



MEDICAL DATASET ANALYSIS PROJECT

Key Insights

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PROJECT DESCRIPTION



The project analyzes patient medical records to identify trends and opportunities to improve care. By exploring real-world data on hospitalizations, medical exams, and patient data, we can better understand patient needs and health system performance. The goal is to showcase the value of data analysis for driving healthcare improvements.



HOSPITALIZATION CHARGES OUTLOOK



2004

Year with the highest number of hospitalizations



488

Number of High BMI Customers with Health Issues



\$13559.07

Average Hospitalization Charges



\$63770.43

Highest Avg Yearly Healthcare Expenditure
(Kelly Hawks)



26

Smoking Patients with Transplants

**Expensive
YoY**

KEY QUESTIONS ADDRESSED IN THIS PROJECT



Average Hospital Charges



Average Charges by Hospital Tier in 2000



Top 3 Customers with Highest Average Yearly Charges



Smoking Patients with Transplants Analysis



Patients with Major Surgeries or Cancer History



High BMI Patients with Health Issues



Patients with the Highest Charges and City Tier by Year



Patients with Most Major Surgeries



Peak Year for Hospitalizations

HOSPITAL CHARGES ANALYSIS



Average Hospital Charges

- The average hospital charge per admission across all patients is **\$13,559**.
- Patients with higher-than-average charges may warrant additional case management to optimize their care.
- Segmenting average charges by disease type or patient attributes could provide further insights into cost drivers.



Average Charges by Hospital Tier in 2000

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- Etiam aliquet eu mi quis lacinia. Ut fermentum a magna ut eleifend.
- Integer convallis suscipit ante eu varius.



Top 3 Customers with Highest Average Yearly Charges

- Ms. **Kelly Hawks** had the highest average yearly hospital charges at **\$63,770**, followed by Mr. Matthew Lehner at \$62,592 and Mr. Phil Lu at \$60,021.
- The top 3 customers with the highest utilization incur 5-10x more in average yearly hospital charges compared to typical customers.
- Focusing care management resources on the top tier of high-cost customers could help address their health issues and reduce overall spending growth.

PATIENTS ANALYSIS



Smoking Patients with Transplants Analysis

- 26 high-risk patients were identified who smoke, had transplants, and were hospitalized, incurring over \$800K in charges
- The BMI for this cohort ranges from 17.3 to 52.6, with an average BMI of 34.5, indicating many are obese.
- Targeted smoking cessation and weight management programs could potentially improve health outcomes and reduce costs.



High BMI Customers with Health Issues

- **488** patients with health issues and a Body Mass Index (BMI) greater than 30, along with associated hospitalization charges
- Customers with obesity and health problems tend to have greater healthcare utilization and costs.
- Proactive outreach to these high-risk individuals could help address their issues through lifestyle changes or disease management.



Patients with Major Surgeries or Cancer History

- **687 patients** were identified as having 2+ major surgeries or cancer history, indicating complex medical needs.
- These individuals likely require more intensive care coordination and management due to their conditions.
- Tailored care plans for patients with surgical/cancer histories can optimize their health outcomes.

THANK YOU



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