



Administrative Preparedness: Emergency Reporting Practices for Health Departments



Abstract

The National Association of County and City Health Officials (NACCHO) examined the administrative factors that impede or support the ability of health departments to report accurate data rapidly during an emergency response. This report describes factors that make emergency reporting a frequent administrative preparedness challenge. It also identifies practices that are common to streamlined and efficient health department reporting processes and procedures. Finally, the report acknowledges the importance of everyday reporting to health department accountability and emphasizes why reporting is essential during emergency response.

NACCHO identified five practices that enable streamlined reporting and increase health departments' administrative preparedness capability.

- Implement the National Incident Management System to establish a clear path for reporting, identify roles and responsibilities, and maintain a common operating picture.
- 2. Use a common and centralized reporting platform that is accessible by and familiar to multiple response partners.
- 3. Minimize the burden of reporting by assessing the need for information, developing data-collection standards, and reporting data once for multiple purposes.
- 4. Employ Web-based technology to enable user-friendly data entry and analysis from multiple locations, including mobile.
- 5. Understand the value of reported data to encourage compliance and enable more consistent data collection.

Background

Reporting public health and medical data during an incident is an essential part of the response to an emergency. Data enable responding agencies and other stakeholders to build "situational awareness" of the health-related aspects of an emergency. By sharing information such as the number of people ill or injured, those responding can establish a common operating picture. Such data drive coordinated decision-making about public health interventions and other response activities.

However, reporting during an emergency is challenging to many health departments. Requests for data may come from a variety of stakeholders. These requests are not always directed to a single individual or program within the health department. The frequency of requests may not align with the operational aspects of the response or come at reasonable intervals. Requests from different sources may be similar, but their variance may require health departments to collect and report the same data in slightly different ways. In some instances, health departments are not aware of how the data they report are used and, therefore, do not benefit from providing the information. All of these factors lead to duplication of effort and distraction from response activities.

NACCHO explored the factors that make reporting a challenge during emergencies and identified practices that suggest an effective administrative preparedness capability for reporting. A small, non-representative survey of 49 NACCHO preparedness workgroup members was used to validate themes and identify unique aspects of reporting within local health departments (LHDs). Health departments and the partners with whom they share information may benefit from assessing whether the practices identified in this report are present in their emergency response planning.

Common Reporting Issues

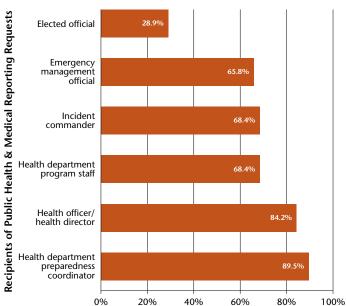
NACCHO identified the following issues as major contributors to challenges faced by health departments attempting to streamline their reporting processes and procedures.

Duplicative and Inconsistent Nature of Reporting Requests

Reporting is an administrative preparedness challenge when multiple people within a health department or jurisdiction receive multiple requests for information from multiple entities at multiple time intervals in multiple reporting formats. NACCHO's survey gathered information about the impact of reporting on a subset of LHDs. While Figure 1 demonstrates the varied recipients of requests for emergency public health and medical reporting, survey respondents indicated their preference for such requests to be directed toward the health officer, incident commander, or preparedness coordinator. Figure 2 shows the frequency of requests typically received by LHDs from response stakeholders.1 As NACCHO expected, local partners ask for information more frequently. The limited reporting requests from governors and federal partners is likely a reflection of LHDs' providing data to the state health department to be aggregated at the state level for submission to those stakeholders. Figure 3 offers a sampling of the types of information requested from LHDs, comparing requests received during normal operations

"In past emergencies, we have hired a person hourly just to do reporting. So much is asked of us from so many different ways. For example, the state immunization department, the state SNS department, the state emergency department for health, the hospital and healthcare coordination department at the state, and epidemiology department at the state all ask for reports from us at the local level. If they could combine their requests into one report so we didn't have so many reports to fill out, it would really help. We only have two staff working in preparedness so it makes it so hard to respond the way we want to and the way we should when so much of our time is taken reporting."1

FIGURE 1: EMERGENCY PUBLIC HEALTH & MEDICAL REPORTING REQUESTS BY ROLE OF RECIPIENT (N=38)



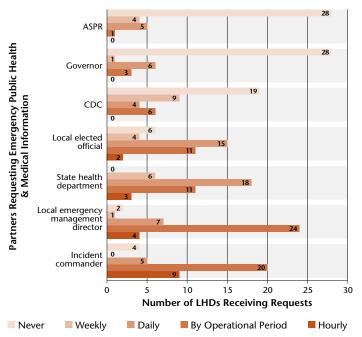
% of Respondents Receiving Reporting Requests

to those received during emergencies.1 While the sample is too small to represent LHDs generally, and the nature of reporting requests varies by incident, the responses begin to show the complexity of reporting requests. In an emergency response, these reporting requests may add chaos and stress to those responding to the incident while simultaneously trying to satisfy the needs of their partners and the public for information about those response activities.

Local and state health departments may struggle to maintain situational awareness of reporting requests. Without a structured chain of command, some staff may devote resources to reporting data, not knowing that staff in another part of the health department is working to respond to the same request. Requesters may not realize that they are asking for the same or similar data as another response partner. In some cases, reporting requests go around established chains of command. The common operating picture becomes distorted when processes and procedures for sharing information are not established and followed.

Because LHDs are closest to the incident, they often receive the greatest number of reporting requests. They need to answer to

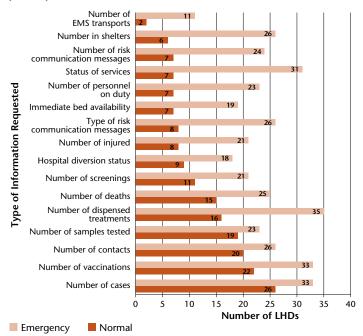
FIGURE 2: FREQUENCY OF EMERGENCY REPORTING REQUESTS RECEIVED BY LHDS FROM VARIOUS PARTNERS (N=38)



their own department, other organizations in their community, local political leadership, the state health department and other state-level agencies, federal agencies, and the public. These reporting requests are often just different enough that they require LHDs to run new data queries or analysis for each request rather than providing the same information to everyone. State health departments are challenged by acting as a conduit for information between local and federal agencies. They often need to aggregate information reported by all LHDs within their state and repackage the information for reporting to the federal level. In some cases, this process cannot be automated due to the format in which the data are reported. These challenges place a major staffing burden on state and local health departments.

Additionally, health departments cannot always plan for the timing of reporting requests or reporting requirements. Ideally, health departments would report specific elements of information at set times within an operational cycle using their existing reporting systems. More likely, ad hoc reporting requests disrupt planning efforts. Often, minor changes in reporting requirements prevent health departments from tracking progress over time due to non-comparable data. Each time the reporting requirements change, health department

FIGURE 3: TYPES OF INFORMATION REQUESTED FROM LHDS DURING NORMAL & EMERGENCY OPERATIONS (N=37)



personnel need to adapt reporting systems to adjust for this change. Sometimes, health departments are required to use new systems to report data rather than existing familiar systems like immunization registries, Epi-X, and the Health Alert Network. These factors disrupt response operations, require the assistance of computer programmers and other information technology staff, and necessitate training and educating staff during a response. Many health departments have very limited personnel and duplicative and inconsistent reporting requests redirect and distract the workforce from response activities.

Difficulty of Anticipating Reporting Needs for All Hazards

Health departments recognize the value of establishing data standards prior to an emergency. They also acknowledge the value of guidance from the Centers for Disease Control and Prevention (CDC) and the Assistant Secretary for Preparedness and Response (ASPR) to pre-identify essential elements of information and the parameters under which such data will be shared. However, health departments are challenged to predict what their reporting needs will be in advance of an emergency. This may be because the focus on all-hazards

"There are times when I [felt] that filling out reports does not add to our preparedness and becomes a distraction . . . the questions asked do not relate to our level of preparedness, they may relate to how well they think we have done some particular task, but there is not always a correlation between having done that task and the level of preparedness."2

preparedness planning may not capture all of the reporting requirements for a specific incident. It may also reflect the difficulty of knowing what the data needs will be for uncommon types of incidents. For instance, communities that are routinely affected by hurricanes know what types of information to report to inform response and recovery efforts for such storms, but health departments in those areas may not have the same ability to predict reporting needs following a chemical exposure incident. As one local health official explained, "For those who haven't had a major incident in their jurisdiction, these things have never been tested, so it is hard to say who really will be asking for what information until you get to a point where you are actually faced with that situation." Building upon the Public Health Emergency Preparedness (PHEP) and the Hospital Preparedness Program (HPP) capabilities, local, state, and federal health agencies and their response partners should share their experiences with reporting needs during previous emergencies to help shape a clearer picture of the types of data that will be needed regardless of the incident, the most appropriate format for reporting data, likely requesters, and intended use of data (e.g., to inform decision-making).

"Our health department has no laboratory facilities or nursing staff or epidemiology staff. We can report emergency operations to the state department of public health and state emergency management through WebEOC as well as reports to DPH by landline phone and fax, cell phone, and satellite phone. These reports would be operational in nature—medication received, medication dispensed, inventory on hand, clinic locations, hours of operation, throughput numbers, etc."1

Differing Perspectives on Timeliness and Utility of Some Requested Data

Health departments and their partners sometimes have differing perspectives about when data should be reported and how data should be used. Those requesting data seek to paint as complete a picture as possible of evolving emergencies to inform decisions about how to direct efforts and resources. Requesters also need reports on response activities to maintain accountability for funding and other resources. However, health departments sometimes question whether all reporting requests are necessary or timely. In some cases, the effort necessary to report on operations during emergencies seems disproportionate to the report's ability to improve situational awareness. There is a perception that more data are being reported than what will actually be analyzed and used to inform the immediate response or future improvement efforts. In other cases, reporting requests focus on administrative and other data that have no impact on the response and could just as easily be provided after the incident transitions to the recovery phase. Requesters may wish to consider whether data reporting that occurs routinely may be suspended during an emergency and allow the reporter to provide the data later. Given competing demands, health department staff may become frustrated by reporting requests that seem to distract from, rather than contribute to, response efforts.

These concerns are exacerbated when health departments are unaware of what happens to reported data. In NACCHO's survey of LHDs, 42 percent of respondents indicated that they did not know how reported information is used by those who request it.1 LHDs indicate that they are asked to report information to their state health department; that information is then aggregated and reported to the federal level. These LHDs often lack information about how their reported data contribute to the overall data-collection effort or how their data compare to nearby or similar jurisdictions. States similarly lack awareness of how their response efforts compare to other state health departments. Stating upfront how reported data will be used and providing aggregated data back to the reporting agencies favorably impacts health departments' willingness to report and their understanding of their place in the overall response effort. Further, awareness of reported jurisdictional and aggregated data may help inform risk communication to the public about the status of response efforts.

Everyday Reporting

While NACCHO's examination of administrative preparedness issues focuses on planned actions that health departments may take to accelerate, modify, streamline, and accountably manage their administrative practices and procedures during an emergency response, the need also exists to enable efficient reporting of health departments' everyday preparedness activities. Over the last decade, there has been a tremendous federal investment in state and local public health and healthcare preparedness, with more than \$13 billion awarded since fiscal year 2002.3 With that investment comes accountability, especially during a time of difficult national economic conditions and increased scrutiny of government spending. For example, the most recent funding application completed by state health departments requires them to describe "[r] eporting/monitoring methodology to ensure payment efficiency and funding accountability."4

A number of complicated factors create a lag time between when health departments obligate preparedness funds and when the funds are reported as spent. For instance, a health department may plan for major expenditures near the end of the funding year that are not reflected in quarterly financial reports. Funding dedicated to the salary for a key preparedness position may go unspent during a long-term vacancy. A health department may select a contractor to complete tasks, but an extended procurement process may delay initiation of work and payment for services. These and other circumstances lead to reporting data suggesting that federal preparedness funds are not being spent in a timely fashion or at all. This creates a perception that preparedness funding is either not needed or being wasted.

NACCHO encourages local and state health departments to improve the efficiency of administrative processes that delay spending of obligated funds and to consider reporting methodologies that more accurately reflect planned spending obligations. Additionally, the practices for streamlined reporting during emergencies outlined in this report can be modified and applied to the reporting of preparedness funds in the following ways:

- 1. Devoting additional personnel to administrative tasks may affect the timeliness and accuracy of reporting. Embedding administrative staff with the preparedness program or vice versa may improve understanding of reporting challenges and identify efficiencies in reporting processes and procedures.
- 2. Using a common and centralized reporting platform may enable more rapid sharing of budgetary and other administrative data and reduce the number of data requests.
- 3. Establishing clear and consistent definitions for financial reporting terms may help manage perceptions about preparedness funds that are "obligated" versus "spent" and create a more stable reporting cycle.
- 4. Employing Web-based technology may increase the user-friendliness of reporting requirements and may improve both compliance and accuracy of data collection.
- 5. Building an understanding of the importance of reporting may create a culture shift within a health department if personnel perceive a return on their investment of time and effort.

As with other areas of administrative preparedness, these efforts require health officials to routinely work with partners within their health department and other governmental agencies to jointly identify spending and reporting obstacles and solutions.

Practices Associated with Streamlined Reporting

NACCHO identified five practices associated with streamlined reporting processes and mechanisms for health departments. Health departments should consider these practices when assessing current reporting processes and determine if adopting them would improve reporting capability and ultimately reporting accountability during an emergency.

Implement the National Incident Management System

Health departments have been learning about and training to use the National Incident Management System (NIMS) for over a decade. During an emergency, this training should be put into practice by implementing the use of an incident command system (ICS). ICS allows for continuous collection of data through briefings, situation reports, and incident action plans and allows all involved with the emergency to have a common operating picture. The implementation of ICS establishes a clear chain of command, identifies staff roles and responsibilities, and defines what data are being collected, who is reporting the data, and who will receive the data. ICS also allows for the organizational flexibility to direct personnel and other resources as appropriate for each incident. Such flexibility may include assigning a greater number of staff to the Finance/Administration, Logistics, and Planning Sections to monitor and collect data on personnel hours, expenses, and other administrative and financial activities. The ICS structure also includes a liaison officer, who may play a key role in offering the health department situational awareness of what partner data needs may be and identifying areas of common interest.

Use a Common and Centralized Reporting Platform

The health department should choose a reporting platform that is accessible to and integrated with multiple stakeholders and partners. The reporting platform is the foundation to a streamlined reporting process. Allowing designated stakeholders and partners access to the data will reduce the number of reporting requests and establish timely situational awareness of all parties. Many health departments use WebEOC or similar systems to communicate real-time crisis information to their state, region, and local/county partners. In one state, "all hospitals, all 17 cities, the school districts, and 27 different county agencies and departments can all use WebEOC."1 SharePoint, the Health Alert Network, HAvBED, and Epi-X are other platforms that can facilitate a common and centralized reporting system. By using these systems that are common among response partners or are used daily, the need to provide training on a new system in the heat of a response is minimized, and personnel who use the systems are more confident in their skills and their ability to maximize the functionality of the systems.

Minimize Reporting Burden

Reporting often seems burdensome due to multiple requests and multiple formats for reporting. Health departments may consider completing an assessment of their current data-collection processes and mechanisms, which may uncover duplicative data-collection efforts. There may be opportunities to combine processes and the associated reporting requirements. Health departments should develop data-collection standards and standard operating procedures. Standards will help define the content and format of reports, limit collection to essential data, and facilitate merging of related processes. The Public Health Information Network (PHIN) establishes national standards that should guide these efforts, enabling interoperability of systems among different agencies. Additionally, health departments should evaluate if the information within their traditional reports can be used for other purposes, such as social media. Although "public" reporting is often drafted separately, there may be opportunities to include the information in new reporting processes.

Employ Web-Based Technology

The individuals required to report information need to be able to access the reporting system quickly and easily. Health departments should consider options that allow staff to access the reporting system or mechanism easily from the Internet using a browser such as Internet Explorer or Firefox or through a mobile application on a smartphone or tablet. NACCHO's survey respondents indicated that Web-based reporting was their most preferred method. Additionally, the usability of the mechanism needs to be evaluated to ensure it is "user friendly." Responding to an emergency creates a high-stress situation, and accurate reporting is more likely to occur if the reporting system is easily accessible and user friendly. LHDs have reported using Survey Monkey as a tool for quick reporting from their points of dispensing (POD) locations on supplies needed

and used. Online survey tools such as Survey Monkey or Qualtrics require less effort than office productivity tools such as Microsoft Word or Excel because users can click a multiple choice or check a box. Any reporting process that requires the user to complete text boxes is very time-consuming and decreases the likelihood for accurate reporting. Health departments should use a reporting technology with Web-based forms that can be completed simultaneously by multiple users, in real time, and viewed by all necessary partners and stakeholders.

Understand the Value of Reported Data

Those reporting information and those collecting information should understand the value of the data collected. Many LHDs that report data to state or federal agencies are not aware of how that information is used. Federal and state health agencies collecting the data should provide LHDs with this information. LHDs may be able to use this information to report back to their local elected officials, identify areas for improvement based on a national comparison, and identify areas of duplication, further streamlining reporting.

Conclusion

Health departments recognize that reporting data is essential to an informed response and ensures accountability for the use of financial and other resources. Yet, they are often frustrated by the need to devote resources to reporting data that they perceive as adding little value to situational awareness or being more appropriate to report after response activities conclude. Additionally, they are challenged by the number of reporting requests, the large number of stakeholders making requests, and overlapping reporting requirements.

NACCHO encourages local and state health departments to work with community and federal partners to pre-identify essential elements of information as recommended by the PHEP and HPP capabilities. These elements may be used to establish PHIN-compliant data standards that will enable interoperability of reporting systems. The use of Web-based or other user-friendly reporting systems that allow multiple users to input and view data will lead to increased compliance with reporting requirements and more consistent data collection, enabling data comparison across jurisdictions and more informed decision-making. The use of NIMS establishes clear chains of command and role identification so that those requesting data know where to direct reporting requests, leading to greater efficiency and less duplication within health departments. NIMS also allows health departments to augment staffing for reporting-related tasks as necessary. Finally, NACCHO encourages those entities with data needs to consider the timeliness and utility of their requests before asking others to report the data. By focusing on key data elements necessary for situational awareness and delaying reporting on non-critical, non-operational data, health departments may devote their efforts toward reporting quality data that have a clear benefit in improving the response effort.

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The mission of the National Association of County and City Health Officials (NACCHO) is to be a leader, partner, catalyst, and voice for local health departments.

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