Healthcare Data Analytics and Business Intelligence Training Course

20 - 24 Dec 2026

Manama

4400 € (Per Person)

Ref: #HSM2153_227013

Course Introduction / Overview:

This course provides a comprehensive exploration of healthcare data analytics and business intelligence, designed to empower professionals to transform raw healthcare data into actionable insights. In an era where data-driven decision-making is paramount for improving patient outcomes and operational efficiency, this program covers the entire lifecycle of data analytics. We will delve into foundational concepts, data management strategies, advanced analytical techniques, and the art of data visualization. As highlighted by the renowned author Trevor L. Strome in his work "Healthcare Analytics: From Data to Value", the true power of data lies in its ability to inform strategy and drive meaningful change. Participants will learn to navigate the complexities of healthcare data, including electronic health records (EHR), financial data, and operational metrics. BIG BEN Training Center has meticulously designed this curriculum to bridge the gap between technical data skills and strategic healthcare management, ensuring that graduates can lead initiatives that enhance quality of care, reduce costs, and foster innovation within their organizations. This training is not just about learning tools; it is about cultivating an analytical mindset to solve the most pressing challenges in the healthcare sector.

Target Audience / This training course is suitable for:

- Healthcare Administrators and Managers.
- Clinical and Business Analysts.
- Healthcare IT Professionals.
- Data Scientists working in the healthcare sector.
- Public Health Officials.
- Quality Improvement Coordinators.
- Medical Informatics Specialists.
- Healthcare Consultants.
- Finance and Operations Managers in healthcare settings.
- Physicians and Clinicians interested in data-driven practice.

Target Sectors and Industries:

- Hospitals and Healthcare Systems.
- Pharmaceutical and Biotechnology Companies.
- Medical Device Manufacturers.
- Health Insurance Providers.
- Clinical Research Organizations (CROs).
- Public Health Organizations.
- Governmental healthcare agencies and regulatory bodies.
- Healthcare Consulting Firms.
- Telemedicine and Digital Health Companies.
- Long-term Care Facilities.

Target Organizations Departments:

- Information Technology (IT) and Data Management.
- Finance and Revenue Cycle Management.
- Clinical Operations and Patient Services.
- Quality and Safety Improvement.
- Strategic Planning and Business Development.
- Population Health Management.
- Supply Chain and Logistics.
- Human Resources.
- Compliance and Risk Management.
- Marketing and Patient Engagement.

Course Offerings:

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

- Master the fundamentals of healthcare data types, sources, and governance frameworks.
- Implement robust data quality and management processes for reliable analytics.
- Apply descriptive, diagnostic, predictive, and prescriptive analytical techniques to healthcare datasets.
- Develop and interpret key performance indicators (KPIs) and dashboards for operational oversight.
- Utilize data visualization tools to communicate complex findings to diverse stakeholders effectively.
- Analyze clinical and operational data to identify opportunities for process improvement and cost reduction.
- Understand the ethical and privacy considerations, including HIPAA, in handling patient data.
- Evaluate the role of big data, AI, and machine learning in the future of healthcare analytics.
- Formulate a data-driven strategy to support value-based care initiatives.
- Lead business intelligence projects from conception to implementation within a healthcare setting.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, practical, and highly interactive, ensuring participants can immediately apply their learning. We employ a blended approach that combines expert-led instruction with hands-on workshops, real-world case studies, and collaborative group projects. Each session moves beyond theoretical lectures to engage participants in problem-solving exercises that mirror the challenges faced in today's healthcare environments. We emphasize a "learning by doing" philosophy, where participants will work with sample healthcare datasets to practice data cleaning, analysis, and visualization. Interactive discussions and peer-to-peer feedback are integral components, fostering a dynamic learning environment where diverse perspectives enrich the educational experience. Our expert instructors facilitate these sessions, providing personalized guidance and ensuring that complex concepts are demystified. The course structure is designed to build skills progressively, culminating in a capstone project where participants develop a comprehensive analytics solution for a given healthcare scenario, solidifying their competence and confidence.

Course Agenda (Course Units):

Unit One: Foundations of Healthcare Analytics

- Introduction to Healthcare Data and its Importance.
- Types of Healthcare Data (Clinical, Financial, Operational).
- The Role of Business Intelligence in Healthcare.
- Data Governance and Stewardship in a Clinical Setting.
- Understanding HIPAA, GDPR, and Data Privacy Regulations.
- The Analytics Lifecycle and Methodologies.
- Key Stakeholders and Their Data Needs.

Unit Two: Healthcare Data Management and Integration

- Sources of Healthcare Data: EHR, LIS, PACS, and Claims.
- Data Warehousing and Data Marts in Healthcare.
- ETL (Extract, Transform, Load) Processes for Healthcare Data.
- Strategies for Ensuring Data Quality and Integrity.
- Master Data Management (MDM) for Patient and Provider Data.
- Interoperability Standards (HL7, FHIR).
- Data Architecture for a Modern Healthcare Organization.

Unit Three: Core Analytical Techniques and Methods

- Descriptive Analytics: Summarizing and Reporting Healthcare Data.
- Diagnostic Analytics: Root Cause Analysis for Clinical and Operational Issues.
- Introduction to Statistical Analysis for Healthcare.
- Predictive Analytics: Forecasting Patient Admissions, Disease Outbreaks, and Resource Needs.
- Prescriptive Analytics: Optimizing Decisions and Processes.
- Introduction to Data Mining and Machine Learning Concepts.
- Analyzing Patient Outcomes and Clinical Efficacy.

Unit Four: Healthcare Business Intelligence and Visualization

- Designing Effective Healthcare Dashboards and Scorecards.
- Key Performance Indicators (KPIs) for Healthcare Management.
- Principles of Data Visualization and Storytelling.
- Communicating Insights to Clinical and Non-Clinical Audiences.
- Developing Reports for Quality Improvement and Compliance.
- Interactive Data Exploration Techniques.
- Benchmarking Performance Against Industry Standards.

Unit Five: Advanced Applications and Strategic Implementation

- Analytics for Population Health Management.
- Optimizing Hospital Operations and Patient Flow.
- Financial Analytics and Revenue Cycle Management.
- Analytics for Supply Chain and Pharmacy Management.
- The Role of AI and Big Data in Shaping Future Healthcare.
- Developing a Business Case for an Analytics Project.
- Change Management and Fostering a Data-Driven Culture.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How can predictive analytics be ethically deployed to improve patient outcomes without exacerbating existing health disparities?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic, strategy-first approach to healthcare analytics and business intelligence. While many programs focus narrowly on specific software or technical skills, our curriculum is built around the core challenge of translating complex data into strategic, actionable intelligence that drives value. We emphasize the "why" behind the "how", ensuring participants understand the clinical and business context of every analysis. The content moves beyond theoretical knowledge by immersing participants in real-world case studies drawn from diverse healthcare settings, from hospital operations to population health management. A significant focus is placed on data storytelling and communication, a critical yet often overlooked skill, empowering participants to effectively convey their findings to executives, clinicians, and other key stakeholders. Furthermore, the course integrates crucial discussions on data governance, ethics, and privacy, preparing professionals to be responsible stewards of sensitive patient information. It is this unique blend of technical depth, strategic business acumen, and ethical consideration that equips our participants not just to be analysts, but to be leaders in the data-driven healthcare revolution.