
Public Health Evidence for Executives: Surveillance, Outbreaks and Screening Course

18 – 22 January 2027
Tokyo





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Programme Summary

Public health evidence, covering surveillance, outbreaks and screening, is the subject of this five-day training course for senior health officials, hospital executives and programme managers at a managerial level, ending in an evidence brief on one health problem. Leaders are asked to act on case counts, rates and screening results they were never trained to read, and weak interpretation delays response or wastes resources. The programme moves from principles and measures, through diagnosis of surveillance and outbreak data, to design of responses and screening decisions, then to application on a live problem. Mars Training Centre UK delivers this programme in public health evidence.

The Business Case

When executives cannot test the evidence placed before them, signals are missed, outbreaks are declared late and screening or prevention budgets follow assumption rather than data. Leaders who can question a case definition, read an epidemic curve and weigh a screening proposal can commit resources earlier and defend each decision to a board or a ministry.

- Response Time: Shortens as surveillance signals are read and escalated against agreed thresholds.
- Wasted Spend: Falls as screening and prevention proposals are tested on validity and yield.
- Decision Confidence: Rises as executives question rates and risk measures before they act.

Principles and Evidence Base

- WHO essential public health operations: They frame the functions that surveillance, response and prevention must cover, applied in the Session 1 map of responsibilities.
- International Health Regulations of WHO: They guide the reporting and escalation routes designed in Session 3.
- The steps of an outbreak investigation: They structure the case definition, curve and hypothesis work in Sessions 2 and 3.
- The WHO social determinants of health framework: It shapes how Session 4 explains differences in risk between population groups.

Intended Participants

- Health officials who direct disease control, prevention and population health programmes.
- Hospital executives who must act on infection, admission and outbreak signals.
- Programme managers who commission surveillance, screening and prevention activity.
- Policy and planning leads who use epidemiological evidence to allocate resources.

The programme serves health ministries, public hospitals, private hospital groups and health insurers.



Learning Outcomes

1. Participants will be able to evaluate a surveillance report using incidence, prevalence and case definitions.
2. Participants will be able to diagnose signals of an outbreak from an epidemic curve and line list.
3. Participants will be able to construct an outbreak response and escalation plan with clear roles.
4. Participants will be able to prioritise screening and prevention options by validity, yield and cost.
5. Participants will be able to appraise relative risk and odds ratio findings and the bias behind them.
6. Participants will be able to justify an evidence brief on one health problem to an executive board.

Programme Structure

Day 1: Public Health Evidence Principles and Measures

What does public health evidence measure, and who is responsible for acting on it?

- WHO Essential Public Health Operations Map
- Incidence and Prevalence Measures
- Case Definition Format
- Rates and Population Denominators
- Responsibility and Escalation Chart

Day 2: Diagnosing Surveillance Signals and Outbreak Data

Where in the data does an outbreak first show itself, and how reliable is the signal?

- Surveillance Report Review
- Epidemic Curve Reading
- Line List Analysis
- Data Quality and Reporting Delay Check
- Outbreak Hypothesis Table

Day 3: Designing Outbreak Response and Reporting Routes

How is an outbreak investigated, controlled and reported across organisations?

- Outbreak Investigation Step Sequence
- Response Team Role Sheet
- Control Measure Options Matrix
- International Health Regulations Reporting Route
- Risk Communication Brief



Day 4: Screening, Risk and Prevention Decisions

How are screening and prevention proposals tested before money is committed?

- Sensitivity and Specificity Table
- Relative Risk and Odds Ratio Reading
- Bias and Confounding Checklist
- Social Determinants of Health Gap Review
- Screening Programme Appraisal Sheet

Day 5: Applying Public Health Evidence to One Health Problem

Is the evidence brief ready for an executive board to act on?

- Applying the Session 2 Signal Review to the Chosen Problem
- Testing the Session 3 Response Plan on a Scenario
- Checking the Session 4 Screening Appraisal Against the Data
- Setting Monitoring Indicators for the Problem
- Completing the Public Health Evidence Brief

Methodology

The programme uses data workshops built on anonymised surveillance tables, outbreak line lists and screening results from hospital and community settings. Participants work in small teams as ministry lead, hospital executive and investigation lead, and carry one health problem from first signal to a board recommendation, without needing to calculate by hand.

- Suggested activity: Reading an epidemic curve and stating what it does and does not show.
- Suggested activity: Challenging a screening proposal by testing its sensitivity, specificity and yield.
- Suggested activity: Briefing a board on an outbreak in three minutes using only the evidence available.

Capstone Output

Each participant completes a public health evidence brief on one health problem for a health authority or hospital. It holds a case definition, a read of the surveillance data, an outbreak response outline, a screening or prevention appraisal and monitoring indicators. The brief is used to inform a board decision and to review the problem when new data arrive.



Frequently Asked Questions

Is public health evidence suitable for executives without epidemiology training?

Yes. Public health evidence is set at managerial level and assumes you use epidemiological findings to decide, not that you analyse raw data yourself.

Which frameworks does public health evidence rest on in this training?

Public health evidence rests on WHO essential public health operations, the International Health Regulations of WHO, the steps of an outbreak investigation and the WHO social determinants of health framework.

How is the brief from public health evidence used at work?

You use the public health evidence brief to inform a board or ministry decision, set monitoring indicators and review the problem when new data arrive.

How does public health evidence differ from a hospital infection control programme?

Public health evidence centres on population surveillance, outbreaks and screening decisions, while a hospital infection control programme centres on preventing infection inside one facility.