

Outbreak Investigation and Response

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1. Introduction

- An outbreak is the occurrence of disease in excess of what is normally expected in an area.
- Prompt investigation limits spread and protects community health.

2. Confirming the Outbreak

- Verify the diagnosis and confirm that case numbers truly exceed the baseline.
- **Case definition:** clear criteria of person, place, and time used to count cases consistently.

3. Descriptive Investigation

- Describe cases by person, place, and time to identify patterns.
- An epidemic curve plots cases over time to suggest the source and mode of spread.

4. Hypothesis and Testing

- Form hypotheses about the source, agent, and transmission route.
- **Analytical study:** case-control or cohort methods test the suspected exposure.

5. Control and Communication

- Implement control measures such as isolation, treatment, and source removal.
- Communicate with authorities and the public, and document lessons learned.

6. Summary

- Outbreak investigation follows systematic steps from confirming cases to applying control measures, reducing illness and preventing future outbreaks.