Integrating Data and Collaboration for Enhanced Outbreak Response: Insights from PHIL and CORHA

Panel Conversation
May 7\textsuperscript{th} @ 11am
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Local Health Department Data Use for Outbreak Response and Prevention in Healthcare Settings

May 2024

Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC) to provide infection control training and education to frontline healthcare workers and public health personnel. National Association of County and City Health Officials (NACCHO) is proud to partner with Project Firstline to host the NACCHO Healthcare Infection Prevention and Control Summit (Summit), as supported through CDC Grant # 6NU380T000306-03-05. CDC is an agency within the Department of Health and Human Services (HHS). This presentation is being hosted as part of the Summit; the contents of this presentation and Summit do not necessarily represent the policies of CDC or HHS and should not be considered an endorsement by the Federal Government.
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Project Background: Qualitative evaluation

**Objective**
- Identify LHD’s awareness, access, and use of data for outbreak investigations in health care settings.

**Methodology**
- Qualitative evaluation involving LHD interviews and a focus group representing 11 LHDs

**Key Findings**
- Barriers with data coordination and access for outbreak response.
- Budget and staffing constraints in smaller and rural LHDs.
- Urban LHDs are more adept at leveraging data due to better resources.
- Larger LHDs tend to focus on at-risk populations with more diverse data while smaller LHDs lack frameworks to equitably manage and use data.

**Recommendations**
- Strengthen partnerships; Enhance LHD capacity; Support improvement of state-level disease reporting systems; address access barriers; facilitate training; and operationalize equity
Project Background: Resource Development

Strategic collaboration guide

- A decision-making guide for LHDs to build outbreak response infrastructure through effective partnership

Equity framework guide

- A resource to provide LHDs the approach to combining population data with infection and facility data to address disparities during outbreak

Data use and management guide

- A resource to provide LHDs with case studies showcasing data solutions and approaches employed by other LHDs conducting outbreak response in healthcare settings
Impact and Future Directions

• Implementation: Guides introduced through webinars, focusing on practical applications and enabling LHDs to operationalize findings.

• Feedback and Iteration: Continuous feedback from LHDs to refine resources and ensure they meet the evolving needs of outbreak management.
Conclusion

• Summary: By bridging the gap between evaluative insights and practical application, the project enhances LHD capabilities to manage and prevent outbreaks more effectively and equitably.

• Future Outlook: Emphasize ongoing support for LHDs, especially in rural areas, to advance their data-driven outbreak response and prevention management practices.
Thank You
Council for Outbreak Response: Healthcare-Associated Infections Antibiotic-Resistant Pathogens

Website – corha.org
Presenters

Dawn Terashita, MD, MPH (CORHA Governance Committee member and Policy Workgroup Co-lead)
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Hospital Outbreak and Biothreat Response Unit
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• **Mission**: To improve practices and policies at the local, state and national levels for detection, investigation, control and prevention of HAI/AR outbreaks across the healthcare continuum, including emerging infections and other risks with potential for healthcare transmission.

• **Council Members**: ASTHO, CSTE, NACCHO, CDC, SHEA, APIC, APHL, CMS, FDA

• **Products**:
  • Threshold for reporting and investigation
  • Tools for investigation
  • Framework for HAI outbreak notification
Enhance Capabilities of Public Health and Healthcare to Improve Outbreak Detection, Response, and Prevention

Detection and Response:
- Develop a Comprehensive Repository of Tools and Guidance

Lessons Learned and Prevention Needs:
- Define and Operationalize CORHA’s Role in Emerging Threats

Funding:
- Implement Succession Planning

E
- Strengthen Relationships and Communication Among Stakeholders

F
- Develop and Implement a Formal Evaluation Plan
Background

- Outbreaks of infections are a regular occurrence within healthcare facilities
- Previously, no comprehensive guidance existed for notification of outbreaks
  - Varied based on situation
CORHA Framework for HAI outbreak notification

Introduction

This document provides guidance for notification in the context of a suspected healthcare-associated infection (HAI) outbreak. It is based on public health best practices and grounded in the biophysical principles of autonomy and beneficence. A suspected outbreak can be signaled by a cluster of cases (infection or colonization), detection of an unusual pathogen or resistance mechanism, or even a serious infection control breach. For the purpose of this document, all such instances will be referred to as “outbreak.”

Investigation partners (e.g., the healthcare setting and public health authorities) should consider the communication needs of all affected target populations, as outlined below. Timely, transparent, and instructional communication may be critical for controlling infection risks, preventing further transmission and reducing harm by allowing appropriate treatment. Public health authorities should be consulted to help develop content of communications to various target populations throughout the process. Communication specialists should be involved where possible. As assessment of the risk evolves and new information becomes available during an investigation, updated information can be communicated to target populations.

This guidance is intended to provide standardized actions that can be taken for suspected HAI outbreak notifications. The circumstances surrounding these investigations may vary, and the course of action may be tailored in consultation with public health authorities. Supplementary resources referenced in this document may be used to enhance communication information. Note that additional guidance, not presented here, is available from CORHA and other organizations to assist with the epidemiological aspects of healthcare outbreak investigations, including reporting.

Case patients who have been infected (or their designated healthcare proxy and, if patients are deceased, their closest family member)

<table>
<thead>
<tr>
<th>How to Notify (if one of more of the following, as appropriate)</th>
<th>When to Notify</th>
<th>What to Notify (public health agency to be involved on an ongoing basis to ensure accuracy)</th>
<th>Justification (if one or more of the following)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbally, in person or by phone calls if the patient has already been discharged, with the opportunity to ask questions. Written FAQs and descriptive statement should also be given or sent.</td>
<td>First tier.</td>
<td>Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment and additional care measures may need to be communicated and implemented (e.g., isolation, personal protective equipment [PPE], cohorting, screening, and/or changes in antibiotics).</td>
<td>To prevent and control transmission and assist with outbreak investigation activities.</td>
</tr>
<tr>
<td>If unable to reach patients in person or by phone, a written communication should be sent.</td>
<td></td>
<td></td>
<td>To fully inform patients about the nature and implications of their health.</td>
</tr>
<tr>
<td></td>
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<td>To allow patients to seek appropriate treatment.</td>
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</tbody>
</table>

CORHA Principles and Practices for Healthcare Outbreak Response: Chapter 8

- **Box 8.3** for an example involving *Legionella pneumophila*
- **Box 8.4** for New-Delhi metallo-beta-lactamase-producing carbapenem-resistant *Enterobacteriaceae*
- Discusses use of written notification postings
NOTIFICATION SUMMARY AND EXAMPLE SCENARIOS

Immediate Notification
A suspected outbreak should be immediately reported to relevant stakeholders and notification should be initiated as soon as possible after an outbreak is suspected.

Example Scenario: Legionella outbreak in a hospital setting where 2 patients stayed in the same single occupancy hospital room 7 days apart from each other.

\[\text{Case Patients: notify them immediately about their Legionella infection diagnosis and keep them informed throughout the investigation.}\]

Exposed and Potentially Exposed Patients: notify all patients who shared the same room or ward within a relevant time frame, inform them about Legionella, their risk, and symptoms to watch for.

\[\text{Patients of Future Risk: notify patients who will be admitted to the affected area and inform them of the investigation and outbreak.}\]

\[\text{Healthcare Providers: inform healthcare providers caring for affected and potentially exposed patients about the outbreak, location details, isolation measures, and testing.}\]

\[\text{Healthcare Personnel: notify potentially exposed healthcare personnel who might need to make behavioral changes or could be at risk due to underlying diseases.}\]

\[\text{Visitors: inform potentially exposed visitors, including family, members, of any necessary behavioral changes, room closures, or increased risk due to specific health conditions.}\]

\[\text{Other Healthcare Facilities: communicate with receiving facilities when transmitting patients who are exposed, at risk, or affected by the outbreak.}\]

Expanded Notification
As an investigation progresses and more information becomes available, notification should be reviewed. This is especially true if the investigation expands to additional units or to additional healthcare settings.

Public Notification
Public notification provides an important opportunity to communicate ongoing risks and advocate access to a broader audience. A notification may be useful in cases of many cases of disease than expected in a given area or among a specific group of people over a particular period of time. Partners in the investigation, especially healthcare providers and public health authorities, should address communication needs for affected populations. Timely, transparent, and instructional communication is vital to control infection rates, reduce patient harm, and ensure proper treatment. There are a few examples of application of the three steps of the PHERRI Patient Notification Framework.

\[\text{Expanded Notification Framework: provide public notification.}\]

\[\text{Public Notification: provide information to the public on the outbreak.}\]

\[\text{Expanded Notification: inform the public about the ongoing investigation and outbreak.}\]

https://www.cora.org/resources-and-products/?filter_cat=patient-notification
Panel Conversation
Thank you!