In-Patient Hip Replacement Analysis
A Case Study Of New York, 2016

In-Patient Cost Analysis

In-patient LOS Analyis

Tooltip

Project Description

In-Patient Hip Replacement Analysis
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health_service_area

All

151
Total Hospitals

638
Total Surgeons

3
Average LOS Days

$20,99K
Average Cost per Discharge

Average Cost per Discharge by Severity_of_illness

apr_severity_of_illness_description	Average Cost per Discharge
Extreme	(bar to ~$60K+)
Major	(bar to ~$27K)
Moderate	(bar to ~$20K)
Minor	(bar to ~$20K)

Axis: $0K, $20K, $40K, $60K — Average Cost per Discharge
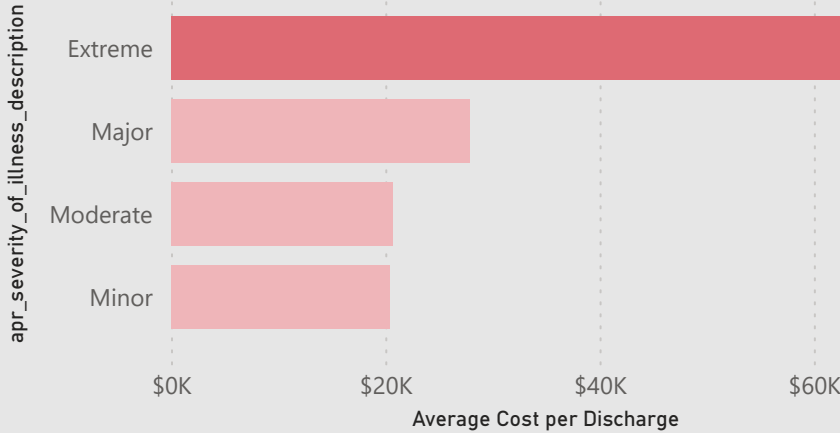
Average Cost per Discharge by ccs_diagnosis_description

ccs_diagnosis_description	Average Cost per Discharge
Cancer of bone and...	$96K
Other and unspecifi...	$52K
Secondary maligna...	$48K
Fracture of lower li...	$43K
Infective arthritis an...	$40K
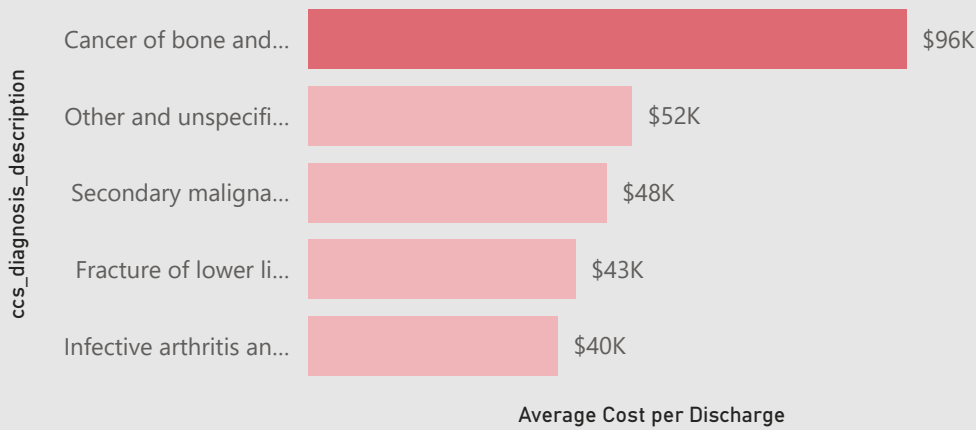
Average LOS Days Vs Average Cost per Discharge by Hospital

health_service_area ● Capital/A... ● Central NY ● Finger Lakes ● Hudson ...

Y axis: $100K, $50K, $0K — Average Cost per Discharge
X axis: 0, 5, 10 — Average LOS Days
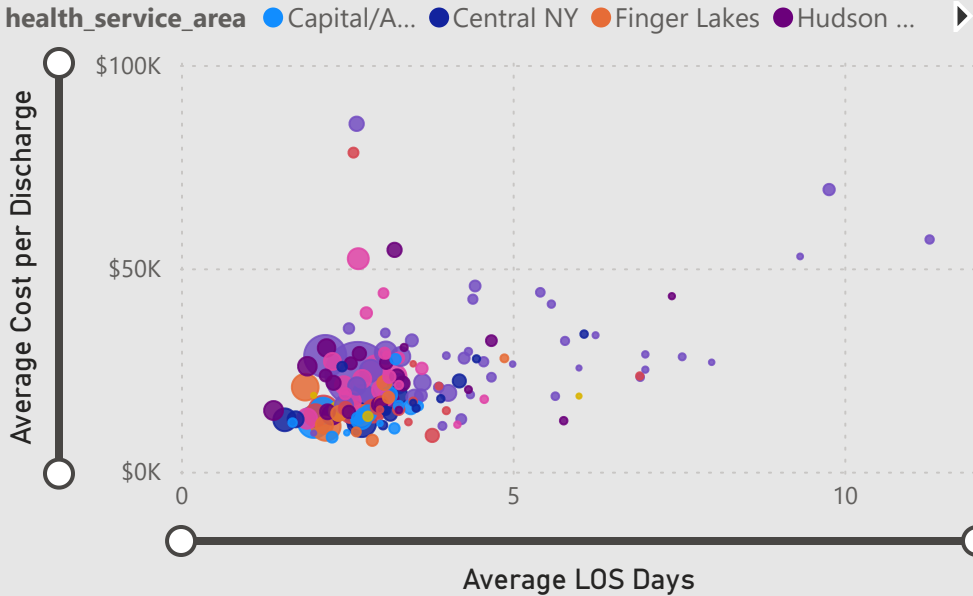
Average Cost per Discharge by apr_risk_of_mortality and Age Bins

Age Bins ● Age 50+ ● Age 70+

apr_risk_of_mortality	Average Cost per Discharge
Extreme	(Age 50+ ~$50K, Age 70+ ~$55K)
Major	(Age 50+ ~$32K, Age 70+ ~$52K)
Moderate	(Age 50+ ~$23K, Age 70+ ~$36K)
Minor	(Age 50+ ~$21K, Age 70+ ~$21K)
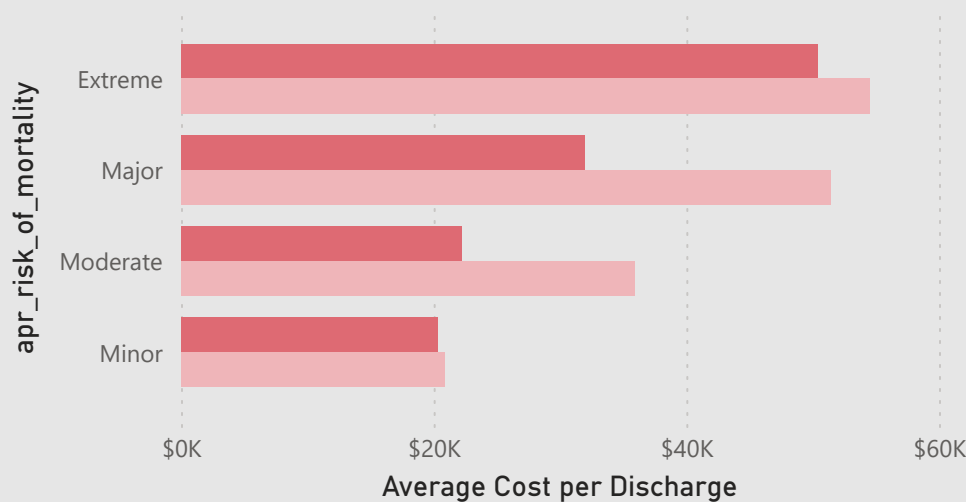
Axis: $0K, $20K, $40K, $60K — Average Cost per Discharge

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All

151	**638**	**3**	**$20,99K**
Total Hospitals	Total Surgeons	Average LOS Days	Average Cost per Discharge

Key influencers   Top segments 👍 👎

What influences length_of_stay to [Increase ⌄] ?

When...   ....the average of length_of_stay increases by
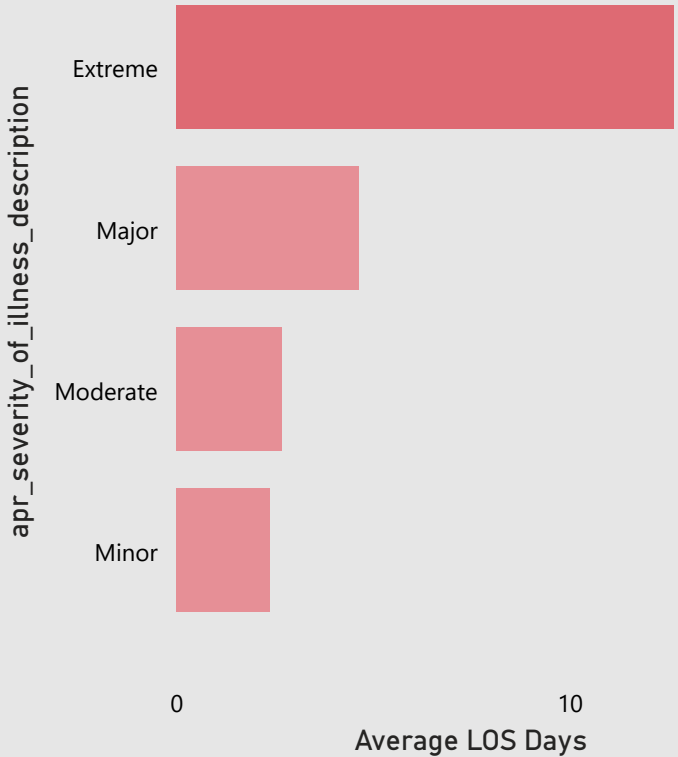
apr_risk_of_mortality is Major → **2,99**

apr_severity_of_illness_des... is Major → **2,01**

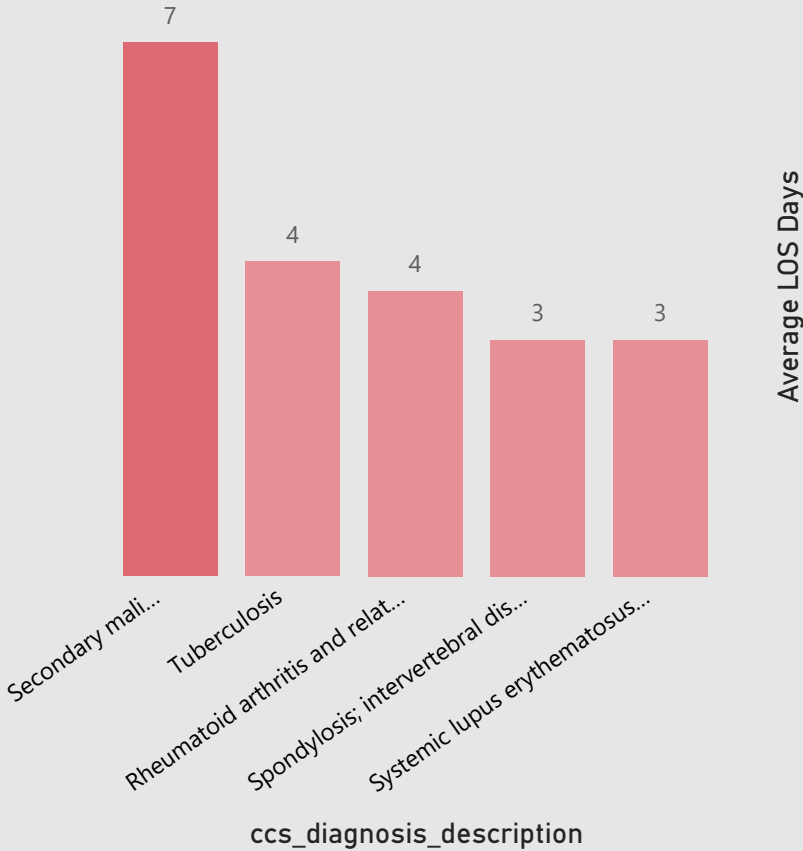patient_disposition is Inpatient Rehabilitation Facility → **1,3**

patient_disposition is Skilled Nursing Home → **1,18**

apr_risk_of_mortality is ... 0,79

Sort by: **Impact** Count

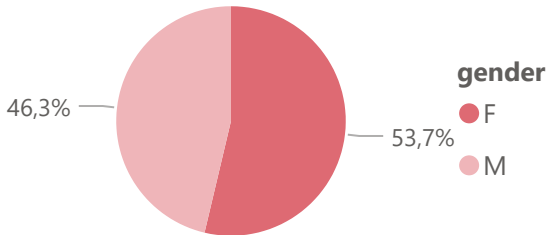## Average LOS Days by apr_severity_of_illness_description

Extreme / Major / Moderate / Minor

0 — 10

Average LOS Days

Average LOS Days by ccs_diagnosis_description

7 · 4 · 4 · 3 · 3

Secondary mali... / Tuberculosis / Rheumatoid arthritis and relat... / Spondylosis; intervertebral dis... / Systemic lupus erythematosus...

Average LOS Days

ccs_diagnosis_description

Gender

46,3%

53,7%

gender

● F

● M

BACKGROUD OF ANALYSIS

This analysis was carried out on a Hip replacement procedure in New York. The dataset was extracted from Data-camp which is the surgical Analytics dataset.

Data Analysis Process

Before dataset was analyze, data processing was performed in other to ensure that informed decisions are derived from the analysis.

Data Overview

Dataset used for the analysis has total of 26594 columns.

Insight

- From the analysis, there are 151 Hospital and 638 surgeons New York
- From the analysis it was observed that In-patient cost was affected by the severity of the illness, age and risk of mortality and the description of the illness.
- It was also deduced that the Length of Stay by a patient is affected by patient disposition, diagnosis description and age of a patient.

Conclusion

The cost having medical treatment is expensive, Government should promote good by subsidizing medical fees and the elderly should be taken into consideration.