

DATA ANALYSIS AND DATA VISUALIZATION IN HEALTH SECTOR

“Turning Healthcare Data into Actionable Insights for Better Patient and Operational Outcomes”

Schedule

Date	Venue	Fees (Face-to-Face)
14 - 18 Dec 2026	London, UK	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

In the digital age of healthcare, data is everywhere—from electronic health records and clinical trials to patient feedback and insurance claims. However, the real challenge lies in analyzing this complex data to drive better patient care, policy decisions, and operational efficiency. Effective data visualization is essential for translating raw healthcare data into clear, actionable insights.

This comprehensive 5-day course equips health sector professionals with the skills to extract, analyze, and visually present healthcare data. Participants will work with practical tools such as Excel and Power BI to build dashboards and reports that support data-driven decision-making across hospitals, public health agencies, and healthcare systems.

Objectives

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

- Understand the sources and structures of health sector data
- Apply data analysis techniques to patient, clinical, and operational datasets
- Create dashboards and visual reports using Excel and Power BI
- Track key performance indicators (KPIs) such as readmission rates, wait times, and case loads
- Support decision-making with evidence-based visual storytelling

Why Attend

- To improve clinical, operational, and administrative decision-making
- To align performance metrics with quality care goals
- To comply with healthcare data reporting standards and regulations
- To increase transparency and accountability through data visibility
- To present complex health data in a simplified and engaging format

Target Audience

This program is designed for:

- Healthcare analysts and data managers
- Hospital administrators and public health professionals
- Medical records and informatics officers
- IT professionals supporting health data systems
- Policy planners and regulatory professionals in the health sector

Individual Benefits

Key competencies that will be developed include:

- Data extraction, cleaning, and transformation for health datasets
- KPI development and analysis in clinical and non-clinical settings
- Visual dashboard creation for healthcare management
- Communication of analytical findings to multidisciplinary teams
- Use of health data to support service quality and efficiency

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- More effective use of patient and operations data
- Data-informed strategic and clinical decision-making
- Better compliance with public health and regulatory reporting
- Increased efficiency in service delivery and resource allocation
- Enhanced monitoring and evaluation of healthcare initiatives

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Health data systems, KPIs, and analytics frameworks
- Case Studies - Analysis of real healthcare performance and patient outcome data
- Workshops - Excel and Power BI dashboards, health metric tracking, and reporting
- Peer Exchange - Sharing challenges and solutions in clinical data use
- Tools - Dashboards, EHR data templates, KPI scorecards, and report samples

Course Outline

Detailed 5-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Foundations of Health Data Analysis

- Module 1: Understanding Healthcare Data Ecosystems (07:30 – 09:30) • EHR, claims, lab results, clinical trials, and surveys
- Module 2: Health Sector KPIs and Data Types (09:45 – 11:15) • Patient safety, resource utilization, and service quality metrics
- Module 3: Workshop – Cleaning and Structuring Patient Data (11:30 – 01:00) • Managing missing values, errors, and duplicates
- Module 4: HIPAA and Healthcare Data Privacy Standards (02:00 – 03:30) • Data protection, consent, and access control

Day 2: Visualizing Health Metrics and Outcomes

- Module 5: Introduction to Data Visualization Principles (07:30 – 09:30) • Choosing the right visual for clinical and operational data
- Module 6: Excel-Based Dashboards and Scorecards (09:45 – 11:15) • Using charts, pivot tables, slicers, and conditional formatting
- Module 7: Workshop – Building a Hospital Dashboard in Excel (11:30 – 01:00) • Displaying bed occupancy, wait times, and discharge rates
- Module 8: Visualizing Trends in Public Health Data (02:00 – 03:30) • Mapping disease outbreaks and vaccination coverage

Day 3: Power BI for Health Analytics

- Module 9: Getting Started with Power BI (07:30 – 09:30) • Connecting, transforming, and loading health datasets
- Module 10: Data Modeling and KPI Development in Power BI (09:45 – 11:15) • Creating DAX measures and setting thresholds
- Module 11: Workshop – Building a Live Healthcare Dashboard (11:30 – 01:00) • Visualizing admissions, mortality, and utilization metrics
- Module 12: Filtering and Drilling into Health Data (02:00 – 03:30) • Interactive visuals for service-level decision-making

Day 4: Forecasting and Resource Planning in Health Sector

- Module 13: Predictive Analytics in Healthcare (07:30 – 09:30) • Forecasting patient load and future demand
- Module 14: Scenario Planning and What-If Analysis (09:45 – 11:15) • Capacity planning and resource optimization
- Module 15: Workshop – Forecasting Readmissions and Clinic Visits (11:30 – 01:00) • Excel-based regression and time series forecasting
- Module 16: Visualizing Resource Allocation and Efficiency (02:00 – 03:30) • Comparing departments, teams, and patient categories

Day 5: Storytelling, Reporting, and Quality Improvement

- Module 17: From Analysis to Impact – Health Data Storytelling (07:30 – 09:30) • Framing messages for clinicians, administrators, and policymakers
- Module 18: Healthcare Quality Dashboards and Indicators (09:45 – 11:15) • Monitoring infection rates, adverse events, and care compliance
- Module 19: Workshop – Final Dashboard & Insight Presentation (11:30 – 01:00) • Presenting a full visual analysis of hospital or clinic performance
- Module 20: Final Review and Certification (02:00 – 03:30) • Evaluation, action planning, and peer feedback

Certification

Participants will receive a Certificate of Completion in Data Analysis and Data Visualization in Health Sector, recognizing their ability to leverage healthcare data for clinical, operational, and strategic improvement.

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