





Healthcare Analytics BI – Overview

Patient Admissions & Billing Trends

- Monthly Admission Trend:** Line chart tracks admissions for conditions like Arthritis, Asthma, Cancer, Diabetes, Heart Disease, and Obesity. Seasonal fluctuations and condition-specific spikes are visible.
- Average Billing by Condition:** Bar chart shows billing amounts ranging from ~\$20K to ~\$35K, with Cancer and Heart Disease among the highest.
- Insurance Billing Distribution:** Treemap reveals billing concentration across providers like Aetna, Cigna, and UnitedHealth.
- Admission Type Breakdown:** Pie chart categorizes admissions into Emergency, Inpatient, and Outpatient, showing proportional usage.

Medication & Patient Demographics

- Medication Frequency Matrix:** Displays how often key medications (e.g., Metformin, Atorvastatin, Ibuprofen) are prescribed across hospitals H1–H10.
- Billing vs Age Scatter Plot:** Visualizes billing patterns by age and gender, suggesting demographic billing trends.

- **Length of Stay Analysis:** Bar chart compares average patient stay across top hospitals like Mayo Clinic, Cleveland Clinic, and Johns Hopkins.
- **Hospital Site Admissions Table:** Lists admission months and years for major hospitals, useful for temporal analysis.

Key Insights

- **Condition-based billing** and **insurance provider impact** are clearly visualized for financial analysis.
- **Medication usage** varies significantly across hospitals, indicating prescribing patterns.
- **Age and gender** influence billing amounts, hinting at demographic cost drivers.
- **Hospital performance** in terms of length of stay and admission timing supports operational benchmarking.