# Hospital Information System

# Outpatient Department

An outpatient department or outpatient clinic is the part of a hospital designed for the treatment of outpatients, people with health problems who visit the hospital for diagnosis or treatment, but do not at this time require a bed or to be admitted for overnight care.

Primary care physicians, community health clinics, urgent care clinics, specialized outpatient clinics, pharmacies, and the emergency department are examples of outpatient department.



# Connecting to Data:

- Necessary software was installed to integrate the data into Power BI.

- Required tables were loaded into Power BI.

1. Accounting TaxSettingPercentages
2. Core Orders
3. Core Patients
4. Core TreatmentVisits
5. Core TreatmentVisitStatusHistory
6. HR Departments

# Data Modelling

Data modelling was done and relationships between the tables are established.

|  |  |  |
| --- | --- | --- |
| **Table 1** | **Table 2** | **Cardinality** |
| Core Orders (TaxSettingPercentageId) | AccountingTaxSettingPercentages  (TaxSettingPercentageId) | Many to One |
| Core Orders (TreatmentVisitID) | Core TreatmentVisits (TreatmentVisitID) | Many to One |
| Core TreatmentVisits (DepartmentID) | HR\_Departments (DepartmentID) | Many to One |
| Core TreatmentVisits (PatientID) | Core Patients (PatientID) | Many to One |

Business Metrics

### **Average Visit Time**

Avg\_visit\_time = CALCULATE(

AVERAGEX(

VALUES('Core TreatmentVisitStatusHistory'[TreatmentVisitID]),

[Visit\_time\_diff]))

### **Average Clinic Time**

Avg\_Clinic\_time = CALCULATE(

AVERAGEX(

VALUES('Core TreatmentVisitStatusHistory'[TreatmentVisitID]),

[Clinic\_time\_diff]))

### **Average Time Difference**

Clinic\_time\_diff = DATEDIFF( CALCULATE(

MAX('Core TreatmentVisitStatusHistory'[CreationDate]),

'Core TreatmentVisitStatusHistory'[Visit\_status] ="Attended"

),CALCULATE(

MAX('Core TreatmentVisitStatusHistory'[CreationDate]),

'Core TreatmentVisitStatusHistory'[Visit\_status] = "Completed"),HOUR)

### **Patient Count**

patient\_count = COUNT('Core TreatmentVisits'[PatientID])

### **Patient visit Status Count**

Visit\_status\_count = COUNT('Core TreatmentVisits'[VisitStatus])

### **Patient Visit Type Count**

Visit\_type\_count = COUNT('Core TreatmentVisits'[VisitType])

### **Average Time of Visit Completion**

Visit\_time\_diff = DATEDIFF(

CALCULATE(

MAX('Core TreatmentVisitStatusHistory'[CreationDate]),

'Core TreatmentVisitStatusHistory'[Visit\_status] ="Arrived"

),CALCULATE(

MAX('Core TreatmentVisitStatusHistory'[CreationDate]),

'Core TreatmentVisitStatusHistory'[Visit\_status] = "Attended"),HOUR)

## Canvas Designing:

- Necessary shapes were created for visual appeal.

## KPIs:

**1. Average Visiting Time (in Hr):**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Average visit time count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Utilizes a suitable shape to signify the KPI.

**2. Average Clinic Time (in Hr):**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Average clinic time count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Incorporates a fitting shape for KPI representation.

**3. Patient Count:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Total patient count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Employs a suitable shape for effective KPI representation.

**4. Male Patient Count:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Total male patient count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Integrates a suitable shape for clear KPI representation.

**5. Female Patient Count:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Total female patient count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Selects an appropriate shape for conveying the KPI.

**6. Total Patients Scheduled for OP:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Visit Status where status equals to schedule count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Features a suitable shape to symbolize the KPI.

**7. Total Patients Arrived for OP:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Visit Status where status equals to arrived count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Utilizes a fitting shape for effective KPI representation.

**8. Total Patients Attended for OP:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Visit Status where status equals to attended count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Incorporates a suitable shape for clear KPI representation.

**9. Total Patients OP Visit Completion:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Visit Status where status equals to completed count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Selects an appropriate shape for conveying the KPI.

**10. Total Patients Not Appeared for OP:**

- Visualization: Name card with dimensions 116x229.

- Data Displayed: Visit Status where status equals to No-Show count.

- Font: Segoe UI, Size 25, Colour #0E1A77.

- Card Title Font: Segoe UI, Size 12, Black.

- Representation: Employs a suitable shape for effective KPI representation.

## Visualisations:

**1. Department Wise Patients Count:**

- Visualization Type: Bar chart

- Axes Configuration: Y-axis represents department titles, X-axis represents patient count.

- Visual Name Font: Segoe UI, Size 11, Black.

- Background: White color.

- Visual Border: Turned off.

- X-axis Title: Turned off.

- Y-axis Value Font: Segoe UI, Size 9, Black.

- Bars Color: #414FB1.

- Data Labels: Turned on, Font - Segoe UI, Size 11, Color #333333.

**2. Visit Type:**

- Visualization Type: Donut chart

- Legend: Visit type against visit type count.

- Visual Name Font: Segoe UI, Size 11, Black.

- Background: White color.

- Visual Border: Turned off.

- Donut Chart Slices Colors: #118DFF, #12239E, #E66C37.

- Legend: Turned on, Positioned at top center.

- Detail Labels Position: Outside, Content to data value percent of total.

- Label Font: Segoe UI, Size 11, Color #333333.

**3. Patient Visit Status Trend:**

- Visualization Type: Ribbon chart

- Axes Configuration: X-axis represents dates, Y-axis represents patient count.

- Legend: Visit status, Turned on, Positioned at top left.

- Background: White color.

- Visual Border: Turned off.

- Ribbon Colors: Arrived: #41A4FF

Attended: #A0A7D8

Cancelled: #333333

Completed: #EB895F

Confirmed: #E669B9

No Show: #9071CE

No Status: #A38600

Scheduled: #A1343C