Healthcare Analytics: Business Questions & Insights

Readmissions Within 30 Days

Business Question: Which patients are being readmitted within 30 days of discharge, and how often does this occur for chronic conditions such as Diabetes and Hypertension?

Why it matters: High readmission rates increase hospital costs and reduce care quality scores. Identifying repeat cases helps hospitals design preventive care strategies.

Doctor Diagnostic Success Rate

Business Question: Which doctors achieve the highest rate of 'Normal' test results (clean outcomes), and where are there gaps in diagnostic accuracy?

Why it matters: This provides insight into clinical effectiveness and highlights opportunities for additional training or diagnostic improvements.

Average Length of Stay by Doctor & Condition

Business Question: How does the average hospital stay vary by doctor and condition? Who has the longest/shortest average stay durations?

Why it matters: Longer stays increase costs and resource use. This analysis highlights efficiency differences between doctors and conditions.

Chronic Condition Recurrence

Business Question: For chronic patients, how often do the same conditions reappear across multiple admissions?

Why it matters: Understanding condition recurrence enables better long-term care planning, reduces repeated admissions, and improves patient quality of life.

Data Quality Tracking

Business Question: How much of the hospital's data is missing, inconsistent, or unusable (e.g., NULL test results, blank discharges, unknown gender)?

Why it matters: Poor data quality limits analytics accuracy and can mislead decision-makers. Monitoring a 'data quality score' helps prioritize data-cleaning initiatives.