

# **SQL Healthcare Assessment Project By Joshua Matthew**

## **Problem Questions**

### **Patient Care (Risk Factors)**

1. Investigate the lab dataset to examine patients' blood sugar levels. Typically, fasting Blood sugar levels fall between 70 and 100 mg/dL. The goal is to identify patients whose lab results are outside this normal range to implement early interventions
2. The Hospital management wants to prevent cardiovascular disease and they need to assess how many patients are considered High, Medium, and Low Risk
3. Identify individuals at high risk of developing obesity within a population based on bmi and hyperlipidemia diagnosis
4. Flag patients who are at risk due to interaction between their medication and smoking status
5. Classify patients into high, medium or low risk based on their BMI and family risk of hypertension

### **Population Demographics**

1. What is the distribution of patients in our healthcare system based on their age groups and genders
2. How many patients have been admitted in each department so far?
3. Detailed info (Patient name, doctor name, visitdate, reason for visit, diagnosis, test, result, medications, days in hosp)
4. How does the frequency of fasting blood sugar testing vary between gender and age group?
5. Which department should receive additional resources (e.g., staff, equipment) to manage a high volume of test screenings

### **Clinical research (Present diseases and demographic characteristics)**

1. Which diagnoses are most prevalent among patients, and how do they vary across the different demographic groups, including gender and age
2. What are the most commonly ordered lab tests
3. Are there significant differences in diagnosis between smokers and non-smokers?
4. Identify a cohort of patients with chronic diseases, including hypertension, hyperlipidemia, and diabetes.
5. Investigate the main reason for patients to visit the hospital (count the reasons and group them)

### **Healthcare Admin (reason for visit; appointment date and reminders)**

1. What are the most common appointment times throughout the day, and how does the distribution of appointment times vary across different hours?
2. The hospital administration is interested in finding out information about the patients who had multiple visits within 30 days of their previous medical visit. Write a query to identify those patients, the date of the initial visit, the reason for the initial visit, the readmission date, the reason for readmission, and the number of days between the initial visit and readmission.
3. Compare the average number of days the patients are spending in each department of the hospital