

Management of the Outbreak

**General Directorate of Infection Prevention and Control
(GDIPC)**

Outbreak and RRT Team

2022

Outline

- **Definitions**
- **Steps of initial investigation of an outbreak**
- **Steps of follow up investigation of an outbreak**

Definitions

- **Outbreak:**
- It is the occurrence of a disease in a population above the normally expected rates at any given time or location
- **Health care-associated infection (HAI):**
- It is an infection that occurs in a patient as a result of care at a health care facility that was not present at the time of admission to the facility.

Definitions

- Investigation

is the process of getting to the root of an epidemic and cutting it off at an early stage when possible.

- Notification

an alert (typically a message) generated by an application to notify the user of a new circumstance or incidence

Definitions

- **HAI outbreak:**
- It is an increase in the number of HAI events among patients or staff over and above the expected number of cases.

Note

- For early detection, if there are more than 2 cases of HAIs with the same organism, linked to the same exposure, at any given location within 3 days, it will be considered an outbreak.

Steps of initial investigation of an outbreak

1. Recognize potential outbreak
2. Confirm presence of outbreak
3. Alert key individuals
4. Perform literature review
5. Establish a preliminary case definition
6. Develop method for case findings
7. Perform descriptive epidemiology
8. Implement initial control measures
9. Identify potentially implicated health practices
10. Consider environmental sampling
11. Communicating Information about Outbreaks

Recognize potential outbreak

A potential outbreak may be identified by:

- Laboratory reports
- recognized by front-line HCWs
- Surveillance system.



Confirm presence of outbreak

- Compare the observed (the current) number of cases with the expected (previous) number of cases (same location during the last few years) to detect the occurrence of more cases of disease than expected

Alert key individuals

- It is important to alert supervisors and hospital leadership ,the microbiology laboratory and staff working in the area where the outbreak is occurring to the presence of an outbreak situation

Performing literature review

- Literature reviews help identify possible sources of the outbreak by answering the question: Where has the organism/problem been found previously



Case Definition

Case category	General features
Confirmed	Laboratory confirmation of agent
Probable	Typical clinical features of illness AND Partial laboratory results (confirmation pending) OR Epidemiologic link to a laboratory-confirmed case
Suspect	Typical clinical features of illness AND Missing laboratory and epidemiologic information

Notification Process

- The outbreak level is determined using an Outbreak Classification Matrix
- Once an outbreak is confirmed, the hospital outbreak coordinator is required to fill all required an online outbreak process starting with :
 - ✓ Notification form within the first (2-6) hours of an outbreak onset.
 - ✓ start the control measures immediately according to the hospital outbreak management action plan (OMAP)

Roles and Responsibilities in Outbreak

hospital's outbreak coordinator

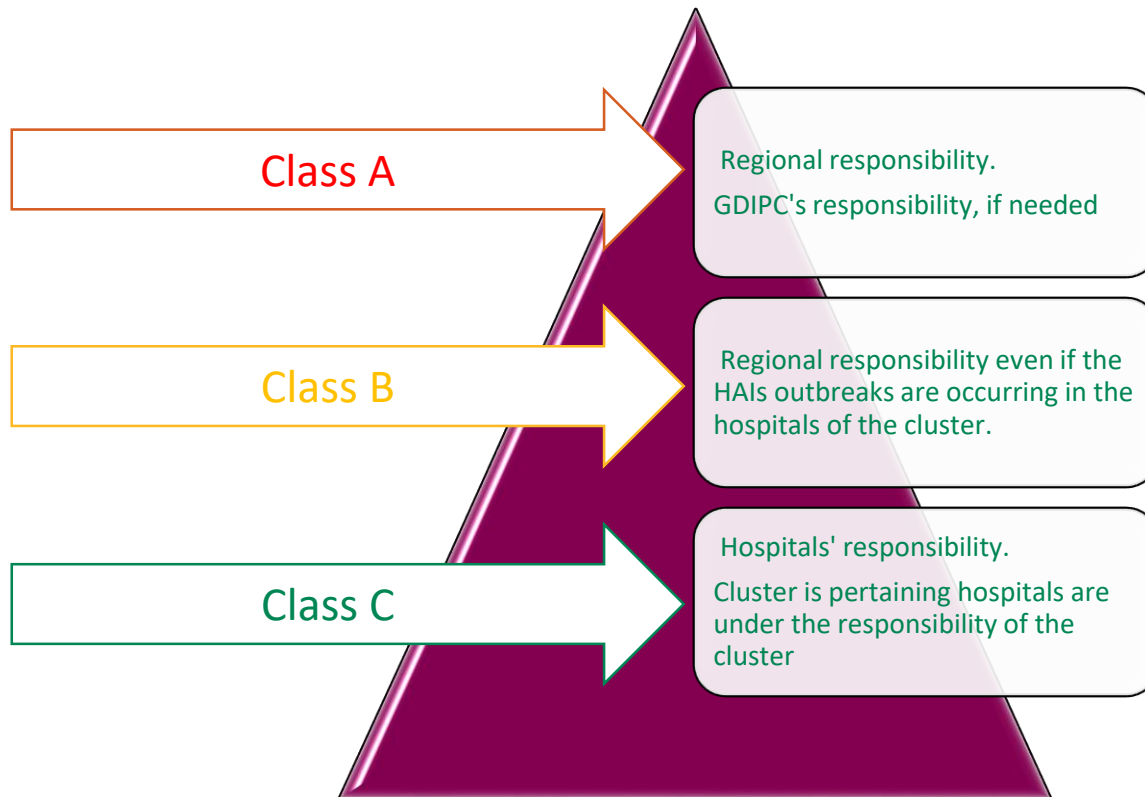
- Once an outbreak is confirmed, the hospital outbreak coordinator is required to fill all required an online outbreak process starting with
- Notification form within the first (2-6) hours of an outbreak onset.
- The filled outbreak notification form regarding the occurrence of a confirmed outbreak will be received by cluster, regional directorate coordinator and the GDIPC simultaneously.
- Hospital infection department should start the control measures immediately according to the hospital outbreak management action plan (OMAP).
- The hospital's outbreak coordinator must update the investigation form immediately when new cases or deaths occurs, otherwise data will be updated once every week.
- Meanwhile the regional directorate and GDIPC will keep an eye on the updates, status of the outbreak and classify the level of the outbreak (A, B or C) according to the provided data.
- In case the outbreak is type A or B, the regional directorate coordinator will use an outbreak risk assessment, thus the GDIPC will make a field visit, if deemed necessary.
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Roles and Responsibilities in Outbreak

regional and cluster outbreak coordinator

- The regional outbreak coordinator is responsible for performing the outbreak investigation and following control measures applied by the hospital's outbreak management team (OMT).
- Meanwhile the regional directorate and GDIPC will keep an eye on the updates, status of the outbreak and classify the level of the outbreak (A, B or C) according to the provided data.
- In case the outbreak is type A or B, the regional directorate coordinator will activate the outbreak risk assessment, thus the GDIPC will make a field visit, if deemed necessary.

Outbreak Classification Matrix



Hospital Outbreak Management Team (OMT)

Generally, the members of an OMT are as follows:

- ✓ Hospital Director or Medical Director (Chairman)
- ✓ Infection Control coordinator.
- ✓ Epidemiologist.
- ✓ Clinical Microbiologist.
- ✓ Infectious disease consultant.
- ✓ Public health (Environmental health).
- ✓ Supportive services department.
- ✓ Supplies department.
- ✓ Pharmacy Administration
- ✓ **The Head of the mean concern department**

Hospital Outbreak Management Team (OMT) Roles:

- Confirm the existence of an outbreak.
- Establish case definition.
- Report the outbreak within 2-6 hours, and provide interim and status reports when deemed necessary.
- Determine the extent of the outbreak through active-case finding.
- Investigate the source and cause of the outbreak.
- Make sure laboratory tests are undertaken appropriately and promptly.
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Hospital Outbreak Management Team (OMT) Roles:

- Generate a hypothesis on the occurrence of the outbreak whenever possible.
- Define and implement control measures.
- Implement a screening policy during the outbreak for patients and staff.
- Assess the requirement for additional supplies and staff in case of a large outbreak.
- Coordinate with the hospital managers for assisting the OMT.
- Keep the HCWs in the hospital aware of the outbreak, regularly update them on its situation, and provide training and clear recommendations.
- Declare the end of the outbreak after the regional OMT and GDIPC's consultation and approval.
- Make sure prompt, consistent, accurate and adequate information is available.
- Maintain the confidentiality of the outbreak data.

Any Question?

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