Executive Summary: Hospital Emergency Room Data Analysis

Introduction

This project provides a comprehensive analysis of hospital emergency room data to uncover critical insights and inform strategic decisions for improving patient care and operational efficiency. The analysis focused on key metrics related to patient admissions, wait times, satisfaction, and resource allocation. The insights derived from this project are presented in a professional, interactive dashboard designed for executive and operational leadership.

Key Findings

The analysis revealed several critical areas of focus:

- **Patient Demographics and Satisfaction:** The data indicates that patient satisfaction scores vary across different demographics, with notable differences observed in specific age groups and races. The average satisfaction score of 6.3 suggests a need for targeted interventions to improve the patient experience.
- **Operational Efficiency:** The average patient waits time of 31 minutes, while within a manageable range, shows opportunities for optimization. A closer examination of wait times by department referral indicated significant variances, with the **General Practice** and **Orthopaedics** departments experiencing the longest wait times.
- **Departmental Performance:** An analysis of patient admissions by department revealed that **General Practice** and **Orthopaedics** are the busiest departments, accounting for the highest volume of patient traffic. This high volume directly correlates with the extended wait times in these areas.
- **Patient Flow and Admission Flag:** The data shows that approximately 72% of patients are ultimately admitted. There is a strong correlation between department referral and the likelihood of admission, suggesting that certain departments act as key entry points for inpatient care.