Infection Control Risk Assessment (ICRA) for Healthcare Construction and Renovation

15 – 19 November 2027
London - Central London four-star



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Introduction:

Infection control risk assessment ICRA for healthcare construction and renovation is often left to a signed form, while demolition dust, wet ceiling voids, depressurised corridors and stagnant pipework expose immunocompromised patients to fungal spores and waterborne organisms. This Core Concept course trains infection prevention, facilities engineering, project and contractor teams to classify works on the ICRA matrix, design containment, hold negative pressure with HEPA filtration, manage water and HVAC interfaces, and enforce permits and daily rounds. Participants complete an ICRA and Construction Infection Control Plan for a case hospital renovation.

Course Objectives:

- Explain how demolition, drilling, ceiling access and water outages release Aspergillus spores, dust and waterborne organisms into patient areas
- Classify a construction project by activity type and patient risk group on the ICRA matrix and assign the matching precaution class
- Specify containment barriers, anterooms, negative pressure and portable HEPA filtration for works next to occupied clinical areas
- Plan dust suppression, moisture control, water system flushing and HVAC shutdowns so that clinical services stay protected during works
- Operate the ICRA permit, pre-work sign-off, daily inspection rounds and contractor induction as one controlled process
- Respond to a containment breach or a construction-linked infection signal with stop-work, investigation and corrective action

Target Audience:

- Infection prevention teams who assess the risk of building works and approve precaution classes
- Hospital facilities and engineering managers responsible for ventilation, water systems and maintenance works in occupied buildings
- Healthcare project managers who plan renovation phasing, budgets and contractor scope
- Contractor site supervisors accountable for barrier installation, dust control and workforce conduct inside hospitals
- Environmental services managers who clean work zones and surrounding clinical areas during and after works
- Unit and department managers who coordinate patient relocation and clinical service continuity during works

Course Outline:

Day 1: Why Construction Creates Infection Risk in Healthcare Buildings

- Construction-Linked Outbreak Patterns: Aspergillus, Mucorales and Waterborne Organisms
- Dust and Spore Release Mechanisms in Demolition, Drilling and Above-Ceiling Access
- Moisture Intrusion, Wet Building Materials and Mould Growth Timelines
- High-Risk Patient Groups: Transplant, Severely Neutropenic and Corticosteroid-Treated Patients
- Estate Walk-Down Checklist for Planned, Reactive and Minor Works

Day 2: The ICRA Matrix, Precaution Classes and Guidance Frameworks

- Environmental Infection Control Guidelines for Healthcare Facilities: Construction Provisions
- Construction Activity Types A to D: Inspection, Small-Scale, Heavy Dust and Major Demolition Works
- Patient Risk Group Mapping: Low, Medium, High and Highest-Risk Areas
- ICRA Matrix Reading and Precaution Classes I to IV with Required Controls
- Pre-Construction Risk Assessment Scope: Adjacent Rooms, Floors Above and Below and Air Paths

Day 3: Containment, Pressure and Dust Control on Live Wards

- Barrier Design: Portable Containment Cubes, Hard-Wall Enclosures and Sealed Penetrations
- Anteroom Layout, Sticky Mats and Protective Clothing Changes at the Work Zone Exit
- Negative Pressure Set-Up with Differential Pressure Monitors and Exhaust Routing
- Portable HEPA Air Scrubber Selection, Air Changes and Filter Change Logs
- Dust Suppression, Debris Removal Routes and Covered Waste Carts

Day 4: Water, HVAC Interfaces, Permits and Breach Response

- Water Outage Planning, Dead-Leg Removal and Post-Works Flushing Before Handover
- HVAC Shutdown Requests, Duct Sealing and Air Handling Restart Checks
- ICRA Permit Workflow: Sign-Off by Infection Prevention, Facilities and the Contractor
- Contractor Induction, Competence Records and Non-Conformance Escalation
- Containment Breach Stop-Work Protocol and Construction-Linked Infection Surveillance Review

Day 5: Inspection Walkthrough and the Construction Infection Control Plan

- Daily ICRA Round Walkthrough Using a Scored Containment Checklist
- Case Study: Oncology Ward Refurbishment Next to an Occupied Bone Marrow Transplant Unit
- Case Study: Outpatient Clinic Fit-Out with a Planned Domestic Water Shutdown
- Stakeholder Communication Plan: Clinical Teams, Patients, Facilities and Contractors
- ICRA and Construction Infection Control Plan Build and Panel Review

Skills You Will Gain:

- Construction Infection Hazard Recognition
- ICRA Matrix Classification
- Containment Barrier Specification
- Negative Pressure Verification
- HEPA Filtration Planning
- Construction Water and HVAC Interface Planning
- ICRA Permit Administration
- Containment Breach Investigation

Why Attend This Course:

- Leave with a completed ICRA and Construction Infection Control Plan for a case renovation, ready to adapt to your next project
- Agree precaution classes with engineers and contractors using one shared matrix instead of case-by-case negotiation
- Spot failing barriers, reversed airflow and dusty exit routes on a site round before patients are exposed
- Compare construction infection control practice with hospital, clinic and long-term care teams from several organisations

Conclusion:

Building works in occupied healthcare facilities stay safe when risk is classified before the first panel is removed and controls are checked every day until handover. The course moves from how construction releases spores, dust and waterborne organisms, through the ICRA matrix and precaution classes, to containment, negative pressure, HEPA filtration and dust control, then to water and HVAC interfaces, permits, contractor oversight and breach response. The final day applies this in an inspection walkthrough and produces an ICRA and Construction Infection Control Plan.