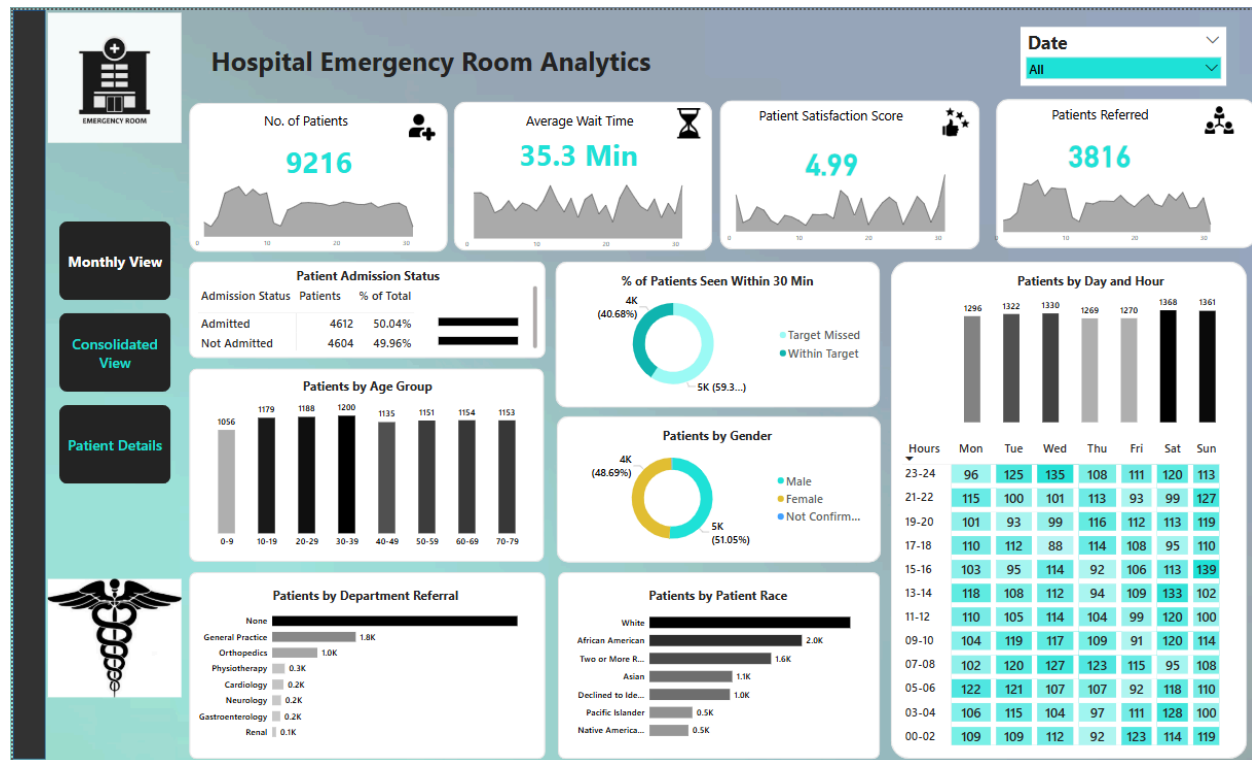


# Hospital Emergency Room Analytics Dashboard



## Documentation

This document provides a comprehensive explanation of the Hospital Emergency Room Analytics dashboard developed in Power BI. The dashboard is designed to deliver actionable insights into emergency room operations, patient demographics, and performance metrics for hospital administrators and healthcare professionals.

## Dashboard Overview

The dashboard is structured into three main views

- Monthly View
- Consolidated View
- Patient Details

A date filter at the top right allows users to filter the data for specific periods or view all available data.

# Key Metrics and Visualizations

## 1. High-Level KPIs

At the top of the dashboard, four critical Key Performance Indicators (KPIs) are displayed:

- Number of Patients: Total patients visiting the emergency room (e.g., 9,216).
- Average Wait Time: Average time (in minutes) patients wait before being seen (e.g., 35.3 minutes).
- Patient Satisfaction Score: Average satisfaction rating (e.g., 4.99 out of 5).
- Patients Referred: Number of patients referred to other departments or specialists (e.g., 3,816).

Each KPI is accompanied by a trend line, providing a visual representation of changes over time.

## 2. Patient Admission Status

A horizontal bar chart and table display:

- Admitted: Number and percentage of patients admitted (e.g., 4,612; 50.04%).
- Not Admitted: Number and percentage of patients not admitted (e.g., 4,604; 49.96%).

## 3. Patient Demographics

### Age Group Distribution

A bar chart shows the number of patients in each age group (e.g., 0-9, 10-19, etc.), allowing for quick identification of the most frequent age ranges.

### Gender Distribution

A donut chart visualizes the gender breakdown:

- Male
- Female

- Not Confirmed

This helps identify gender-based trends in ER visits.

## Race Distribution

A horizontal bar chart details the number of patients by race, including categories such as White, African American, Asian, Pacific Islander, Native American, and others.

## 4. Operational Performance

### % of Patients Seen Within 30 Minutes

A donut chart indicates the percentage of patients seen within the target wait time (e.g., 59.3% within target, 40.68% missed target)

## Patients by Day and Hour

A matrix and bar chart display patient volume by day of the week and hour of the day, highlighting peak periods for ER visits. This enables resource planning and staffing optimization.

## Department Referrals

A bar chart shows how many patients were referred to various departments (e.g., General Practice, Orthopedics, Cardiology, etc.), as well as those with no referral.

## 5. Patient Details Table

The "Patient Details" view provides a detailed, filterable table listing:

- Patient ID and Name
- Gender and Age
- Admin Date

- Race
- Wait Time
- Department Referral
- Admission Status

This granular data supports case reviews, audits, and deeper analysis of individual patient journeys.

## Usage and Navigation

- Date Filter: Refine data by specific periods.
- Interactive Visuals: Most charts and tables are interactive, allowing for drill-down and cross-filtering to explore specific segments or trends.

## Benefits and Applications

- Performance Monitoring: Track ER efficiency, patient flow, and satisfaction.
- Resource Allocation: Identify peak hours/days for staffing and resource planning.
- Demographic Insights: Understand patient profiles for targeted interventions.
- Quality Improvement: Monitor wait times and satisfaction to drive quality initiatives.

## Conclusion

This Power BI dashboard provides a holistic view of emergency room operations, combining high-level KPIs with detailed demographic and operational breakdowns. It is a powerful tool for data-driven decision-making in hospital management.