

# Descriptive Analysis

(April 2023 – October 2024)

The emergency room dataset, covering a period of 19 months, records a total of 9,216 unique patients.

## Patient Wait Time & Satisfaction:

The average wait time was approximately **35.3 minutes**, indicating a need for improvement to enhance patient flow. The **average satisfaction score** was **4.99 out of 10**, suggesting moderate satisfaction and highlighting areas for improving patient experiences.

## Departmental Referrals:

A significant number of patients (**5400**) did not require referrals. Among those referred, the most common were **General Practice (1840 cases)** and **Orthopedics (995 cases)**, followed by **Physiotherapy (276 cases)** and **Cardiology (248 cases)**.

## Peak Busy Periods:

The busiest days were **Mondays (1377 patients)**, **Saturdays (1322 patients)**, and **Tuesdays (1318 patients)**. The busiest hours were **11 AM**, **7 PM**, **1 PM**, and **11 PM**, indicating the need of ample staffing during these periods.

## Patient Demographics:

Age Groups: Adults (**30 – 39 years**) formed a large group (**1200 patients**), followed by young adults (**20 – 29 years**) with **1188 patients**. Other significant groups included middle-aged as well (**40 – 50 years**).

## Race Distribution:

The largest racial group was **White (2571)**, followed by **African American (1951)**, **Multiracial (1557)**, and **Asian (1060)** patients. A significant number of patients (**1030**) declined to identify their race.

## Admission Patterns:

Nearly half of the patients (**4612**) were **admitted**, while the rest (**4604**) were **treated and released**.

## Summary:

The dataset reveals high patient volumes, moderate satisfaction levels, and common referrals to General Practice and Orthopedics. Mondays and late night to early mornings hours are particularly busy. The patient demographics show a diverse age and racial composition, with nearly equal numbers of admitted and non-admitted patients. These insights can help optimize resource allocation and improve patient care in the emergency room.