CONCEPT

Medication Safety in Hospitals: High-Alert Medications and Medication Reconciliation

23 – 27 May 2027
Jeddah - Corniche four-star



Medication Safety in Hospitals: High-Alert Medications and Medication Reconciliation

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Introduction:

Medication safety breaks down at hand-offs: an infusion is programmed at the wrong rate, a look-alike vial is picked from the wrong bin, a home medicine is omitted on admission or a discharge list contradicts the ward chart. This Core Concept course gives pharmacy, nursing and quality staff a working method to map the medication use process, control high-alert medications, run medication reconciliation at every transition, learn from medication errors and near misses and steer a medication safety committee with audits and indicators. Participants produce a Hospital Medication Safety Improvement Plan.

Course Objectives:

- Map the hospital medication use process from prescribing to monitoring and locate the steps where errors and near misses cluster
- Build a local high-alert medication list with safeguards for independent double checks, standard concentrations and restricted storage
- Run medication reconciliation at admission, internal transfer and discharge using a best possible medication history and discrepancy log
- Specify look-alike sound-alike, infusion pump and barcode scanning controls and check that they work on the ward
- Investigate medication errors and near misses with incident reports, timelines and contributing factor analysis, and set strong corrective actions
- Run a medication safety committee with an indicator set, audit schedule and staff education programme

Target Audience:

- Hospital pharmacy leads responsible for dispensing systems, formulary controls and clinical pharmacy services
- Nursing managers accountable for medicine administration practice and infusion safety on wards and critical care units
- Medication safety leads who coordinate error reporting, trend review and the medication safety committee
- Quality and patient safety managers who audit medicine-related processes and report indicators to hospital leadership
- Clinical informatics and biomedical staff who configure prescribing systems, barcode scanning and infusion pump libraries

Course Outline:

Day 1: Medication Use Process, Error Points and Medication Safety Assessment

- Medication Use Process Map: Prescribing, Transcribing, Dispensing, Administration and Monitoring
- Medication Error, Adverse Drug Event and Near Miss Definitions and Harm Categories
- WHO Medication Without Harm Action Areas: High-Risk Situations, Polypharmacy and Transitions of Care
- Error-Prone Conditions: Verbal Orders, Unsafe Abbreviations, Interruptions and Illegible Labels
- Hospital Medication Safety Self-Assessment Checklist and Baseline Gap Register

Day 2: High-Alert Medication Safeguards and Look-Alike Sound-Alike Controls

- Local High-Alert Medication List: Selection Criteria, Review Cycle and Ward Visibility
- Independent Double Check Procedure: Steps, Documentation and When to Apply It
- Standard Concentrations, Premixed Infusions and Pharmacy-Prepared Syringes
- Storage and Access Controls: Segregated Bins, Auxiliary Labels and Automated Dispensing Cabinet Limits
- Look-Alike Sound-Alike Pairs Register, Tall Man Lettering and Shelf Separation

Day 3: Medication Reconciliation at Admission, Transfer and Discharge

- Best Possible Medication History Interview and Multi-Source Verification
- Admission Reconciliation Form and Discrepancy Classification: Intentional, Undocumented and Unintentional
- Transfer Reconciliation Between Critical Care, Theatre and General Wards
- Discharge Medication List, Patient Counselling Script and Hand-Over Letter to Community Prescribers
- Reconciliation Roles, Timeliness Standards and Pharmacy Technician Support Model

Day 4: Technology Barriers, Medication Event Investigation and Committee Governance

- Smart Infusion Pump Drug Library, Soft and Hard Limits and Override Report Review
- Barcode Medication Administration Workflow, Scan Compliance Reports and Workaround Detection
- Medication Incident Reporting Form, Near-Miss Capture and Non-Punitive Feedback Loop
- Medication Event Investigation: Timeline, Fishbone Contributing Factors and Hierarchy of Action Strength
- Medication Safety Committee Terms of Reference, Indicator Dashboard and Audit Calendar

Day 5: Hospital Case Work and the Medication Safety Improvement Plan

- Case Study: Concentrated Electrolyte Error Traced Through the Medication Use Process
- Case Study: Omitted Home Medicines Found in a Discharge Reconciliation Audit
- Staff Education Plan: Induction Modules, Safety Huddles and Medication Safety Alerts
- Hospital Medication Safety Improvement Plan Drafting with Indicator Baselines and Owners
- Committee Review Panel and Improvement Plan Defence

Skills You Will Gain:

- Medication Process Mapping
- High-Alert Medication Control
- Double Check Design
- Look-Alike Sound-Alike Risk Control
- Medication Reconciliation Practice
- Infusion Pump Library Review
- Medication Event Investigation
- Medication Safety Indicator Design

Why Attend This Course:

- Return with a Hospital Medication Safety Improvement Plan with baselines, owners and an audit calendar
- Close the gaps where home medicines are lost or duplicated between admission, transfer and discharge
- Turn pump override and barcode scan reports into ward-level actions instead of unread printouts
- Compare medication safety practice with pharmacy, nursing and quality peers from public, private and teaching hospitals

Conclusion:

Medication harm is rarely one person's slip; it follows from gaps between prescribing, dispensing, administration and hand-over that nobody owns. The course moves from the medication use process and error-prone conditions, through high-alert safeguards and look-alike sound-alike controls, to reconciliation at every transition, then to pump libraries, barcode scanning, incident learning and committee governance. The final day applies these methods to hospital cases and produces a Hospital Medication Safety Improvement Plan ready for committee review.