

▶ DIRECT FROM THE NEHA PREPAREDNESS PROGRAM COMMITTEE

Coordinating Environmental Health Preparedness Across Sectors

Kai Elgethun, MPH, PhD, REHS, DAAS
 Liz Walker, PhD
 Sauda Yerabati, MPH
 Tania Busch Isaksen, MPH, PhD
 Jesse C. Bliss, MPH, PhD
 Amy Chang
 Charissa Cooper, REHS
 Shelby Haddeland, REHS
 David T. Dyjack, DrPH, CIH

Editor's Note: The National Environmental Health Association (NEHA) strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we are pleased to feature a column from the NEHA Preparedness Program Committee. Our organization has several committees made up of subject matter experts who are dedicated to environmental health topics including body art, climate change, food safety, preparedness, vector control, and more. These committees provide guidance, input, and expertise to NEHA leadership and staff, the environmental health workforce, and partner organizations.

The conclusions of this column are those of the author(s) and do not necessarily represent the official position or views of NEHA or of author affiliations.

Dr. Kai Elgethun, Sauda Yerabati, Charissa Cooper, and Shelby Haddeland are members of the NEHA Preparedness Program Committee. Dr. Liz Walker and Dr. Tania Busch Isaksen were facilitators of the panel held at the NEHA 2022 Annual Educational Conference & Exhibition. Dr. Jesse Bliss, Amy Chang, and Dr. David Dyjack are NEHA staff members.

Introduction

The National Environmental Health Association (NEHA) recognizes the important role of the environmental public health (EPH) workforce in public health preparedness, response, and recovery from emergencies and disaster-related events. NEHA established the Preparedness Program Committee to convene subject matter experts to showcase the significance of EPH within emergency preparedness and to advance best practices. The committee is made up of professionals from public and private sectors with EPH and emergency management expertise.

The mission of the NEHA Preparedness Program Committee is to serve as a resource for the organization and for the EPH pro-

profession in preparing for, responding to, and recovering from emergencies and disasters to create more resilient communities and to minimize death, illness, and injury. The committee champions the efforts of EPH professionals who respond to emergencies and disaster-related events. Committee activities include the following:

- Provide guidance on NEHA preparedness programs and projects.
- Identify training gaps and emerging issues in EPH preparedness.
- Promote and disseminate materials and resources developed by NEHA and the committee.
- Identify EPH preparedness funding and other opportunities to engage and support the workforce.

In 2022, committee chairs convened a panel at the 2022 NEHA Annual Educational Conference (AEC) & Exhibition held in Spokane, Washington, on June 28–July 1. The panel engaged the audience in a brainstorming session on the topic, “Coordinating Environmental Health Preparedness Across Sectors.” The audience, panel, and facilitators represented sectors that are active in EPH preparedness and response, including nonprofit organizations, nongovernmental organizations (NGOs), and voluntary organizations active in disaster (VOADs). These contributors detailed the challenges to coordination and provided recommendations regarding the need to improve this coordination across local, state, tribal, territorial, federal, NGO/VOAD, and other sectors.

Challenges

The following challenges were identified by the panel as barriers that impede EPH preparedness coordination across sectors.

- Staffing shortages and turnover were noted as recalcitrant issues. COVID-19 burnout among EPH professionals and a booming job market in more lucrative fields have made the problem even more pronounced in the past few years.
 - » Funding is needed to specifically support EPH preparedness staffing. This funding is especially critical to support the EPH workforce at the local level where EPH professionals are needed on the front lines.
 - » Dedicated EPH preparedness coordinators are needed. For example, there are only three EPH emergency preparedness coordinators in California funded by the Public Health Emergency Preparedness (PHEP) cooperative agreement at the state level, which is inadequate for such

a populous state. Who else can coordinate and help?

- » Many new recruits lack expertise in operational processes and norms.
- » Due to staff turnover, it is often difficult to find the right point of contact. Furthermore, agency websites are often out-of-date and list people who are no longer employed.
- » Preparedness and response staff are often different people because response requires more people and many responders are volunteers.
- » Health department leadership is often unfamiliar with the Incident Command System (ICS), which can lead to their reluctance to fully staff a response.
- » Local EPH staff are funded to provide fee-for-service regulatory work such as permitting and compliance enforcement. Operational systems and structures for routine work are not conducive to emergency preparedness, which has repercussions for the entire disaster management lifecycle. For example, if EPH is not involved in developing hazard mitigation, response, and recovery plans, capability gaps will be pervasive. The capacity gaps are frequently demonstrated as a lack of formal procedures for activation, communication, and coordination during an emergency.
- Interpersonal challenges exist, some of which are due to the way different agencies and groups are structured and some result from communication breakdowns.
 - » The ongoing process of identifying which groups are most important to build relationships with is necessary for success but is time-consuming to conduct.
 - » Interagency and interpartner coordination does not frequently happen in preparedness, which translates to poor coordination in response.
 - » Agencies do not always use the same language or terminology (e.g., job titles, roles differ by agency).
 - » Local EPH and emergency management often do not interact.
 - » EPH is organizationally separated from public health in many jurisdictions. Seamless integration of Emergency Support Function (ESF) 8 partners (public health and medical services) is the foundational bedrock for the coordination
- of policies and procedures upstream to operations downstream.
- » Roles and responsibilities are not well defined, which adds to a lack of awareness and understanding of the roles of EPH in disasters among the larger emergency management community.
- » The scope of each group is not well defined and often overlaps.
- » ICS terms are defined, but there is no enforcement of their proper use.
- Technologies and tools that responders use are often incompatible with one another, including communications technology, software, and databases.
 - » Data sharing is challenged by incompatible technology platforms.
 - » Maintenance of software and online content updates vary depending on the IT capacity of agencies or groups.
 - » The continuity of IT platforms across state lines is uneven (e.g., WebEOCs [Emergency Operations Centers], ESSENCE [Electronic Surveillance System for Early Notification of Community-Based Epidemics]).
 - » Job action sheets, mutual aid resource requests, and other tools are outdated or irrelevant to EPH.
 - » Databases are not updated regularly. Further, dates are not included to indicate when the last update took place, which makes it difficult to determine how current is the information.
 - » In most organizations, there is a lack of support for database technologies.
 - » Problems with continuity and interoperability of software (e.g., incompatibility of GIS software versions).
- Training challenges limit the number of qualified people working in preparedness. Initial and continuing education training to maintain certifications is challenging.
 - » Meaningful continuing education opportunities that specifically support EPH preparedness, response, and recovery professionals are lacking.
 - » ICS curricula do not cover EPH.
 - » There is not enough opportunity to participate in training exercises, in part because EPH professionals are often not invited.
 - » Training exercises that require EPH expertise are infrequently held. As previously stated, a lack of funding for preparedness precludes the par-

ticipation of EPH staff in interagency exercises.

- » There is a disconnect between the needs of EPH professionals and the training offered by local fire departments and emergency medical services (EMS).
- » There is a shortage of communication training for EPH preparedness professionals.
- » Language, definitions, and terminology are not used consistently and vary by agency, group, and geographic region.

Recommendations

The following recommendations were identified by the panel as solutions for increasing coordination across sectors.

- Perform a high-level “landscape analysis” to assess connectivity or the lack of connectivity within emergency preparedness. Given the consistent challenges related to a lack of coordination, mapping the existing emergency preparedness ecosystem of federal, state, tribal, territorial, and local agencies with an honest assessment of what is and is not well coordinated is needed.
- As a first step for local improvements, inventory everyone in your geographic area who works in the fields of emergency preparedness and management. Identify which groups and people are most important for building relationships with. Identify who is working well together and who needs to be introduced or invited to the table.
- Set a regular schedule for coordination meetings of entities involved in EPH preparedness and response (e.g., regional response teams). Regular meetings of EPH professionals that are led by and focus more specifically on this sector can help information, ideas, and best practices transfer across the sector and demonstrates excellence and leadership to other emergency preparedness sectors and entities.
- Leverage existing resources that help coordination. Many tools and approaches already exist and should be first considered to avoid wasted time and energy. Examples include the following:
 - » Laboratory Response Network for Chemical Threats from the Centers for Disease Control and Prevention (<https://emergency.cdc.gov/lrn/chemical.asp>).
 - » Environmental Health Training in Emergency Response (EHTER, www.ehter.org).

cdc.gov/nceh/ehs/elearn/eheter.htm) and other training.

- » Local emergency planning committees (LEPCs)—the EPH workforce needs to be at the table.
- » Rapid response teams (RRTs)—the EPH workforce is at the table.
- » Policy statement from NEHA on preparedness to show the added value of the EPH workforce (www.neha.org/Images/resources/NEHA-Policy-Statement-EH-Role-Preparedness-Final-Nov-2021.pdf).
- » Important role of social services (e.g., woman, infant, and children [WIC] services; services for older adults and people with disabilities). These services are already embedded in communities and can convey key preparedness messages to individuals and assist with disaster recovery.
- » Important role of NGOs: These organizations represent local voices and vulnerable groups and communicate needs to government emergency services at all levels, including representation of economic interests (e.g., tourism).
- Leverage faculty and university resources in coordination to improve preparedness, response, and recovery activities. Both state and local emergency preparedness can expand capacity by communicating gaps and needs to academia.
 - » Universities often have the perspective and training to design projects that will benefit the local EPH workforce.
 - » Universities often have the resources to provide training.
 - » University faculty do important research on technology and platforms that benefit all sectors (e.g., drones, environmental sampling).
- Leverage NGOs/VOADs to improve preparedness, response, and recovery activities. As possible, build relationships with local organizations that deliver critical services or represent vulnerable groups to enhance preparedness and define a system for communication and working together during a disaster. This work can enhance the response through predefined roles and processes, and hopefully minimize confusion.
- Increase grants to local agencies from states to enhance emergency preparedness. Such leadership from the state level

could ensure consistency, standardization, and interoperability of local preparedness within states. This work was recently accomplished in Illinois where funding to address the following was made available:

- » State grants to facilitate coordination and equipment sharing.
- » State grants to ensure software and communications are synchronized across the state.
- » State-funded regional coalitions that support relationship building and trust at the local level.
- Improve and standardize communication. From a common lexicon and awareness of processes to the technology that supports efficient and timely detection, response, coordination, and after-action review of disasters, clear communication is critical. Federal systems that can be accessed by all might be an avenue for true standardization; in their absence, reviewing interoperability for different scenarios can help identify issues.
- Grant deliverables should include EPH capabilities in clear, succinct language.
 - » Federal grants (e.g., Cybersecurity & Infrastructure Security Agency, SAFE-COM Aviation Safety Communiqué, U.S. Department of Homeland Security, Federal Emergency Management Agency [FEMA]) exist to improve emergency communications.
 - » Create a clearinghouse or centralized information center. Knowing the location of resources is key but many exist behind silo walls.
 - » Local knowledge sharing is key to multi-sector collaboration. Make sure the local EPH workforce is included in applicable communications.
- Improve plans. Too frequently, multiple plans that address overlapping scenarios or hazards exist and can create a fragmented, confusing, or incomplete disaster response. As key entities and individuals identify one another and begin to meet regularly, they must begin an ongoing inventory, revision, and updating of plans.
 - » Local response plans are needed that integrate with the state and federal agencies and other sectors. An example given during the panel was of a local EPH department that was not able to work

with their state counterparts on EPH issues during a disaster.

- » Recommend that senior-level health leaders in critical sectors complete ICS and National Incident Management System (NIMS) training from FEMA (<https://training.fema.gov/nims/>).
- » Review plans regularly to make them relevant to current threats.
- » Strive to maintain relationships that were newly formed during the COVID-19 response. Many relationships between EPH and other sectors of public health, healthcare delivery, and preparedness were built during the COVID-19 pandemic.
- Increasing and enhancing training could provide a common body of knowledge and vocabulary to EPH staff to enable them to engage more effectively in preparedness and response teams. Preparedness is a core public health service and requires a trained and respected cadre of EPH professionals to contribute their expertise to multi-agency teams.
 - » EPH staff who could become involved in disaster response and recovery should have initial and refresher (i.e., continuing education) trainings.
 - » Training EPH leadership using fire and hazardous materials (HAZMAT) instructors has proven to be an effective way to get EPH on the same page as fire and HAZMAT professionals who are often incident commanders during an event or disaster.
 - » Real scenarios are needed for training exercises to be effective.
 - » Propose creating an EPH-specific ICS 300 and 400, possibly through NEHA, that could be offered at the NEHA AEC and other venues.
 - » Create training for non-EPH partners on the roles and responsibilities of EPH in disasters. This training could be an amended EHTER course for these partners.

Conclusion

The panel discussion held at the NEHA 2022 AEC highlighted the unique challenges faced by EPH practitioners in the preparedness arena. A recurring theme is the challenge of technology incompatibilities, as well as the challenge of getting EPH professionals, fire departments, and EMS to regularly com-

municate and better understand each other. Securing adequate funding for preparedness infrastructure at the state or regional level has been shown to greatly improve coordination across sectors.

These findings are a call to action for all EPH professionals to engage their state and local preparedness exercise planners to invite EPH professionals to their exercises and to get EPH problems added to the script. Finally, the panel recommended that NEHA engage FEMA and the Administration for Strategic Preparedness and Response (ASPR) at the pol-

icy level to ensure that EPH is at the preparedness table. The authors thank the participants of this panel for sharing their insight and hope that the capacity for EPH preparedness and response continues to grow. 🌸

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Corresponding Author: Kai Elgethun, LCDR, U.S. Public Health Service, Region 8 Director, Office of Community Health and Hazard Assessment, Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, 1595 Wynkoop Street, Denver, CO 80202. Email: irz6@cdc.gov.



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