

Healthcare Data Analytics Dashboard - Client Requirements

■ Client Objective:

Provide a data-driven view of hospital performance by tracking patient inflow/outflow, department efficiency, staff utilization, revenue distribution, and patient satisfaction metrics.

■ Dashboard Pages & Requirements:

1. Hospital Summary (Overall Performance)

- 1 Show key KPIs: Total Patients, In-Patients, Out-Patients, Total Staff, Occupied Beds, Avg ER Time, Avg Treatment Cost, Patient-Staff Ratio.
- 2 Display Weekly Trend chart for Patient Inflow/Outflow.
- 3 Include Occupied Bed Gauge Chart showing current vs total capacity.
- 4 Show Revenue by Age Group (Bar Chart).
- 5 Display Feedback Summary on Doctor Satisfaction (Bar Chart).
- 6 Include Avg ER Time by Department with a Target Line.
- 7 Add Patient Sentiment Analysis (Donut Chart).
- 8 Add Rating by Age Group (Bar Chart).
- 9 Provide Department and Month slicers for filtering.
- 10 Advanced: Add Dynamic Titles, Tooltip Page, and Bookmarks for navigation.

2. Patient Summary

- 1 Show Patient Demographics: Gender-wise, Age Group.
- 2 Include Monthly New Patient and Discharge Rate Trends.
- 3 KPIs: Avg Admission Time, Avg Discharge Time, Readmission %.
- 4 Show Top 5 Diseases/Treatments by Patient Count.
- 5 Advanced: Add Drill-through page for individual patient details.
- 6 Add DAX measures for Readmission Rate and Bed Occupancy Rate.

3. Department Insights

- 1 Show Department-wise metrics: No. of Doctors, Staff, Patients (In/Out), Avg Treatment Duration, ER Time, Revenue.
- 2 Include Correlation visuals: ER Time vs Satisfaction, Revenue vs Avg Treatment Cost.
- 3 Add Conditional Formatting Table for Top/Bottom Departments.
- 4 Show key KPIs: Total Revenue, Count ER time, Average Treatment cost.

■■ Technical Stack & Concepts:

- 1 Power Query for Data Cleaning and Transformation.
- 2 Data Modeling with relationships (avoiding many-to-many).

- 3 DAX Measures for KPI calculation (e.g., ER Time, Bed Occupancy Rate, Growth Analysis).
- 4 Interactive Visuals: Donut, Bar, Line, Gauge, and KPI Cards.
- 5 User Experience Enhancements: Filters, Bookmarks, and Navigation Buttons.

■ Expected Outcome:

An interactive Power BI dashboard providing real-time hospital insights, enabling management to monitor key KPIs, identify inefficiencies, and improve overall patient care and departmental performance.