Hospital Emergency Room Dashboard Project Report

# 1. Purpose of the Project

The objective of this project is to create a Hospital Emergency Room (ER) Analysis Dashboard using Microsoft Excel. This dashboard helps hospital administrators and stakeholders track patient trends, monitor service efficiency, and make data-driven decisions to improve healthcare delivery.  
  
This monthly report provides real-time insights into:  
- Patient volume  
- Waiting times  
- Satisfaction levels  
- Gender and age distributions  
- Timeliness of medical attention  
- Department referrals

# 2. Key Metrics and Visualizations

## Total Number of Patients

513 patients (January)  
Shows how many patients visited the ER each day using an area sparkline.  
Purpose: Helps identify high-traffic days and seasonal trends.

## Average Wait Time

36.32 minutes  
Sparkline trend for daily wait time changes.  
Purpose: Identifies days when service is delayed and improvements are needed.

## Satisfaction Score

4.96 (on a scale of 5)  
Area sparkline to display trends.  
Purpose: Tracks patient satisfaction to highlight service quality.

## Admission Status

Not Admitted: 244 patients (47.56%)  
Admitted: 269 patients (52.44%)  
Purpose: Provides insights into ER load and patient outcomes.

## Age Group Distribution

0–9: 76, 10–19: 69, 20–29: 64, 30–39: 59, 40–49: 58,  
50–59: 66, 60–69: 67, 70–79: 54  
Purpose: Understand the age demographics of patients to improve targeted services.

## Timeliness

On Time: 70%, Delayed: 30%  
Purpose: Measures how effectively the ER meets its 30-minute consultation goal.

## Gender-wise Analysis

Male: 53%, Female: 47%  
Purpose: Tracks gender distribution to ensure balanced service.

## Department Referrals

General Practice: 103, Orthopedics: 65, Cardiology: 14, Physiotherapy: 14,  
Neurology: 9, Renal: 5, Gastroenterology: 4, None: 299  
Purpose: Identifies common referral departments to allocate resources efficiently.

# 3. Benefits of the Dashboard

• Enhances operational transparency.  
• Tracks key ER performance metrics at a glance.  
• Helps improve patient wait time and satisfaction.  
• Guides data-driven hospital decisions.  
• Useful for monthly reporting and service audits.

# 4. Conclusion

The Hospital Emergency Room Dashboard project was developed using Microsoft Excel with the aim of enhancing operational visibility and decision-making in emergency healthcare settings. This dashboard offers a comprehensive analysis of key performance indicators such as patient volume, wait times, satisfaction scores, and admission rates. By leveraging dynamic visualizations—including sparklines, pie charts, and bar graphs—the dashboard enables stakeholders to monitor trends over time and identify service bottlenecks. It also provides demographic insights such as age and gender distribution, along with departmental referral patterns. These insights support hospital administrators in improving response efficiency, patient experience, and resource allocation. Overall, the dashboard serves as a practical tool for transforming raw data into meaningful and actionable intelligence for healthcare management.