



Medical Claims & Coding: Value-Based Payment Strategies

10 – 14 January 2027
Toronto

Medical Claims & Coding: Value-Based Payment Strategies

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Course Overview

The Medical Claims & Coding Specialization: Value-Based Payment Strategies course provides an in-depth, practice-oriented understanding of how artificial intelligence and data analytics are reshaping the entire medical claims ecosystem—from adjudication and coding to DRG classification and value-based reimbursement. Participants explore how automation, predictive modeling, and healthcare data analysis improve claim accuracy, streamline coding compliance, reduce fraud and denials, and support fair, value-driven payment models.

The course integrates modern techniques to detect anomalies, validate coding integrity, optimize DRG assignments, and enhance adjudication processes using AI-powered healthcare fraud analytics. Through Gulf-region and international case studies, learners gain hands-on insights into the relationship between coding accuracy, DRG integrity, and efficient value-based payments.

By the end of the program, participants will be able to design analytical frameworks, apply automation tools, and implement data-driven reimbursement strategies that strengthen transparency, compliance, and operational performance across the claims lifecycle—supporting a sustainable, efficient, and accountable healthcare delivery system.

Target Audience

- Medical Claims Adjudication Officers
- Claims Automation and Process Managers
- Health Insurance Operations and Quality Auditors
- Medical Coding and Billing Specialists
- DRG and Reimbursement Analysts
- Value-Based Payment and Revenue Cycle Managers
- Healthcare Data Analysts and Compliance Professionals
- Internal Auditors and Health Informatics Managers

Targeted Organizational Departments

- Medical Claims Adjudication and Audit Units
- Medical Coding and Revenue Integrity Departments
- Data Analytics and AI Implementation Divisions
- Finance, Billing, and Reimbursement Operations
- Quality and Compliance Management Divisions
- Health Insurance and Provider Relations Departments

Targeted Industries

- Health Insurance Companies
- Hospitals and Healthcare Provider Networks
- Third-Party Administrators TPAs
- Medical Billing and Coding Firms
- Government Health Authorities and Regulators
- Private and Public Healthcare Systems

Course Offerings

By the end of this course, participants will be able to:

- Apply automation and AI tools to medical claims adjudication and review processes
- Detect anomalies and reduce fraud in medical coding and DRG classification
- Integrate data analytics into healthcare reimbursement and audit frameworks
- Use AI models to improve claims accuracy and compliance in payment systems
- Implement value-based payment strategies aligned with outcomes and performance
- Strengthen data governance and interpretability across claims operations
- Develop dashboards and key metrics for claims integrity and reimbursement efficiency

Training Methodology

This program uses a blended, interactive learning model that includes:

- Interactive lectures
- Case simulations and scenario analysis
- Group discussions
- Hands-on analytical demonstrations

Participants analyze real healthcare claim scenarios, practice automation workflows, apply data analytics for fraud detection, and evaluate DRG and coding integrity. They explore policy-driven decisions, benchmarking techniques, and performance analytics used globally and within the Gulf region.

The methodology emphasizes:

- Data-driven scenario analysis
- Adjudication automation walkthroughs
- Interactive coding and DRG workshops
- Simulation of value-based reimbursement systems
- Real-world case applications

Course Toolbox

Participants will work with:

- Claims adjudication workflow models
- AI-supported coding validation tools
- Coding accuracy and DRG integrity checklists
- Fraud and anomaly detection analytical frameworks
- Predictive models for payment accuracy
- Performance dashboards and KPI templates
- End-to-end adjudication-to-payment workflow maps
- Case study datasets for hands-on analysis

Course Agenda:

Day 1: Medical Claims Adjudication and Automation

- **Topic 1:** Fundamentals of Medical Claims Adjudication and Insurance Review
- **Topic 2:** Common Adjudication Errors, Denials, and Fraud Indicators
- **Topic 3:** Automating Adjudication with AI and Data Analytics
- **Topic 4:** Predictive Models for Claims Validation and Risk Scoring
- **Topic 5:** Workflow Automation and Claims Management Dashboards
- **Topic 6:** Compliance Integration in Automated Adjudication Systems
- **Reflection & Review:** AI Automation and Fraud Detection



Day 2: Medical Coding

- **Topic 1:** Overview of ICD, CPT, and HCPCS Coding Systems
- **Topic 2:** Linking Clinical Documentation to Coding Integrity and Reimbursement
- **Topic 3:** AI-Assisted Medical Coding Validation and Automation
- **Topic 4:** Detecting Upcoding and Unbundling Using Analytics
- **Topic 5:** Quality Assurance and Coding Audit Best Practices
- **Topic 6:** Natural Language Processing NLP in Coding Optimization
- **Reflection & Review:** Accurate Coding and Compliance

Day 3: DRG Diagnosis-Related Group Systems

- **Topic 1:** Introduction to DRG Principles and Healthcare Finance
- **Topic 2:** DRG Grouping, Weights, and Reimbursement Methodologies
- **Topic 3:** AI and Analytics for DRG Accuracy and Fraud Detection
- **Topic 4:** Identifying DRG Upcoding and Misclassification Risks
- **Topic 5:** Linking DRG Data with Claims Adjudication Performance
- **Topic 6:** DRG Analysis for Benchmarking Cost and Quality
- **Reflection & Review:** DRG Systems and Reimbursement

Day 4: Value-Based Claims Payment

- **Topic 1:** Overview of Value-Based Healthcare and Payment Models
- **Topic 2:** AI in Monitoring Outcomes-Based and Bundled Payments
- **Topic 3:** Fraud and Anomaly Detection in Value-Based Claims
- **Topic 4:** Designing Performance Dashboards for Quality Metrics
- **Topic 5:** Predictive Analytics for Payment Accuracy and Compliance
- **Topic 6:** Linking Reimbursement Models to Healthcare Value Indicators
- **Reflection & Review:** Aligning Claims Integrity with Value Reimbursement



Day 5: Data Analysis for Healthcare Claims Intelligence

- **Topic 1:** Foundations of Healthcare Data Analysis and Visualization
- **Topic 2:** Data Collection, Cleansing, and Transformation
- **Topic 3:** Statistical and Predictive Techniques for Fraud Recognition
- **Topic 4:** Building Dashboards and Analytical Models for Claims Monitoring
- **Topic 5:** AI Explainability Tools SHAP, LIME for Transparency
- **Topic 6:** Case Study – End-to-End Adjudication-to-Payment Data Flow
- **Reflection & Review:** Integrating Analytics for Continuous Improvement