A BI Capstone

project

on

HEALTHCARE ANALYTICS

EXCEL, POWER BI,
TABLEAU, MYSQL

- MALLIKA UPPUGANTI

AGENDA

- What is Healthcare?
- Why Analytics matter ?
- KPI List
- Excel Dashboard
- Power BI Dashboard
- Tableau Dashboard
- MySQL Queries
- Recommendations and Action Plan
- Conclusion

HEALTHCARE

What is Healthcare?

Healthcare refers to the organized provision of medical services to maintain or improve people's health. It includes services like diagnosis, treatment, prevention of diseases, and promotion of overall well-being through hospitals, clinics, doctors, nurses, and other health professionals.

Why Analytics matter?

Analytics matters in healthcare because it helps improve patient outcomes, reduce costs, and optimize operations. By analyzing data from patient records, treatments, and diagnostics, healthcare providers can:

- **Identify trends and risks early** (e.g., chronic disease patterns).
- **Make data-driven decisions** for better resource management.
- **Improve patient care quality** through personalized treatments.
- **Enhance operational efficiency** by monitoring workloads, costs, and follow-up rates.

KPI List

1. Total Patients
2. Total Doctors
3. Total Visits
4. Average Age of Patients
5. Top 5 Diagnosed Conditions
6. Follow-Up Rate
7. Treatment Cost Per Visit (Avg.)
8. Total Lab Tests Conducted
9. Percentage of Abnormal Lab Results
10. Doctor Workload (Avg. Patients Per Doctor)
11. Total Revenue


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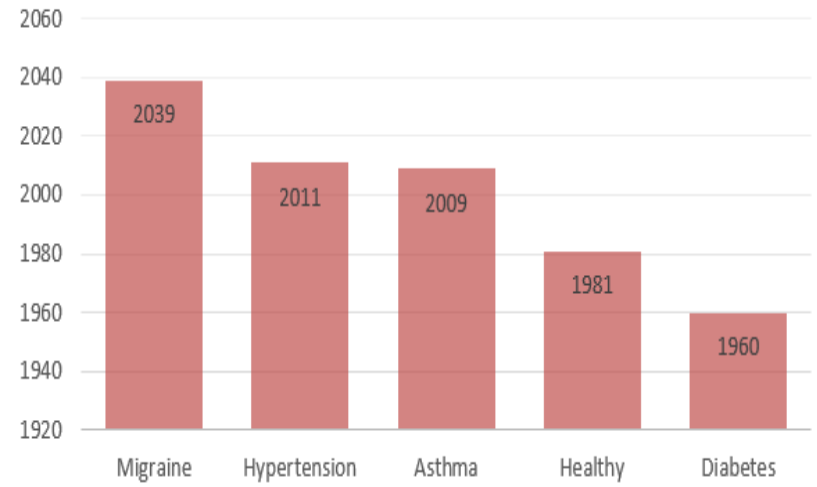
Summe : 0

EXCEL DASHBOARD

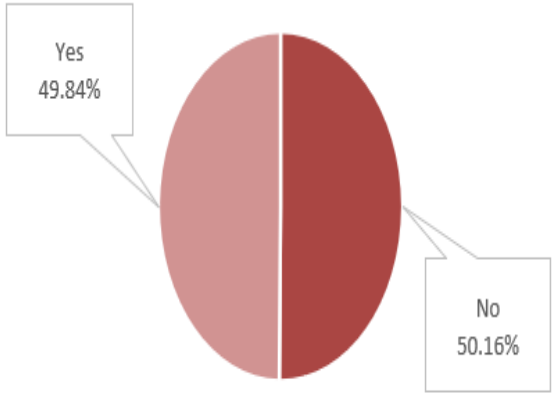
HEALTHCARE ANALYTICS

TOTAL PATIENTS	TOTAL DOCTORS	TOTAL VISITS	AVERAGE AGE OF PATIENTS	TOTAL REVENUE
10000	1000	10000	49	$52,47,455

TOP 5 DIAGNOSED CONDITIONS



FOLLOW UP RATE



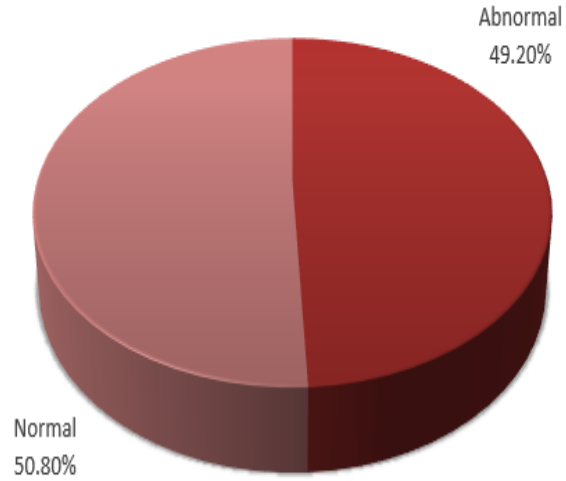
Diagnosis

Asthma | Diabetes | Healthy | Hypertension | Migraine

City

- Chicago
- Houston
- Los Angeles
- Miami
- New York City

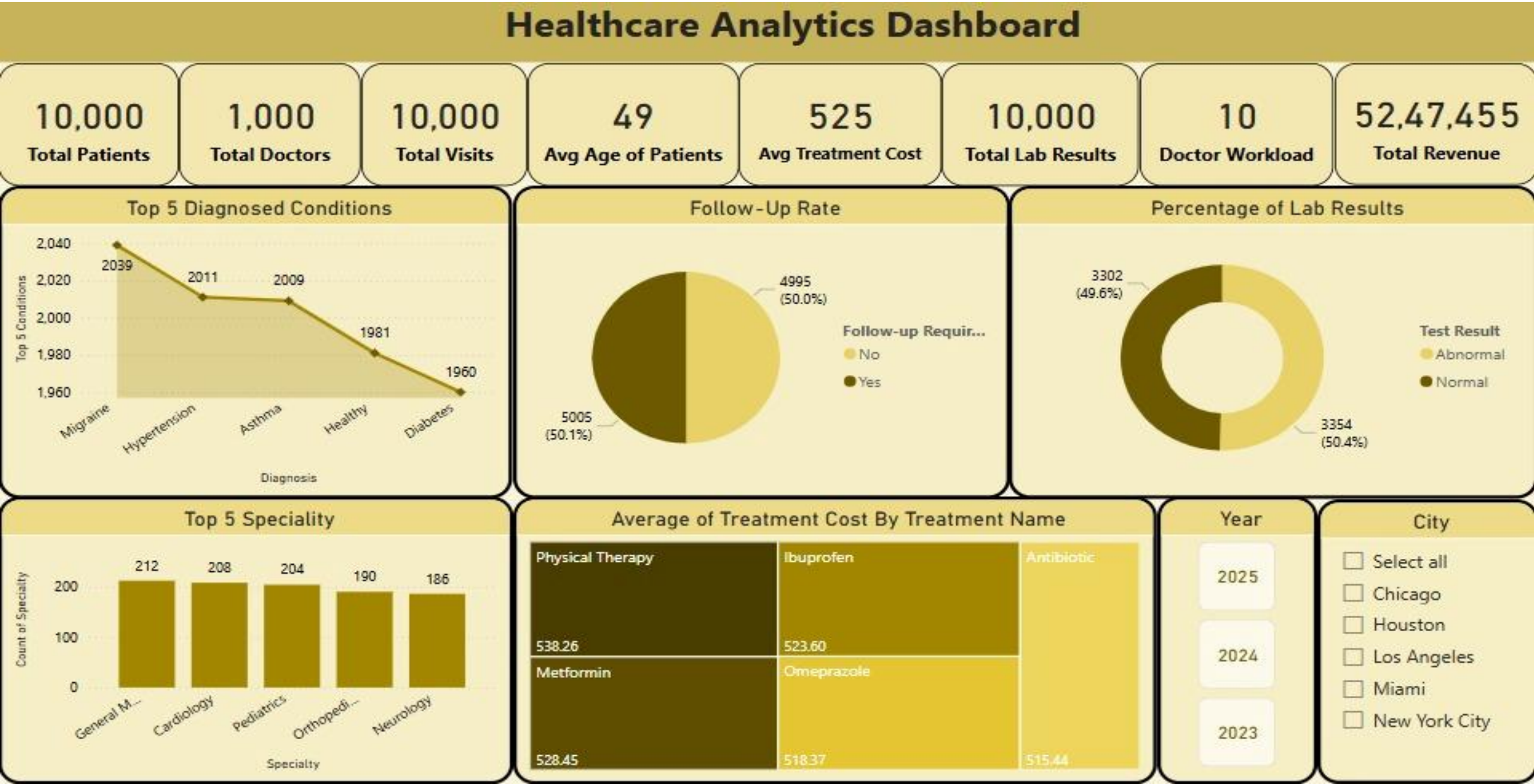
LAB RESULTS



AVERAGE COST OF TREATMENT PER VISIT	DOCTOR WORKLOAD	TOTAL LAB TESTS
$524.75	10	10000


Power BI

POWER BI DASHBOARD



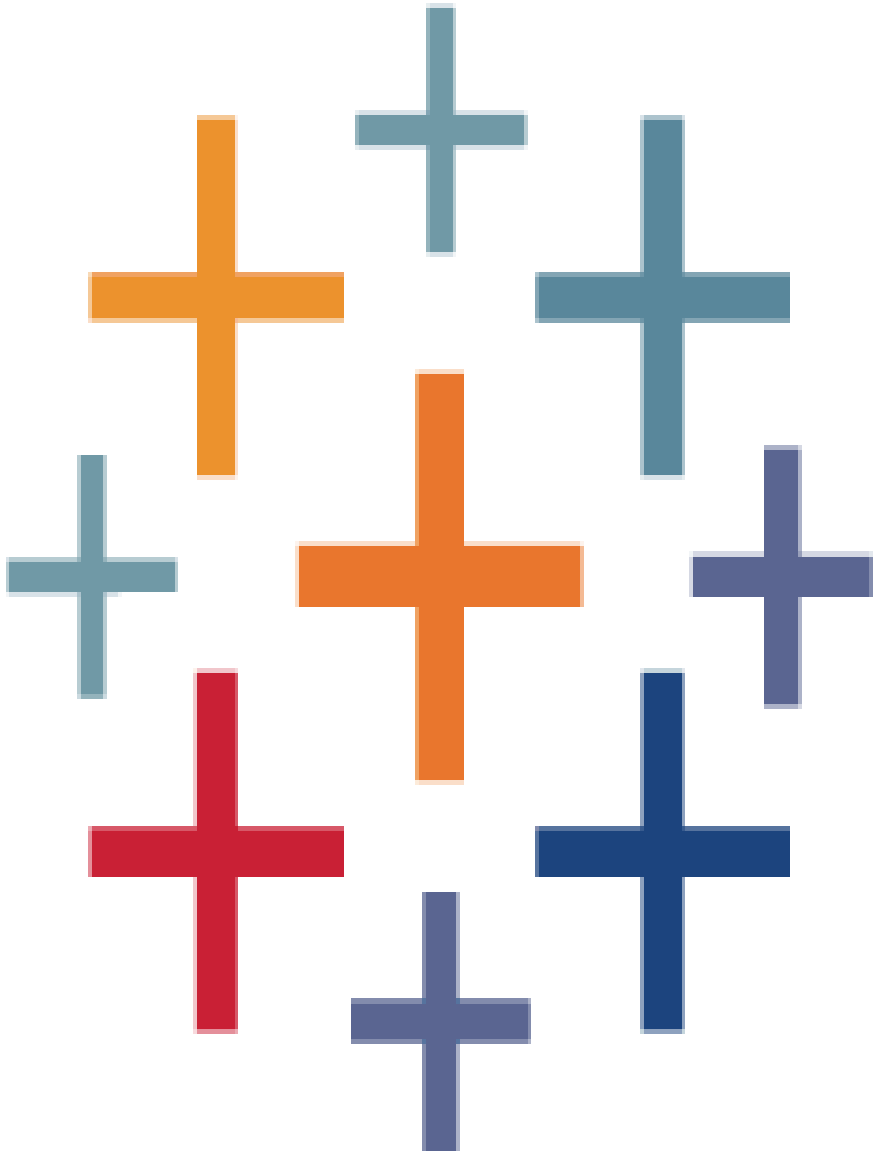
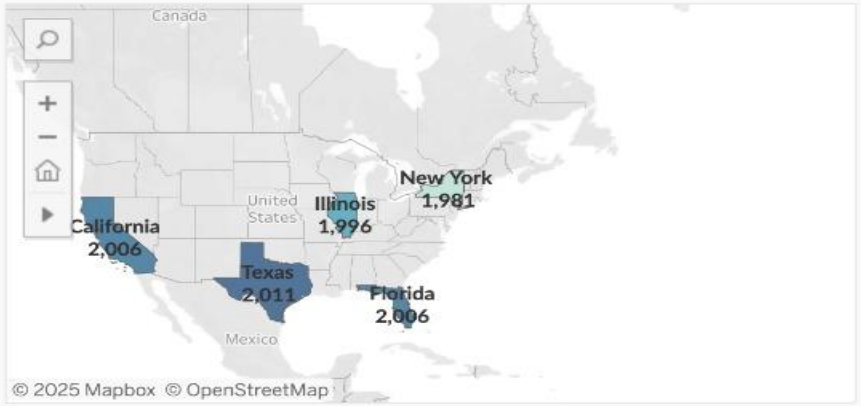


tableau
SOFTWARE

TABLEAU DASHBOARD

Healthcare Analytics Dashboard

Region Wise - Total Patients



Count of Total Doctors
1,000

Average Age of Patients
48.94

Follow Up Rate
49.8%

Average Treatment Cost per Visit
$524.75

Percentage of Abnormal Lab Results
33.54%

Doctor Workload
10.00%

Healthcare Diagnostics

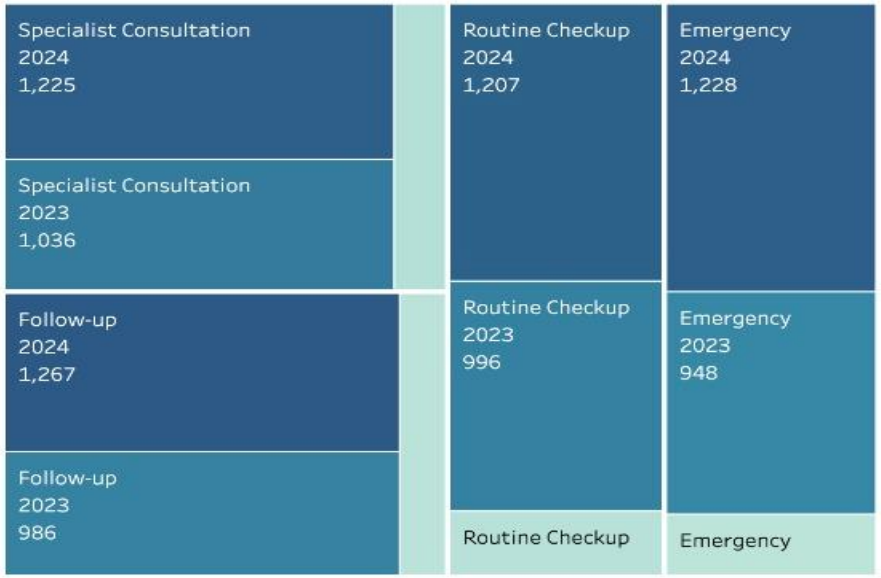
Year of Visit Date
(All)

Count of Total Patients
10,000

Total Lab Tests Conducted
10,000

Total Revenue
$5,247,454.52

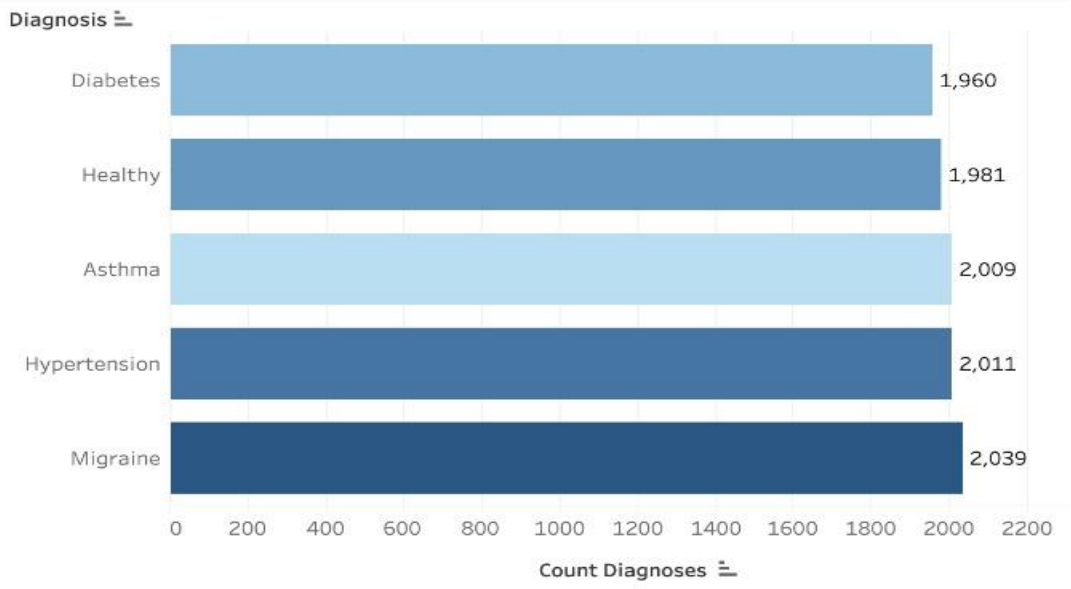
Total Number of Visits



Doctor Specializations

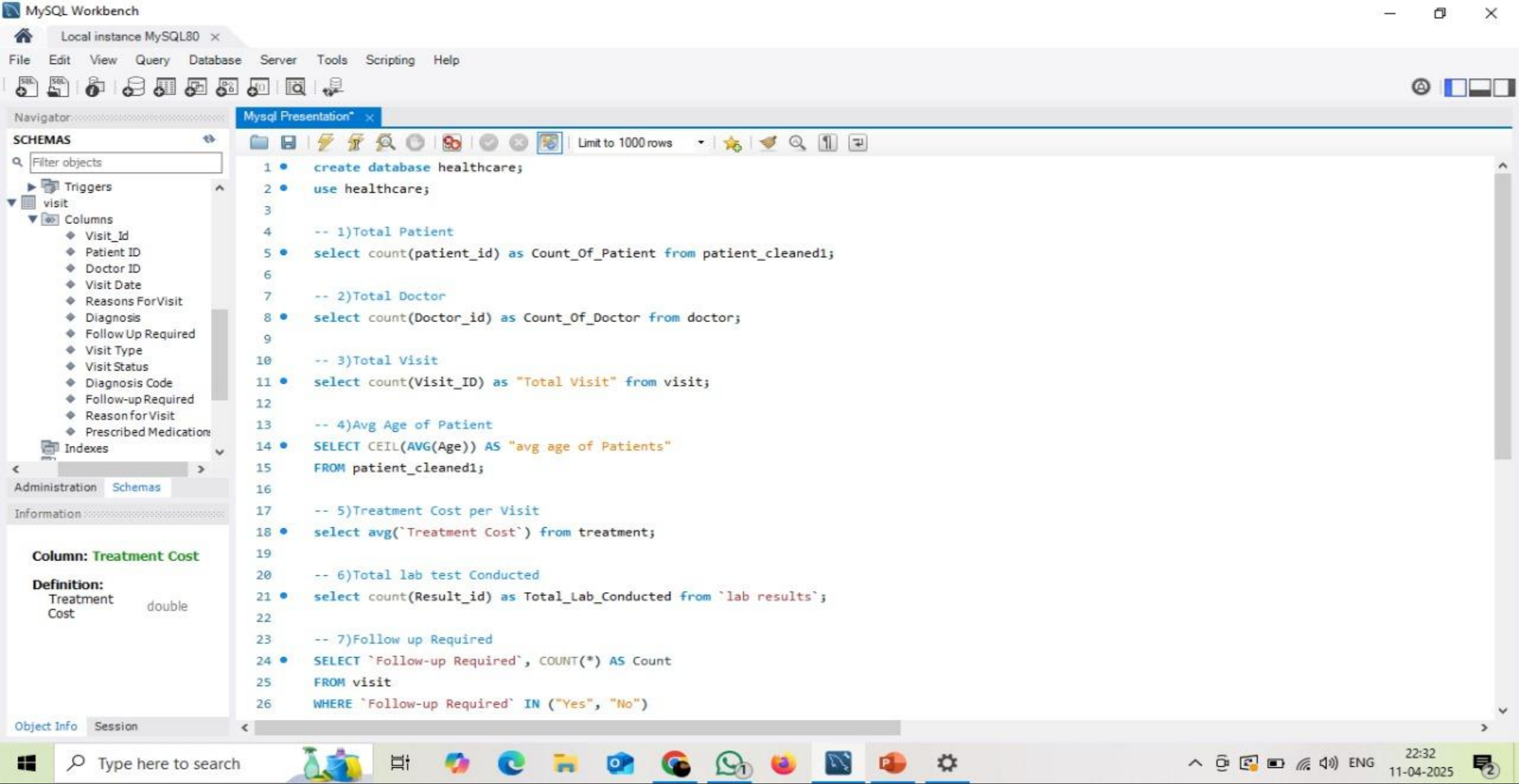
Specialization	
Cardiology	191
General Medici..	191
Neurology	225
Orthopedics	198
Pediatrics	195

Top 5 Diagnosed Conditions

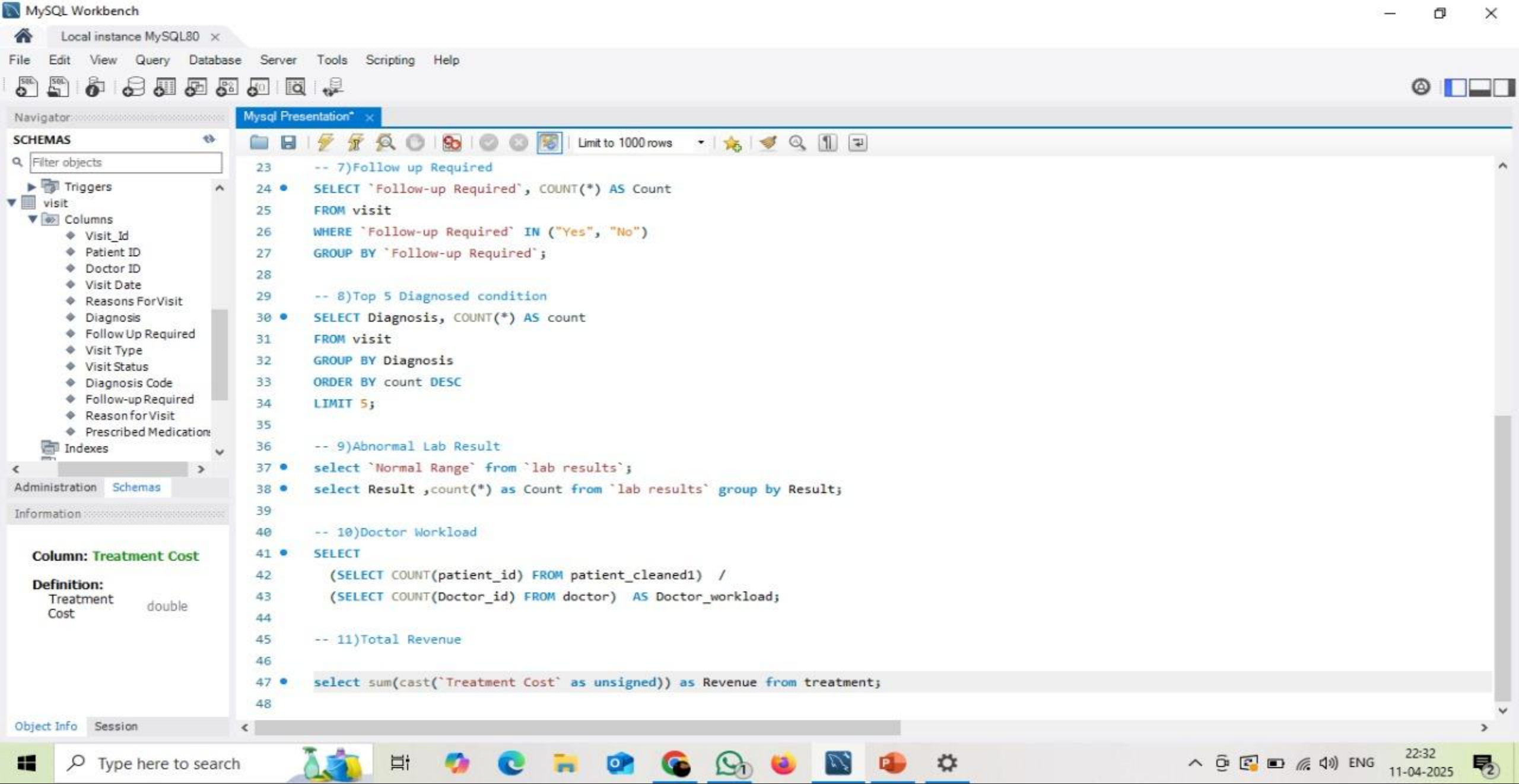



MySQL™

MySQL Queries



MySQL Queries



Recommendations & Action Plan

1. **Enhance Patient Retention:** Improve follow-up rates through reminders, digital health consultations, and personalized engagement.

2. **Strengthen Chronic Disease Management:** Focus on hypertension, diabetes, and migraine treatment programs.

3. **Optimize Healthcare Costs & Doctor Workload:** Assess treatment costs and balance doctor workloads for efficiency.

4. **Improve Lab Test Utilization:** Since nearly 50% of lab tests return abnormal results, early detection programs should be reinforced.

5. **Leverage Regional & Condition-based Insights:** Use geographic data to deploy targeted interventions in different cities.

CONCLUSION

In summary, while we are performing well in terms of patient engagement and revenue generation, there are clear opportunities to enhance follow-up care, address chronic health conditions more proactively, and ensure optimal use of resources.

These insights will support informed decision-making, help us improve patient outcomes, and drive continued growth and efficiency across our healthcare services.

Thank You!