replenishment?
• Procurement	• What were some of the strengths and challenges associated with procuring supplies?

Health and Medical	
• Pre-hospital Emergency Medical Services (Triage, Transport)	• What were some of the strengths and challenges associated with pre-hospital EMS during COVID-19?
• EMS Protocols	• Did EMS protocols change during the response? How were these protocol changes drafted, distributed, and received? Were the protocols effective?
• 911/PSAP Protocols	• Did 911/PSAP protocols change during the response? How were these protocol changes drafted, distributed, and received? Were the protocols effective?
• Hospitals/Healthcare Implementation of surge capacity plans	• Describe the implementation of hospitals/healthcare systems' surge capacity plans. • What impacts did this have in NH? • What worked well, and what could be improved? • Which agency or organization became the coordinating entity?

• Epidemiological Surveillance and Investigation	• Did your department or agency contribute or receive epidemiology data during the COVID-19 response? • How could this process have been improved?
• Resource and capabilities gaps	• What were the main resource and capability gaps you observed specific to the health and medical community? Was this unique to NH?
• Laboratory and Testing	• Describe the laboratory and testing structure and capacity during COVID-19 in NH. Was it effective? How did this change during the response?
• Vaccine Acquisition and Distribution	• Did your organization participate in vaccine acquisition or distribution? • How could this process have been improved?
• Medical Supplies Management and Distribution	• Did your organization participate in medical supply management and distribution? • How could this process have been improved?
• Responder Health and Safety	• What measures were put in place to ensure responder health and safety, and by whom? Do you believe they were adequate?
Communications	
• Use of public safety communications networks	• How were public safety communication networks leveraged?
• Cross-discipline interoperability	• How would you describe communications across disciplines during the COVID-19 response in NH? Examples of disciplines include law enforcement, Fire/EMS, emergency management, etc.
• Use of Communications Lead (COM-L) and Communications Unit (COM-U) programs	• Describe any involvement your organization had with the Communications Lead (COM-L) and Communications Unit (COM-U) programs.
• Resource and capabilities gaps	• What were the key communication resources and capability gaps?
Information Sharing/Situational Awareness	
• Use of the Health Alert Network (HAN)	• Describe your organization's use of the Health Alert Network to receive or share health-related information during the pandemic.

• Use of other information sharing processes and tools	• Are there any best practices (implemented during response) or areas for improvement for those information-sharing processes or tools?

Public Information	
• Multi-agency coordination of messaging and public information	• Describe how messaging and public information were coordinated across agencies. Was a Joint Information System or Center established? Were they effective?
• Use of emergency alerting systems	• How did your organization, and the state, use emergency alerting systems? Was it effective?
• Use of social media	• How did your organization, and the state, use social media? Was it effective?
• Use of public notification tools	• What other public notification tools did your organization, or the state, use during the response?
• Development of press releases	• Describe your organization's involvement in issuing organization-specific or state-wide press releases.
• Rumor control and management	• Were rumors and/or disinformation a challenge during COVID-19? What strategies were used to manage this – were they effective?
• Call Centers	• Describe your organization's involvement in any call centers established during response.
• Response to media reports	• How did your organization handle media inquiries and/or respond to media reports?
• Frequency of communication	• Did the state communicate externally on a frequency that was appropriate? Why/why not?

Logistics	
• Establishment of staging areas	• Describe the process to identify, select, stand up, and manage any staging areas and/or warehouses that your department played a role in.
• Management of the staging areas	
• Resource and capabilities gaps	• Were resources (human, financial, material) sufficient to adequately coordinate logistics? How did this change over time and do you believe resources are adequate to respond to a similar incident?

Finance	

	• Please describe novel approaches, successes and challenges faced with procurement during the COVID-19 response.
	• Please describe approaches, successes, and challenges faced with **Public Assistance reimbursement** through FEMA for COVID-19 cost tracking and reimbursement.

Closing:

- As you reflect on your experience during the COVID-19 response, do any of the following stand out to you:
    - Strengths in New Hampshire's response
    - Areas for improvement in New Hampshire's response
    - Best practices that New Hampshire adopted during the response, that should be captured into policies and plans for future disaster responses

- Are there any additional items you'd like to share before we conclude today's interview?

APPENDIX D – KEY EVENTS TIMELINE

Date	Event Description	Event Type Level
12/31/19	The government in Wuhan, China confirms that health authorities are treating dozens of cases of pneumonia of unknown cause which surfaced in a Chinese seafood and poultry market in December 2019.	International
1/17/20	The United States (U.S.) responds to the outbreak in China by implementing screenings for symptoms at airports in San Francisco, New York, and Los Angeles.	National
1/20/20	The World Health Organization's (WHO) release their first situation report, in response to China reporting 139 new cases of Coronavirus Disease (COVID-19) and three deaths. The report confirms cases in Japan, South Korea, and Thailand.	International
1/20/20	Officials in Washington state confirm the first case on U.S. soil.	National
1/20/20	The National Institutes of Health (NIH) announces that it is working on a vaccine against COVID-19.	National
1/29/20	The White House announces the formation of a new task force that will help monitor and contain the spread of the virus and ensure Americans have accurate and up-to-date health and travel information.	National
1/30/20	The U.S. reports its first confirmed case of person-to-person transmission of COVID- 19.	National
1/30/20	WHO determines that the outbreak constitutes a Public Health Emergency of International Concern.	International
1/31/20	U.S. Health and Human Services (HHS) Secretary issues a Public Health Emergency (PHE) for the U.S.	National
2/6/20	First COVID-19 death in the U.S.; link to COVID-19 is confirmed April 21.	National
2/26/20	CDC officials say that a California patient being treated for COVID-19 is the first U.S. case of unknown origin. The patient, who didn't have any relevant travel history nor exposure to another known patient, is the first possible U.S. case of "community spread."	National
2/29/20	First reported death linked to COVID-19 reported near Seattle, WA.	National

Date	Event Description	Event Type Level
3/2/20	The first positive test results for COVID-19 are identified in New Hampshire.	State
3/4/20	The CDC formally removes earlier restrictions that limited COVID-19 testing of the general public to people in the hospital unless they have close contact with confirmed COVID-19 cases.	National
3/11/20	WHO declares COVID-19 a global pandemic.	International
3/12/20	Governor Sununu announces an Insurance Department Order requiring New Hampshire health insurers to cover services associated with testing for COVID-19 without cost-sharing, and to take a series of related measures designed to promote early detection and access to prevention, treatment, and recovery services.	State
3/12/20	211NH has been mobilized to handle all COVID-19 related calls from NH residents.	State
3/13/20	Governor Sununu announces activation of the State Emergency Operations Center effective immediately to assist in the state's response to the COVID-19 outbreak.	State
3/13/20	President Trump declares a National Emergency under the National Emergencies Act, freeing up $50 billion in federal resources to combat COVID- 19.	National
3/13/20	Governor Christopher Sununu declares a state of emergency due to Novel Coronavirus (COVID-19).	State
3/15/20	The CDC recommends no gatherings of 50 or more people in the U.S. The following day, President Trump advises citizens to avoid groups of more than 10.	National
3/15/20	Governor Sununu issues Emergency Order #1 pursuant to Executive Order 2020-04 transitioning all K-12 public schools in New Hampshire to temporary remote instruction.	State
3/16/20	Governor Sununu announces that the State of New Hampshire is prohibiting scheduled public gatherings of over 50 people and transitioning restaurants and bars to mandatory offsite eating.	State
3/18/20	Governor Sununu announces the U.S. Small Business Administration approved New Hampshire's application for Small Business Administration (SBA) Economic Injury Disaster Loans, which will help small business overcome loss of revenue due to the COVID-19 outbreak	State

Date	Event Description	Event Type Level
3/18/20	The U.S. and Canada mutually agree to close their border to non-essential travel.	International
3/18/20	President Trump signs into law a COVID-19 relief package that includes provisions for free testing for COVID-19 and paid emergency leave.	National
3/19/20	Governor Sununu issues Emergency Order #9, establishing the COVID-19 Emergency Healthcare System Relief Fund, pursuant to Executive Order 2020-04.	State
3/20/20	NH National Guard begins leading planning effort for Alternate Care Sites (ACS) to provide surge capacity to hospitals.	State
3/20/20	NH National Guard: Joint Task Force (JTF)-197 activated.	State
3/23/20	New Hampshire officials announce the first death from COVID-19.	State
3/23/20	Governor Sununu issues Emergency Order #14, Temporary authorization for out-of-state pharmacies to act as a licensed mail-order facility within the state of New Hampshire; and Emergency Order #15, Temporary authorization for out-of-state medical providers to provide medically necessary services and provide services through telehealth.	State
3/24/20	Governor Chris Sununu signs Emergency Order #16 prohibiting scheduled gatherings of 10 or more people.	State
3/26/20	The U.S. leads the world in confirmed cases. The U.S. officially becomes the country hardest hit by the pandemic with at least 81,321 confirmed infections and more than 1,000 deaths.	International
3/26/20	Governor Sununu signs Emergency Order 17, ordering the closing nonessential businesses and advising citizens to stay at home.	State
3/27/20	President Trump signs a $2 trillion stimulus deal to offset the economic damage of COVID-19, producing one of the most expensive and far-reaching measures in the history of Congress.	National
3/27/20	The second death in NH from COVID-19 is reported, as the current number of cases diagnosed rises to 197.	Local
3/27/20	NH National Guard: Strategic National Stockpile (SNS) Personal Protection Equipment (PPE) mission begins.	State

Date	Event Description	Event Type Level
3/30/20	Governor Sununu signs the Relief for Workers Affected by Coronavirus (CARES) Act agreement, which provides New Hampshire with 100% funding from the U.S. Department of Labor to support benefit payments to people receiving unemployment as a result of the COVID-19 pandemic.	State
4/1/20	NH National Guard: Call Center missions begin at the Fire Academy, including the NH Employment Security call center.	State
4/2/20	According to the Department of Labor, 6.6 million U.S. workers file for their first week of unemployment benefits in the week ending March 28, the highest number of initial claims in history. Globally, the total number of COVID-19 cases surpasses 1 million, according to Johns Hopkins University's tally.	National
4/3/20	Governor Sununu signs Executive Order 2020-05 renewing the Declaration of a State of Emergency due to COVID-19 and extending the State of Emergency declared in Executive Order 2020-04 for a period of 21 days.	State
4/3/20	President Trump says his administration is now recommending Americans wear "non-medical cloth" face coverings, a reversal of previous guidance that suggested were unnecessary for people who weren't sick.	National
4/6/20	NH National Guard: Food bank mission begins.	State
4/9/20	Governor Sununu issues Emergency Orders 28 as part of the state's efforts to respond to COVID-19. Emergency Order #28: Temporary non-congregate sheltering order to reduce the spread of COVID-19.	State
4/16/20	To respond to the disproportionate impact of COVID-19 on the state's most vulnerable populations, Governor Sununu issues Emergency Order #31, Establishment of the COVID-19 Long Term Care Stabilization Program.	State
4/17/20	Governor Sununu issues Emergency Order #33, Activation of the New Hampshire Crisis Standards of Care Plan.	State
4/21/20	Governor Sununu initiated the Governor's Economic Re-Opening Task Force, comprised of bipartisan legislators, private sector leaders, and state officials. The taskforce would hold X meetings between April 21, 2020 and X.	State
4/24/20	NH National Guard: Mobile testing mission begins.	State
4/26/20	The global death toll from COVID-19 surpasses 200,000.	International
4/28/20	The U.S. passes one million confirmed cases of COVID-19.	National

Date	Event Description	Event Type Level
4/28/20	Governor Sununu issues Emergency Order #37, implementing a hiring freeze at the Executive Branch level.	State
4/30/20	NH National Guard: Fixed testing sites are operational.	State
4/30/20	President Trump launches Operation Warp Speed, an initiative to produce a vaccine for COVID-19 as quickly as possible.	National
5/1/20	As part of the state's steps to reopen the economy in a smart, phased approach, Governor Sununu announces Stay at Home 2.0, a new modified Stay-at-Home Order, in effect until May 31.	State
5/1/20	The U.S. Food and Drug Administration (FDA) issues an emergency-use authorization for remdesivir, the first authorized therapy drug for COVID-19 in hospitalized patients with severe cases.	National
5/11/20	The Trump Administration announces that the federal government is sending $11 billion to states to expand COVID-19 testing capabilities. The relief package signed on April 24, 2020, includes $25 billion for testing, with $11 billion for states, localities, territories, and tribes.	National
5/12/20	The State of New Hampshire announces the launch of a new testing site in Concord, NH for residents with COVID-19 symptoms, with underlying health conditions, over the age of 60, or who are health care workers.	State
5/15/20	Governor Sununu announces $595 million in new funding commitments for areas and industries across New Hampshire affected by the COVID-19 public health emergency.	State
5/27/20	Data collected by Johns Hopkins University reports that COVID-19 has killed more than 100,000 people across the U.S., meaning that an average of almost 900 Americans died each day since the first known COVID-19-related death reported nearly four months earlier.	National
6/10/20	New Hampshire marks 100 days in the fight against COVID-19.	State
6/11/20	Governor Sununu announces New Hampshire's Stay at Home Order will expire Monday, June 15, 2020, at 11:59 p.m., along with the cap on gatherings of 10 or less. Additionally, the governor announces that indoor movie theaters, performing arts, and amusement parks may begin reopening on Monday, June 29, 2020.	State
6/11/20	The U.S. passes 2 million confirmed cases of the virus.	National
6/15/20	NH National Guard: Call Center mission complete.	State

Date	Event Description	Event Type Level
6/15/20	Governor Sununu issues Emergency Order #52: An order regarding public health guidance for business operations and advising Granite Staters that they are safer at home including requirements for business employees to wear a cloth face covering.	State
6/30/20	NH National Guard: Additional call centers open at DOT/NHES.	State
7/7/20	The Trump administration notifies Congress and the UN that the U.S. is formally withdrawing from WHO. The withdrawal goes into effect on July 6, 2021.	International
7/10/20	The U.S. sets seven records in 11 days. On July 10, the U.S. reaches 68,000 new cases for the first time, setting a single-day record for the seventh time in 11 days. The infection rate is underscored by alarming growth in the South and West.	National
7/14/20	Governor Sununu releases the New Hampshire Grades K-12 Back-to-School Guidance, containing recommendations crafted by the School Transition Reopening and Redesign Taskforce.	State
7/22/20	Governor Sununu releases the Governor's COVID-19 Equity Response Team's report and recommendations.	State
7/22/20	The American Red Cross reports an emergency shortage of convalescent blood plasma and calls for donations.	National
8/1/20	The New York Times reports that the U.S. saw July cases more than double the total of any other month with more than 1.9 million new infections recorded in July, nearly 42 percent of the more than 4.5 million cases reported nationwide since the pandemic began and more than double the number documented in any other month.	National
8/7/20	NH National Guard completes Food Bank mission.	State
8/8/20	NH National Guard begins their second call center mission.	State
8/11/20	Governor Sununu issues Emergency Order #63, an order requiring face coverings for certain scheduled gatherings of 100 or more individuals.	State
8/16/20	Governor Sununu issues Emergency Order #65, an order authorizing assessments of civil penalties against businesses, organizations, entities, property owners, facility owners, organizers, and individuals who violate emergency orders.	State
8/16/20	The CDC begins developing a plan to distribute a COVID-19 vaccine.	National

Date	Event Description	Event Type Level
8/22/20	Global COVID-19 deaths surpass 800,000.	International
8/23/20	The FDA issues an emergency use authorization for the use of convalescent plasma to treat COVID-19.	National
9/3/20	Governor Sununu issues Emergency Order #67, establishing the Remote Learning Center Program to allow alternative options for children to participate in temporary remote instruction.	State
9/22/20	The U.S. death toll from COVID-19 surpasses 200,000.	National
9/28/20	Global deaths from COVID-19 reach 1 million.	International
9/28/20	The Office of the Governor of New Hampshire announces the state will soon be able to conduct an additional 25,000 COVID-19 rapid antigen tests per week as a result of the new shipment of Abbott BinaxNOW Rapid-Antigen COVID-19 tests distributed in the state as part of the U.S. Food and Drug Administration's effort to increase rapid COVID-19 testing across the nation.	State
9/30/20	NH National Guard completes SEOC mission.	State
11/8/20	The U.S. surpasses 10 million infections.	National
11/16/20	Governor Sununu reactivates New Hampshire's Long Term Care Stabilization Program to ensure long term care facilities have the resources needed to confront the COVID-19 pandemic.	State
11/17/20	FDA authorizes the first at-home COVID-19 test which requires a prescription from a health care provider and can return results in about 30 minutes.	National
11/18/20	The U.S. death toll hits 250,000.	National
11/19/20	Governor Sununu issues Emergency Order #74 instituting a statewide mask mandate in New Hampshire as cases rise to 529 – the state's highest total to date.	State
12/11/20	The FDA approves a vaccine by Pfizer for emergency use clearing the way for millions of highly vulnerable people to begin receiving the vaccine within days.	National
12/13/20	Pfizer begins distributing COVID-19 vaccines in the U.S.	National
12/14/20	The U.S. death toll from COVID-19 surpasses 300,000.	National

Date	Event Description	Event Type Level
12/15/20	First COVID-19 vaccine is administered in New Hampshire.	State
12/18/20	The FDA approves the Moderna COVID vaccine for emergency use, allowing the shipment of millions more doses of COVID-19 vaccines across the nation.	National
12/20/20	One million coronavirus tests have been administered in New Hampshire.	State
12/28/20	Governor Sununu announces that 13 vaccination sites will begin vaccinating first responders and high-risk ambulatory care providers as part of Phase 1A of the state's vaccination plan. Phase 1A includes high-risk health workers, first responders, and residents and staff of long-term care and assisted living facilities.	State
1/5/21	Governor Sununu issues two emergency orders as part of the state's efforts to combat COVID-19: Emergency Order #79, an order allowing registered and certified pharmacy technicians to administer COVID-19 vaccines under certain conditions; and Emergency Order #80, Medicaid Disaster Relief for the COVID-19 National Emergency, COVID-19 Vaccine Administration.	State
1/20/21	President Joe Biden halts the U.S. withdrawal from WHO.	National
1/22/21	The State of New Hampshire begins accepting vaccination appointments for individuals within Phase 1B of the state's vaccination plan. Phase 1B includes people older than 65 years of age, those medically vulnerable at significantly higher risk with co-morbidities, residents and staff of residential facilities for persons with intellectual and developmental disabilities, corrections officers and staff, and those first responders and workers not already vaccinated.	State
1/25/21	Since 1/22, just under 200,000 New Hampshire citizens have signed up for the vaccination as part of Phase 1B, and over 60% have scheduled an appointment.	State
1/25/21	The total number of New Hampshire residents who have died due to COVID-19 passes 1,000.	State
2/12/21	Governor Sununu issues Emergency Order #84, an order rescinding Emergency Orders #37 and #77, lifting the State of New Hampshire's hiring freeze implemented during the beginning of the pandemic.	State
2/16/21	The state Department of Health and Human Services receives nearly $20 million from the federal government as part of the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA) to support childcare programs across the state.	State

Date	Event Description	Event Type Level
2/19/21	Governor Sununu issues Emergency Order #85, mandating schools offer in-person instruction to all students at least two days a week starting March 8, 2021.	State
2/22/21	The death toll from COVID-19 exceeds 500,000 in the U.S.	National
2/25/21	Governor Sununu announces the New Hampshire Emergency Rental Assistance Program (NHERAP), a new rental assistance program through the Governor's Office for Emergency Relief and Recovery (GOFERR) that will provide assistance to eligible residents of New Hampshire who cannot pay their rent and utilities due to the COVID-19 pandemic.	State
2/27/21	The FDA grants emergency use authorization to Johnson & Johnson's COVID-19 vaccine, the first single-dose COVID-19 vaccine available in the U.S.	National
3/17/21	State of New Hampshire launches the Vaccine & Immunization Network Interface (VINI), the state's new COVID-19 vaccine scheduling and appointment management website, as Phase 2A scheduling begins. Phase 2A includes K-12 school and childcare staff.	State
3/17/21	Governor Sununu releases the (revised) New Hampshire Grades K-12 Back-to-School Guidance, containing updated quarantine guidance for people who are fully vaccinated or previously infected with COVID-19.	State
3/27/21 – 3/28/21	State of New Hampshire hosts a by appointment only mass vaccination site on Saturday, March 27 and Sunday, March 28 at the New Hampshire Motor Speedway in Loudon.	State
3/29/21	New Hampshire becomes the first state in New England to expand vaccine eligibility to residents 40 and over, with nearly 37,000 appointments booked. Eligibility to expand to residents 30+ on Wednesday, March 31.	State
4/2/21	The state expands vaccine registration eligibility to all New Hampshire residents 16+, capping off a week of registration that sees nearly 150,000 appointments scheduled.	State
4/9/21	New Hampshire to allow vaccines for non-residents starting April 19.	State
3/10/21 – 3/11/21	State of New Hampshire hosts a mass vaccination site, by appointment only, on Saturday, April 10 and Sunday, April 11 at the New Hampshire Motor Speedway in Loudon.	

Date	Event Description	Event Type Level
4/13/21	The State of New Hampshire announces a pause on the use of the Johnson & Johnson COVID-19 vaccine, consistent with the recommendation of the federal government after reports that six individuals in the U.S. developed a rare disorder involving blood clots within about two weeks after vaccination.	State
4/15/21	Governor Sununu announces the statewide mask mandate will expire on Friday, April 16. The announcement follows a reduction in the state's 7-day average of daily deaths to 0.6, the lowest since October of 2020 before the mask mandate had been implemented, as hospitalizations remain at a manageable level, and as over 70% of those 65+ have been vaccinated.	State
4/17/21	The global tally of deaths from COVID-19 surpasses 3 million.	International
4/21/21	Post-COVID long-haulers program for COVID-19 patients whose symptoms continue more than three months after infection begins at Dartmouth-Hitchcock Medical Center. State reports nearly 25% of the state population is now fully vaccinated.	State
4/26/21	The state Bureau of Infectious Disease Control announces New Hampshire will resume administration of Johnson & Johnson vaccine.	State
5/8/21	The Governor's Economic Reopening Taskforce issues the *Universal Best Practices* guidance, replacing all existing "Safer at Home 2.0" business operations guidance, in place since March 2020.	State
5/12/21	The State of New Hampshire opens appointments in VINI, the state's COVID-19 vaccine scheduling and appointment management website, for individuals 12 to 15 years old.	State
5/17/21	FEMA issues *COVID-19 Pandemic Operational Guidance* to support response and recovery.	National
5/18/21	For the first time in more than seven months, every community in the state of New Hampshire has fewer than 100 active coronavirus cases.	State
6/27/21	Since March 2020, 99,403 Granite Staters have tested positive for COVID-19; 2.42 million tests have been administered; 53.7% fully vaccinated.	State

APPENDIX E – GLOSSARY

AFTER-ACTION REPORT (AAR): A report covering response actions, application of the Incident Command System, modifications to plans and procedures, training needs, and recovery activities.

CARES ACT: The Coronavirus Aid, Relief, and Economic Security Act was signed into law on March 27, 2020. The bill dedicated historic government funding to support large and small businesses, industries, individuals, families, gig workers, independent contractors, and the healthcare system.

CHAIN OF COMMAND: The orderly line of authority within the ranks of incident management organizations.

CONTINUITY OF OPERATIONS (COOP): Continuity of Operations is a United States federal government initiative, required by U.S. Presidential Policy Directive 40 to ensure that agencies can continue the performance of essential functions under a broad range of circumstances.

COORDINATION: The process of systematically analyzing a situation, developing relevant information, and informing the appropriate command authority of viable alternatives for the selection of the most effective combination of available resources to meet specific objectives. The coordination process does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc.

COVID-19: COVID-19 is a disease caused by a virus called SARS-CoV-2. Most people with COVID-19 have mild symptoms, but some people become severely ill. Older adults and people who have certain underlying medical conditions are more likely to get severely ill. Post-COVID conditions are a wide range of health problems people can experience four or more weeks after first getting COVID-19. Even those who do not become severely ill from COVID-19 may experience post-COVID conditions.

DISASTER: A situation that creates an actual or imminent serious threat to the health and safety of persons or a situation that has resulted or is likely to result in catastrophic loss to property or the environment and for which traditional sources of relief and assistance within the affected area are unable to repair or prevent the injury or loss. A disaster usually exhausts local resources and requires outside help.

EQUITY: Equity is treating everyone fairly by acknowledging their unique situation and addressing systemic barriers. The aim of equity is to ensure that everyone has access to equal results and benefits.

EMERGENCY: An unforeseen combination of circumstances that calls for immediate action to prevent a disaster from developing or occurring. An emergency can usually be handled with the resources of the local unit of government.

EMERGENCY OPERATIONS CENTER (EOC): A central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management or disaster management functions at a strategic level during an emergency and ensuring the continuity of operations of a company, political subdivision, or other organization.

EMERGENCY OPERATIONS PLAN (EOP): The EOP provides the structure and processes that the organization utilizes to respond to and initially recover from an incident.

EMERGENCY SUPPORT FUNCTION (ESF): Emergency Support Functions is the grouping of governmental and certain private sector capabilities into an organizational structure to provide support, resources, program implementation, and services that are most likely needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal following domestic incidents.

ESSENTIAL FUNCTIONS: The critical activities performed by organizations, especially after disruption of normal activities.

EXECUTIVE ORDER (EO): An executive order is a directive by the executive branch of government that manages the operations of the government.

FUNCTION: In ICS, function refers to the five major activities in the ICS: Command, Operations, Planning and Intelligence, Logistics, and Finance/Administration. At the EOC the term "Management" is used in place of "Command." The term "function" is also used when describing the activity involved.

INCIDENT: An occurrence or event, either human-caused or by natural phenomena, that requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

INCIDENT COMMAND SYSTEM (ICS): The nationally used, standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with the responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

INCIDENT MANAGEMENT: The broad spectrum of activities and organizations providing operations, coordination, and support applied at all levels of government, using both governmental and nongovernmental resources to plan for, respond to, and recover from an incident, regardless of cause, size, or complexity.

INCIDENT MANAGEMENT TEAM (IMT): An incident management team is dispatched or mobilized during complex emergency incidents to provide a command-and-control infrastructure in order to manage the operational, logistical, informational, planning, fiscal, community, political, and safety issues associated with complex incidents.

JOINT INFORMATION CENTER (JIC): The JIC is a central location that facilitates operation of the Joint Information System. It is the central point of contact for all news media. Public information Officers from all participating agencies should co-locate at the JIC.

JOINT INFORMATION SYSTEM (JIS): A system that integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, timely information during crisis or incident operations.

JURISDICTION: Jurisdictions are usually incorporated locations, recognized by the U.S. Census Bureau. Jurisdictions include, but are not limited to, cities, towns, townships, boroughs, villages, counties, and parishes.

LOCAL GOVERNMENT: Public entities responsible for security and welfare of a designated area as established by law. A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments, regional or interstate government entity, agency or instrumentality of a local government, or a tribe or authorized tribal authority.

LOGISTICS: The process and procedure for providing resources and other services to support incident management.

NONPROFIT ORGANIZATION: A tax-exempt organization that serves the public interest. In general, the purpose of this type of organization must be charitable, educational, scientific, religious, or literary. It does not declare a profit and utilizes all revenue available after normal operating expenses in service to the public interest. This organization is a 501(c)(3) or a 501(c)(4) designate.

PANDEMIC: An influenza pandemic is a global outbreak of a new influenza A virus that is very different from current and recently circulating human seasonal influenza A viruses. Pandemics happen when new (novel) influenza A viruses emerge which are able to infect people easily and spread from person to person in an efficient and sustained way.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Specialized clothing or equipment worn for protection against health and safety hazards. Personal protective equipment is designed to protect many parts of the body, e.g., eyes, head, face, hands, feet, and ears.

PREPAREDNESS: Actions taken to plan, organize, equip, train, and exercise to build and sustain the capabilities necessary to prevent, protect against, mitigate the effect of, respond to, and recover from threats and hazards.

PRIVATE SECTOR: Organizations and individuals that are not part of any governmental structure. The private sector includes for-profit and not-for-profit organizations, formal and informal structures, commerce, and industry.

PUBLIC HEALTH EMERGENCY: The Secretary of the Department of Health and Human Services (HHS) may, under section 319 of the Public Health Service (PHS) Act, determine that: a) a disease or disorder presents a public health emergency or b) that a public health emergency, including significant outbreaks of infectious disease or bioterrorist attacks, otherwise exists.

PUBLIC INFORMATION: Information disseminated to the public by official sources during an emergency, using broadcast and print media. This includes: 1) instructions on survival and health preservation actions to take (what to do, what not to do, evacuation procedures, etc.), 2) status information on the disaster situation (number of deaths, injuries, property damage, etc.), and 3) other useful information (state/federal assistance available).

PUBLIC INFORMATION OFFICER (PIO): A member of the ICS Command Staff responsible for interfacing with the public and media and/or with other agencies with incident-related information needs.

QUARANTINE: Separating and restricting the movement of people exposed (or potentially exposed) to a contagious disease. A quarantine may be self-imposed (self-quarantine) or mandated by the authorities.

RECOVERY: The capabilities necessary to assist communities affected by an incident to recovery effectively.

REMOTE WORK: A work flexibility arrangement under which an employee performs the duties and responsibilities of their position and other authorized activities from an approved worksite other than the location from which the employee would otherwise work.

RESOURCE: Personnel, equipment, teams, supplies, and facilities available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an EOC.

RESPONSE: The capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred.

SOCIAL DISTANCING: A technique used to limit or slow the spread of communicable diseases by decreasing the number of opportunities for the agent to be passed from one person to another. Examples of social distancing include school or daycare closures, limitations on public meetings and gatherings, encouraging workers to telecommute, etc.

STATE EMERGENCY OPERATIONS CENTER (SEOC): The SEOC is where state, local, and federal agencies coordinate the response to a disaster, emergency, or terrorist event within the state.

STATE OF EMERGENCY: The Minnesota governor may declare a peacetime emergency in response to an act of nature, industrial accident, hazardous materials accident, or major health threat or civil disturbance that endangers life and property and for which local government resources are inadequate to handle the situation. The governor may also declare a state of emergency if a threat of armed violence, sabotage, or act of terrorism is imminent.

STRATEGY: The general plan or direction selected to accomplish incident objectives.

SUBJECT MATTER EXPERT (SME): SME provides the knowledge and expertise in a specific subject, business area, or technical area for a project/program.

UNIFIED COMMAND: An ICS application used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions.

VACCINE: A substance used to stimulate the production of antibodies and provide immunity against one or several diseases, prepared from the causative agent of a disease, its products, or a synthetic substitute, treated to act as an antigen without inducing the disease.

APPENDIX F – ACRONYMS

Acronym	Meaning
ACS	Alternate Care Site
CARES	Coronavirus Aid, Relief, and Economic Security
CDC	Centers for Disease Control and Prevention
COG	Continuity of Government
COOP	Continuity of Operations
CRRSA	Coronavirus Response and Relief Supplemental Appropriations
DHHS	Department of Health and Human Services
DOT	Department of Transportation
DPHS	Division of Public Health Services
EMS	Emergency Medical Services
EOP	Emergency Operations Plan
ESF	Emergency Support Function
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FSTEMS	Division of Fire Standards and Training & Emergency Medical Services
GOFERR	Governor's Office for Emergency Relief and Recovery
HAN	Health Alert Network
HSEM	Homeland Security and Emergency Management
IA	Individual Assistance
ICS	Incident Command System
IIS	Immunization Information System
IMT	Incident Management Team
JIC	Joint Information Center
JIS	Joint Information System

Acronym	Meaning
JTF	Joint Task Force
NHERAP	New Hampshire Rental Assistance Program
NHNG	New Hampshire National Guard
NIH	National Institute of Health
NIMS	National Incident Management System
PA	Public Assistance
PHCOC	Public Health Operations Center
PHE	Public Health Emergency
PIO	Project Management Team
PMT	Personal Protective Equipment
PPE	Personal Protective Equipment
PSAP	Public Safety Answering Points
RPHN	Regional Public Health Networks
SARS	Severe Acute Respiratory Syndrome
SBA	Small Business Administration
SEOC	State Emergency Operations Center
SEOP	State Emergency Operations Plan
SME	Subject Matter Expert
SNS	Strategic National Stockpile
STRRT	School Transition Reopening and Redesign Task Force
VAMS	Vaccine Administration Management System
VINI	Vaccine and Immunization Network Interface
VPN	Virtual Private Network
WHO	World Health Organization