About This Document

The Incident Management Measurement Toolkit is designed to assess the effectiveness of incident management during and after real-life public health incidents and realistic exercises. The toolkit provides a low-burden “snapshot” that incident managers can use to identify opportunities for improvement without having to wait for or invest in a full after-action review.

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Acknowledgments

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Community Health and Environmental Policy Program

RAND Social and Economic Well-Being is a division of RAND that seeks to actively improve the health and social and economic well-being of populations and communities throughout the world. This research was conducted in the Community Health and Environmental Policy Program within RAND Social and Economic Well-Being. The program focuses on such topics as infrastructure, science and technology, industrial policy, community design, community health promotion, migration and population dynamics, transportation, energy, and climate and the environment, as well as other policy concerns that are influenced by the natural and built environment, technology, and community organizations and institutions that affect well-being. For more information, email chep@rand.org.
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Background and Motivation

Public health incident management (IM) plays a pivotal role in coordinating multiple disciplines and stakeholders when responding to disease outbreaks, natural hazards, technological disasters, and other incidents with public health consequences. Effective IM involves answering questions about who is in charge, what resources are available, how the threat is evolving, and how to pay for the response.\(^1\)

Risks and priorities often change while managing public health incidents, such as the shift from disease containment to mitigation during a disease outbreak. Incident managers must be ready to quickly update plans, reconfigure staff and resources, and reexamine key assumptions. Feasible, useful, evidence-based measures could be leveraged to identify opportunities for improvement during and after incidents.

The Incident Management Measurement Toolkit (IMMT or “the toolkit”) is designed to assess the effectiveness of IM during and after real-life public health incidents and full-scale exercises. The toolkit provides a low-burden “snapshot” that incident managers can use to identify opportunities for improvement without having to wait for or invest in a full after-action review (AAR).

By providing evidence-based standard items focused specifically on public health IM, the toolkit offers a useful supplement to more-comprehensive assessments and permits systematic comparisons over time. While potentially useful for all incident managers, it is specifically designed for communities with limited evaluation resources, which could benefit from simple and easy-to-use measures.

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The IMMT is based in published research and expert knowledge, incorporating input from a wide range of professionals experienced in public health IM. It was tested across multiple incidents and by diverse users over a three-year period. Please see the “Methodology” section at the end of this document for more information on how the IMMT was developed.

Domains of Incident Management

The IMMT is designed to capture five domains necessary to effective public health IM:

- **Situational awareness and information-sharing**: This domain encompasses the perception and characterization of incident-related information to identify response needs.

- **Incident action and implementation planning**: This domain encompasses the ongoing articulation and communication of decisions in coherent incident action plans.

- **Resource management and mobilization**: This domain encompasses the deployment of human, physical, and other resources to match ongoing situational awareness, identification of roles, and relevant decisions.

- **Coordination and collaboration**: This domain encompasses engagement and cooperation between different stakeholders, teams, and departments in managing the incident.

- **Feedback and continuous quality improvement**: This domain encompasses the need for ongoing evaluation and refinement of IM processes.

By providing a structured framework and observable items, the IMMT can help guide and improve responses to public health incidents. This includes incidents real or simulated, large or small in scope, and with full or partial activation of an incident management system (IMS).

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Data Collection and Roles

Data are collected through a survey of IM team members (Incident Management Team Survey) and a peer assessment (Peer Assessor Protocol). The Incident Management Team Survey elicits IM team members’ perceptions of IM performance in the five key domains during incidents and exercises. The Peer Assessor Protocol enables the response organization to receive feedback from an observer inside or outside of the organization. The survey and assessment can be used individually or together. Example items associated with domains are detailed below. For the complete list of items, please see the “Incident Management Team Survey” and “Peer Assessor Protocol” sections in this document.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Survey</th>
<th>Example Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational awareness and information-sharing</td>
<td>Survey</td>
<td>• I am confident that I can identify information relevant to my IM-related job. • I can make decisions quickly enough because I have adequate information. Peer assessment</td>
</tr>
<tr>
<td>Incident action and implementation planning</td>
<td>Survey</td>
<td>• I am aware of the objectives for the current phase of the overall response. • My supervisor(s) and I agree on which of my tasks are highest priority. Peer assessment</td>
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<tr>
<td>Resource management and mobilization</td>
<td>Survey</td>
<td>• I am able to anticipate the availability of resources. • While managing this incident, my stress level remains reasonable. Peer assessment</td>
</tr>
<tr>
<td>Coordination and collaboration</td>
<td>Survey</td>
<td>• There is clarity among IM team members on channels of communication. • I am aware of external partners’ roles and activities that have an impact on my job. Peer assessment</td>
</tr>
<tr>
<td>Feedback and continuous quality improvement</td>
<td>Survey</td>
<td>• Processes exist to build on experiences from previous phases and previous incidents. • It is easy for me to approach superiors about problems I cannot address. Peer assessment</td>
</tr>
</tbody>
</table>

Data collection is coordinated by a **lead evaluator**, who ensures buy-in from leadership and **IM team members**, oversees overall data collection, analyzes site data, and disseminates results. The lead
The evaluator determines which of the two data collection tools (survey, peer assessment, or both) will be used and selects the peer assessor and/or arranges for distribution of the survey, as appropriate.

Components of the Incident Management Measurement Toolkit

Below are brief descriptions of the core components of the toolkit.

Lead Evaluator Materials

This section includes the following tools for the lead evaluator:

- Guidelines for Lead Evaluator (description of role, step-by-step timeline of activities)
- Communication Templates
- Incident Background Information Template
- Incident Management Team Survey.

Peer Assessor Materials

This section includes the following tools for the peer assessor:

- Guidelines for Peer Assessor (description of role, step-by-step timeline of activities and resources)
- Peer Assessor Protocol.

Using the Data

This section describes how to analyze and use data collected using this tool.

Frequently Asked Questions (FAQs)

Q. What is IM?

A. IM is the set of processes and activities through which risks are characterized, objectives are defined, and the resources of different stakeholders are coordinated and deployed to address needs when responding to an incident. Example stakeholders include multiple jurisdictions, various response disciplines, governmental and nonprofit organizations, and businesses.

Q. What parts of IM does the Incident Management Measurement Tool (IMMT) cover?

A. The IMMT is designed to capture five domains necessary for effective IM:

1. situational awareness and information-sharing
2. incident action and implementation planning
3. resource management and mobilization
4. coordination and collaboration
5. feedback and continuous quality improvement.
Q. Can incident managers with limited evaluation resources use the IMMT successfully?
A. Yes. Although the IMMT is potentially useful for all incident managers, it is specifically designed for settings at state and local levels where evaluation resources are limited. This is because such settings frequently could benefit from simple and easy-to-use evidence-based measures.

Q. In what types of incidents should the IMMT be used?
A. The IMMT can be used in any situation that involves IM for health-related incidents—real or simulated, large or small in scope, and with full or partial activation of an IMS. The toolkit does not assume the use of the Incident Command System or the National Incident Management System. It can also be used for exercises (including full-scale exercises and others involving such activities as defining objectives and coordinating the resources of different stakeholders).

Q. How can IMMT data be used?
A. The IMMT is designed to provide a “snapshot” that incident managers can use to identify opportunities for improvement during an incident or as part of a more comprehensive AAR.

Q. Can the IMMT be used as part of continuous quality improvement efforts?
A. Yes. The IMMT can support continuous quality improvement efforts by identifying strengths, weaknesses, and potential opportunities for improvement. However, the IMMT does not provide explicit guidance on how to prioritize, develop, and implement corrective actions. Links to resources on corrective action planning are provided in the “Using the Data” section. The role of continuous quality improvement in managing incidents is one of the domains the tool seeks to measure. The tool does not provide specific guidance on how to make improvements to continuous quality improvement processes.

Q. Does this replace other assessments, such as after-action reviews?
A. The IMMT is meant to augment and supplement the reviews most IM teams already conduct (including AARs and informal “hot washes”), but with a specific focus on public health IM. It also provides a more IM-focused supplement to the kinds of intra-action reviews increasingly promoted by the World Health Organization. The toolkit can be used to guide conversations during those reviews or to identify specific action items to address in a group setting. In more formal reviews, data produced by using the IMMT can provide evidence for discussion.

Q. Can the IMMT be used for accountability purposes?
A. No. The IMMT was designed and tested to identify opportunities for IM improvement. It was not designed to support high-stakes accountability decisions (such as determining compliance with policy and programmatic requirements and informing budgetary decisions). It should not be used in an audit, inspection, or other form of potentially punitive evaluation.
Q. How are the data on incident management collected?
A. Data collection relies on two tools: a survey of IM team members and a peer assessment that follows a standard protocol. The Incident Management Team Survey elicits IM team members’ perceptions about IM during incidents and realistic exercises. The Peer Assessor Protocol enables the response organization to get feedback from an observer who can provide an outside perspective. These tools are modular and can be used separately or together in a single incident assessment. Both the Incident Management Team Survey and the Peer Assessor Protocol are included in this document.

Q. Who participates in data collection?
A. Data collection involves, at a minimum, a lead evaluator who ensures buy-in from leadership and IM team members, decides which of the two data collection tools (Incident Management Team Survey and/or Peer Assessor Protocol) to use, and oversees data collection, analysis, and reporting. Depending on which tools are selected, data collection might involve the IM team members who take the survey and a peer assessor to observe IM activities using the Peer Assessor Protocol. Peer assessors should be knowledgeable about public health IM and be able to provide an objective, outside assessment. Examples include recently retired incident managers, staff from neighboring jurisdictions, and practice-oriented faculty from local universities.

Q. How long will it take?
A. The IMMT is designed to minimize burden. Most of the work is done by the lead evaluator, who will typically spend 4–12 hours using the tool. Peer assessors will typically spend approximately 4–6 hours preparing and 4–6 hours engaging in data collection. The Incident Management Team Survey typically takes no more than 15 minutes per respondent.
Lead Evaluator Materials

IN THIS SECTION

- Guidelines for Lead Evaluator
- Communication Templates
- Incident Background Information Template
- Incident Management Team Survey

Guidelines for Lead Evaluator

I. The Lead Evaluator’s Role

The lead evaluator oversees data collection, analysis, and reporting. This includes recruiting peer assessors, administering the Incident Management Team Survey, and communicating results with IM team members and other relevant stakeholders. The lead evaluator is responsible for

- coordinating the activities that occur before, during, and after the assessment
- identifying IM team members, distributing the survey, and answering any questions that team members might have
- maintaining confidentiality of responses
- interpreting and sharing the results.

If a peer assessment will be completed, the lead evaluator is also responsible for identifying and recruiting a peer assessor and arranging a visit on a typical day when relevant personnel will be present. If the peer assessor needs to visit remotely, the lead evaluator should discuss which meetings the peer assessor can join and how they can interview staff and access information virtually.
II. Lead Evaluator Timeline of Activities and Resources

Pre-Assessment (Steps 1–7)

*Pre-assessment* refers to the period before fielding the survey or peer assessment. It consists of the following steps.

- **Step 1: Learn about the tool by reviewing the “READ ME FIRST” materials**
- **Step 2: Review the Incident Management Team Survey and Peer Assessor Protocol**
  Familiarize yourself with the *Incident Management Team Survey* and the *Peer Assessor Protocol*.
- **Step 3: Record background information**
  Record incident background information using the *Incident Background Information* template in this toolkit. Focus on a single incident that occurred within a reasonable period and that all respondents would recall easily. This template is intended to outline basic information that will be helpful for contextualizing key results. The information can be gathered from a variety of sources, including but not limited to SITREPs, discussions with senior leaders, and IM forms.
- **Step 4: Recruit peer assessors**
  Peer assessors should (1) be familiar with public health-related IM but also (2) provide an objective external perspective that comes from being outside the current IM team. For example, the peer assessor may come from another agency or division or be retired from IM team duties. If an external assessor is not available, someone within the IM team could play the role of a peer assessor (e.g., a member of the Incident Command System structure’s planning section tasked with taking the long view on the response). However, they must be able to step back and assess the management of the incident objectively.

  Peer assessors play an observational role and should generally not take part in or influence IM processes.

  Provide peer assessors with the following four sections from the toolkit:
  1. **READ ME FIRST**
  2. Guidelines for Peer Assessor
  3. Peer Assessor Protocol
  4. Incident Background Information (complete before giving to the peer assessor).
Step 5: Select dates for survey administration and, if appropriate, peer assessment

Work with site-level leadership to identify appropriate dates for conducting the Incident Management Team Survey. If a peer assessment is also being done, coordinate with the peer assessor regarding dates for implementing the protocol.

To reduce burden and help facilitate two perspectives during the same period of operation, administration of the Incident Management Team Survey and Peer Assessor Protocol should occur simultaneously. An effective assessment should ideally be carried out after an emergency operations center has been set up, response teams have been activated, and response activities have been ongoing for a reasonable amount of time. For example, assessment could be carried out at the midpoint of emergency operations center activation or after incident recovery activities.

To obtain information on change over time during the exercise or response, the survey and peer assessment can be repeated at a later time during the same incident.

Step 6: Identify survey respondents

Select a broadly representative sample of IM team members. For some departments and incidents, all IM team members may be included. In other cases, doing so may create unreasonable burdens. Lead evaluators should ensure that each of the following three groups are well represented:

- **IM chiefs or leads**: If possible, include at least one lead responsible for incident command, logistics, operations, planning, and finance. You may also include deputies who work with and assist these individuals in their leadership roles or other members considered part of the response leadership team.
- **IM technical leads**: Include technical leads (e.g., epidemiology, toxicology, environmental science). When technical leads are not used, select up to five staff representing other roles, including but not limited to safety and liaison officers.
- **IM team members**: Additional non-leads representing the above-mentioned roles in the IMS.

In addition, lead evaluators should consider the following when constructing the survey sample:

- **The sample should include those with IM responsibilities and those reporting through the IMS.** Those who are in frontline operational roles (e.g., administering vaccines, triaging survivors) but **without** IM duties should not be included. If in doubt, however, it is better to be over-inclusive.
- In developing the sample, lead evaluators may find it helpful to consult the IM team duty roster.
- If large numbers of individuals are in any one of these groups, consider sampling randomly within them—such as by selecting every other or every third, fourth, fifth, etc., name from a roster.
Step 7: Draft communiqué to selected respondents

- Draft a communiqué to IM team members explaining the purpose of the survey, the referent incident, how data will be used, and provisions for data privacy (see Communication Templates).

Clearly state the scope and time frame of the response. If a response is long, choose a specific aspect of the response or time frame so that findings from the assessment are more actionable.

During Assessment (Steps 8–9)
These activities pertain to the period of assessment when the Incident Management Team Survey and Peer Assessor Protocol are conducted.

Step 8: Field the survey
Share the Incident Management Team Survey with sampled members of the IM team. The following are options for distributing the survey:

- Create an electronic version of the survey and distribute the link via email or other electronic messaging platform. This has the advantage of automatically collating responses into a single data file that can be exported and analyzed.
- Send an electronic copy of the survey as an email attachment and compile results manually as respondents return them.
- Distribute a paper version of the survey and collate the results manually as respondents return them.

Step 9: Follow up with nonrespondents
It is important to get responses from a broad range of team members. Send a reminder to those who have not responded within 48 hours. Send additional reminders, as needed.

Aim for a 100% response rate (meaning all invited team members participate in the survey) and note response issues when interpreting the results.

Post-Assessment (Steps 10–11)
Post-assessment refers to the period after the Incident Management Team Survey and/or Peer Assessor Protocol have been fielded and respondents have provided their responses.

Step 10: Review data and compile results
Consider the guidance on interpreting the data provided in the Using the Data section of the toolkit.
Step 11: Share the results

Share the results with leadership and IM team members for additional feedback and discussion of next steps. Use the results as appropriate in hot washes, briefs, AARs, etc.

Communication Templates

These templates can be used to recruit and communicate with members of the IM team participating in the IMMT process. As noted above, the lead evaluator is responsible for coordinating all communication. Versions are provided below for three situations: (1) survey only, (2) peer assessment only, and (3) survey and peer assessment. They should be customized as needed.

When Conducting Only the Incident Management Team Survey

Dear [team member],

As part of the [name of department]’s efforts to improve, we are requesting your participation in a survey regarding the [name of exercise or response], which occurred from [time frame of incident]. We ask that you complete the survey by [date]. It should take about 15 minutes to complete.

Participation is voluntary but appreciated. Your responses will be used for improvement purposes, not to evaluate the performance of any individual.

CLICK HERE to access the survey. All data will be kept confidential, and results will be anonymized. Please contact [name of lead evaluator] if you have any questions or concerns.

Sincerely,
[your name]

When Conducting Only the Peer Assessment

Dear [team member],

As part of the [name of department]’s efforts to improve, we will be hosting [name of peer assessor] to observe our operations and evaluate our team’s response to [name of exercise or incident]. [Name of peer assessor] may request to meet with you or ask for documentation. Please assist them as best as you are able. Participation is voluntary, but we would appreciate your cooperation.

Information collected by [name of peer assessor] will be used for improvement purposes, not to evaluate the performance of any individual. All data will be kept confidential. Please contact [name of lead evaluator] if you have any questions or concerns.

Sincerely,
[your name]
When Conducting Both the Incident Management Team Survey and the Peer Assessment

Dear [team member],

As part of the [name of department]’s efforts to improve, we will be hosting [name of peer assessor] to observe our operations and evaluate our team’s response to [name of exercise or incident]. [Name of peer assessor] may request to meet with you for a short discussion or may ask for documentation related to our team’s response. Please assist them as best as you are able. Participation is voluntary, but we would appreciate your cooperation and honest feedback.

We are also requesting your participation in a survey regarding the [name of exercise or response], which occurred from [time frame of incident]. We ask that you complete the survey by [date]. It should take about 15 minutes to complete. CLICK HERE to access the survey.

Information collected by [name of peer assessor] will be used for improvement purposes, not to evaluate the performance of any individual. All data will be kept confidential. Please contact [name of lead evaluator] if you have any questions or concerns.

Sincerely,
[your name]
Incident Background Information Template

This information should be collected by the lead evaluator before data collection begins. This document is intended to add context that can help when interpreting measures. It is also intended to help lead evaluators remember the context of the incident during which these data were collected.

1. The incident that these data were collected for was a:
   ___ real incident ___ exercise

2. Date (or date range) of incident or exercise: ___________

3. Location of incident or exercise: ______________________

4. Type of local health governance structure of responding agency:³
   ___ centralized ___ decentralized ___ mixed

5. Health hazards involved (check all that apply):
   - Infectious disease outbreak
   - Foodborne illness
   - Fire or wildfire
   - Chemical or toxic substance spill
   - Hurricane
   - Flood
   - Snowstorm
   - Extreme temperature event
   - Bioterrorism
   - Explosion
   - Mass shooting
   - Other ___________________

6. Scale or spread of the impact (check all that apply):
   - Neighborhood
   - Local community (i.e., city, county)
   - Region (i.e., multiple communities)
   - State
   - Multistate
   - National
   - Global
   - Explanation (if needed): ________________________________

7. Was there a formal activation of an incident management (IM) system:
   ___ Yes ___ No

³ Centers for Disease Control and Prevention, “Public Health Governance,” undated.
8. If you marked “Yes” to question 7, specify FEMA Activation Level (if applicable):
   __ Level 1 __ Level 2 __ Level 3 __ Enhanced Watch __ Watch Steady State

9. IM systems were activated at multiple sites: __Yes __No

10. IM team members convened (check all that apply):
   ☐ In one shared physical space
   ☐ In several shared physical spaces
   ☐ Virtually (such as through WebEOC or similar platform)

11. Approximate number of IM team members involved in the incident: _____

12. Average shift length (hours): _____

13. Number of reportable safety incidents during the period of the incident assessed (optional):
   _____

14. The IM team included external partners (as defined by the site).
   __Yes __ No  (If “Yes,” list key partners.)

15. If applicable, please check the appropriate response phase for when the Incident Management Team Survey was first fielded:
   ☐ Pre-incident activity (e.g., trainings, tabletop exercises)
   ☐ During incident activity (response and recovery)
   ☐ Post-incident activity (as part of the after-action review process)
   ☐ Not applicable (peer assessment only)

16. If applicable, please check the appropriate response phase for when the Peer Assessor Protocol was first fielded:
   ☐ Pre-incident activity (e.g., trainings, tabletop exercises)
   ☐ During incident activity (response and recovery)
   ☐ Post-incident activity (as part of the after-action review process)
   ☐ Not applicable (Incident Management Team Survey only)

17. Please note any additional factors that may be useful in interpreting the data, including changes in context during the incident or exercise:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
Incident Management Team Survey

This survey can help identify opportunities for improvement within organizations responding to public health incidents. It is intended to take approximately 15 minutes to complete. Participation is voluntary, and you can choose to skip any question for any reason. The data are not used to evaluate the performance of individuals, and your name will not be attached to your responses in any reporting of results.

Instructions: Answer these questions about the management of the incident. Some of the questions might appear redundant or duplicative; redundancies are designed to capture different elements of incident management (IM) structured around five critical domains. There are no right or wrong answers. Feel free to write a short descriptive explanation of your answer, particularly for questions that you might feel strongly about (such as “Strongly Agree” or “Strongly Disagree” responses).

Respondent Background

Primary role:
- IM leadership (e.g., chiefs, leads, command staff)
- IM technical and scientific response staff
- IM general staff (field and office staff not already listed)
- Other: ___________________

During your career, how many incidents have you helped to manage?

________________________

Total years of experience in existing or similar IM role:
- 0–1 year
- 2–5 years
- 6–10 years
- More than 10 years

Type of organization you work for:
- State
- Local
- Tribal
- Territorial
- Federal
- Other (describe)
Domain 1: Situational awareness and information-sharing
The perception and characterization of incident-related information to identify response needs

1. I am confident that I can identify information relevant to my IM-related job.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:
   __________________________________________
   __________________________________________
   __________________________________________

2. I have enough information to adequately do my job.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
3. I can make decisions quickly enough because I have adequate information.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

4. I receive required information in time for it to be useful for me.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Is there anything else you would like to share about situational awareness and information-sharing as it relates to how this incident was managed?
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Domain 2: Incident action and implementation planning
The articulation and communication of decisions in coherent incident action plans

5. I am aware of the objectives for the current phase of the overall response.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

6. I believe current objectives are achievable (given factors such as the incident's current status, available IM team resources, etc.).
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

7. I understand how to do the tasks assigned to me.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

8. I understand how my tasks relate to broader response efforts.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

9. My supervisor(s) and I agree on which of my tasks are highest priority.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
10. The IM team’s current pace of decisionmaking matches with the pace of the incident (i.e., decisions are timely).

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

11. IM leadership clearly states their decision(s) or provisional decision(s) and communicates them to me.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unable to judge

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Is there anything else you would like to share about incident action and implementation planning as it relates to how this incident was managed?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Domain 3: Resource management and mobilization

The deployment of human, physical, and other resources to match ongoing situational awareness, identification of roles, and relevant decisions

12. The IM system was stood up quickly enough after first report of the incident.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree
   - Unable to judge

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

13. I am able to anticipate the availability of resources.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree
   - Not applicable

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
14. The process to request resources is convenient.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unable to judge

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

15. While managing this incident, my stress level remains reasonable.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

16. The actions taken to address my stress are adequate.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
17. I am able to maintain my well-being over the course of the incident.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

18. I feel safe working during this incident.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Is there anything else you would like to share about resource management and mobilization as it relates to how this incident was managed?
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Domain 4: Coordination and collaboration

The processes of mutual adjustment between internal and external actors involved in IM to reach a common objective

19. I am aware of other IM team members’ roles and activities that have an impact on my job.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

20. I am aware of external partners’ roles and activities that have an impact on my job.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

21. I am aware of my own limits of authority when it comes to making decisions.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

22. I know whom to ask for permission to engage in activities if/when required.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Is there anything else you would like to share about coordination and collaboration as it relates to how this incident was managed?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Domain 5: Feedback and continuous quality Improvement

The collection and use of information about past operational periods to identify lessons for current and future responses

23. I know how to address correctable problems.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

24. It is easy for me to approach superiors about problems I cannot address.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
25. The same problems with IM do not arise repeatedly in this incident.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

   Is there anything else you would like to share about feedback and continuous quality improvement as it relates to how this incident was managed?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

Final Section

26. Overall, I feel this incident was managed well.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
27. Please let us know if there is anything else you want to mention on how well this incident was managed.

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
Peer Assessor Materials

IN THIS SECTION
- Guidelines for Peer Assessor
- Peer Assessor Protocol

Guidelines for Peer Assessor

I. The Peer Assessor’s Role

Your role as peer assessor is to act as an expert observer to provide a high-level and relatively unbiased view of the management of the incident.

- Peer assessment is intended to provide a brief and targeted “snapshot” of the management of the incident.
- Peer assessment is not intended to be an audit, inspection, or other form of potentially punitive evaluation. It is a collaboration with the IM team designed to improve performance. Guidance on interpreting the results can be found on subsequent pages of this document.
- Keep all data confidential. If names or other identifying information are collected during observation, remove them before sharing or archiving the completed Peer Assessor Protocol form. Only aggregated, de-identified information should be shared with leadership or in public formats.
- The peer assessment can occur in person or remotely, depending on the nature of the incident and the peer assessor’s availability. If the peer assessment occurs in person, work with the lead evaluator to arrange a visit on a typical day when relevant personnel will be present. If the peer assessment is conducted remotely, discuss which meetings you can attend and how you can interview staff to access information virtually.
- Contextual information relevant to explaining the scores is a critical part of the peer assessment. Be sure to include explanations for items with “Strongly Disagree” or “Strongly Agree” ratings.
- You may need to interact with members of the IM team during the assessment, to understand what you are seeing and to respond to their questions about how you are collecting information. You should collect information in a way that minimizes interruptions to their work.
- Remain positive and friendly but somewhat detached. Remember that you are there to observe, not participate. Save any recommendations for formal debriefs, hot washes, and other conversations outside the command center.
• Peer assessment requires judgment, and peer assessors should be prepared to support judgments with references to specific observations, team feedback, and documents. Consider what challenged and what facilitated the team in its ability to accomplish its objectives and share your thoughts with the lead evaluator to consider while interpreting the data (see Using the Data).

• Customize this protocol to the incident and the team when useful. For example, consider asking about aspects of situational reports that seem interesting, problematic, etc.

• Given the assessment aims for a “snapshot,” data collection typically occurs during a single day, with a half-day to full day of preparation ahead of time. Peer assessors should also plan on about a half-day to refine their write-ups and share them with the lead evaluator. Lead evaluators may also ask peer assessors to assist with data analysis and reporting, which may require more time.

• The lead evaluator may ask the peer assessor to contribute to data interpretation and reporting. See Using the Data.

II. Peer Assessor Timeline of Activities and Resources

Pre-Assessment (Steps 1–4)

Pre-assessment refers to the period before implementing the protocol. It involves reviewing documentation, coordinating with the lead evaluator and the incident command center, and reviewing and clarifying responsibilities during assessment.

- Step 1: Learn about the tool by reviewing the “READ ME FIRST” section

- Step 2: Review the incident information and Peer Assessor Protocol

Use the Incident Background Information provided by the lead evaluator to familiarize yourself with the incident. Afterward, familiarize yourself with the Peer Assessor Protocol, also provided by the lead evaluator. Think about the specific types of documents and individuals you might need to access for each question. Identify any questions or concerns related to accessing information for answering these questions and discuss them with the lead evaluator.
Step 3: Identify and communicate dates for conducting the peer assessment to the IM team

Work with the lead evaluator to identify dates for conducting the peer assessment. Key times include after an emergency operations center has been set up, response teams have been activated, and response activities have been ongoing for a reasonable amount of time. Peer assessment can also be conducted after the end of the incident.

Step 4: Access the incident command center

Work with the lead evaluator to access the command center’s virtual portals and platforms, field office locations, and other facilities; documents for review; and personnel for discussions. Example documents could include organization charts, situation reports, plans, etc. Relevant personnel could include the safety officer, planners, and members of the command staff.

Collect background information through conversation with the lead evaluator or by reviewing documents on the incident and the IM structures used.

Confirm that the lead evaluator has sent a communiqué to IM team members explaining the purpose of the peer assessment (see communication templates under Guidelines for Lead Evaluator).

During Assessment (Steps 5–6)

These activities pertain to the period when peer assessment is carried out.

Step 5: Introduce yourself to the incident manager

Introduce yourself to the incident manager. Remind them about the purpose of the peer assessment and what kinds of people, documents, and situations you need to access.

Step 6: Carry out the peer assessment

Use the Peer Assessor Protocol to guide the assessment, working through each item.

Post-Assessment (Steps 7–8)

Post-assessment refers to the period after the peer assessment has been conducted.

Step 7: Review and compile results

Review and compile results in line with the instructions provided in the Using the Data section of the toolkit.

Step 8: Share results with the lead evaluator

Provide the completed Peer Assessor Protocol to the lead evaluator and collaborate with the lead evaluator (if asked) in interpreting and sharing the data (see Using the Data).
III. Additional Instructions for Completing the Peer Assessor Protocol

Please use these suggestions on how to fill out the Peer Assessor Protocol as needed. This high-level guidance may or may not directly apply to the specific incident you are evaluating. Use your professional judgment.

General ways to collect information

Conduct interviews with leadership, team members, technical staff, etc.

Listen in on meetings (in person or virtual) and informal conversations, including but not limited to formal debriefs, hot washes, or conversations outside the command center.

Review documents, including situation updates and public communications. For example, ask the incident manager or IM team members to show you the most recent situation update and look at time stamps. Reflect on time stamps and, considering what you know about the incident, make a judgment about whether the documentation is appropriate for the pace of the incident.

Observe the room and have conversations in informal settings, such as at water coolers and mealtimes. For example, do team members identify many surprises or report not feeling aware? Conversely, are people overwhelmed with information and cannot discern what is important and actionable vs. what is merely helpful to know? In a virtual environment, try to observe chat threads or chatter before video meetings.

Specific ideas for observing each item, by domain

<table>
<thead>
<tr>
<th>Domain</th>
<th>Item</th>
<th>Ideas for Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational awareness</td>
<td>1. Situation assessments are delivered frequently enough, given the</td>
<td>• Observe or ask incident manager for the three (or more)</td>
</tr>
<tr>
<td>and information-sharing</td>
<td>incident’s timeline and pace, phase of the response, and structure</td>
<td>most recent situational updates.</td>
</tr>
<tr>
<td></td>
<td>of the public health system.</td>
<td>• Reflect on time stamps for the updates and determine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>whether they correspond with the nature and pace of the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>incident.</td>
</tr>
<tr>
<td>Situational awareness</td>
<td>2. Situation assessments are delivered to the appropriate</td>
<td>• Ask the lead evaluator who receives (and who should</td>
</tr>
<tr>
<td>and information-sharing</td>
<td>stakeholders in a timely manner.</td>
<td>receive) situation assessments.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chat with identified contacts on (1) their level of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>satisfaction with the information received and (2) any</td>
</tr>
<tr>
<td></td>
<td></td>
<td>unmet information needs.</td>
</tr>
<tr>
<td>Domain</td>
<td>Item</td>
<td>Ideas for Observation</td>
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<td>------------------------------------</td>
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<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Situational awareness and information-sharing | 3. Any delays in delivering or receiving situation assessments do not cause problems (e.g., lack of guidance for decisions, coordination problems—please specify). | • **Listen** to IM team members and ground staff to discern whether delays in updates affected their tasks and to what extent.  
  • **Use** information from above items 1 and 2 to make a judgment on any issues encountered because of delays (if any). |
| Incident action and implementation planning | 4. Within available documents (e.g., incident action plans, situation reports, incident command forms) or discussions, IM objectives are clear. | • **Consider** a wide variety of documents to assess the SMART (specific, measurable, actionable, relevant, and time-bound) of objectives. Don’t limit yourself to the incident action plan.  
  • **Observe** any confusion about identified objectives among IM team members. |
| Resource management and mobilization | 5. Estimated time of first official report of incident (date/time/unable to judge). | • **Examine** the day’s Incident Status Summary for time stamps on first official report of incident.  
  • **Ask** the incident manager or lead evaluator for this information or check news sources for information on incident. |
| Resource management and mobilization | 6. Estimated time of IMS stand-up (date/time/unable to judge). | • **Examine** the day’s Incident Status Summary for time stamps on IMS stand-up.  
  • **Ask** the incident manager or lead evaluator for this information, if not available in the Status Summary. |
| Resource management and mobilization | 7. The estimated time difference between first official report of incident and stand-up of IMS did not negatively affect the overall incident response. | • **Listen** in and have discussions with IM team members to gain insight on emergency operations center stand-up (if applicable), resource mobilization, and overall feedback on IMS stand-up.  
  • **Observe** if the incident response was negatively affected by late IMS stand-up. |
| Resource management and mobilization | 8. IM team members are able to anticipate availability of resources. | • **Identify** resource mobilization and demobilization teams and discern whether resource mobilization matches the incident nature and pace.  
  • **Listen** in and hold informal conversations with IM team members to discuss whether they can identify needs for new resources, given incident pace. |
<table>
<thead>
<tr>
<th>Domain</th>
<th>Item</th>
<th>Ideas for Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource management and mobilization</td>
<td>9. It is clear who is responsible for maintaining the resource tracking system (e.g., entering data, checking data, using data, and solving any technological problems).</td>
<td>• <strong>Look</strong> for clarity and consistency on who IM team members would talk to in case of technical issues with resource tracking systems and/or to check new resources.</td>
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<td></td>
<td>10. Appropriate staff seem to be able to use the resource tracking system without excessive effort.</td>
<td>• <strong>Observe</strong> resource management leads and assess whether they have adequate knowledge of available and anticipated resources.</td>
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</table>
|                                             | 11. When asked, an appropriate team member is able to identify how many people are doing a given job. | • **Identify** a person (e.g., operations lead) who, in your judgment, should be able to identify how many people (e.g., division leaders) are doing a given job (e.g., a member of the planning team or the operations team).  
• **Match** the response with incident organization charts to assess whether they’re consistent with the response above. |
|                                             |                                                                      |                       |
| Coordination and collaboration               | 12. Issues related to safety and fatigue (physical, mental, emotional) are rare in this response (inquire with the safety officer). | • **Ask** the safety officer (or equivalent) about safety- and fatigue-related issues.  
• **Discern** and observe conversations (such as during mealtimes) to ascertain whether there is frustration about staff well-being.  
• **Observe** whether team members needing space to process incident-related information are provided opportunities to do so and whether team members are contacted when not on shift. |
|                                             |                                                                      |                       |
| Coordination and collaboration               | 13. There is clarity among IM team members on channels of communication. | • **Observe** formal meetings (e.g., planning meetings) for clarity (or lack thereof) of recipients, scope, and frequency of incident information. |
|                                             |                                                                      |                       |
| Coordination and collaboration               | 14. The frequency of contact between the command center and responders in the field is adequate (i.e., neither too seldom nor too frequent) given the pace of incident. | • **Listen** and have informal conversations with IM team leadership to note whether the frequency of contact between the command center and responders matches the nature and pace of incidents.  
• **Observe** respondent morale over types of communication, such as telephone calls, wireless communication, etc. |

Incident Management Measurement Toolkit — Peer Assessor Materials
<table>
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<tr>
<th>Domain</th>
<th>Item</th>
<th>Ideas for Observation</th>
</tr>
</thead>
</table>
| Feedback and continuous quality improvement | 15. Processes exist to build on experiences from previous phases and previous incidents based on discussions with leadership on continuous quality improvement. | • **Look** for descriptions of policy changes, process, outcome, resources management, etc. for the current incident.  
• **Inquire** about previous incidents and how lessons were applied here. |
| Feedback and continuous quality improvement | 16. Incident management leadership and others can point to examples of how lessons learned from previous incidents or phases of the current response influence subsequent response activities. If applicable, list up to three. | • **Inquire** about previous incidents and how lessons have been subsequently applied.                                                              |
Peer Assessor Protocol

Domain 1: Situational awareness and information-sharing

The perception and characterization of incident-related information to identify response needs

How might I observe the items related to this domain?

- **Look at and synthesize documents:** For example, ask the incident manager or a team member to show you the most recent situation updates and look at time stamps. Reflect on time stamps and, considering what you know about the incident, make a judgment about whether the documentation is appropriate for the nature and pace of the incident.

- **Discern responders’ awareness:** For example, do team members mention a large number of surprises or a lack of awareness that affects their ability to do their jobs? Conversely, are people overwhelmed with information and cannot discern what is important and actionable versus what is simply helpful to know?

1. Situation assessments are delivered frequently enough, given the incident timeline and speed, phase of the response, and structure of the public health system.

   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:

   ___________________________________________________________

   ___________________________________________________________

   ___________________________________________________________

   ___________________________________________________________

**Example of what this might look like in practice:**
The peer assessor asked the incident manager for the five most recent situational updates and looked at the time stamps. The time stamps show that the initial updates were regular, and, as the incident grew in intensity and size, the updates grew more frequent. Consequently, the assessor marks “Strongly Agree” and describes their process in the “Explanation for rating” section.

2. Situation assessments are delivered to the appropriate stakeholders in a timely manner.

   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree
Example of what this might look like in practice:
The peer assessor asked the lead evaluator for the situation assessments, and then informally chatted with the recommended contacts. The contacts said that they are regularly apprised of the incident’s size and conditions. But the peer assessor noted a few conversations in the break room about responders being surprised about the lack of information around certain changing incident conditions. Consequently, the assessor responds with “Agree,” writing in the “Explanation for rating” section that the most important information was available when needed, but some useful-to-know information was not included.

3. Any delays in delivering or receiving situation assessments do not cause problems (e.g., lack of guidance for decisions, coordination problems—please specify).

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Not applicable

Example of what this might look like in practice:
When talking with IM team members, the peer assessor heard references to information gaps. After probing the reason for these gaps, they learned that some SITREPS had been delayed during a key phase of the response. Consequently, the assessor responds with “Disagree,” writing in the “Explanation for rating” section that the late information caused an observable problem.
Domain 2: Incident action and implementation planning

The articulation and communication of decisions in coherent incident action plans to set up implementation of those plans

How might I observe the items related to this domain?

- **Look at and synthesize documents:** For example, ask the incident manager or a team member for a copy of documents disseminated in a recent meeting, such as a morning briefing or an operations planning meeting. Attempt to locate in these documents a clear indicator of the incident command team’s objectives for the day, for this stage of the incident or for the incident overall.

- **Discern responders’ reactions:** During conversations or team meetings, observe whether team members are confused about why certain tasks or actions have been taken.

4. Within available documents (e.g., incident action plans [IAPs], situation reports [SITREPs], incident command system forms) or discussions, incident management objectives are clear.

  - [ ] Strongly disagree
  - [ ] Disagree
  - [ ] Neutral
  - [ ] Agree
  - [ ] Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

**Example of what this might look like in practice:**
The peer assessor was able to locate a clear and concise list of objectives in an IAP. They can understand the objectives and how the IM team’s work contributed to the IAP goals. Reviews of other recent IAPs were similar. The assessor did not hear any confusion from team members about these goals. Consequently, the assessor marks “Strongly Agree” and describes their process in the “Explanation for rating” section.
Domain 3: Resource management and mobilization

The deployment of human, physical, and other resources to match ongoing situational awareness, identification of roles, and relevant decisions

How might I observe the items related to this domain?

- **Look at and synthesize documents**: Look for information and consistency in daily reports, such as incident status summaries (such as ICS Form 209). These documents can contain information on incident resources, as well as pertinent history and data. Other regularly updated documents can be used to find this information.

- **One-on-one conversations**: Talk with incident command team members responsible for resource mobilization and demobilization to learn about resource tracking systems. Talk with the incident's safety officer about workplace safety questions or incidents.

- **Listen in**: Those working on incidents can offer valuable insight into the IM team arrival, their own mobilization experiences, and what it's like to work on the incident.

5. Estimated time of first official report of incident (date/time/unable to judge):

   _______________________________________

Example of what this might look like in practice:
The peer assessor examined the day’s Incident Status Summary and found the information. They add this information in the “Response” section.

6. Estimated time of IM stand-up (date/time/unable to judge):

   _______________________________________

Example of what this might look like in practice:
The peer assessor examined the day’s Incident Status Summary and found the information. They add this information in the “Response” section.

7. The estimated time difference between first official report of the incident and stand-up of the IM system did not affect the overall incident response.

   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree
Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Example of what this might look like in practice:
The peer assessor spoke with members of the IM team that were present for the IM stand-up process. The assessor learned there was initially some delay, but the team was able to quickly get back on top of things and the response was not negatively affected. Consequently, the assessor marks “Agree” and describes their process in the “Explanation for rating” section.

8. IM team members are able to anticipate availability of resources.
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree
   - Unable to judge

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Example of what this might look like in practice:
The peer assessor listened to IM team members discuss what upcoming days will look like as new resources arrive and discovered a mix of information. Some teams had a clear grasp of what to expect, whereas others expressed frustration at not knowing when needed resources would arrive. Consequently, the assessor marks “Neutral” and describes the team’s process in the “Explanation for rating” section.

9. It is clear who is responsible for maintaining the resource tracking system (e.g., entering data, checking data, using data, and solving any resource tracking technological problems).
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree
10. Appropriate staff seem to be able to use the resource tracking system without excessive effort.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Example of what this might look like in practice:
The peer assessor asked members of the IM team who they would ask to check on new resources. The answers they received were clear and consistent, and the people the assessor was directed to were available to check on those resources. Consequently, the assessor marks “Strongly Agree” and describes their process in the “Explanation for rating” section.

11. When asked, an appropriate team member is able to identify how many people are doing a given job.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
Example of what this might look like in practice:
The peer assessor asked the IM team’s operations section chief how many division leaders there are on the incident. The answer was clear and matched incident organization charts. Consequently, the assessor marks “Strongly Agree” and describes their process in the “Explanation for rating” section.

12. Issues related to safety and fatigue are rare in this response.

   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

   Explanation for rating:

   _______________________________________________________________________

   _______________________________________________________________________

   _______________________________________________________________________

Example of what this might look like in practice:
The peer assessor talked to the safety officer about safety and fatigue issues. In addition, the peer assessor listened to team members’ informal conversations. Team members did not mention fatigue-related issues and were not contacted when off shift. Consequently, the assessor marks “Strongly Agree” and describes the team’s processes for managing safety and fatigue in the “Explanation for rating” section.
Domain 4: Coordination and collaboration

The processes of mutual adjustment between internal and external actors involved in IM to reach a common objective

How might I observe the items related to this domain?

- **Listen in on meetings**: Observe in-person and virtual meetings, focusing on how individuals and groups work together. Note attendance—were key groups and individuals in the room and able to give input?
- **Discern the feel in the room**: In informal settings and conversations, such as at water coolers or mealtimes, listen in to hear whether there are frustrations or irritations about communication.

13. There is clarity among IM team members on channels of communication.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**Explanation for rating:**

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Example of what this might look like in practice:
The peer assessor noted during formal meetings that some team members seemed unsure as to who is supposed to know key pieces of information, sources providing information, and how frequently this information needs to be updated. Consequently, the assessor marks “Strongly Disagree” and describes their process in the “Explanation for rating” section.

14. The frequency of contact between the command center and responders in the field is adequate (i.e., neither too seldom nor too frequent) given the pace of the incident.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
Example of what this might look like in practice:
The peer assessor noted in conversations with team leadership that frequency of contact was regular. But IM team leaders indicated that frequency has not changed in regularity as the tempo of the incident has changed. This has not caused problems but has necessitated more informal conversations and occasional last-minute decisionmaking, which generated stress. Consequently, the assessor marks “Neutral” and describes their process in the “Explanation for rating” section.

Domain 5: Feedback and Continuous Quality Improvement
The collection and use of information about past operational periods to identify lessons for current and future responses

How might I observe the items related to this domain?

- **Have one-on-one conversations:** Talk with leadership about previous incidents or earlier stages of the current incident and how they have shaped today’s response efforts.
- **Have one-on-one conversations:** Talk with general team members with several years’ experience with the current team to see whether incident response has changed over time. Also ask them whether there are mechanisms for giving feedback to leadership and whether they feel leadership listens to and uses that feedback to improve incident response.
- **Look at and synthesize documents:** Specifically, aim to assess whether any lessons learned, such as AARs, have been incorporated to improve the response.

15. Processes exist to build on experiences from previous phases and previous incidents.

[ ] Strongly disagree
[ ] Disagree
[ ] Neutral
[ ] Agree
[ ] Strongly agree

Explanation for rating:
Example of what this might look like in practice:
The peer assessor heard in discussions with leadership and team members that leadership used lessons learned from previous incidents to guide the current incident. Discussions with team members suggested mistakes with mandating proper use of personal protective equipment and ensuring worker safety were occurring. Consequently, the assessor marks “Neutral” and describes the different areas of response in the “Explanation for rating” section.

16. IM leadership and others can point to examples of how lessons learned from previous incidents or phases of the current response influence subsequent response activities. If applicable, list up to three.

Example 1:

_____________________________________________________________________
_____________________________________________________________________

Example 2:

_____________________________________________________________________
_____________________________________________________________________

Example 3:

_____________________________________________________________________

Example of what this might look like in practice:
IM team members described how lessons identified in previous AARs, IAPs, and other continuous quality improvement mechanisms were being applied to this incident.
Final Section

17. Overall, I feel this incident was managed well (or has been managed well so far).
   - Strongly disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly agree

Explanation for rating:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

18. Any other notes on how this incident was managed?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________


Using the Data

IN THIS SECTION
• Summarizing Survey Data
• Summarizing Peer Assessment Data
• Data Interpretation Guidance
• Sharing and Using Insights from the Data

Having collected the data, the next step is to analyze and share them with decisionmakers and stakeholders. Data analysis and reporting processes will depend on whether data were collected by (1) survey only, (2) Peer Assessor Protocol only, or (3) both. The lead evaluator should oversee this process, drawing on insights from the peer assessor and others, as appropriate.

Summarizing Survey Data

After the survey data have been collected, summarize the information across each item and domain using Microsoft Excel or other spreadsheet software. Below are step-by-step instructions.

❑ Step 1: Format the data

Organize the data by respondent in rows and by survey item in columns. If you are using an online survey platform, you can likely export the data in this format to a spreadsheet program. If you distribute the survey as an email attachment or paper copy, you will need to type responses manually into a spreadsheet. Below is an illustration of how the data should be formatted:
Example of a data matrix formatted with respondents in rows and survey items in columns

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Respondent</td>
<td>v1</td>
<td>v2</td>
<td>v3</td>
<td>v4</td>
<td>v5</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>5</td>
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<td>3</td>
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<td>4</td>
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<td>5</td>
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<tr>
<td>8</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>6</td>
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<td>9</td>
<td>8</td>
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<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>.</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
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<td>10</td>
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<td>3</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Step 2: Organize respondent background information

Report respondent background data as frequencies and percentages across each option to describe the sample of the IM team surveyed. To facilitate interpretation, consider visualizing these data using column, bar, or pie charts. An example is shown below.

Example visualization of the “Years of experience” survey item found in the respondent background information section of the survey

![Years of experience chart](image-url)
Step 3: Review the distributions across each survey item
Using the formatted data, calculate the frequency distribution (i.e., the number and percentage of respondents selecting each response option) for each survey item. To aid interpretation, consider creating a visual display, such as a “100% stacked” bar or column chart. These can be created in Excel and most other statistical or spreadsheet software packages. Review the range of responses to the survey items, noting aspects of IM viewed as working well or needing improvement and where there is disagreement among respondents. Below is an example.

Example of how the Coordination and Collaboration domain survey items could be visualized

![Coordination and collaboration](image)

Step 4: Use comments to deepen understanding of the quantitative data
Use any comments in the “Explanation for rating” section to give additional context for interpreting survey items. For instance, comments might be useful in interpreting “unable to respond” and “neutral” responses. Identifying common themes or patterns among comments is a way of identifying crosscutting contextual issues associated with the incident. This could also help deepen understanding of the quantitative data.

Step 5: Calculate the domain scores
After examining frequency distributions for each item, generate domain scores to communicate general patterns. For each respondent, calculate the mean of item scores for each domain. Then calculate the median domain scores. For example, for domain 1, create a new variable that equals the mean of items 1–4 for each respondent. Then, calculate the median of this new domain variable across all respondents. An example is provided below.
Example of how to calculate domain-level scores in a spreadsheet

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Step 1: Start with formatted data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Respondent</td>
<td>d1i1</td>
<td>d1i2</td>
<td>d1i3</td>
<td>d1i4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
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<td>4</td>
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<td></td>
<td></td>
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<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 2: Create new variable with mean of all domain scores

<table>
<thead>
<tr>
<th></th>
<th>Respondent</th>
<th>d1i1</th>
<th>d1i2</th>
<th>d1i3</th>
<th>d1i4</th>
<th>d1i_mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.75</td>
</tr>
<tr>
<td>13</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4.25</td>
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<td>14</td>
<td>4</td>
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<td>2</td>
<td>3</td>
<td>3</td>
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<td>5</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Step 3: Create new variable median of means

<table>
<thead>
<tr>
<th></th>
<th>Domain 1 median</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CAUTION: While domain scores provide a useful overview, they may mask important variations among items in the same domain. Be sure to review the item-level analysis in Step 3 to identify specific items with responses that deviate substantially from the domain score. Note any items with bimodal responses (i.e., lots of values near the extremes and few in the middle), as this may be hidden by the domain score. Use particular caution when interpreting domain scores for domain 5, which includes only three items.

The domain scores can be visualized using column or bar charts in Excel or another statistical software. An example is provided below.
Summarizing Peer Assessor Data

The layout of the Peer Assessor Protocol is designed to facilitate easy interpretation by the lead evaluator and requires no special data formatting or analytic techniques.

The following are suggested steps for interpreting the data:

- **Step 1: Scan the responses**
  Scan the numerical ratings, identifying particularly high and low values for each item.

- **Step 2: Aggregate data by domain**
  Aggregate items by domain by calculating the median of items provided by the peer assessor. As mentioned above, domain scores should be interpreted with caution, as they may mask within-domain item variation.

- **Step 3: Incorporate comment data**
  Use the comments in the “Explanation for rating” section to gain a more nuanced understanding of each of the ratings, as well as broader patterns across items and domains. Identifying common themes or patterns among comments could be one method of identifying broader patterns across questions and domains.
Data Interpretation Guidance

The lead evaluator (aided by the peer assessor, as appropriate) should carefully review all the data (i.e., from both the Incident Management Team survey and Peer Assessor Protocol, if both were used) to identify patterns before sharing findings with others. Doing so requires understanding the context of the incident and the representativeness of the data collected. Lead evaluators should start by considering contextual factors and data quality. Next, they should identify key findings based on context and data quality and explore explanatory factors. This process is summarized in the figure below.

Overview of data interpretation process

The questions below are intended to help account for these considerations as part of the data interpretation process. The questions are provided as illustrations, and users are encouraged to consider others. The lead evaluator can develop these questions separately or with knowledgeable members of the IM team.

- **Step 1: Review contextual factors and data quality**
  
  Incident context questions
  
  Think about how the context of the incident might have influenced the way the incident was managed and the generalizability of findings to other incidents.
  
  HINT: Use the Incident Background Information Template to help answer these questions. Below are examples of contextual factors, how they might affect IM processes, and specific incident background items that might be relevant.
Sample questions for reflection about context

<table>
<thead>
<tr>
<th>Question</th>
<th>How It Might Affect IM Performance</th>
<th>Potential Information Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the incident scope or severity create IM challenges?</td>
<td>Incidents with broad scope or high severity might require participation by an unusually large number or variety of partners, increasing the challenges of information-sharing, coordination, etc.</td>
<td>Incident Background items on incident hazards (Q5), scale or spread (Q6), and external partners (Q14).</td>
</tr>
<tr>
<td>Did the length of the incident create IM challenges?</td>
<td>Especially long incidents might increase burnout and problems with staff turnover.</td>
<td>Incident Background item on the date range (Q2).</td>
</tr>
<tr>
<td>Did the geographic dispersion of responders create challenges?</td>
<td>If responders are spread out geographically, this might increase coordination and communication challenges.</td>
<td>Incident Background item on multiple sites (Q9) and physical space for IM team (Q10).</td>
</tr>
<tr>
<td>What else (if anything) was occurring that might have affected how this incident was managed?</td>
<td>The need to address other conditions might distract from IM.</td>
<td>Discussions with participants, review of documents.</td>
</tr>
<tr>
<td>Did the incident have novel or unique elements (e.g., novel influenza, unusual chemical agents, etc.)?</td>
<td>Uncertainty about the hazard or other incident elements might require additional time and effort for incident characterization, etc.</td>
<td>Discussions with participants, review of documents.</td>
</tr>
</tbody>
</table>

NOTE: "Q" refers to items from the Incident Background Information Template.

Data quality questions
Reflect on the quality of the data collected, considering how this might shape the findings. Below are some potential data quality issues, ways they might affect the analysis and interpretation, and how they might be identified.

Sample questions for reflection about data quality

<table>
<thead>
<tr>
<th>Question</th>
<th>How It Might Affect Analysis and Interpretation</th>
<th>Potential Information Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What was the overall response rate?</td>
<td>A low overall response rate might mean that important perspectives are missing.</td>
<td>Compare number of surveys sent out with number returned (calculate percentage).</td>
</tr>
<tr>
<td>Did all key teams and roles participate in the survey?</td>
<td>If some roles are not represented, important perspectives may be missing.</td>
<td>Compare the groups or sectors to which surveys were sent with those from which surveys were returned.</td>
</tr>
</tbody>
</table>
Step 2: Develop key findings

Data interpretation questions

Keeping in mind the context of the incident and the quality of the data collected, review the domain-level and item-level scores and comments to identify patterns. Begin by identifying overall trends via domain-level scores, and then drill down into item-level scores.

Sample questions for reflection about data interpretation

**Domain-level questions:**

- Which domain has the highest score? Which domain has the lowest score?
- Was there lower variation (i.e., less agreement) among individual items in some domains?
- How might context and/or data quality (see above) affect domain-level scores?

**Item-level questions:**

- Which items have the highest scores? Which items have the lowest scores?
- Was there lower variation (i.e., less agreement) among responses to some items?
- How might context and/or data quality (see above) affect item-level scores?

**Write-in comments:**

- Are there common themes across respondents’ write-in comments? Are there areas of difference?
- Do respondent write-in comments align with or contradict domain- and item-level scores?
- Are any of the respondents’ write-in comments particularly surprising or unsurprising given incident context? What does this suggest about how this incident was managed?
Step 3: Explore explanatory factors

Sample questions for reflection about explanatory factors

Drawing on the answers to the data interpretation questions above, consider whether the data suggest any factors beyond context and data quality that might help explain the strengths and weaknesses revealed. Consider factors such as the following:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plans and policy</td>
<td>• How appropriate were preparedness plans specific to this type of incident? Were any parts of these plans inadequate or poorly designed?</td>
</tr>
<tr>
<td></td>
<td>• Did any policies complicate the management of the incident?</td>
</tr>
<tr>
<td>Personnel and training</td>
<td>• Did issues of staff technical expertise (e.g., staff knowledgeable of chemical hazards during a chemical incident) affect how this incident was managed?</td>
</tr>
<tr>
<td>Organization</td>
<td>• Were lines of authority between public health incident command structure and governor’s office staff and/or other organizational issues clear? If not, did this affect how the incident was managed?</td>
</tr>
</tbody>
</table>

Exploring explanatory factors can help generate ideas for improving IM. Below are links to sources of additional information on root cause analysis and corrective action planning.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Link</th>
</tr>
</thead>
</table>
Sharing and Using Insights from the Data

Insights from the data collection and analysis should be shared with members of the IM team who participated in the assessment, key decisionmakers, and key partners. This could be done one-on-one or in small-group discussions, briefings, workshops, or written summaries. A possible outline for sharing results is provided below.

Possible outline for sharing results

1. Incident or exercise overview
2. Summary of data collected (e.g., survey sample, peer reviewer selection and process)
3. General trends in the data, including strengths and weaknesses of how the incident was managed
4. Specific findings of interest, with illustrative comment data
5. Possible explanatory factors
6. Next steps
7. Questions or feedback about this process

Findings from the data analysis may inform the following processes:

<table>
<thead>
<tr>
<th>Process</th>
<th>Resources</th>
</tr>
</thead>
</table>
Methodology: How the IMMT Was Developed

The IMMT was developed over a six-year period, from 2018 to 2024. Initial development of the toolkit took place in 2018–2020, and the toolkit was pilot tested and finalized from 2020 to 2024. Initial development and pilot testing involved close collaboration with public health incident managers. We aimed to align the toolkit to four criteria commonly used in health care quality and public health emergency preparedness: validity, reliability, feasibility, and utility.

IMMT Initial Development Process (2018–2020)

We began our initial development process by establishing a conceptual framework for public health IM that could serve as a foundation for the measures. Drawing on IM-related research, theory, and doctrine and approximately 50 discussions with experts, we developed a framework that consists of five domains: situational awareness and information-sharing, incident action and implementation planning, resource management and mobilization coordination and collaboration, and feedback and continuous quality improvement. We then developed items for measuring those domains, starting with 135 candidate items, then reducing to the final set of items with feedback from the semi-structured interviews and numerical rankings by approximately 50 experts. We concluded the initial development process by drafting the toolkit to guide users in planning, data collection, analysis, and reporting.


We piloted the draft toolkit in 23 incidents and exercises, using the results of the pilots to revise and finalize the toolkit. Sites were recruited by working through professional associations, advertising in blogs, publishing commentaries, and speaking at conferences. We sought sites at both state and local health agencies from various regions of the country. We primarily targeted small and medium-sized health departments, since these agencies might benefit most from a low-burden assessment tool. Given the variety of actors involved in managing public health incidents, we sought to also include emergency management agencies, health care coalitions, and other agency types.

Sites were given the option to administer the Incident Management Team Survey or Peer Assessor Protocol separately or together. Most elected to use the survey to minimize burden. Most pilot tests involved real incidents, but a handful of tests involved full-scale exercises. Exercises were carefully

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4 Clark-Ginsberg et al., 2023.
screened in advance to ensure that the scope of the exercise provided sufficient opportunity to observe public health IM activities.

Data sources during pilot testing included data collected using the measurement protocols and data from post-pilot site debriefs. Quantitative data consisted of the Incident Management Team Survey items, which we analyzed using frequency distributions, measures of central tendency, Cronbach’s alpha, item-rest correlations, and other approaches. Qualitative data included write-in comments from the survey and peer assessments, and debriefs that we conducted after each test. Debriefs focused on the site’s experience using the toolkit and the toolkit’s strengths, weakness, and areas for improvement. Qualitative data were analyzed using a basic qualitative coding frame.
# Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAR</td>
<td>after-action review</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>IAP</td>
<td>incident action plan</td>
</tr>
<tr>
<td>IM</td>
<td>incident management</td>
</tr>
<tr>
<td>IMS</td>
<td>incident management system</td>
</tr>
<tr>
<td>IMMT</td>
<td>Incident Management Measurement Toolkit</td>
</tr>
<tr>
<td>SITREP</td>
<td>situation report</td>
</tr>
</tbody>
</table>
References


