

# (Healthcare Data Analysis Project)

## (Rational & Efficiency Dashboard)

### (Objects)

#### 1- Average Length of Stay (ALOS)

**Question:** What is the average hospital stay duration across all patients?

**Columns:** DateOfAdmission, DischargeDate, PatientID

#### 2- Emergency Admission Rate

**Question:** What percentage of all admissions are emergency cases?

**Columns:** AdmissionType, PatientID

#### 3- Average Cost per Patient Day

**Question:** What is the average *BillingAmount* per day of stay for each hospital?

**Columns:** BillingAmount, LengthOfStay, Hospital

#### 4- Length of Stay by Admission Type

**Question:** How does the average *LengthOfStay* differ across *AdmissionType* (Emergency, Urgent, Elective)?

**Columns:** AdmissionType, LengthOfStay

#### 5- Geographic Workload by State

**Question:** Which states have the highest patient load, and how does it vary by *AdmissionType*?

**Columns:** State, AdmissionType, PatientID

#### 6- Age Impact on Length of Stay

**Question:** How does *AgeCategory* affect the average *LengthOfStay*?

**Columns:** AgeCategory, LengthOfStay

#### 7- Hospital Performance Comparison

**Question:** Which hospitals have the lowest cost per patient day (best operational efficiency)?

**Columns:** Hospital, BillingAmount, LengthOfStay

#### 8- Length of Stay vs. Billing Efficiency

**Question:** Is there a correlation between *LengthOfStay* and *BillingAmount*?

**Columns:** LengthOfStay, BillingAmount

#### 9- Admission Type Trend by Age Category

**Question:** What admission types are most common in each *AgeCategory*?

**Columns:** AgeCategory, AdmissionType, PatientID

## **(Financial & Billing Dashboard)**

### **(Objects)**

#### **1- Highest Billing State**

**Question:** What is the highest state in *BillingAmount*?

**Columns:** State, BillingAmount

#### **2- Billing Comparison by Gender**

**Question:** Compare between males and females by their *BillingAmount*.

**Columns:** Sex, BillingAmount

#### **3- Most Common Admission Type**

**Question:** Which *AdmissionType* is the most frequent?

**Columns:** AdmissionType, PatientID

#### **4- Average and Total Billing**

**Question:** Calculate the average and total *BillingAmount*.

**Columns:** BillingAmount

#### **5- General Health vs. Billing Relationship**

**Question:** Is there a relationship between *GeneralHealth* and the average

*BillingAmount*?

**Columns:** GeneralHealth, BillingAmount

#### **6- Age Impact on Billing and Admission Type**

**Question:** Does *Age* have an impact on *BillingAmount* and *AdmissionType*?

**Columns:** Age, AgeCategory, BillingAmount, AdmissionType

## **(Clinical & Population Health Dashboard)**

### **(Objects)**

#### **1- Chronic Diseases by Age Category**

**Question:** What is the average number of chronic diseases across different age categories?

**Columns:** AgeCategory, HadChronicConditions

#### **2- BMI Categories by Age Category**

**Question:** How is BMI distributed across age categories?

**Columns:** AgeCategory, BMI, BMICategory

#### **3- Diabetes Classification by Age and Sex**

**Question:** How does diabetes prevalence vary by age category and sex?

**Columns:** AgeCategory, Sex, HadDiabetes

#### **4- Patient Classification by Admission Type and Age**

**Question:** How are patients distributed by admission type across different age categories?

**Columns:** AgeCategory, AdmissionType, PatientID

#### **5- General Health by BMI Category (Filtered by Sex)**

**Question:** How does general health vary by BMI category and sex?

**Columns:** GeneralHealth, BMICategory, Sex

#### **6- Blood Type Distribution by State**

**Question:** What is the distribution of blood types across states?

**Columns:** State, BloodType, PatientID

#### **7- Heart Attacks by BMI Category**

**Question:** What is the frequency of heart attacks in each BMI category?

**Columns:** HadHeartAttack, BMICategory

#### **8- Chronic Disease Classification by Age**

**Question:** How are chronic diseases distributed among different age categories?

**Columns:** AgeCategory, HadHeartAttack, HadDiabetes, HadCOPD, HadArthritis, HadKidneyDisease

#### **9- Medical Tests by Age Category**

**Question:** How do medical test rates (HIV, checkups, cholesterol) differ by age category?

**Columns:** AgeCategory, HIVTesting, CheckupLastYear, CholesterolCheck

#### **10- Vaccinations by Age Category**

**Question:** What are the vaccination rates across different age categories?

**Columns:** AgeCategory, FluVaxLast12, PneumoVaxEver, TetanusLast10Tdap

**11- Traditional Smoking by Age Category**

**Question:** What is the smoking rate among different age categories?

**Columns:** AgeCategory, SmokerStatus

**12- E-Cigarette Usage by Age Category**

**Question:** What is the usage rate of e-cigarettes by age category?

**Columns:** AgeCategory, E\_CigaretteUse

**13- Alcohol Consumption by Age Category**

**Question:** How does alcohol consumption vary across age categories?

**Columns:** AgeCategory, AlcoholDrinkers

**14- Disabilities by Age Category**

**Question:** What is the distribution of disabilities (hearing, vision, mobility) by age category?

**Columns:** AgeCategory, DeafOrHardOfHearing, BlindOrVisionDifficulty, MobilityDifficulty

**15- Tetanus Vaccination by Age Category**

**Question:** What is the percentage of patients vaccinated for tetanus in each age category?

**Columns:** AgeCategory, TetanusLast10Tdap