HEALTHCARE DATA ANALYSIS

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PROJECT OVERVIEW

This project analyzed health data from hospitals across Pakistan to understand patient demographics, disease prevalence, treatment costs, and hospital performance. It offers insights into age, gender, and disease distribution, as well as hospital efficiency and regional healthcare patterns, aiming to improve healthcare services in Pakistan.

OBJECTIVES

- Analyze patient demographics (age, gender, height, weight) across hospitals.
- Identify common diseases and their distribution across cities and provinces.
- Assess treatment costs and financial burden on insured vs. uninsured patients.
- Compare hospital performance based on patient volume and treatment costs.
- Determine peak times for hospital admissions and discharges.
- Analyze insurance coverage and its impact on treatment costs.
- Explore the distribution of blood groups among patients.
- Gain geographical insights into healthcare needs across Pakistan.
- Investigate correlations between patient demographics and treatment costs.
- Facilitate data-driven decision-making to improve healthcare services in Pakistan.

DATA COLLECTION & METHODOLOGY

1

Data Sources

A comprehensive health dataset collected from various hospitals across Pakistan

2

Analytical Techniques

MS Excel was used for analysis, utilizing its powerful pivot tables and charts to analyze and and visualize large sets of health data to interpret and extract meaningful insights and results.

3

Stakeholder Engagement

Collaborate with healthcare providers, policymakers, and researchers to improve healthcare services and outcomes

HOSPITAL STATISTICS

Highest no. of Patients :

Lady Reading Hospital

Lowest No. of patients :

Nishtar hospital

Highest average treatment cost :

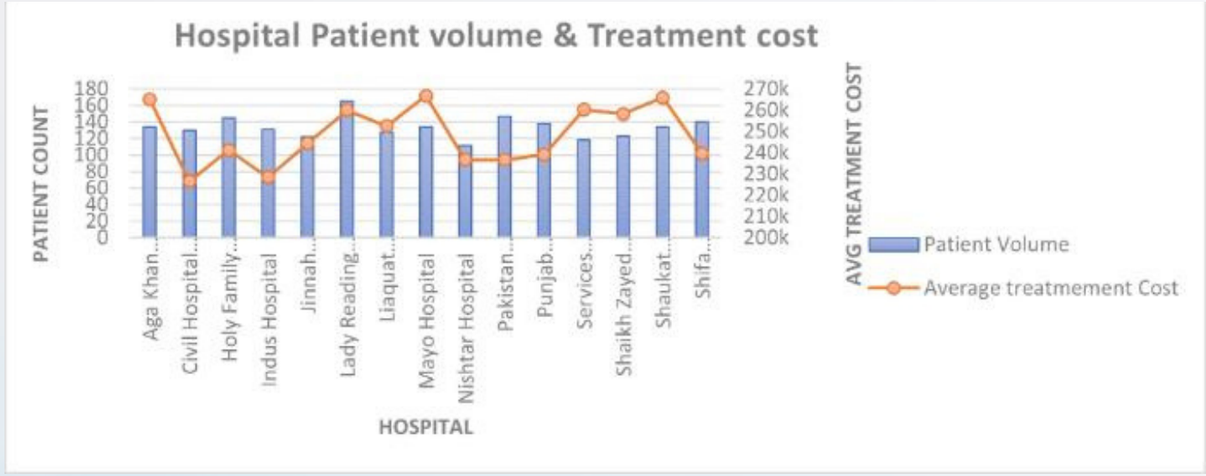
Mayo Hospital

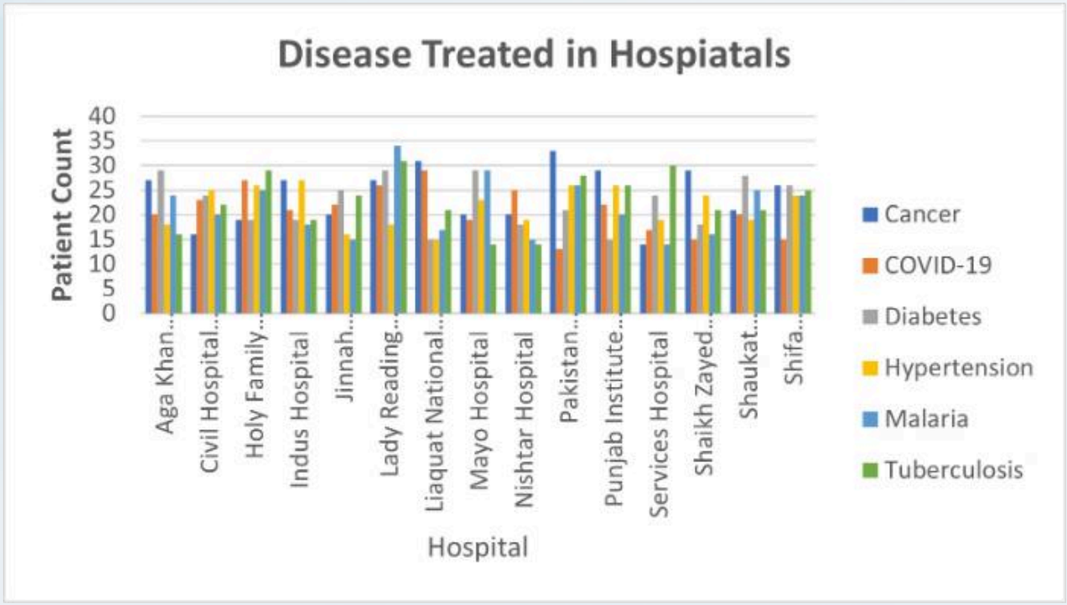
Lowest average Treatment Cost :

Civil Hospital

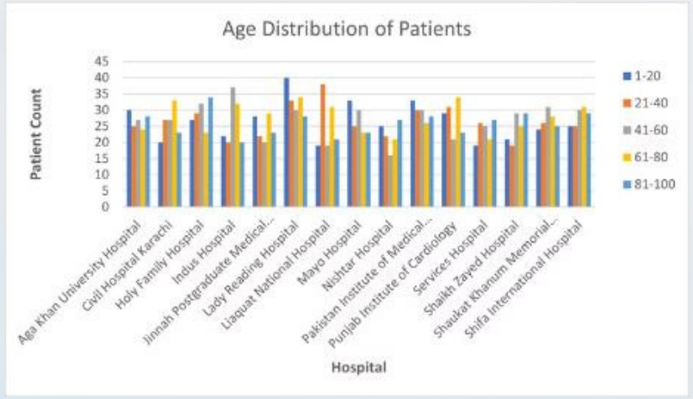
Most common disease treated in hospitals

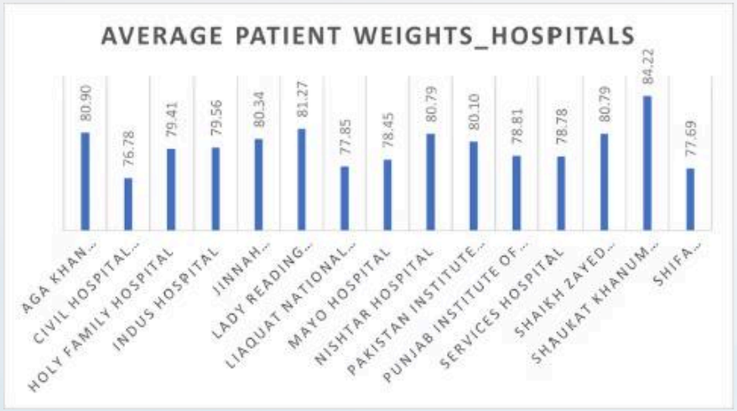
Cancer & Tuberculosis

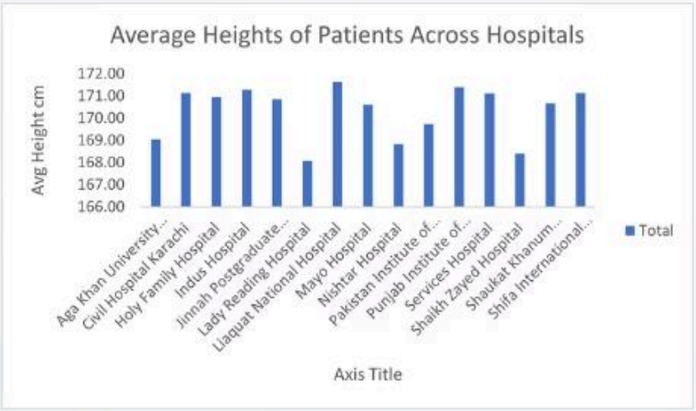




Patient Demographics







Most number of patients -Age group (61-80)

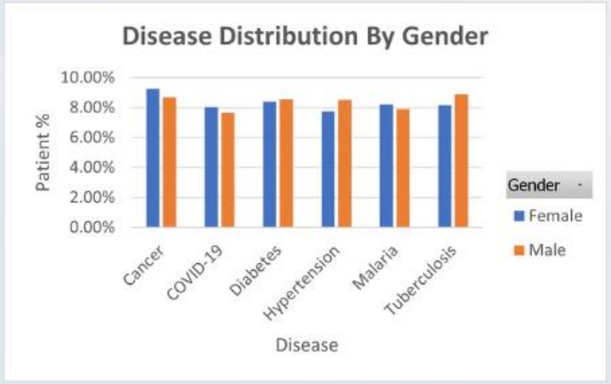
Average weight of patients across all hospitals : 79.73 kg

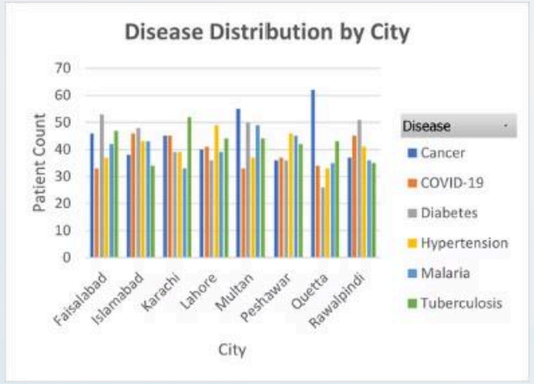
Average height of patients across all hospitals : 170.31 cm

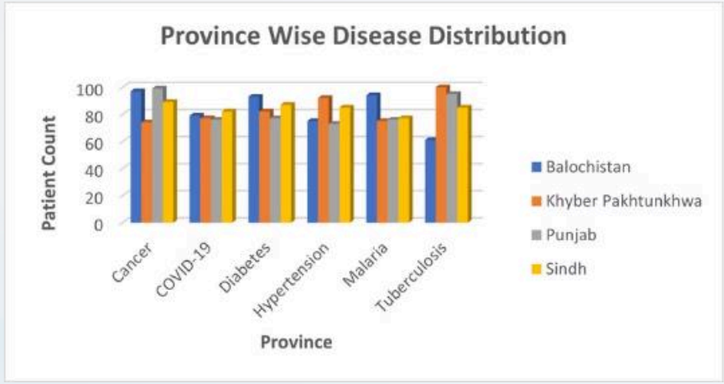
Female patients : 49.80% ,

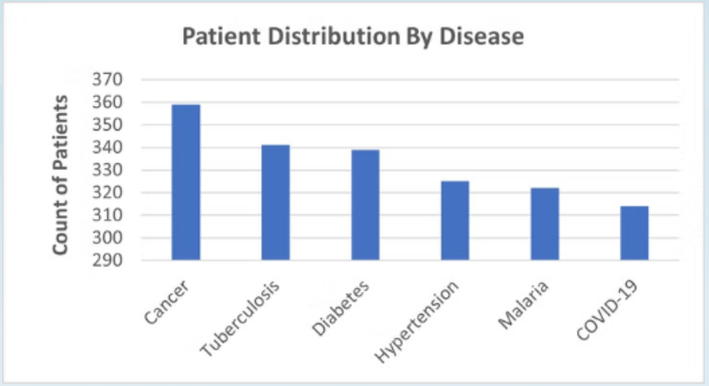
Male Patients : 50.20%

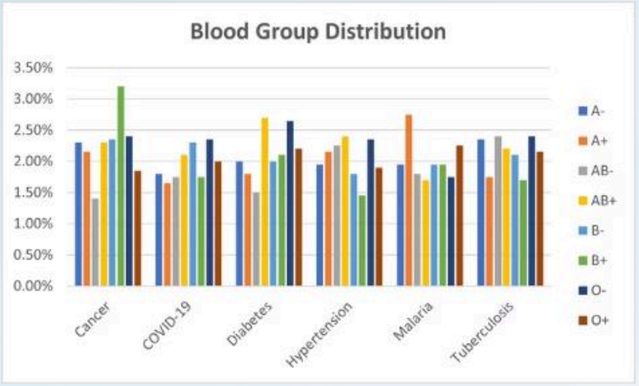
Disease Distribution

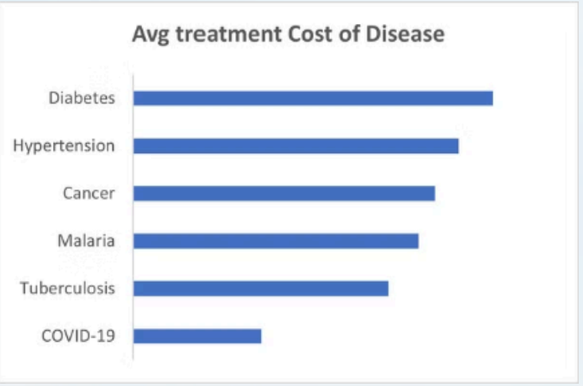












Disease Distribution

Age 61-80 has the greatest number of disease prevalence·

Most common disease prevalence : Cancer

Highest treatment Cost : Diabetes

Most number of Malaria and Diabetes patients exist in Balochistan

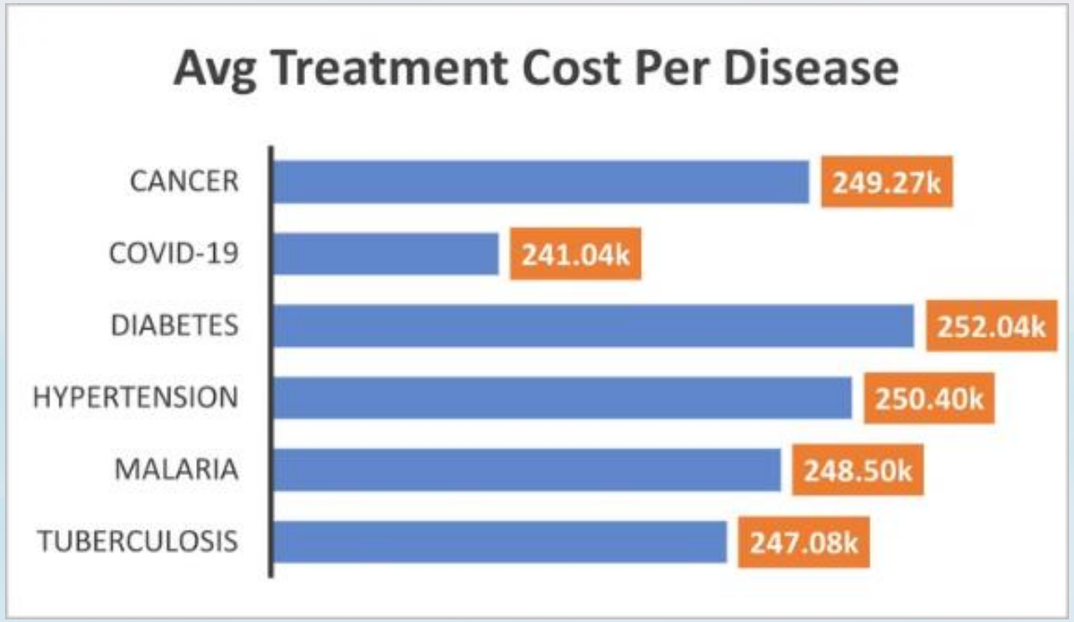
Most number of Cancer patients exist in Punjab Most number of covid-19 patients exist in Sindh

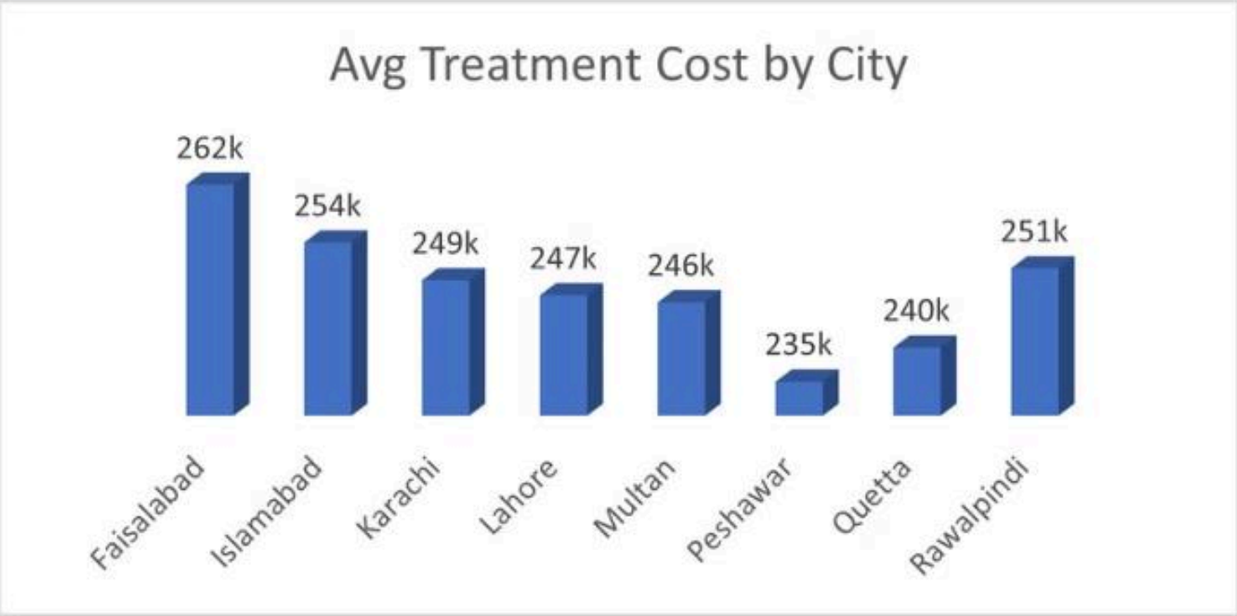
Most number of Hypertension & Tuberculosis patients exist in KPK

Blood Group of 0-has the highest number of disease prevalence

Blood Group of B+ has the highest number of cancer patients

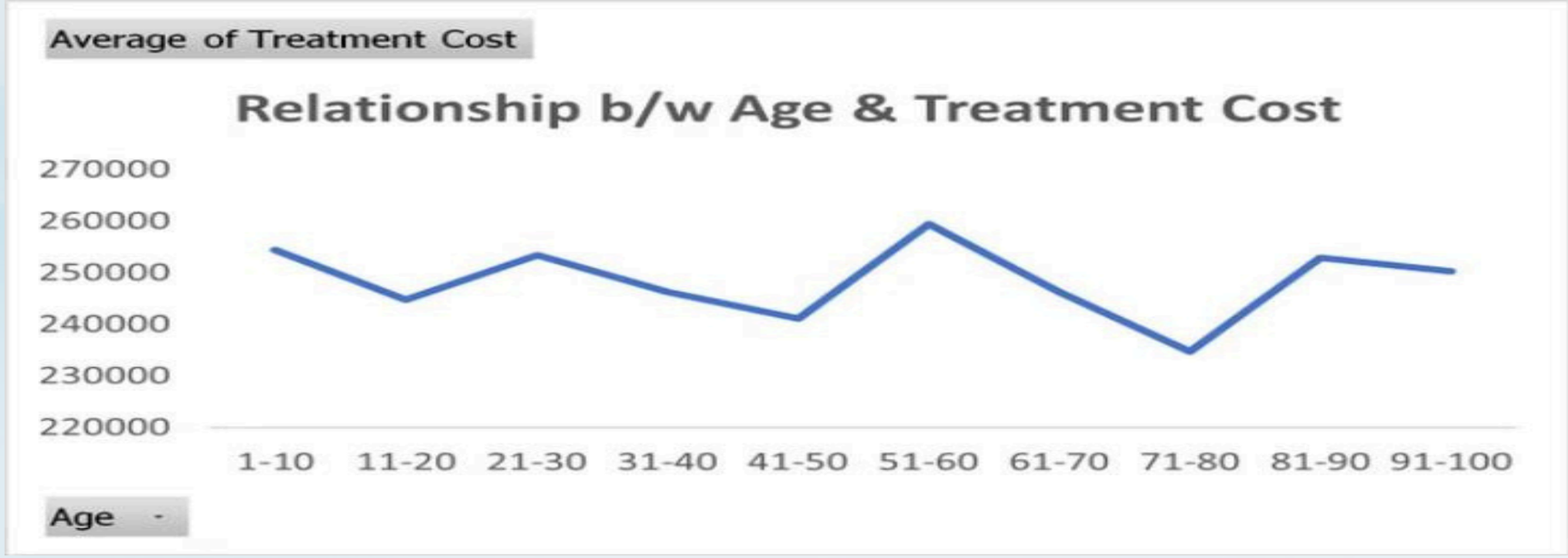
TREATMENT COST ANALYSIS





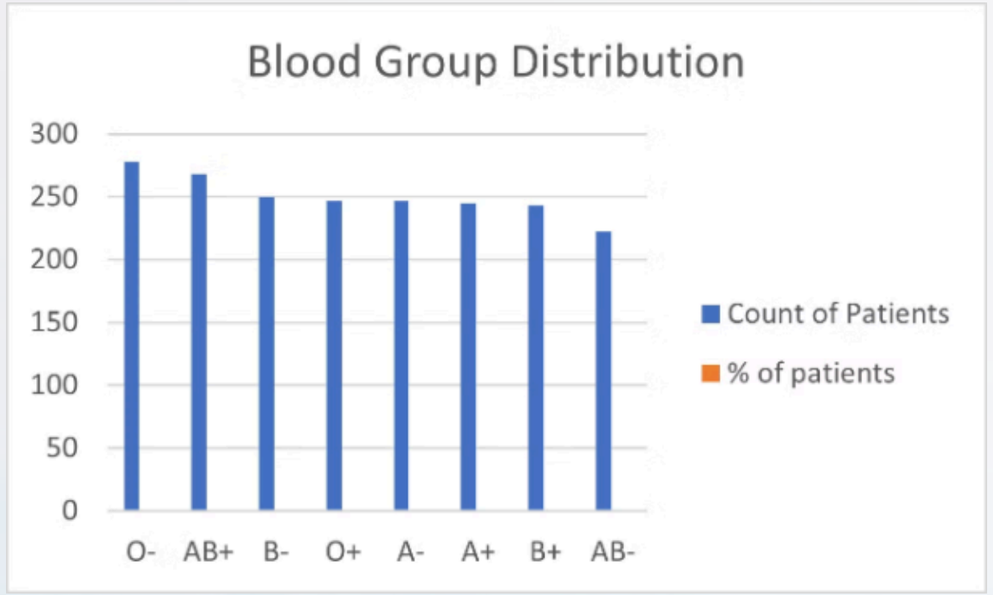
CORRELATION - AGE & TREATMENT COST

The fluctuation in line shows that there is no such relationship between average treatment cost with age, hence there is no correlation between age with treatment cost.



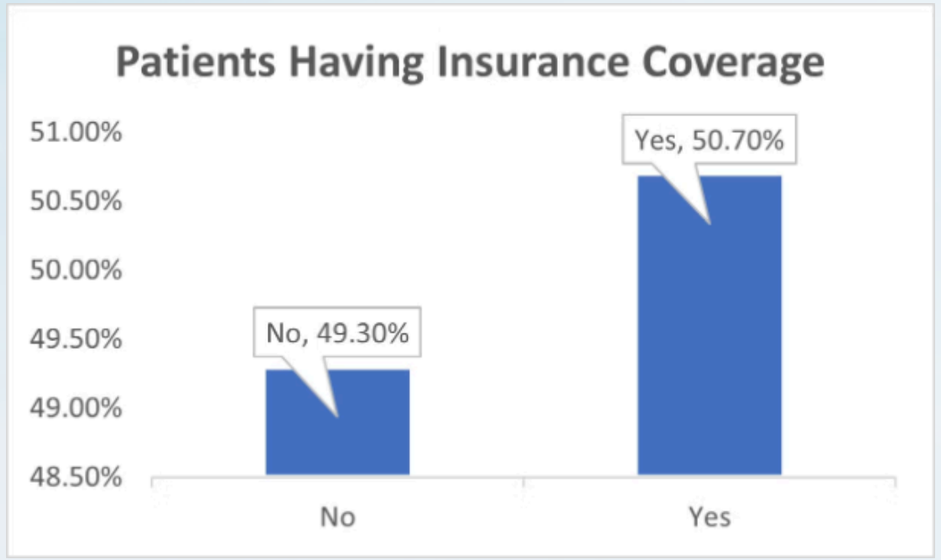
Blood Group

Blood Group 0-has the most number of Patients while AB- has the least



Insurance Coverage

Almost 50% of the patients are not having insurance coverage so they have to bear the expenses on their own



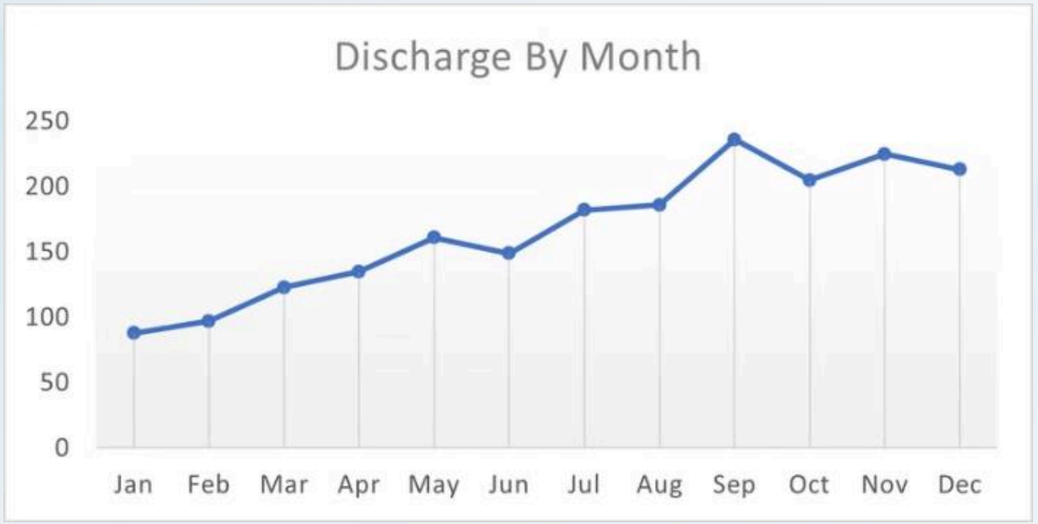
HOSPITAL ADMISSION & DISCHARGE PATTERN

Most Admissions : January

Most Discharges : September

Q1-Q2 are the peak time for admissions so hospitals should allocate resources accordingly while

Q3-Q4 are peak time for discharges



Recommendations

Optimize Allocation of Resources	Ensure availability of doctors, doctors, staff and medicines medicines during peak times times
Healthcare Insurance Facilitation	There is a need to introduce government funded health insurance programs to facilitate patients patients with treatment cost cost
Awareness Programs	Introduce awareness programs about preventive measures of diseases

CONCLUSION

This analysis report provides key insights on demographics, hospital statistics, disease prevalence and their associated treatment cost for the healthcare policymakers to make data data driven decisions for improving healthcare healthcare services and facilities in Pakistan

THANKYOU!

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