

Preparing for the Next Pandemic Response Through Strengthened Collaboration

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Executive Summary

This report synthesizes the insights from the National Emergency Management Association (NEMA) Pandemic Workshop hosted in June of 2023. The Centers for Disease Control and Prevention (CDC) funded the project. The workshop brought together emergency management directors and state public health officers from eight states to discuss their collaborative response to the COVID-19 pandemic in the very early phases of the response, January 2020 – January 2022. The particular focus was on the identification of friction points, successes, and opportunities for increased collaboration. Federal partners were invited to discuss issues with federal integration into state COVID-19 response efforts. The discussions highlighted a range of complex issues encompassing roles and authorities, data collection and sharing, equity concerns, and communication, with an emphasis on state and local levels as well as rural and urban experiences.

Key areas for improvement within the emergency management (EM) sector included strong consensus on the need to enhance data collection, sharing, and analysis with public health (PH) and federal partners. Also, to address equity, especially in providing services to vulnerable populations, given the pandemic's disproportionate impact on marginalized communities. The report emphasizes the importance of emergency management embracing data from public health, enhancing collaboration, and diversifying hiring practices.

Despite the public health (PH) sector's historical expertise in pandemics and a prevailing emergency planning assumption that PH agencies would take the lead in a pandemic, COVID-19 posed unique challenges for health departments. From maintaining continuity of operations, to "ramping up" to mount a massive field operation (to manage contract tracing, testing, and vaccination sites) due to pharmaceutical supply chain issues, a complex political environment, and combatting contested information. Key areas of major concern of public health included: workforce challenges, fractured infrastructure, and a need for more agile decision-making.

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Executive Summary, cont'd

Recommendations for both emergency management and public health were established:

- Establishing joint-agency training and agreements related to data collection and information sharing;
- Collaboration on data dashboards to achieve a "common operating picture;"
- Diversifying hiring practices, and infusing equity considerations into their policies and actions; and,
- Structural changes such as joint planning efforts, collocating organizations during a disaster, and embedding staff in each other's agencies were suggested.

The report underscores the importance of collaboration between emergency management and public health during pandemics, with a focus on enhancing their relationships, clarifying roles, and addressing the identified challenges. It also highlights the successful aspects of the pandemic response, particularly in information sharing, testing, vaccine distribution, equity considerations, and continuity of operations. Lastly, it addresses opportunities for federal integration with state efforts, emphasizing data sharing, supply chain resilience, privacy concerns, and prioritization of equity and vulnerable populations.

The lessons and recommendations offered in this report provide valuable insights for improving future pandemic preparedness and strengthening the collaboration between emergency management and public health at all levels of government.

Introduction

he COVID-19 pandemic posed a unique challenge for state and federal officials, necessitating seamless coordination among various levels and sectors for managing the crisis. The pandemic response underscored the importance of interdisciplinary coordination, within both successes and areas needing enhancement. Despite occasional delays, effective data collection and sharing were achieved, bolstering decision-making and situational awareness. This was facilitated by pre-existing partnerships that helped navigate traditional barriers. The swift development and dissemination of vaccines, along with the establishment of testing and alternate care sites, were notable achievements, showcasing exemplary coordination between emergency management and public health. However, these processes were identified also as areas for further improvement. The pandemic shed light on existing health disparities, prompting a concerted effort to address these vulnerabilities, aided by the established synergy between public health and emergency management. Past experiences with public health emergencies like H5N1, SARS, and Ebola Virus Disease contributed to the robust collaboration observed during the pandemic. Both sectors commended the maintenance of essential functions, attributing it to adherence to pre-established continuity of operations planning, which underpinned optimal functioning throughout the extended pandemic.

Funded through a cooperative agreement between the Centers for Disease Control and Prevention (CDC) and the National Emergency Management Association (NEMA), academics, and The Equitist were selected to design a workshop to bring together emergency management and public health leaders to discuss their collaborative response to the COVID-19 pandemic in the very early phases of the response, January 2020 - January 2022. Invited states included: Georgia, Virginia, Maryland, Mississippi, Oregon, Illinois, Tennessee, and Florida. Representatives from the Federal Emergency Management Agency (FEMA), CDC, NEMA, and Association of State and Territory Health Officials (ASTHO) also participated in the workshop.

Gleaned from the workshop were recommendations for both emergency management and public health:

- Establishing joint-agency training and agreements related to data collection and information sharing;
- Collaboration on data dashboards to achieve a "common operating picture;"
- Diversifying hiring practices, and infusing equity considerations into their policies and actions; and,
- Structural changes such as joint planning efforts, collocating organizations during a disaster, and embedding staff in each other's agencies were suggested.

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Introduction, cont'd

Key issues related to emergency management and public health coordination were researched via an in-depth literature review and a survey disseminated by NEMA to inform the development of the workshop. This white paper outlines the summary of the research and provides recommendations for closing gaps and enhancing preparedness for future disasters to inform new policies and programs.

The whitepaper is divided into four key areas:

- 1. Discussion of Emergency Management Lessons Learned
- 2. Discussion of Public Health Lessons Learned
- 3. Lessons Learned for both Emergency Management and Public Health
- 4. Federal Integration with State COVID-19 Response Efforts

It is important to reflect on and recognize the areas in which emergency management and public health successfully responded. But to also identify the key areas for improvement in emergency management and public health based on lessons learned in response to COVID-19 and their discussion of these key areas and related recommendations that are covered in the following pages.

Emergency Management Lessons Learned

The focus for emergency management (EM) professionals in reflections of the pandemic response covered a wide range of topics with respect to how emergency management and public health (PH) did and did not work well together.

For a pandemic response, the following topics, with respect to each entity and their respective staff, were of most concern:

- Clarity of roles and authorities,
- Performance of each discipline within unified command.
- Performance of each within incident management
- Common use of other coordinating bodies and/or mechanisms.
- Communication between them, data collection and sharing,
- · How equity concerns manifested in plans and processes during response,
- Information sharing between the disciplines, and
- Use of situational awareness technologies (e.g., WebEOC).

Collaboration around decision-making, the use of information to inform decisions, risk communication, personal protective equipment, testing, contact tracing, vaccine distribution, accessibility of information, and accessibility of vaccines help drive the lessons learned in three categories: actions that emergency management needs to take to improve its performance in the next pandemic, actions that public health needs to take, and actions that both public health and emergency management need to take.

With respect to areas for improvement for EM, two specific areas for improvement stood out as high priority areas: (1) data collection and sharing, and (2) addressing equity issues and the protection of vulnerable populations. PH shared the same high priority areas.

Data Collection and Sharing: EM and PH professionals agreed that EM needs to improve in the areas of data collection, sharing, and analysis. Establishing standardized data reporting protocols and interoperable systems across jurisdictions would have facilitated better surveillance, situational awareness, and decision-making. Additionally, addressing privacy concerns and ensuring the secure sharing of data would foster more effective collaboration between public health and emergency management.

Equity and Vulnerable Populations: COVID-19 exposed existing inequities and vulnerabilities within communities. The pandemic had a significant impact on mental health and psychosocial well-being. Marginalized and vulnerable communities, already facing disparities in mental healthcare access, experienced increased stress, anxiety, and depression due to factors such as economic hardships, isolation, and systemic racism (Nunez-Smith et al., 2021). Furthermore, members of marginalized and vulnerable communities often work as essential workers, including healthcare personnel, frontline workers, and in industries with high exposure risks. Inequities in workplace protections, access to personal protective equipment (PPE), and paid sick leave contributed to disparities in occupational health outcomes for individuals working in these types of positions. The intersection of the disproportionate risk and impacts due to social inequity with the added health and safety risks due to the nature of employment for some drove inequitable COVID-19 health outcomes for members of marginalized communities (Nunez-Smith et al., 2021). >>>

Emergency Management Lessons Learned, cont'd

Efforts to address health disparities, ensure equitable access to testing and healthcare, and provide targeted support to marginalized and vulnerable populations were slow to manifest and/or less than robust in many states. These issues have been identified as among the most important for the United States to address before the next pandemic (Nunez-Smith et al., 2021), and each state has a role to play in ensuring more equitable approaches and outcomes next time.

Emergency Management cannot control the drivers of inequity, marginalization, and social vulnerability (e.g., political power, distribution of resources, access to education, etc.). Yet, COVID-19 exposed EM's overall lack of knowledge regarding social vulnerability, access to robust data related to social vulnerability, capability to utilize such data to drive equitable approaches to response, and capability to engage meaningfully with

vulnerable populations. PH entities and the professionals that serve them have expertise in all of these areas; yet EM and PH did not collaborate as early or effectively as would have been ideal in all jurisdictions or at all levels.

With respect to where EM could learn lessons from the COVID-19 response, a lack of training in the areas of data collection, analysis, and application and social vulnerability and equity were identified as a partial explanation for EM's performance. Additionally, a lack of understanding of where relevant forms of data existed within state agencies or other organizations on the part of EM staff hindered their efforts. Finally, the lack of diversity of EM staff at the state level and weak pre-response relationships with PH staff at the state level may partially account for the performance observed. Both explanations were offered in PH as well.

Potential Solutions:

- EM needs training related to data collection, agencies that have data, and how to analyze and apply data in decision making,
- · EM needs to embrace data gathering from a variety of agencies, to include PH and, as importantly, learn to apply that data across EM mission areas,
- · EM and PH may benefit from collaborating to develop joint data dashboards and their use on an ongoing basis,
- EM needs to rely more on PH day-to-day for collaboration to innovate solutions to complex problems as well as their data and expertise related to community engagement, social vulnerability, and equity-driven decisionmaking and resourcing,
- EM needs to diversify hiring at all levels and skill sets for which hiring,
- · EM needs to infuse training related to what equity means and how to live it out through policy and their work across the country at all levels, and
- · EM can benefit from solidifying a structural approach (e.g., a task force) to infusing equity considerations and approaches for every event in policy.

Public Health Lessons Learned

¬he unprecedented scale and scope of the COVID-19 response and the need to work closely with EM leaders for such an extended duration felt as a unique and unfamiliar working environment for most PH leaders which led to some successes as well as opportunities for improvement.

Industry-specific issues of concern were shared by PH and EM as identified challenges to the response and serve as two critical areas for improvement within PH.

Public Health Workforce Challenges:

Workforce challenges center on the ongoing issues of burnout and turnover that were only further exacerbated by the pandemic. Funding mechanisms that largely rely on time and activity-constrained grant funding for PH roles makes adequate preparation for future public health emergencies incredibly challenging.

Potential Solutions:

- PH can look to other state PH agencies and EM who have figured out the COVID-19 -related workforce recruitment and retention.
- work with EM agencies to leverage the use of emergency or "disaster" funding to expand workforce and close manpower gaps, and
- · PH agencies and staff to consider emergency response as a core duty and incorporate it into hiring/onboarding process with staff.

Public Health Fractured Infrastructure:

Participants universally lamented a current and history of disinvestment in PH, that has largely resulted in a broken and archaic PH infrastructure. Public health as a system is not equipped with the state-of-the-art technology needed to quickly respond to the needs of the public in an emergency. For example, the use of fax machines to send and receive COVID-19 test results, and reliance on spreadsheets to capture and categorize information verses more sophisticated and efficient software that is readily accessible in other parts of the healthcare ecosystem.

Potential Solutions:

In acknowledgement of the complexities with increasing resource allocation to PH, the following are suggested solutions:

- PH will benefit from learning from EM about federal resources for procurement and how to use them and develop policies like EM to address these issues, and
- PH needs to generate data and support to justify increased funding for pandemic preparedness.

Ways of Working in Public Health:

The tendency to prioritize accuracy and data collection over action is a habitual norm in a PH environment, however in reflection one can see the double-edged sword; on one hand, accuracy and data are essential, but not at the expense of intervening in an emergency. PH as an industry must become more agile and adept at decision-making with urgency and communicate more effectively with the public.

Potential Solutions:

- PH professionals need opportunities to learn unified command and practice working within it, and
- PH agency public information officers (PIOs) need more training related to crisis communications (in addition to others, like the Governor's communication teams).

Lessons Learned for Both Emergency Management and Public Health

ver the course of the response to COVID-19, EM and PH reported an improvement in the partnership between the two sectors.

Yet, those partnerships were not as robust as would have been ideal at the onset of COVID-19. Professionals in both sectors need to continue to develop and deepen those partnerships with each other, to clarify roles and grow in the understanding of their respective fields to better meet the challenges associated with the next pandemic.

Organizational and Structural Arrangements:

Had EM and PH had better alignment day-to-day, professionals from each sector may have been better positioned for collaborative, coordinated efforts during the COVID-19 response. EM and PH regions were typically not aligned within states before the pandemic. EM and PH entities were not typically collocated (e.g., they were typically in different buildings altogether). Leading up to the pandemic, EM staff had not typically been embedded in PH entities or vice versa, and response plans did not incorporate plans to embed key staff during pandemics (e.g., during the pandemic it would have been ideal for PH financial staff to embed with EM financial staff and the same for planners. PIOS, and decision-making level staff). These structural realities combined to hinder collaboration and coordination between EM and PH in many states.

Planning, Training, Exercises, and Staffing:

Across many states, EM and PH did not train to plans and exercise, pre-pandemic, in such a way that multiple levels of staff from both entities were engaged and exercised to the point of failure together. EM and PH staff routinely attend separate training courses and separate conferences before the pandemic response, and this reality too helps us understand why collaboration and coordination between the two entities was less than ideal in many states. Before the pandemic, both EM and PH were understaffed in many states. In addition, adequate arrangements had not been made to surge staff from other agencies to complement their respective workforces or to quickly scale up by identifying vendors/private companies, consultants, academics etc., and establish contracts with them to support during pandemics. Severe staff shortages led to long hours, stress, burnout, and retention issues in both EM and PH agencies across the country. Self-care and resilience practices were not common across all staff, in both sectors, and in all states. Such practices would not alone have countered the effect of a lack of staffing but would have supported the staff that had to work during the pandemic in incredibly challenging circumstances. >>>

Lessons Learned for Both EM and Public Health, cont'd

Recommendations:

- EM and PH need to continue to develop and deepen the partnerships they developed during the COVID-19 response and incorporate those partners into their planning,
- core competencies clarification for EM and PH to support role clarity and incorporate into the above education and educate EM and PH about the other,
- · align EM and PH regions and staff,
- collocate organizations and embed EM and PH staff in the other's agencies as much as possible (e.g., job rotation),
- · build embeddedness more into plans (e.g., PH financial personnel to collocate with EM financial counterparts in events, same for planners, PIOs/those putting out communications, and decision-maker level personnel),
- · EM and PH need to train to plans and exercise in such a way that multiple levels of staff are engaged and exercise to the point of failure together,
- · EM and PH need to examine how we encourage and build self-care/resilience in teamsand what day-to-day practices we can put in place to use within each field,
- pursue integrated training and conferences as opportunities for cross-training (i.e., where PH teaches EM key elements and vice versa) and relationship building,
- · explore mechanisms for EM and PH to pull in staff from other agencies to augment the workforce should another pandemic occur, and
- EM and PH need to continue to develop the ability to quickly scale up by identifying vendors/private companies, consultants, academics, etc. and establish contracts with them to support that effort.

Federal Integration with State **COVID-19 Response Efforts**

ederal resources, expertise, and support are crucial in achieving a seamless response, as state officials look towards their federal counterparts for guidance and resources during disasters. The need for closer coordination between federal agencies and state-level EM and PH will help to ensure a more effective response to future pandemic responses.

The federal government's integrated response with state authorities to the COVID-19 response demonstrated several successes. The distribution of testing supplies and vaccines at an unprecedented scale was one such achievement. Operation Warp Speed facilitated the rapid development and distribution of vaccines, which played a crucial role in curbing the spread of the virus and lessening the burden on states. The deployment of federal resources also supported states in building temporary alternate care facilities, increasing the availability of medical supplies, and ensuring that healthcare systems did not become overwhelmed. In states heavily impacted by COVID-19, the deployment of the active-duty military to assist

with and construction and operation of Axulilary Communications Service (ACS) and points of distribution (PODs), and federal Department of Health and Human Services disaster medical assistance (DMAT) and mortuary (DMORT) teams helped lesson the overwhelming demands placed on state and local resources. Financial assistance to the states in the form of massive pandemic grants became the driving force behind staving off food insecurity, homelessness and assuring that state governments could take care of those most at-risk for increased morbidity and mortality from COVID-19. Despite the successes, there were evident opportunities for improvement in the federal-state integration during the pandemic.

Recommendations:

- Standardized data reporting protocols and interoperable systems across jurisdictions would have facilitated better surveillance and decision-making. Collaborative data dashboards between levels of government for EM and PH is a potential area of collaboration to develop joint situational awareness and to facilitate real-time information sharing and decision-making,
- Privacy concerns and secure data sharing must also be addressed to foster collaboration effectively,
- Pharmaceutical and medical supply chain preparedness and resilience is a cross-cutting concern, thus federal systems need to be created to safeguard the domestic manufacturing of pharmaceuticals, including precursor chemicals, and medical supplies and equipment,
- · Prioritization of equity and the protection of vulnerable populations by the federal government could enhance federal-state response. The pandemic exposed disparities in healthcare access, particularly among marginalized communities. Strengthening coordination between PH and social service agencies, community-based organizations, and community leaders is essential to address these disparities effectively.

Conclusion

or both EM and PH to arrive at the same areas of lessons learned and the same recommendations for their respective fields underscores the importance of collaboration in preparedness and response for the next pandemic response. The lessons and recommendations applied to the sectors at all levels of government is a signal that the need for change is strong in these areas and that professionals in both fields are invested in leading that change.

There are some limitations with this effort that prohibit making generalized conclusions regarding the primary lessons each field needs to learn before the next pandemic and what each must do to improve their respective performance in the future. Nevertheless, the lessons learned, and recommendations reported here are valuable in that they represent a significant viewpoint within a finite time of history. The recommendations offered provide insights for EM and PH to pursue and there is a support role for appropriate agencies at the federal level to play in states' full implementation of them.

It is important to note that there are important contextual elements (e.g., burnout, high turnover, funding, authorities) that drive outcomes during response that are greater than what EM and PH in one state can do that will enhance response effectiveness. These contextual elements will impact effectiveness, even should EM and PH agencies across the U.S. carry out the recommendations offered here.

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Appendix 1. NEMA Pandemic Workshop Agenda

NEMA Pandemic Workshop June 6 - 7, 2023 Omni CNN Hotel Atlanta, GA

Designed to bring together public health and emergency management professionals for insights of the onset of the COVID-19 pandemic response, January 2020 - January 2022. Cultivating recommendations on how a Nation can grow stronger in thinking of diversity, equity, and coordination first in response for the next public health emergency.

Agenda: Tuesday, June 6

7:30 am

Registration/Breakfast (provided)

8:30 am

Welcome/Introductions

8:40 am

Level Setting/Overview of the Day

Facilitator: Dr. Donell Harvin

Speakers: Mr. Curtis Brown, Dr. Jessica Jensen,

and Dr. Lauren Powell

January 2020 – January 2022. Take the moment to pause and reflect as we move through the historical timeline of the response and take note of the decisions and actions that impacted the experience. Be prepared to reset back to the earlier days of the response for discussion on the experience and events that occurred.

10:05 am

Focus Groups by Discipline:

Public health and emergency management professionals will be divided into groups to gain insights: Be prepared to share what went well and what actions should be recommended for the response next time?

11:00 am

Tracking what we learned.

Facilitators: Dr. Donell Harvin, Mr. Curtis Brown, Dr. Jessica Jensen, and Dr. Lauren Powell

Bringing the larger group back together, a facilitated discussion will unfold as the two groups discuss the common threads of the response that went well and what may be replicated.

Noon

Lunch (provided)

1:00 pm

Tension Points

Facilitator: Dr. Donell Harvin

Speakers: Dr. Shamarial Roberson, former Deputy Secretary for Health, Florida Ellis Stanley, Emergency Management SME, Dr. Marion D. Bell, Homeland Security and Emergency Management Professor, Savannah State University

As the rubber hit the road, speed bumps occurred. A facilitated discussion will focus on tension points; areas that needed a great deal of improvements; and how best those moments were handled.

2:00 pm

Focus Groups by Discipline

Public health and emergency management professionals will be divided into groups to gain insights: Be prepared to share insights on the tension points your agency experienced and how best those were resolved (or not).

3:15 pm

Tracking what we learned.

Facilitators: Dr. Donell Harvin, Mr. Curtis Brown, Dr. Jessica Jensen, and Dr. Lauren Powell

Bringing the larger group back together, a facilitated discussion will unfold as the two groups discuss the common threads of the response for tension points and how best those were resolved.

4:00 pm

The Recommendations

Facilitators: Dr. Donell Harvin, Mr. Curtis Brown, Dr. Jessica Jensen, and Dr. Lauren Powell Crafting the insights of the day into recommendations.

4:30 pm

Adjourn for the day

Appendix 1. NEMA Pandemic Workshop Agenda, cont'd

NEMA Pandemic Workshop June 6 - 7, 2023 Omni CNN Hotel Atlanta, GA

Agenda: Wednesday, June 7

7:30 am

Breakfast (provided)

8:30 am

Welcome

Facilitator: Dr. Donell Harvin, Mr. Curtis Brown, Dr. Jessica Jensen, and Dr. Lauren Powell

8:40 am

The Federal and State Coordination

A discussion on the federal operations and coordination with the states during the pandemic response. Be prepared to share insights on the coordination between federal partners.

10:00 am

Recommendations

Facilitators: Dr. Donell Harvin, Mr. Curtis Brown, Dr. Jessica Jensen, and Dr. Lauren Powell Crafting the insights from the workshop into recomendations.

11:00 am

Closing Remarks

11:15 am Adjourn

Appendix 2. Pandemic Workshop Attendees

Charlisa Bell, MSHI, CBCP, MEP, GA-CEM

Deputy Director, Public Health **Emergency Preparedness** GA Department of Public Health

Xavier Crockett

Director, State Health Protection GA Department of Public Health

Thomas Dobbs, MD, MPH

Dean

University of Mississippi Medical Center Former State Health Officer. MS State Department of Health

Chas Eby, MA

Deputy Executive Director MD Department of Emergency Management Additional titles: Chief, State Mass Vaccination Centers and Multiagency Coordination Commander

Nicole Estes

Lead Partner Liaison (PHA) Program Planning and Development Unit Division of State and Local Readiness (DSLR) Office of Readiness and Response (ORR) Centers for Disease Control and Prevention

Clayton French, Jr.

Deputy Director MS Emergency Management Agency and Office of Homeland Security

Scott Gauvin

Manager of Strategic Operations and Preparedness IL Emergency Management Agency and Office of Homeland Security

Parham Jaberi

Deputy Director for Medical Services Fairfax County (VA) Health Department Former Chief Deputy Commissioner, VA Department of Health

James Joseph

Chief of Staff Tidal Basin

Former Director of External Affairs, FEMA (July 2021 -Jan. 2022) and Former Regional Administrator, Region 5, FEMA (Jan. 2020 - June 2021)

Niesh Kalyanaramna, MD, FACP

Deputy Secretary- Public Health Services MD Department of Health

Susan Kansagra, MD, MBA

Director

NC Division of Public Health

Greg Nimmo

Recovery Division Chief IL Emergency Management Agency and Office of Homeland Security

Norman Oliver, MD, MA

McChrystal Group Former State Health Commissioner, VA Department of Health

Andrew Phelps

Vice President of Planning and Risk Reduction AC Disaster Consulting Former Director, OR Office of Emergency Management

Shamarial Roberson, PhD

President of Health and Human Services **Indelible Business Solutions** Former Deputy Secretary for Health. Florida Department of Health

Akiko Sato, MPH

Interim Business Director, OR State Public Health Laboratory Oregon Health Authority Former Director, COVID-19 Response and Recovery Unit, OR Health Authority

Patrick Sheehan

Director

TN Emergency Management

Appendix 2. Pandemic Workshop Attendees, cont'd

Ellis Stanley, Sr.

Managing Partner Ellis Stanley Partners, LLC

Gracia Szczech

Regional Administrator FEMA Region 4

Todd Talbert, MA

Associate Director, Program Planning and Development Division of State and Local Readiness, Office of Readiness and Response Centers for Disease Control and Prevention

Alicia Tate-Nadeau

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