



Pandemic Preparedness and Outbreak Response: Surge Capacity, Contact Tracing and Continuity



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Introduction:

Pandemic preparedness and outbreak response often fail in the first weeks of a health emergency: plans sit on shelves, alerts reach decision-makers late, contact tracing teams are improvised, wards and staff run out before supplies arrive, and public messages contradict each other. This Core Concept course gives hospital administrators, public health managers and health emergency managers a management method to plan for all hazards, rate health threats, act on early warning signals, direct outbreak operations, scale up capacity and keep essential services running. Participants finish with a Health Emergency Preparedness and Outbreak Response Plan for a case health authority or hospital.

Course Objectives:

- Build an all-hazards health emergency plan that sets activation levels, roles, decision rights and coordination links for a hospital or health authority
- Rate health threats with a likelihood and impact matrix and turn early warning signals into escalation decisions
- Direct an outbreak investigation and a contact tracing operation from the management side, including staffing, data flows and progress indicators
- Plan surge capacity for staff, beds and supplies and keep essential health services running under sustained pressure
- Lead risk communication and community engagement, One Health coordination and workforce protection during a prolonged emergency
- Design and run tabletop and functional exercises and convert after-action review findings into a tracked improvement plan

Target Audience:

- Hospital managers responsible for bed capacity, staffing rosters and continuity of clinical services during emergencies
 - Public health programme managers accountable for disease alerts, field response teams and community measures
 - Health emergency and disaster managers who maintain preparedness plans and coordinate multi-agency response
 - Operations and support services managers who secure supplies, logistics, facilities and contracted services in a crisis
 - Quality and patient safety managers who track readiness indicators and lead post-event reviews
 - Communication and community engagement leads who prepare public health messages and manage stakeholder relations
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Course Outline:

Day 1: Health Emergency Landscape and Preparedness Baseline

- Emergency Management Cycle Applied to Health: Mitigation, Preparedness, Response and Recovery
- Epidemic, Pandemic and Endemic Terminology with Grading of Health Emergencies
- International Health Regulations Core Capacities and WHO Emergency Guidance at Overview
- Health Emergency Governance: Emergency Committee, Operations Centre and Decision Rights
- Preparedness Baseline Self-Assessment Scorecard for a Hospital or Health Authority

Day 2: All-Hazards Planning, Threat Rating and Early Warning

- All-Hazards Health Emergency Plan Structure with Hazard-Specific Pandemic Annex
- Health Threat Risk Assessment Matrix: Likelihood, Impact, Vulnerability and Coping Capacity
- Indicator-Based and Event-Based Early Warning Signals with Alert Thresholds
- Escalation and Activation Levels: Alert, Standby and Full Response Triggers
- One Health Coordination for Zoonoses: Joint Risk Assessment Across Human, Animal and Environment Sectors

Day 3: Outbreak Operations: Investigation Management and Contact Tracing

- Outbreak Investigation Management View: Team Activation, Case Definition Sign-Off and Control Decisions
- Contact Tracing Operation Design: Notification, Interview, Isolation Feasibility, Daily Follow-Up and Close-Out
- Tracer Workforce Sizing, Scripts, Supervision Ratios and Data Protection Safeguards
- Situation Reports and Outbreak Dashboards: Key Indicators for Daily Decision Briefings
- Quarantine and Isolation Support Services: Food, Housing and Welfare Arrangements for Contacts

Day 4: Surge Capacity, Continuity and Communication Under Pressure

- Surge Capacity Planning Model: Staff, Stuff, Space and Systems
 - Bed Expansion, Patient Flow Redesign and Elective Activity Deferral Decisions
 - Health Facility Business Continuity: Essential Service Prioritisation and Supply Stockpile Rules
 - Risk Communication and Community Engagement Plan: Message Mapping, Spokespeople and Rumour Tracking
 - Workforce Protection and Wellbeing: Exposure Risk Controls, Fatigue Rostering and Psychosocial Support
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Day 5: Pandemic Simulation Exercise and the Response Plan

- Tabletop Exercise Design: Objectives, Scenario Injects, Evaluator Guides and Exercise Rules
- Timed Simulation: Novel Respiratory Outbreak Escalating Across a Hospital Network
- Hot Debrief and After-Action Review Method: What Was Planned, What Happened, Why and What Changes
- Improvement Action Tracker with Owners, Deadlines and Readiness Retest Schedule
- Health Emergency Preparedness and Outbreak Response Plan Drafting and Panel Challenge

Skills You Will Gain:

- All-Hazards Health Planning
- Health Threat Risk Rating
- Early Warning Escalation
- Contact Tracing Operations Management
- Surge Capacity Planning
- Essential Health Service Continuity
- Risk Communication and Community Engagement
- Exercise Design and After-Action Review

Why Attend This Course:

- Return with a Health Emergency Preparedness and Outbreak Response Plan tested against a timed outbreak simulation
- Know which signal should trigger which activation level and who decides at each step
- Size contact tracing teams, beds, staff and supplies before the pressure arrives rather than during it
- Compare preparedness practice with managers from hospitals, public health agencies and emergency services in different health systems

Conclusion:

Pandemics and large outbreaks test whether a health organisation can move from plan to action within hours and sustain that effort for months. The course moves from the emergency management cycle and health emergency governance, through all-hazards planning, threat rating, early warning and One Health coordination, to outbreak investigation management and contact tracing operations, then to surge capacity, continuity, risk communication and workforce protection. The final day runs a timed simulation and produces a Health Emergency Preparedness and Outbreak Response Plan.
