



Immunization Programme Management: Vaccine Storage, Microplanning and Coverage



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Introduction:

Immunization programme management breaks down when vaccine refrigerators run unmonitored, stock counts drift from registers, open vials are discarded without rules and nobody tracks dropout between first and final doses. Missed children, spoiled lots and hesitant families follow. This Core Concept course trains immunisation service managers, vaccine store staff and clinic leads to plan target populations, microplan sessions, run the vaccine cold chain, control stock and wastage, report adverse events and answer hesitancy. Participants produce an Immunization Programme Plan and Vaccine Cold Chain Audit Report for a case facility.

Course Objectives:

- Estimate target populations and set coverage targets for routine, catch-up and healthcare worker vaccination within an immunisation service
- Build a microplan with catchment maps, session calendars, outreach sites and vaccine and supply requirements
- Operate vaccine refrigerators, freezers and cold boxes with twice-daily temperature records, vaccine vial monitor checks and alarm response
- Control vaccine stock with minimum and maximum levels, earliest-expiry-first issue, wastage rate calculation and open-vial decisions
- Monitor coverage, dropout and missed-opportunity indicators from registers and immunisation information systems and report adverse events following immunization
- Audit a facility's vaccine storage and immunisation practice and write a corrective plan with community communication actions

Target Audience:

- Public health and immunisation service managers who plan sessions and answer for coverage results
 - Pharmacy and vaccine store staff who receive, store, issue and account for vaccine stock
 - Nursing leads who run immunisation clinics, outreach sessions and staff vaccination days
 - Occupational health teams who manage vaccination policy and records for healthcare workers
 - Supply and logistics officers who distribute vaccines and consumables to clinics and outreach points
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Course Outline:

Day 1: Immunization Programme Foundations and Service Baseline

- WHO Essential Programme on Immunization Goals Across the Life Course
- Target Population Estimation from Birth Cohorts, Census Data and Catchment Registers
- Healthcare Worker Vaccination Policy: Eligibility, Declination Forms and Record Keeping
- Immunisation Service Roles: Vaccinator, Store Keeper, Supervisor and Data Clerk
- Baseline Service Review Checklist for Sessions, Stock and Coverage Data

Day 2: Vaccine Cold Chain Equipment and Temperature Tiers

- Refrigerated, Frozen and Ultra-Low Temperature Tiers for Vaccine Storage
- Ice-Lined Refrigerators, Solar Direct-Drive Units, Cold Boxes and Vaccine Carriers
- Vaccine Vial Monitor Stages and Discard-Point Reading
- Continuous Temperature Loggers, Twice-Daily Charts and Alarm Thresholds
- Freeze Sensitivity and the Shake Test for Suspected Frozen Vaccines

Day 3: Microplanning, Session Delivery and Vaccine Stock Control

- Microplan Build: Catchment Map, Session Calendar and Outreach Site List
- Vaccine and Diluent Requirement Forecast with Buffer Stock
- Stock Ledger with Minimum and Maximum Levels and Earliest-Expiry-First Issue
- Refrigerator Loading Plan and Daily Session Cold Box Packing Routine
- Immunisation Registers, Home-Based Records and Reminder-Recall Lists

Day 4: Wastage, Adverse Events, Hesitancy and Coverage Indicators

- Vaccine Wastage Rate and Wastage Factor Calculation by Vial Size
- Open-Vial Policy Decisions and Temperature Breach Quarantine Log
- Adverse Event Following Immunization Reporting Flow and Investigation Triggers
- SAGE Hesitancy Drivers: Confidence, Complacency and Convenience Messaging
- Coverage, DTP1 to DTP3 Dropout and Missed-Opportunity Dashboards

Day 5: Facility Cold Chain Audit and Immunization Programme Plan

- Walkthrough of a Vaccine Store Against a Storage and Handling Audit Checklist
 - Clinic Session Observation: Vial Handling, Sharps Boxes and Used Vial Disposal
 - Case Facility Data Review: Coverage Gaps, Stock-Outs and Temperature Records
 - Immunization Programme Plan Drafting with Targets and Session Schedule
 - Cold Chain Audit Report Presentation and Peer Corrective Action Review
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Skills You Will Gain:

- Target Population Estimation
- Immunisation Microplanning
- Vaccine Stock Accounting
- Vaccine Vial Monitor Interpretation
- Wastage Rate Analysis
- Dropout Indicator Monitoring
- Adverse Event Reporting
- Hesitancy Communication

Why Attend This Course:

- Return with an Immunization Programme Plan and Vaccine Cold Chain Audit Report built on a case facility
- Stop losing vaccine lots to unread temperature charts, frozen doses and unclear open-vial rules
- Find the families your service is missing through dropout and missed-opportunity data rather than guesswork
- Compare immunisation practice with peers from hospitals, primary care, occupational health and community services

Conclusion:

An immunisation service protects its community only when target setting, session planning, vaccine storage, stock control, reporting and communication work as one routine. The course moves from programme foundations and staff vaccination policy, through cold chain equipment and vial monitors, to microplanning, stock ledgers and registers, then to wastage, adverse event reporting, hesitancy and dropout indicators. The final day applies these methods in a vaccine store walkthrough and produces an Immunization Programme Plan with a Cold Chain Audit Report ready for management review.