Incident Management Measurement Toolkit

Read Me First: Toolkit Overview
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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.

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:2

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>Example Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational awareness and information-sharing</td>
<td>Survey</td>
</tr>
<tr>
<td></td>
<td>• I am confident that I can identify information relevant to my IM-related job.</td>
</tr>
<tr>
<td></td>
<td>• I can make decisions quickly enough because I have adequate information.</td>
</tr>
<tr>
<td>Peer assessment</td>
<td>• Situation assessments are delivered frequently enough, given the incident timeline and speed, phase of the response, and structure of the public health system.</td>
</tr>
<tr>
<td>Incident action and implementation planning</td>
<td>Survey</td>
</tr>
<tr>
<td></td>
<td>• I am aware of the objectives for the current phase of the overall response.</td>
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<tr>
<td></td>
<td>• My supervisor(s) and I agree on which of my tasks are highest priority.</td>
</tr>
<tr>
<td>Peer assessment</td>
<td>• Within available documents (e.g., incident action plans [IAPs], situation reports [SITREPs], incident command system forms) or discussions, IM objectives are clear.</td>
</tr>
<tr>
<td>Resource management and mobilization</td>
<td>Survey</td>
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<tr>
<td></td>
<td>• I am able to anticipate the availability of resources.</td>
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<tr>
<td></td>
<td>• While managing this incident, my stress level remains reasonable.</td>
</tr>
<tr>
<td>Peer assessment</td>
<td>• When asked, an appropriate team member is able to identify how many people are doing a given job.</td>
</tr>
<tr>
<td>Coordination and collaboration</td>
<td>Survey</td>
</tr>
<tr>
<td></td>
<td>• There is clarity among IM team members on channels of communication.</td>
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<tr>
<td></td>
<td>• I am aware of external partners’ roles and activities that have an impact on my job.</td>
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<tr>
<td>Peer assessment</td>
<td>• 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.</td>
</tr>
<tr>
<td>Feedback and continuous quality improvement</td>
<td>Survey</td>
</tr>
<tr>
<td></td>
<td>• Processes exist to build on experiences from previous phases and previous incidents.</td>
</tr>
<tr>
<td></td>
<td>• It is easy for me to approach superiors about problems I cannot address.</td>
</tr>
<tr>
<td></td>
<td>• Processes exist to build on experiences from previous phases and previous incidents.</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
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.