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COURSE BROCHURE

AI Innovations in Healthcare: Detection to Treatment Training Course

4 – 8 April 2027
Muscat

AI Innovations in Healthcare: Detection to Treatment Training Course

Ref: 117_2954 **Date:** 4 – 8 April 2027 **Location:** Muscat **Fees:** 6500 GBP

AI Innovations in Healthcare: Detection to Treatment is a 1-week training course for hospital managers, clinical directors and medical quality managers, who leave with a Care Pathway AI Evaluation Scorecard. Algorithms now flag sepsis, predict readmission, suggest therapies and forecast drug response, and leaders must decide which ones earn a place at the bedside. Jupiter Prime Training delivers AI Innovations in Healthcare: Detection to Treatment for these clinical decision makers.

Why AI Innovations in Healthcare: Detection to Treatment Matters Now

Three groups shape the subject today: clinicians who want fewer missed deteriorations and better-targeted therapy, executives under pressure to show outcomes for every digital investment, and patients who expect safe, explainable care. Hospitals that judge clinical algorithms on evidence and workflow fit catch illness earlier and avoid treatments unlikely to work; those that buy on promise alone collect unused dashboards and unsafe alerts. The course draws on ISO/IEC 42001 for an AI management system and the NIST AI Risk Management Framework AI RMF.

Who Gains Most from AI Innovations in Healthcare: Detection to Treatment

- Hospital managers who fund and prioritise clinical technology
- Clinical directors who own care pathways and treatment protocols
- Innovation leads who scout, trial and scale new clinical tools
- Medical quality managers who monitor patient safety and outcomes
- Pharmacy and therapeutics leads who shape prescribing decisions

Hospitals that send a clinical director and a quality manager together gain most, since benefit and safety are then judged by the same pair.

AI Innovations in Healthcare: Detection to Treatment Capabilities

Participants learn to follow a patient from first warning sign to chosen therapy and judge where an algorithm improves each decision.

- Assess early detection and risk prediction models against clinical evidence — clinical directors
- Weigh clinical decision support suggestions against alert burden and clinician autonomy — medical staff committees
- Apply treatment personalisation and drug response insight to formulary choices — pharmacy and therapeutics leads
- Test algorithms for safety, bias and workflow fit before go-live — quality managers
- Calculate value across the pathway in outcomes, bed days and avoided harm — hospital executives
- Communicate evaluation results to boards and clinicians — innovation leads

Key AI Innovations in Healthcare: Detection to Treatment Terms

- Risk prediction model — an algorithm estimating a patient's chance of an event such as sepsis, deterioration or readmission.
- Clinical decision support CDS — software that offers clinicians patient-specific suggestions at the point of care.
- Treatment personalisation — matching therapy to a patient's characteristics rather than average responses.
- Pharmacogenomics — the study of how genetic differences change a patient's response to medicines.
- Prospective evaluation — testing an algorithm on new patients in live care rather than historical records.
- Care pathway — the planned sequence of assessments and treatments for a condition.

AI Innovations in Healthcare: Detection to Treatment Day by Day

Day 1: Mapping AI Along the Care Pathway

- Care Pathway Mapping from Screening to Follow-Up — Locating AI Opportunities
- Clinical AI Market Landscape — Separating Evidence from Promise
- Electronic Health Record Data Readiness — Feasibility of Clinical Models
- Patient and Clinician Expectations — Trust and Explainability Needs
- ISO/IEC 42001 Scope for Clinical Algorithms — Hospital Accountability

Day 2: Early Detection and Risk Prediction

- Sepsis and Deterioration Early Warning Models — Rapid Response Activation
- Readmission and Frailty Risk Scores — Discharge Planning Decisions
- Population Screening Algorithms — Targeting Preventive Outreach
- Calibration and Lead Time Testing — Trusting a Prediction
- NIST AI RMF Measure Function — Quantifying Clinical Risk

Day 3: Decision Support and Treatment Personalisation

- Clinical Decision Support Alert Design — Reducing Override and Fatigue
- Treatment Recommendation Engines in Oncology and Cardiology — Protocol Fit
- Pharmacogenomic Insight and Drug Response Prediction — Prescribing Choices
- Medication Safety Algorithms — Interaction and Dosing Error Prevention
- Explainability Methods for Clinicians — Accepting or Rejecting Advice

Day 4: Evidence, Safety and Value

- Clinical Evidence Hierarchy for Algorithms — Retrospective to Prospective Trials
- Bias and Equity Audits — Performance Across Patient Groups
- Workflow Fit and Usability Testing — Adoption by Ward Teams
- Health Economic Value Models — Outcomes, Bed Days and Avoided Harm
- Post-Market Surveillance and Incident Reporting — Ongoing Safety

Day 5: Practising the Care Pathway AI Evaluation Scorecard

- Pathway Opportunity Map — Applying Day 1 Mapping
- Detection Model Shortlist with Calibration Results — Applying Day 2 Tests
- Decision Support Fit Assessment — Applying Day 3 Design Rules
- Evidence and Value Ratings — Applying Day 4 Criteria
- Care Pathway AI Evaluation Scorecard — Peer Challenge and Sign-Off

Applying AI Innovations in Healthcare: Detection to Treatment After the Course

- Score one clinical algorithm already in use against evidence, safety, workflow and value criteria, and report gaps to the quality committee.
- Run an alert override audit on a decision support rule and propose threshold or wording changes.

AI Innovations in Healthcare: Detection to Treatment Questions FAQ

What is AI Innovations in Healthcare: Detection to Treatment and why does it matter now?

It is the study of clinical algorithms across the whole pathway, from early warning and risk prediction to therapy choice. It matters now because hospitals face many such tools and must fund only those with evidence.

Which roles gain most from AI Innovations in Healthcare: Detection to Treatment training?

Hospital managers, clinical directors, innovation leads, quality managers and pharmacy leads gain most, as each decides whether a clinical algorithm is bought, trusted or retired.

How does AI Innovations in Healthcare: Detection to Treatment differ from a diagnostic imaging AI course?

It spans the full pathway rather than one department. You compare early warning, decision support and treatment personalisation tools, instead of validating scan or slide algorithms.

What do you bring back from AI Innovations in Healthcare: Detection to Treatment training?

You bring back a Care Pathway AI Evaluation Scorecard rating shortlisted tools on evidence, safety, workflow fit and value for one condition in your hospital.

AI Innovations in Healthcare: Detection to Treatment: The Way Forward

The Care Pathway AI Evaluation Scorecard first informs which clinical algorithm a hospital funds, trials or declines. Clinical directors, quality managers and innovation leads use it to compare tools on equal terms. After the first live use, its value and equity ratings deserve another look, since real-world performance often differs from published trials.