Advanced Outbreak Investigation and Response Training Course

4 – 8 July 2027
Muscat

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Training Center

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Ref: 1524_212590 **Date:** 4 – 8 July 2027 **Location:** Muscat **Fees:** 5700 Euro

Overview

Advanced Outbreak Investigation and Response Training Course is a one-week course for infection prevention professionals, epidemiology teams, public health practitioners, laboratory coordinators, preparedness leaders, and healthcare managers, who leave with an Outbreak Investigation and Response Pack. The course integrates verification, case definition and case finding, descriptive epidemiology, hypothesis testing, laboratory and environmental evidence, control measures, incident coordination, risk communication, surveillance, reporting, and improvement. Agile Leaders Training Center presents outbreak investigation and response as disciplined evidence-to-action coordination.

Who Should Attend

- Functions responsible for infection prevention and outbreak detection
- Teams responsible for epidemiological investigation and surveillance
- Personnel responsible for laboratory and environmental coordination
- Functions responsible for emergency preparedness and incident management
- Healthcare leaders responsible for operational control measures
- Communication teams responsible for risk messages and stakeholder updates

The course assumes participants support surveillance, investigations, incident response, or healthcare operations and leaves out clinical diagnosis, laboratory qualification, antimicrobial stewardship, and introductory epidemiology.

Departments and Industries

The course supports departments and organizations that investigate, coordinate, or respond to health-related outbreaks.

- Hospitals and ambulatory healthcare services
- Public health and community health organizations
- Laboratory and environmental health services
- Emergency preparedness and crisis coordination functions
- Infection prevention, quality, and risk departments
- Residential care, education, and workplace health services

Learning Objectives

By the end of this course, participants will be able to:

- Analyze alerts and verify whether an outbreak investigation is warranted
- Build case definitions, line lists, epidemic curves, and case maps
- Apply descriptive and analytic epidemiology to test hypotheses
- Use laboratory and environmental evidence to refine decisions
- Prioritize control measures, incident actions, and risk communication
- Evaluate surveillance evidence and after-action improvements

Course Agenda

Day 1: Detection and Investigation Design

- Outbreak Signal Verification and Baseline Comparison Checklist
- Investigation Objectives and Multidisciplinary Team Charter
- Working Case Definition Design Template
- Active Case-Finding and Notification Pathway
- Investigation Log and Decision Record Structure

Day 2: Descriptive Epidemiology and Hypotheses

- Case Line List Design and Data Quality Rules
- Epidemic Curve Construction and Pattern Interpretation
- Person, Place, and Time Analysis Matrix
- Case Mapping and Exposure Cluster Review
- Hypothesis Generation Interview and Evidence Grid

Day 3: Analytic and Field Investigation

- Cohort and Case-Control Study Selection Guide
- Exposure Comparison and Association Analysis Plan
- Laboratory Specimen Coordination and Result Tracker
- Environmental Sampling and Site Assessment Protocol
- Evidence Triangulation and Hypothesis Revision Board

Day 4: Response, Communication, and Assurance

- Outbreak Control Measure Prioritization Matrix
- Incident Action Plan and Coordination Rhythm
- Risk Communication Message and Audience Map
- Enhanced Surveillance and Control Effectiveness Dashboard
- Outbreak Report and After-Action Review Framework

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Day 5: Outbreak Response Practice

- Suggested Exercise: Alert Verification and Case Definition Review
- Suggested Exercise: Epidemic Curve and Hypothesis Assessment
- Suggested Exercise: Analytic Study and Field Evidence Simulation
- Suggested Exercise: Control, Communication, and Surveillance Review
- Capstone Exercise: Outbreak Investigation and Response Pack

Practical Exercises

The course uses suggested activities based on fictional hospital, residential care, community, education, and workplace outbreak scenarios.

- Suggested activity: verify an alert, define investigation objectives, build a case definition, and organize a line list.
- Suggested activity: interpret an epidemic curve and case map, then generate and rank exposure hypotheses.
- Suggested activity: choose an analytic design and integrate epidemiological, laboratory, and environmental findings.
- Suggested activity: assemble control, communication, surveillance, reporting, and after-action decisions.

FAQs

Who suits advanced outbreak investigation and response training, and what does it assume?

Infection prevention, epidemiology, laboratory, preparedness, communication, and healthcare operations functions suit the training; it assumes responsibility for surveillance or response and excludes clinical diagnosis and introductory epidemiology.

How does outbreak investigation and response differ from routine infection prevention training?

Outbreak investigation and response examines unusual clusters through case definitions, case finding, descriptive and analytic epidemiology, multidisciplinary evidence, incident coordination, targeted controls, communication, and monitoring rather than routine prevention controls alone.

How is a case definition used in outbreak investigation and response?

A case definition applies consistent person, place, time, clinical, and laboratory criteria to determine which records belong in an investigation, support case finding, and allow investigators to revise classifications as evidence develops.

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How are outbreak control measures evaluated during a response?

Control measures are evaluated by defining intended effects, owners, implementation evidence, surveillance indicators, unexpected consequences, review intervals, and decision points for maintaining, adapting, or ending actions.

Conclusion

Participants leave with an Outbreak Investigation and Response Pack containing verification, case definition, line list, curve, map, hypothesis, study, evidence, control, communication, surveillance, reporting, and review tools. The pack links investigation evidence to coordinated decisions. It helps teams document reasoning, monitor action, revise hypotheses, and carry learning into future preparedness.