

PowerBI Dashboard Design and Development for Healthcare Management System

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Overview

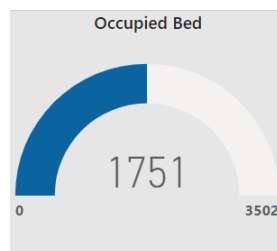
The objective of the article on the healthcare management dashboard is to offer an engaging and informative tool for healthcare management teams. The dashboard aims to help monitor and evaluate various aspects of hospital operations, including patient visits, revenue across different age groups, average length of patient stays, and bed occupancy rates. The goal is to provide actionable insights that support decision-making and improve hospital efficiency.

Purpose

The purpose is to enhance hospital management by offering a streamlined way to track key performance indicators, such as patient wait times, bed occupancy rates, and revenue by department and age group, enabling hospitals to optimize resource allocation and financial performance.

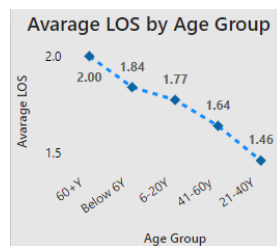
Key Questions

1. How many beds are currently occupied?



The gauge chart represents the number of occupied beds in a hospital, with 1,751 beds currently in use out of a total capacity of 3,502. The blue portion indicates the beds that are occupied, while the white shows the available beds. This visualization offers a clear snapshot of bed usage and helps track hospital capacity efficiently. It provides an easy way to monitor resource availability in real-time.

2. What is the average Length of Stay by Age Group of the patient?



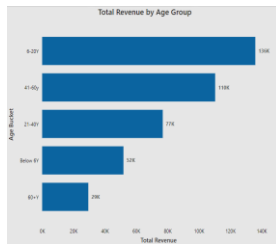
This chart displays the length of stay for patients across different age groups. Patients aged 60+ have the longest stays at 2.0 days, while those aged 21-40 have the shortest at 1.46 days. The chart shows a clear decline in LOS as age decreases, highlighting how younger patients tend to spend less time in the hospital. This trend helps illustrate the impact of age on hospital stay duration.

3. What is the Total Number of Revenues Generated Monthly?

404,488.14
Total Revenue

The hospitals need to collect financial data from all departments, including patient services and diagnostics. This data should be categorized by revenue source, such as patient payments and insurance claims. The revenue from each source is then summed up to get the monthly total. Using financial software can streamline this process and improve accuracy in tracking overall performance.

4. What is the revenue generated by the total age group?



Analyzing total revenue by age group reveals the financial impact of different demographics in a hospital. This helps identify which segments, such as children or seniors, generate the most revenue through specific services. By understanding these trends, healthcare facilities can refine their marketing strategies and resource allocation to better meet patient needs and improve financial stability.

Key Performance Indicators (KPIs)

1. Average Patient Wait Time: This KPI tracks the time patients wait from check-in to the start of treatment in emergency rooms and clinics. It helps identify delays in the care process, enabling hospitals to improve efficiency and patient satisfaction.

2. Bed Occupancy Rate: This KPI measures the percentage of hospital beds that are currently occupied compared to the total available beds. It is critical for assessing resource utilization and ensuring adequate capacity for patient care.

3. Average Length of Stay: This KPI calculates the average number of days patients spend in the hospital from admission to discharge. Monitoring this helps hospitals manage bed availability and optimize care processes for faster patient recovery.

4. Revenue by Age Group: This KPI tracks hospital revenue based on different age groups, with an option to filter by month. It provides insights into which age demographics generate the most revenue, helping with targeted financial planning.

5. Total Revenue Generated Monthly: This KPI tracks the total revenue generated by each hospital department monthly. It helps hospital management with budgeting and identifying areas for financial improvement.

Healthcare PowerBI Dashboard

The healthcare management dashboard aims to enhance the operational efficiency of healthcare facilities by monitoring key performance indicators (KPIs). The main objective is to provide insights into aspects such as patient visits, bed occupancy rates, revenue by age group, and average length of stay. The dashboard includes visual representations, like gauge charts for occupied beds and charts for the average length of stay by age group, allowing healthcare management teams to make informed decisions. By tracking total monthly revenue and analyzing it by age demographics, the dashboard serves as a crucial tool for optimizing resource allocation and improving financial performance in hospitals.

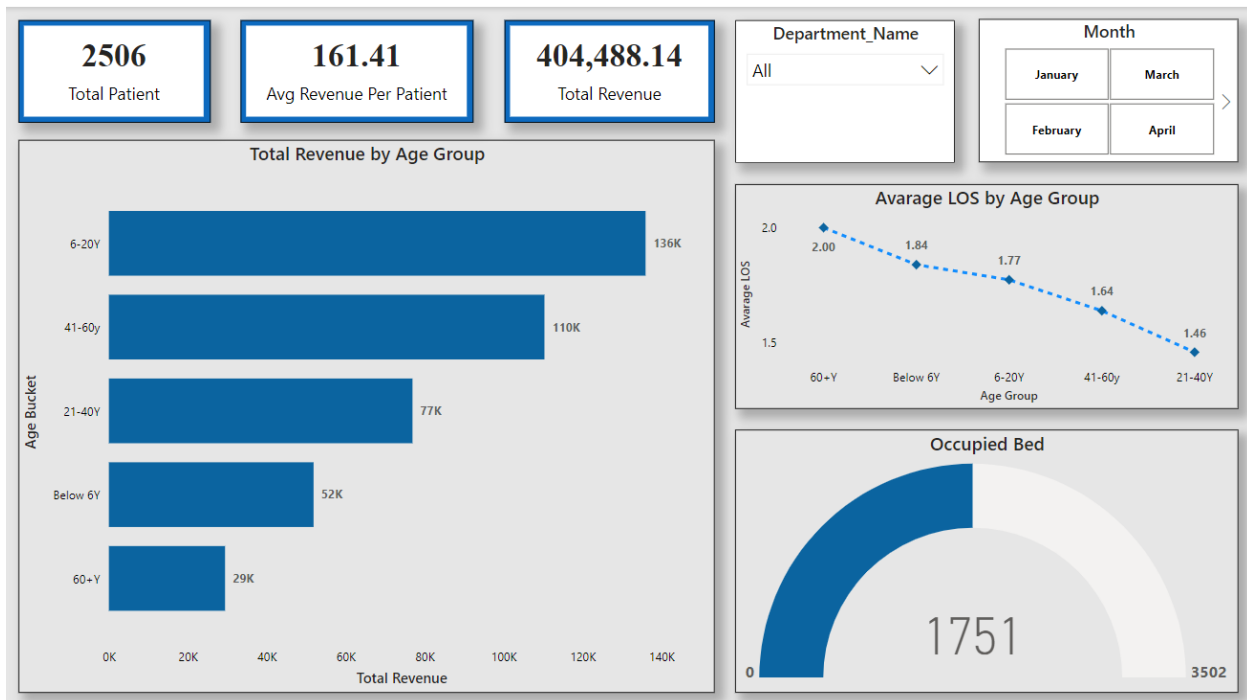


Fig 1: Picture shows PowerBI Dashboard for the Healthcare Management System.

Conclusion

In conclusion, the development of the healthcare management dashboard is a crucial tool for hospital administrators to gain insights into key operational metrics such as bed availability, average patient length of stay, and revenue by age groups. By utilizing this dashboard, healthcare management can make informed decisions about patient intake, resource utilization, and financial strategies. The insights provided help target specific demographics, streamline hospital operations, and ultimately improve both patient care and hospital profitability.