

HEALTHCARE ANALYSIS



Year ▾

☐ 2021

☐ 2022

☐ 2023

Hospital ▾

☐ Cedar Sinai Clinic

☐ Green Valley Medical Center

☐ Maple Grove Health Facility

☐ Riverside Hospital

☐ Silver Oak Medical Plaza

Diagno... ▾

☐ Asthma

☒ Covid-19

☐ Diabetes

☐ Flu

☐ Hypertension

Total Patient

192

Patient / Hospital

38

Total Cost

\$2.24M

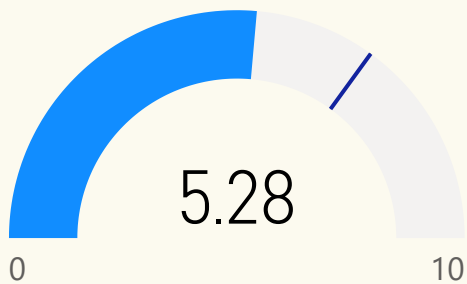
Total Doctors

153

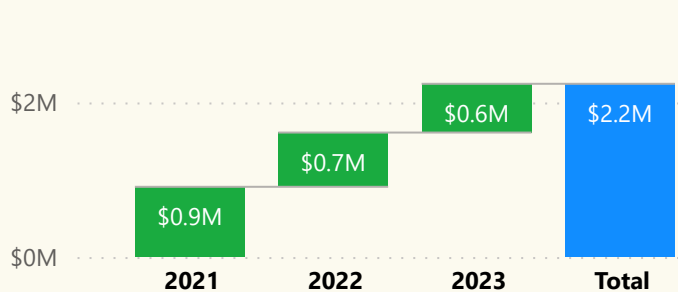
YoY Patient

132.41%

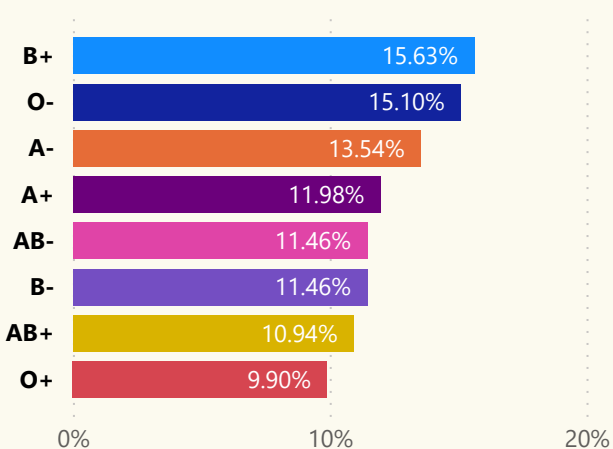
Avg. Recovery Rating



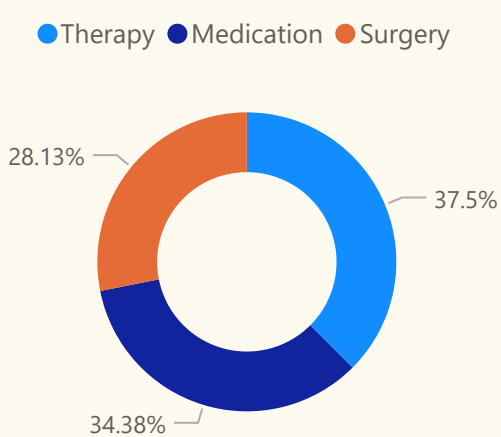
YoY Total Cost Change



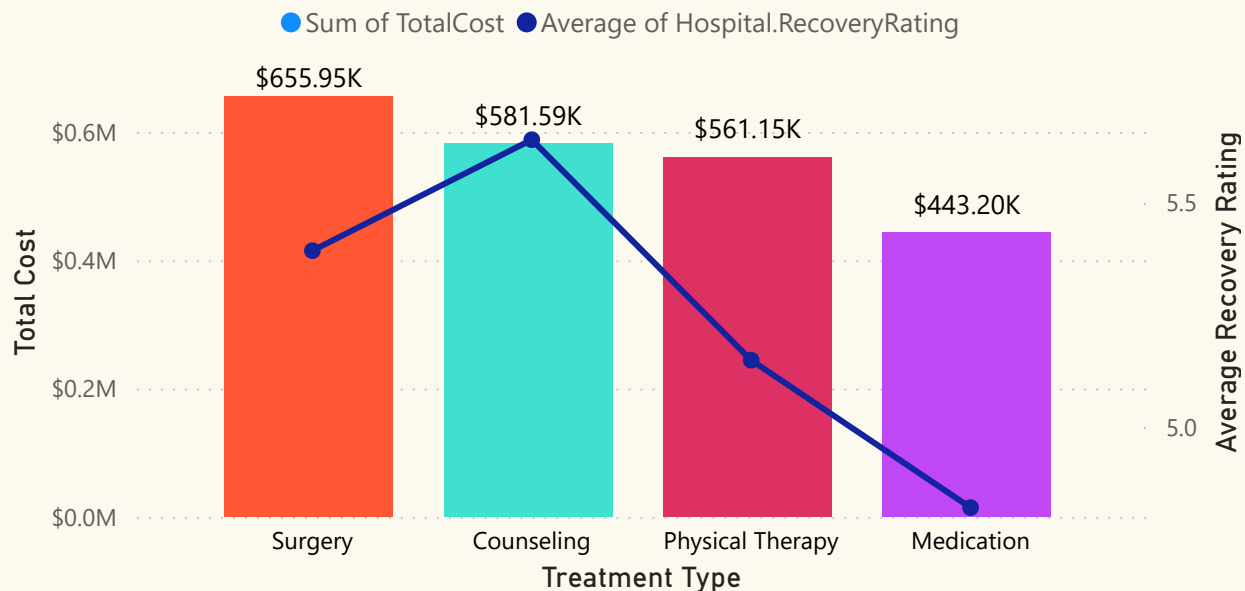
Prevalent Bloodtype by Age group



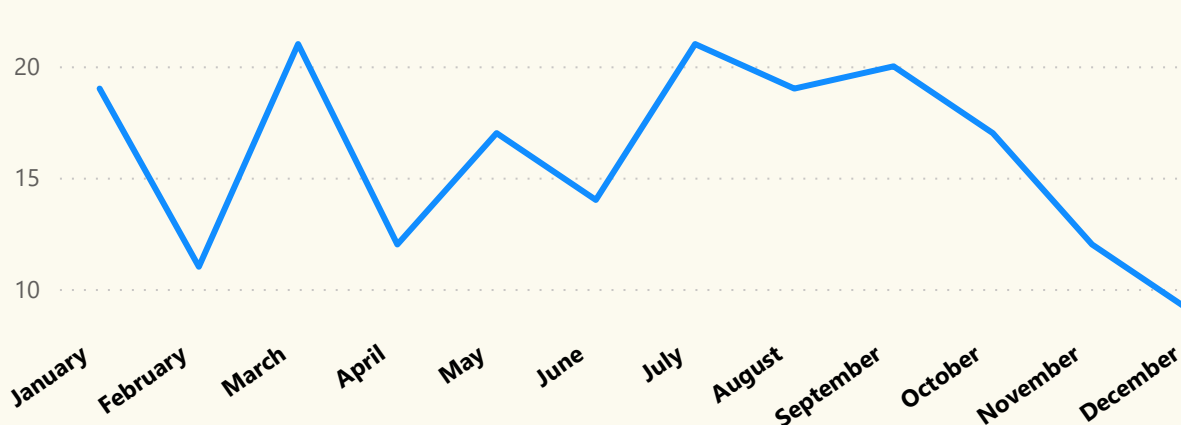
Treatment wise Gender Distribution



Hospital Performance Comparison

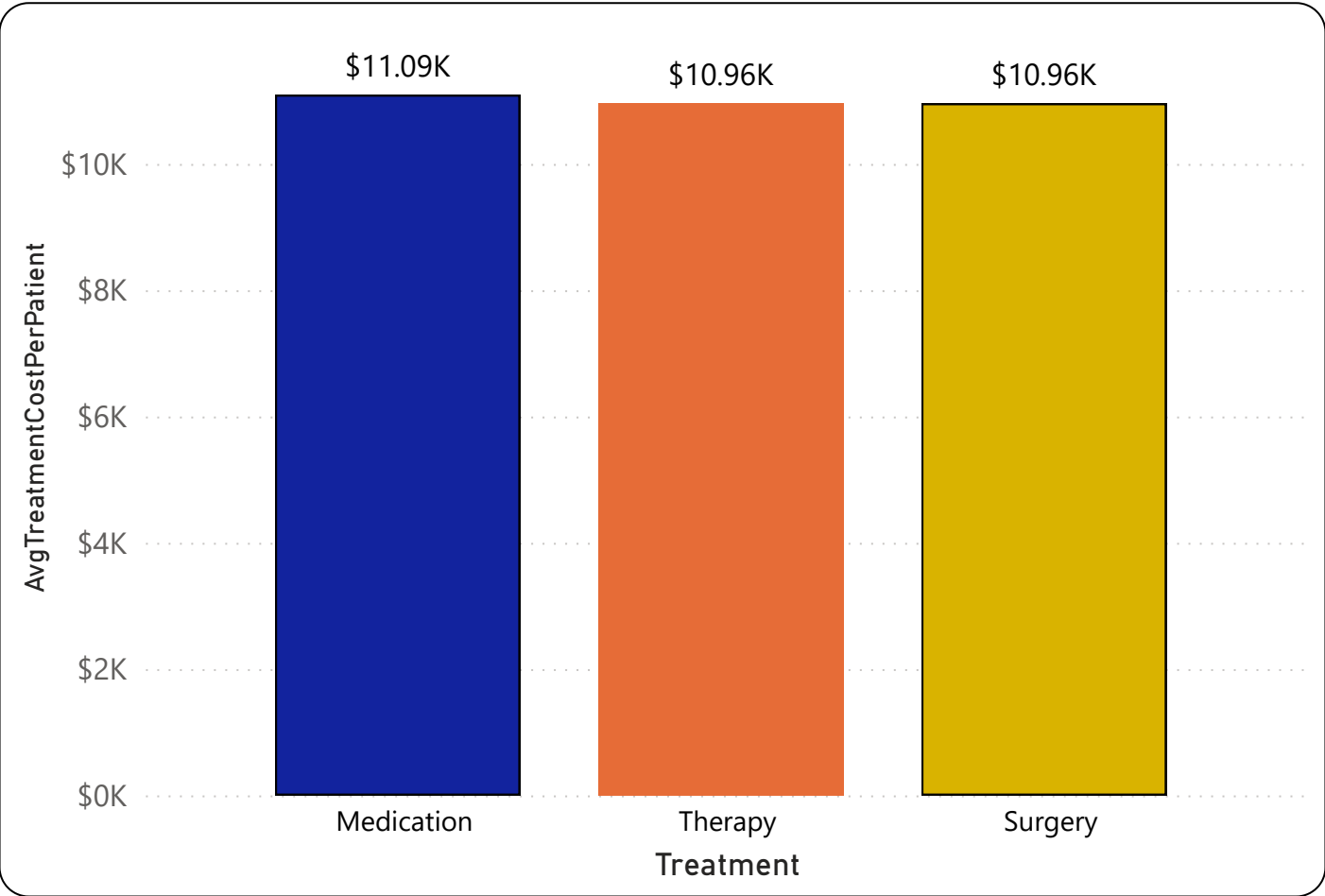


Total Patients Admission by Month



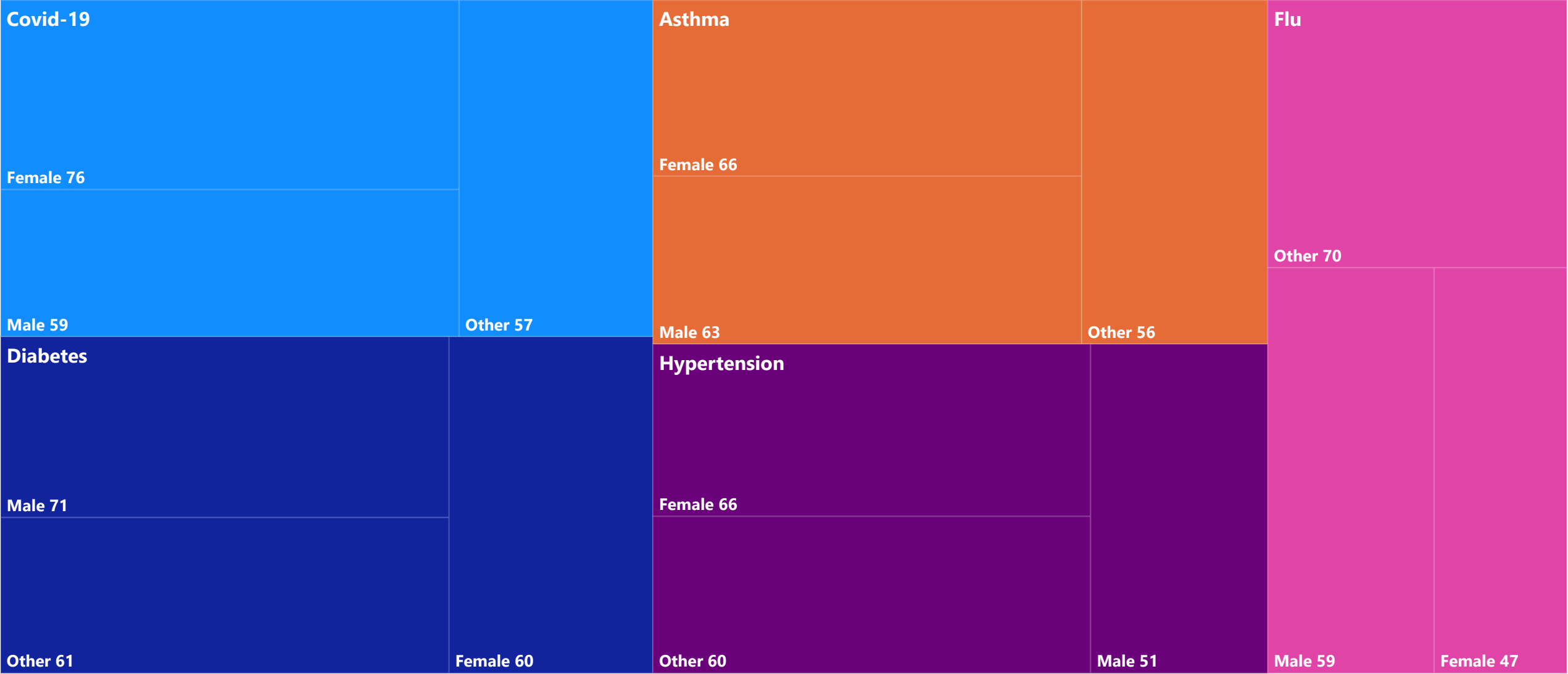
6 Analysis of Treatment Costs

Calculate the total cost of treatment for each patient (consider 'TotalBill' and 'DailyCost'). Which treatments are the most expensive on average?



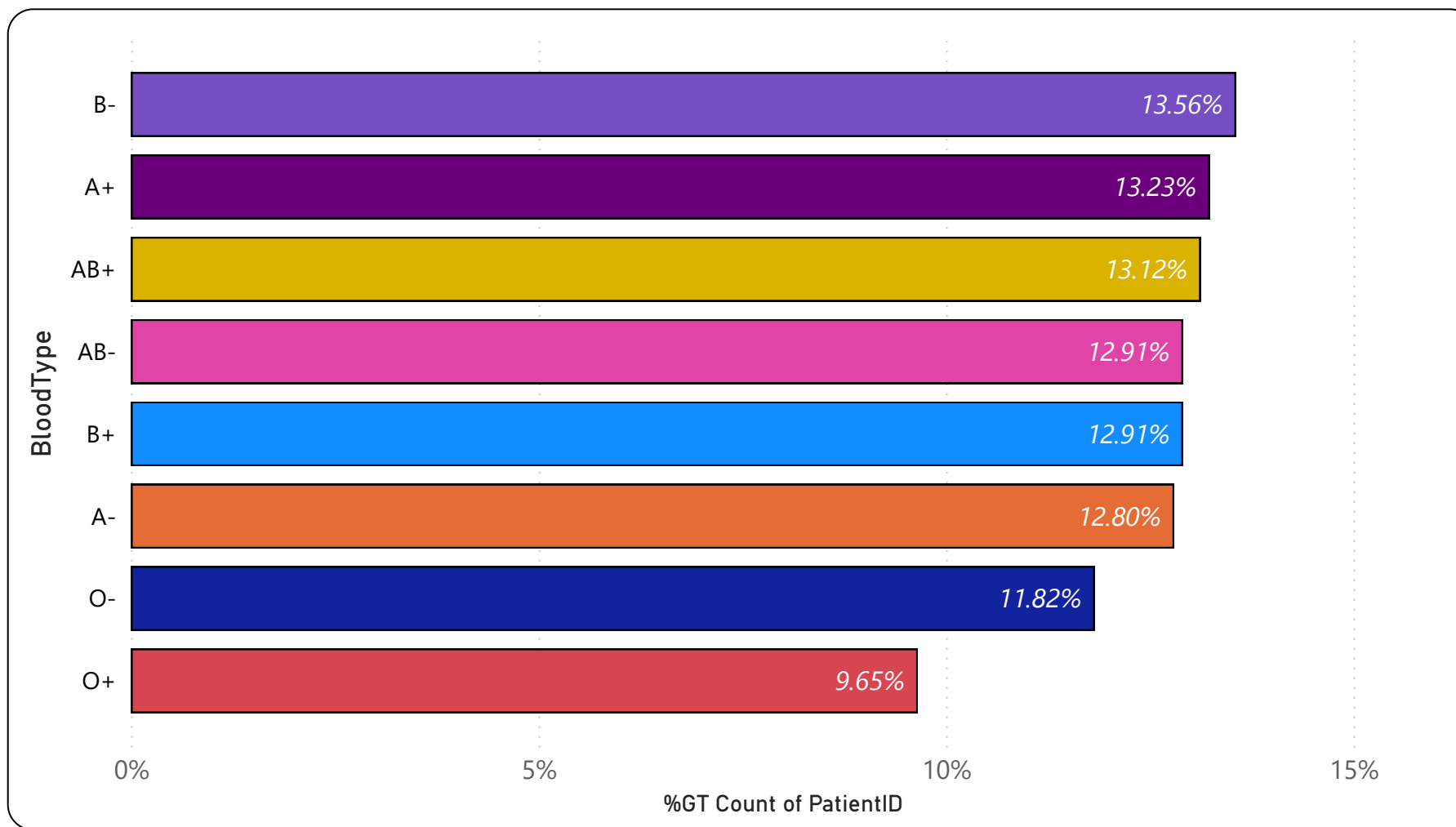
7 Gender Distribution in Diagnosis

Analyze the distribution of genders across different diagnoses. Are there any noticeable patterns or trends?



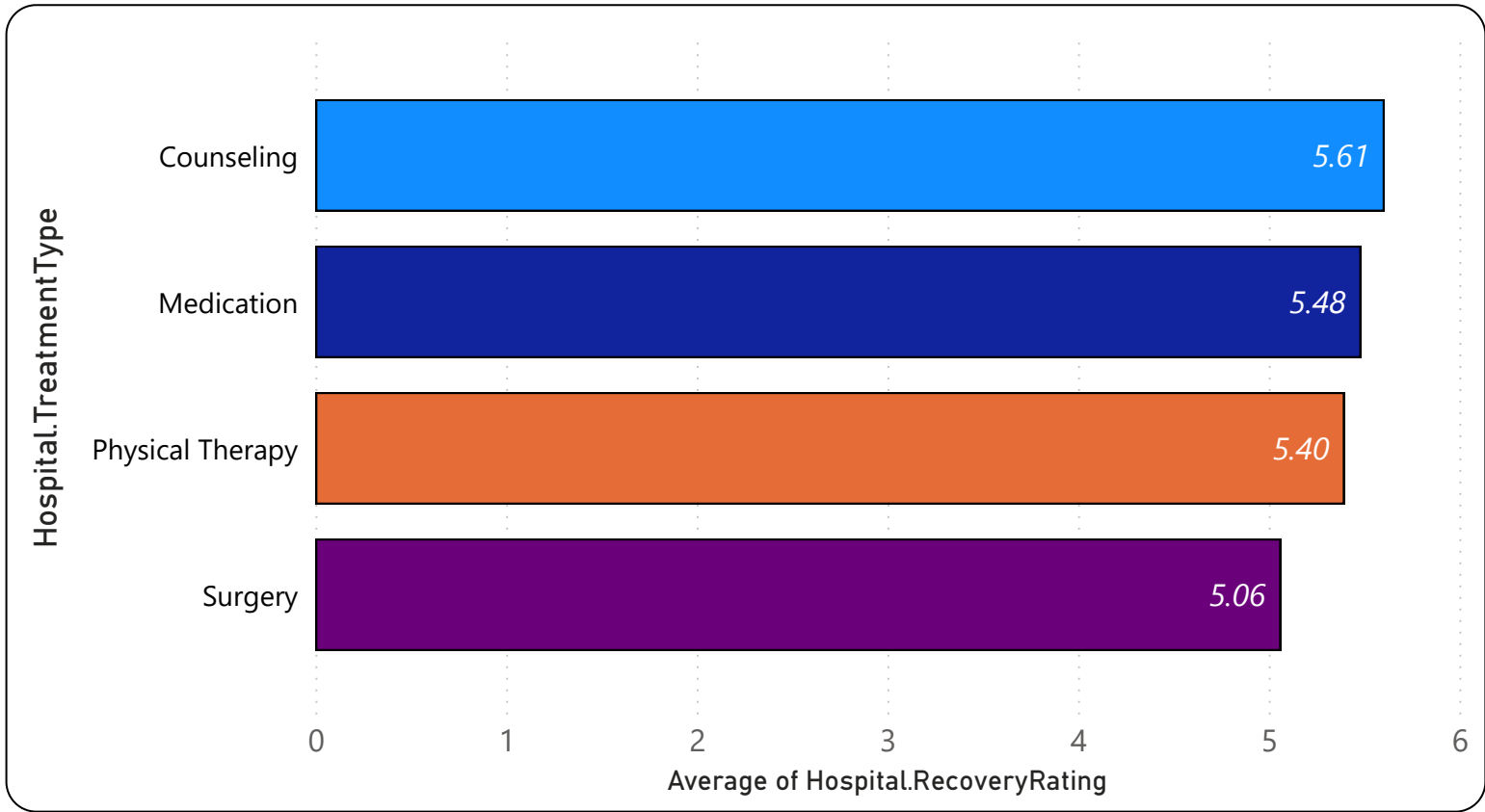
8 Blood Type Analysis

Investigate the distribution of blood types among the patients. Is there a blood type that is more prevalent?



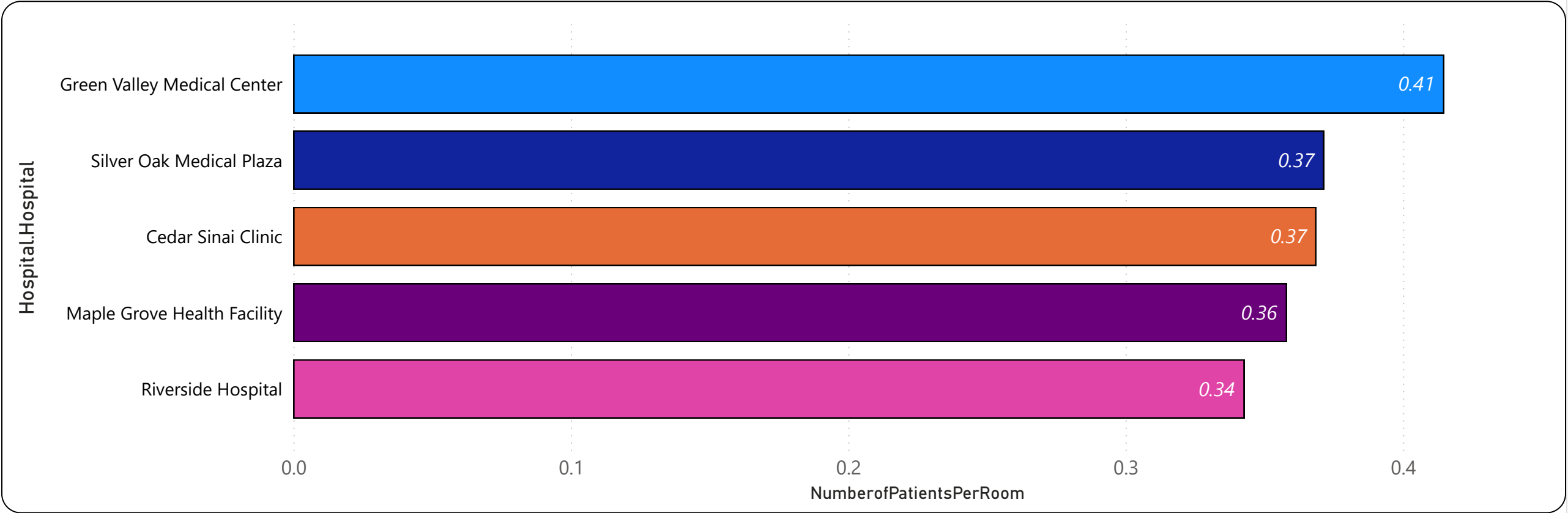
9 Recovery Rating Analysis

Using DAX, analyze the average recovery rating by treatment type. Which treatment type has the highest average recovery rating?



10 Hospital Utilization Analysis

Calculate the average number of patients per room in each hospital. Which hospital has the highest utilization?



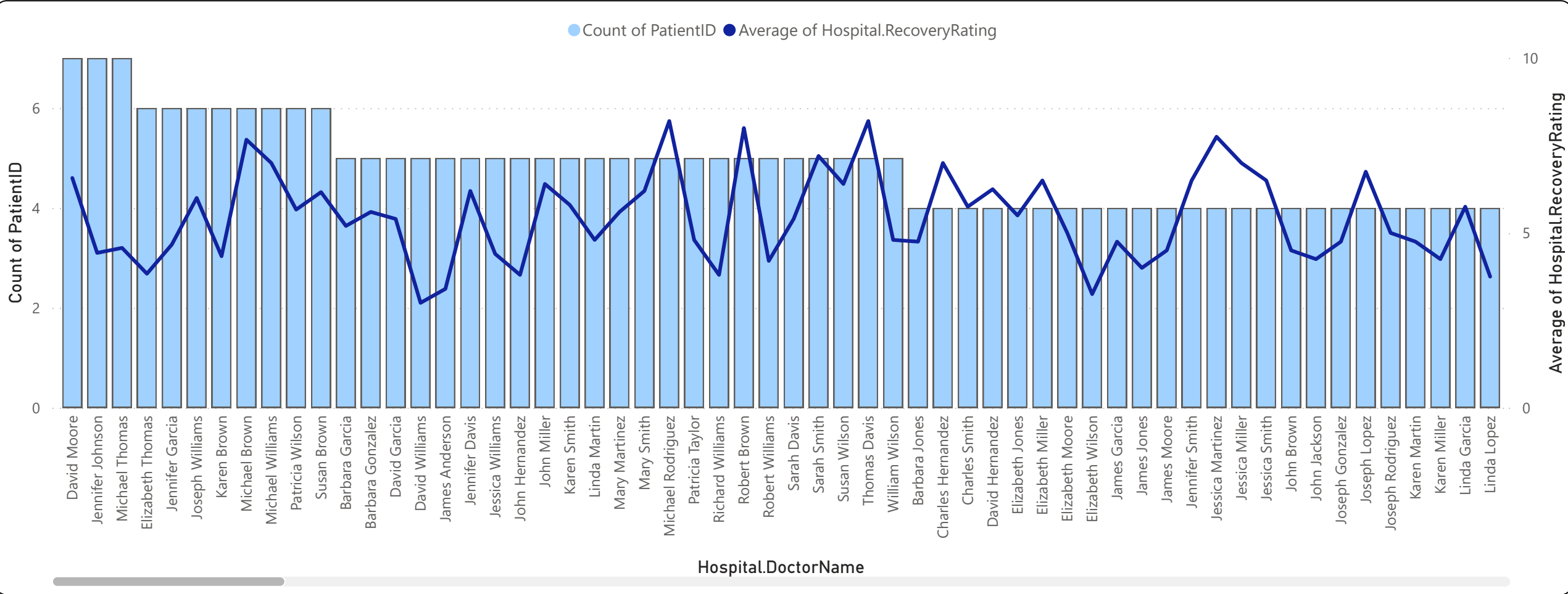
11 Doctor's Patient Load

Analyze which doctor has treated the most patients. Does a higher patient load correlate with lower recovery ratings?

PatientID

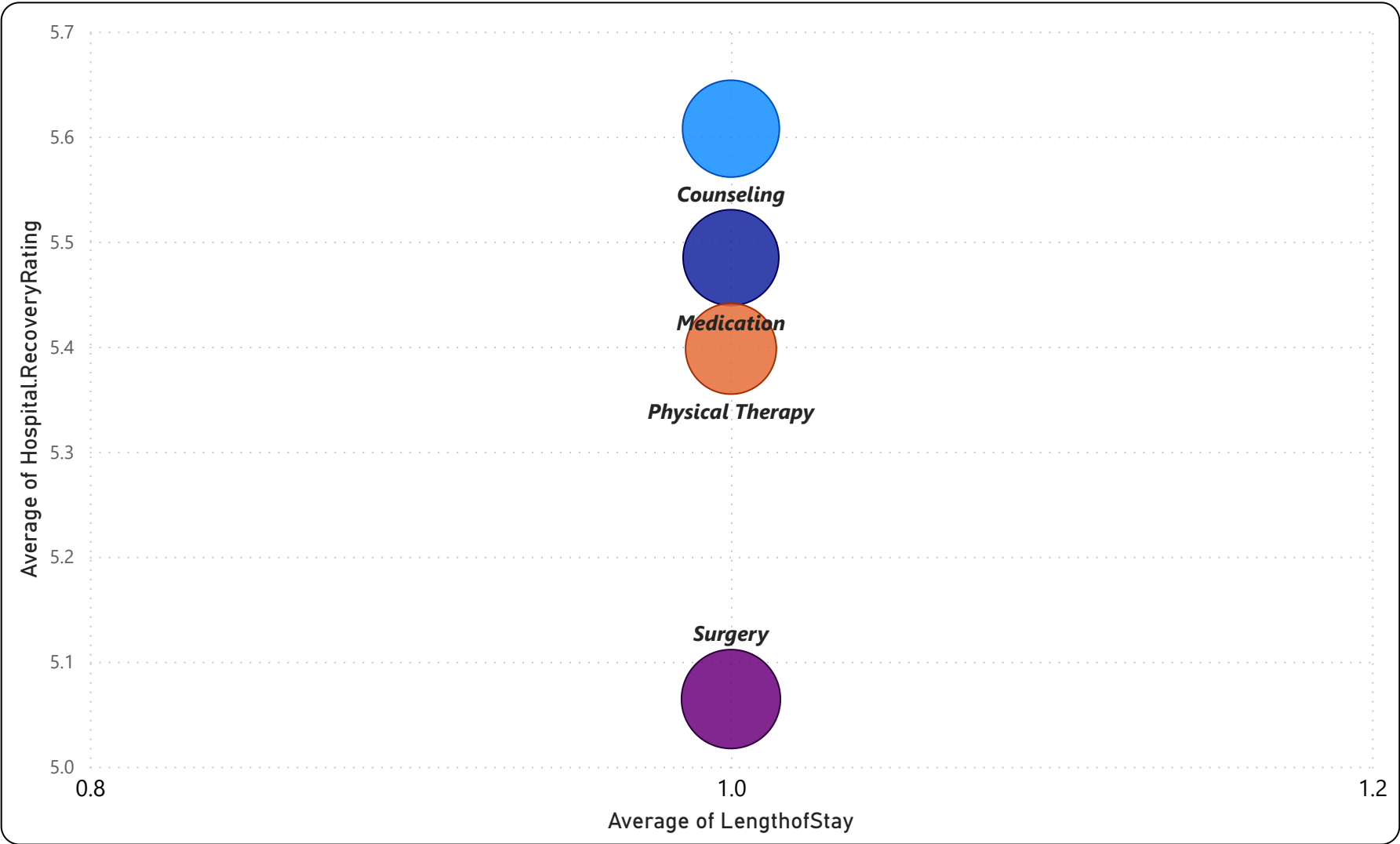
1

997



12 Treatment Effectiveness

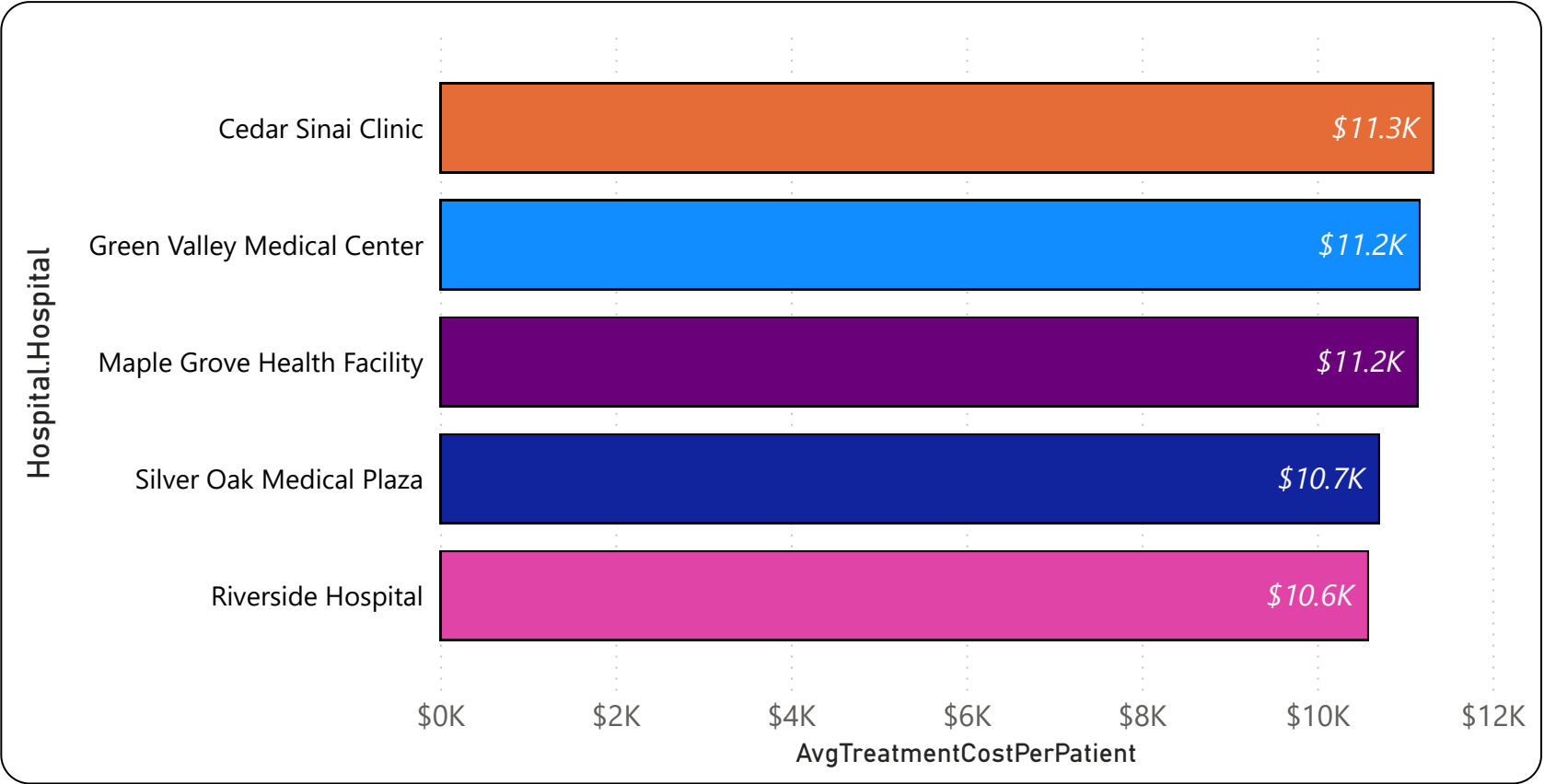
. Compare the length of stay against the recovery rating for different treatment types. Which treatment shows the most effectiveness?



13 Cost Analysis by Hospital

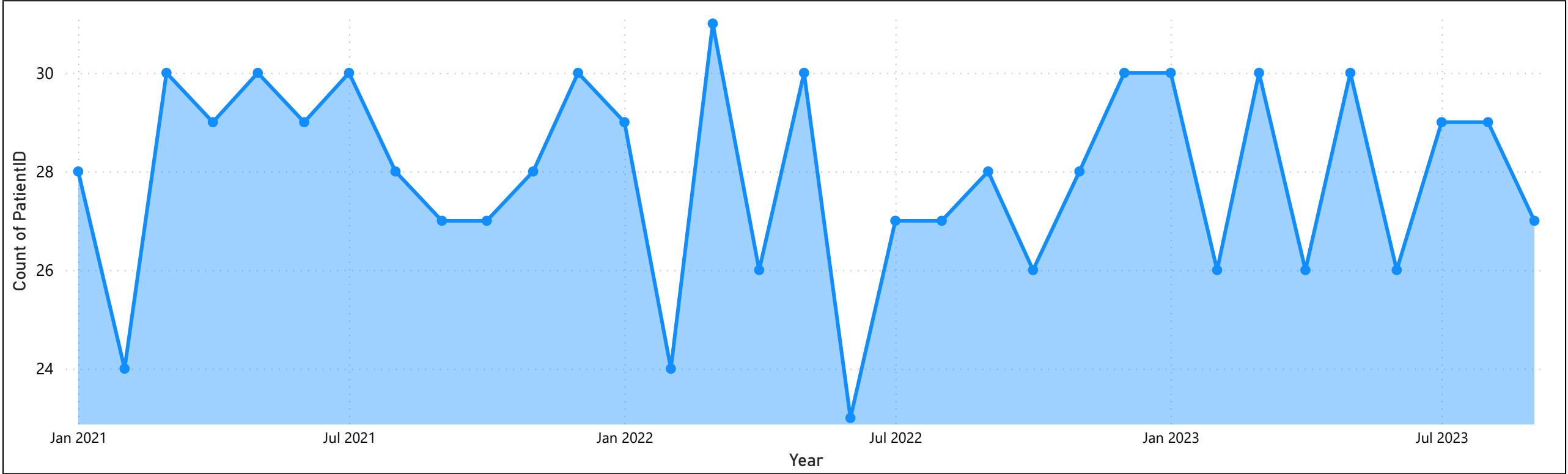
· Investigate the average treatment cost per patient in each hospital. Which hospital has the highest and lowest costs?

Hospital.Hospital	AvgTreatmentCostPerPatient
Riverside Hospital	\$10,591.43
Silver Oak Medical Plaza	\$10,716.38
Maple Grove Health Facility	\$11,156.75
Green Valley Medical Center	\$11,179.72
Cedar Sinai Clinic	\$11,333.07



14 Patient Admission Trends Over Time

.Analyze the trends in patient admissions over time. Are there any seasonal patterns?

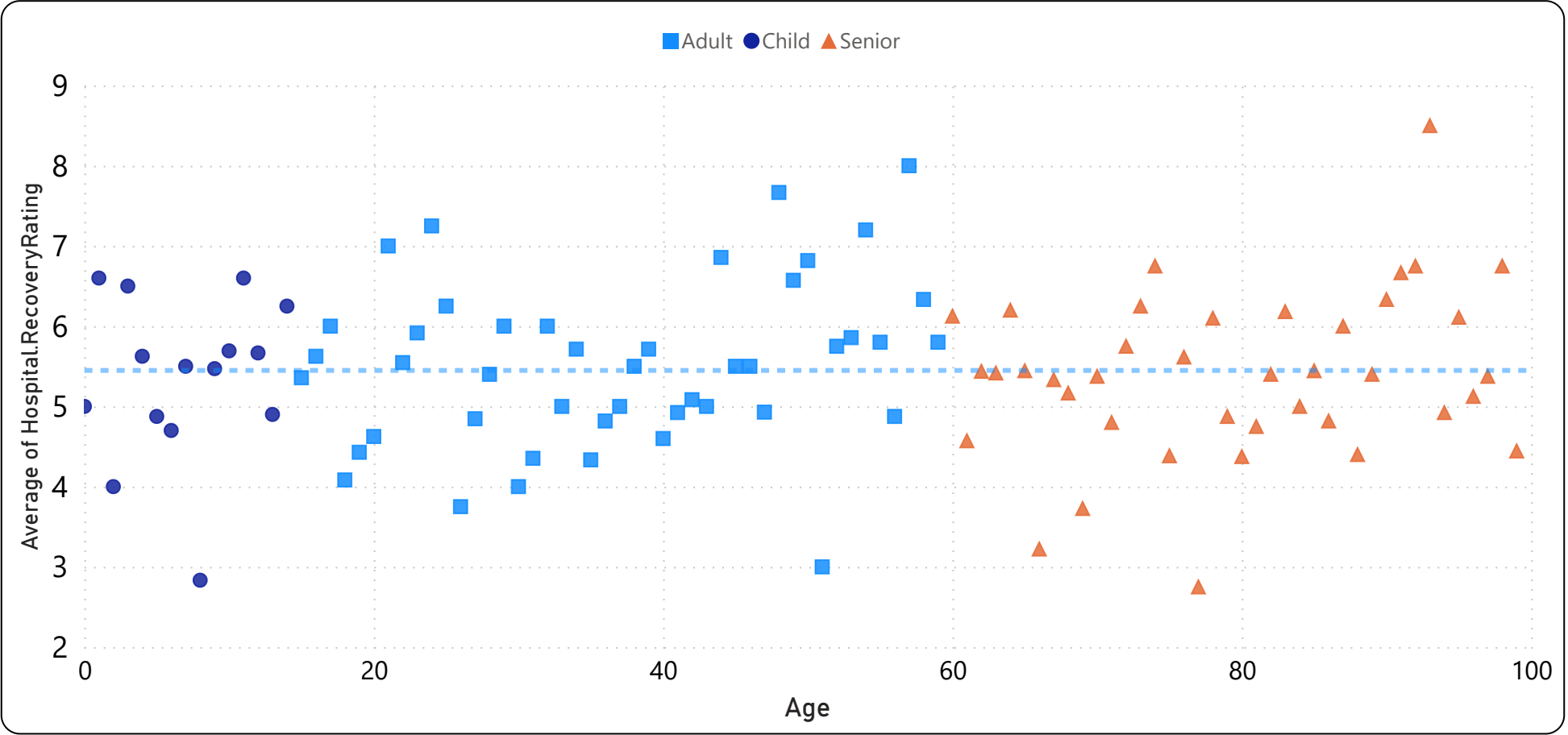


15 Correlation Between Age and Recovery

. Explore if there's a correlation between patient age and recovery rating.

Correlation Between Age and Recovery Ratings

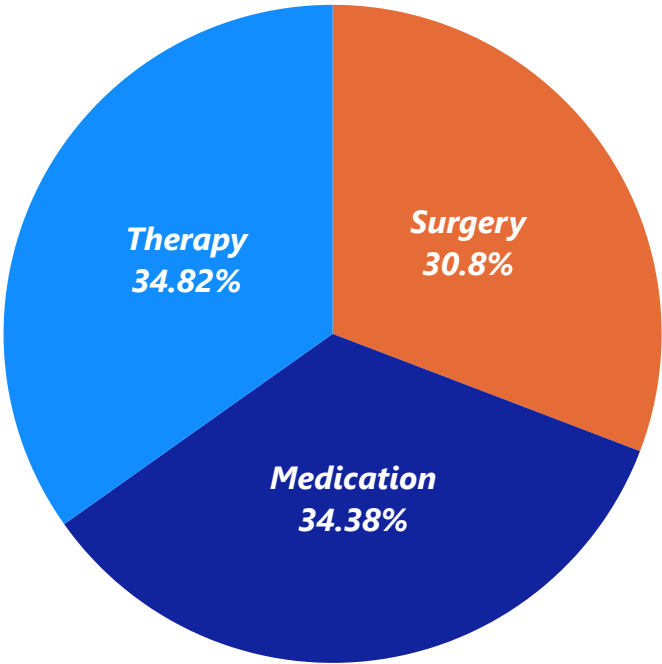
0.82



16 Analyzing Room Efficiency

.Create a measure to analyze the efficiency of room usage (number of patients per room versus average length of stay)

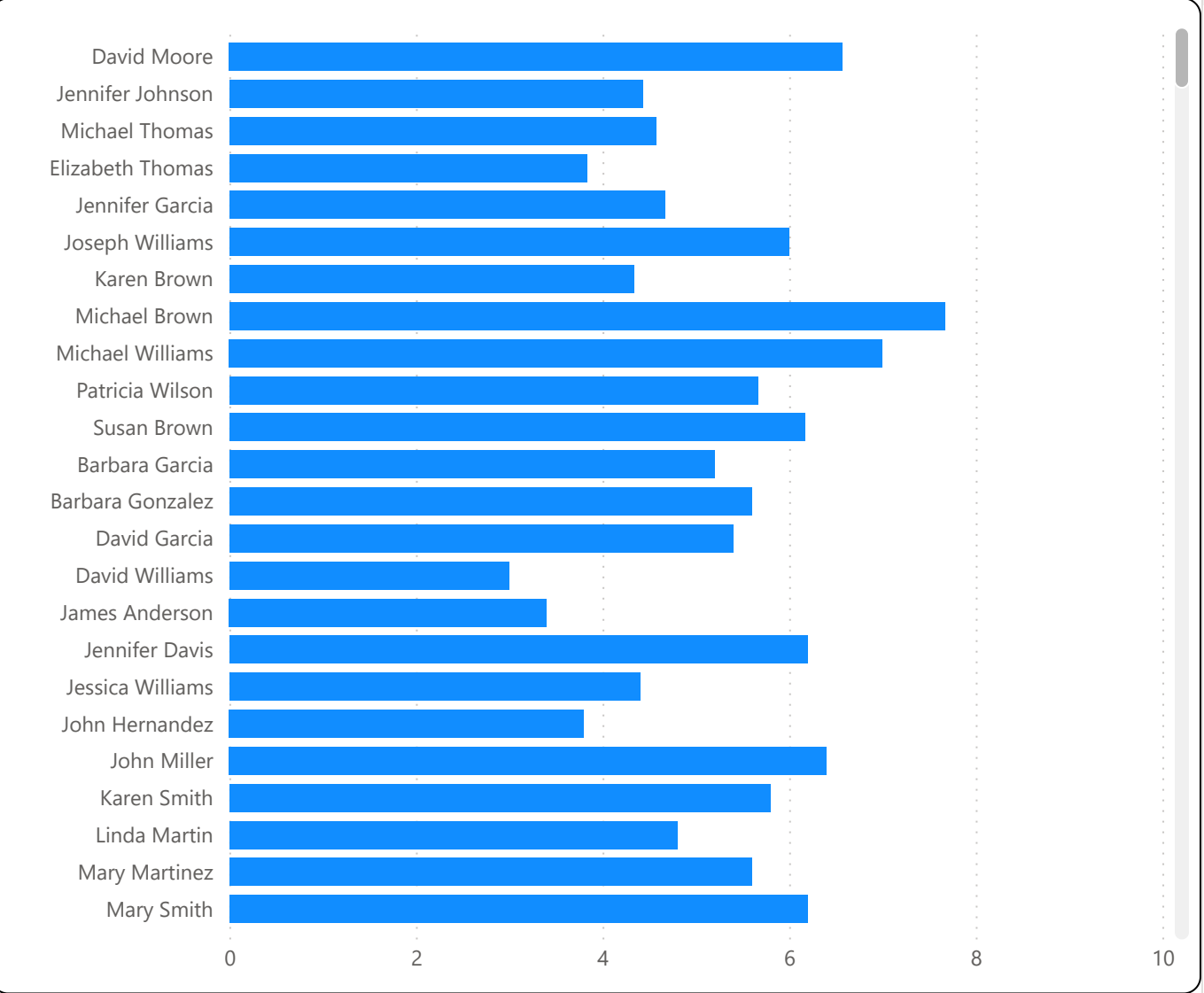
Treatment	Count of PatientID	NumberofPatientsPerRoom
Surgery	284	0.57
Medication	317	0.64
Therapy	321	0.64
Total	922	1.85



Hospital.DoctorName	Average of Hospital.RecoveryRating	Count of Hospital.PatientID
Barbara Jackson	10.00	1
Elizabeth Rodriguez	10.00	1
Jennifer Jackson	10.00	1
Mary Jones	10.00	3
Richard Thomas	10.00	1
Robert Davis	10.00	2
Thomas Thomas	10.00	1
Jessica Wilson	9.50	2
Robert Hernandez	9.50	2
Barbara Moore	9.00	1
Barbara Smith	9.00	1
Elizabeth Garcia	9.00	2
James Taylor	9.00	1
Jennifer Anderson	9.00	1
Jessica Jones	9.00	1
John Anderson	9.00	1
John Garcia	9.00	1
John Wilson	9.00	1
Joseph Jackson	9.00	1
Karen Martinez	9.00	1
Linda Jones	9.00	1
Mary Moore	9.00	1
Patricia Brown	9.00	1
Patricia Rodriguez	9.00	2
Richard Hernandez	9.00	2
Sarah Anderson	9.00	2
Sarah Moore	9.00	2
Susan Taylor	9.00	2
William Miller	9.00	1
William Rodriguez	8.67	3
David Lopez	8.50	2
James Wilson	8.50	2
Richard Martin	8.50	2
Total	5.38	922

17 Impact of Doctor on Recovery

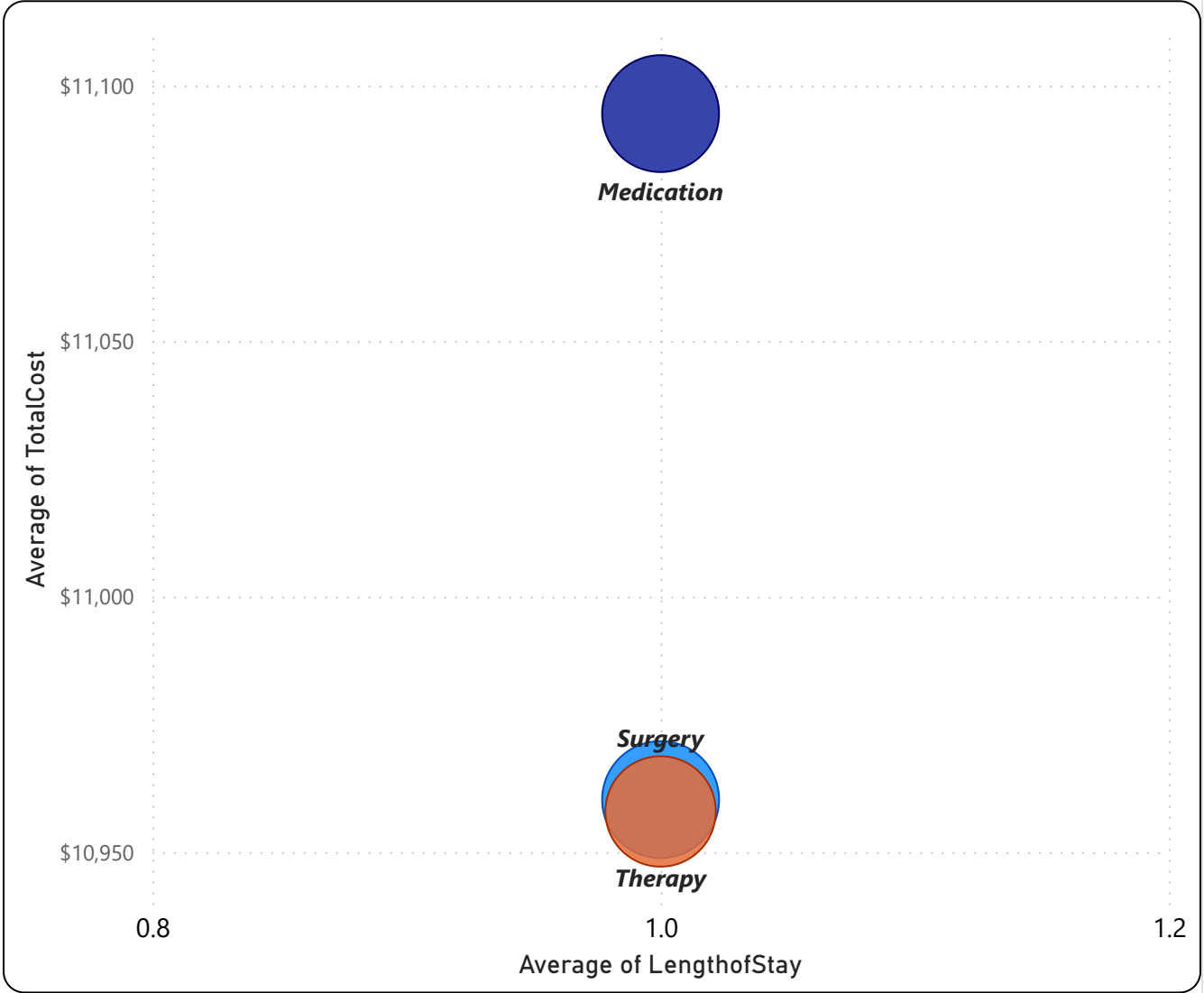
Analyze if the treating doctor has a significant impact on the patient's recovery rating



18 Advanced DAX: Length of Stay and Cost Correlation

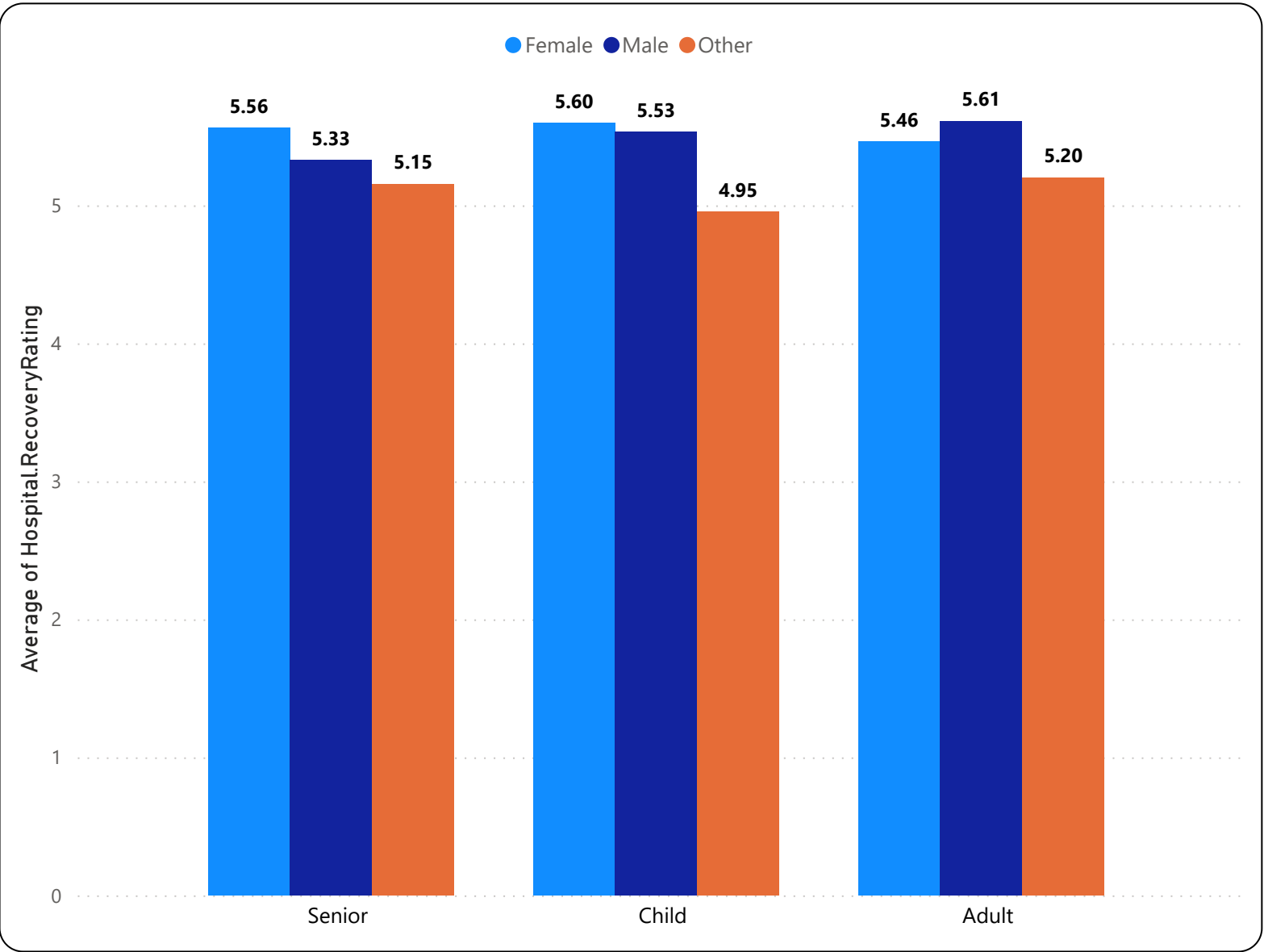
.Using DAX, explore the correlation between the length of stay and total treatment cost.

Treatment	Count of LengthofStay	Average of TotalCost
Medication	1	\$11,094.52
Surgery	1	\$10,957.97
Therapy	1	\$10,960.29
Total	1	\$11,005.73



19 Recovery Trends by Gender and Age Group

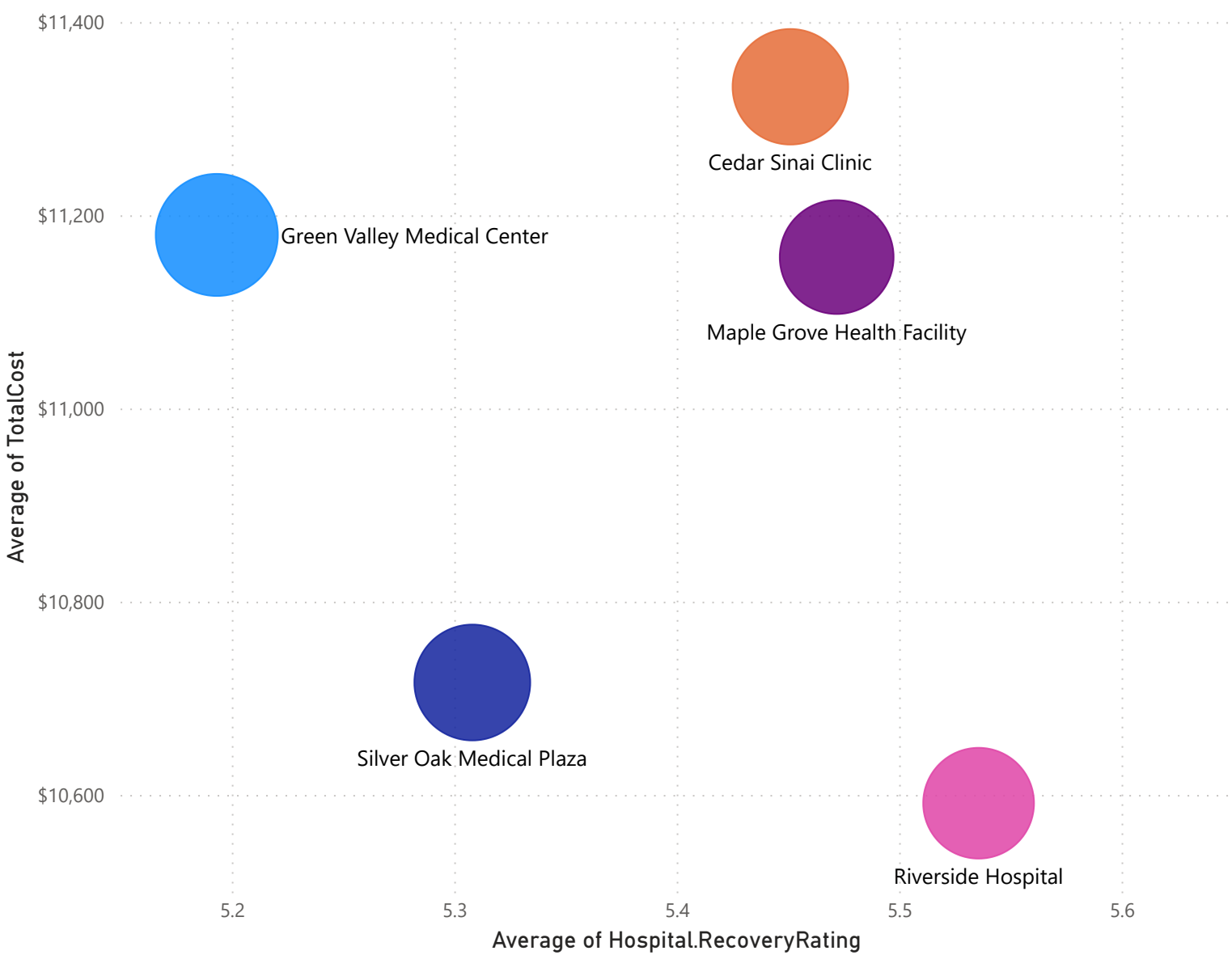
.Analyze recovery trends across different genders and age groups.



20 Hospital Performance Analysis

Create a comprehensive performance analysis for each hospital, considering factors like patient load, recovery ratings, and treatment costs.

Hospital.Hospital	Count of PatientID	Count of Hospital.DoctorName	HospPatientload
Green Valley Medical Center	207	164	207
Silver Oak Medical Plaza	185	145	185
Cedar Sinai Clinic	184	150	184
Maple Grove Health Facility	178	145	178
Riverside Hospital	168	145	168
Total	922	363	184



21 Extracting Key Information

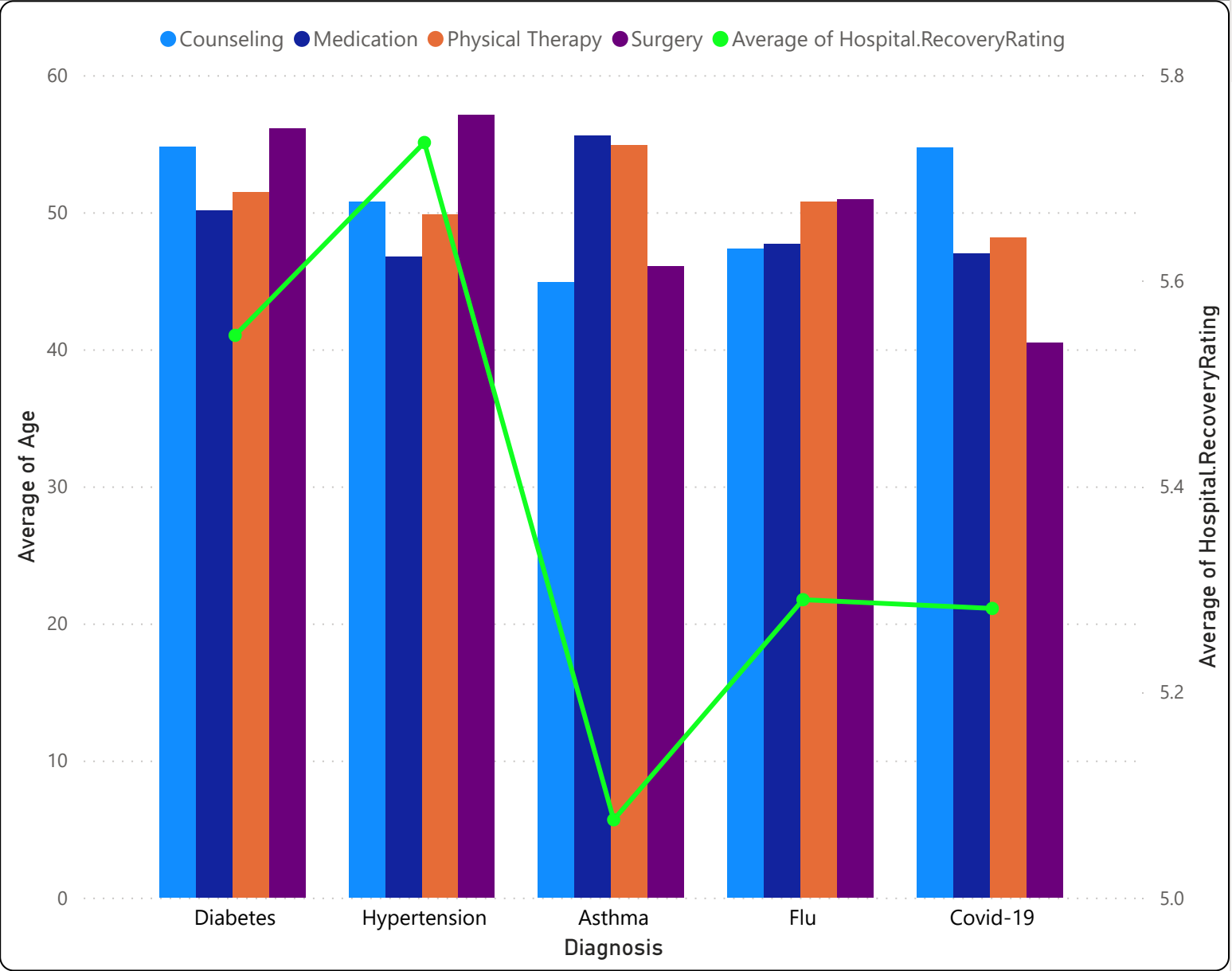
Using the 'Full Prescription Details' column in the updated Healthcare Dataset 1, create a new column that lists only the names of the medications and their dosages for each patient. Exclude other details like frequency and duration from this column."

PatientID	Medicine1	Dose1	Medicine2	Dose2
1	Furosemide	40mg	Clonazepam	2mg
2	Losartan	50mg	Amoxicillin	500mg
3	Amlodipine	5mg	Gabapentin	300mg
4	Azithromycin	250mg	Simvastatin	40mg
5	Duloxetine	60mg	Amoxicillin	500mg
6	Escitalopram	10mg	Fluoxetine	20mg
7	Sertraline	100mg	Fluoxetine	20mg
8	Ibuprofen	400mg	Prednisone	20mg
9	Duloxetine	60mg	Prednisone	20mg
10	Fluoxetine	20mg	Tramadol	50mg
11	Levothyroxine	50mcg	Clopidogrel	75mg
12	Escitalopram	10mg	Lisinopril	20mg
13	Furosemide	40mg	Loratadine	10mg
15	Citalopram	20mg	Ibuprofen	400mg
16	Ciprofloxacin	500mg	Gabapentin	300mg
17	Levothyroxine	50mcg	Gabapentin	300mg
18	Meloxicam	15mg	Simvastatin	40mg
19	Azithromycin	250mg	Sertraline	100mg
20	Clonazepam	2mg	Amoxicillin	500mg
21	Atorvastatin	10mg	Fluoxetine	20mg
22	Tramadol	50mg	Doxycycline	100mg
23	Gabapentin	300mg	Insulin Glargine	100 units/mL
24	Ciprofloxacin	500mg	Sertraline	100mg
25	Losartan	50mg	Ibuprofen	400mg
26	Prednisone	20mg	Insulin Glargine	100 units/mL
27	Duloxetine	60mg	Pantoprazole	40mg
28	Omeprazole	40mg	Sertraline	100mg
31	Levothyroxine	50mcg	Meloxicam	15mg
32	Hydrochlorothiazide	25mg	Metformin	1000mg
33	Losartan	50mg	Amoxicillin	500mg
34	Prednisone	20mg	Meloxicam	15mg

22 Complex DAX: Predictive Modeling for Recovery Rating

Use DAX to create a predictive model estimating the recovery rating based on factors like age, diagnosis, and treatment type.

Hospital.RecoveryRating	Average of Age	Diagnosis	Hospital.TreatmentType
1	38.67	Asthma	Counseling
1	46.13	Asthma	Medication
1	41.14	Asthma	Physical Therapy
1	42.00	Asthma	Surgery
1	80.00	Covid-19	Counseling
1	63.33	Covid-19	Medication
1	47.83	Covid-19	Physical Therapy
1	50.00	Covid-19	Surgery
1	63.25	Diabetes	Counseling
1	29.33	Diabetes	Medication
1	39.67	Diabetes	Physical Therapy
1	42.75	Diabetes	Surgery
1	51.20	Flu	Counseling
1	34.33	Flu	Medication
1	71.33	Flu	Physical Therapy
1	53.33	Flu	Surgery
1	72.00	Hypertension	Counseling
1	86.00	Hypertension	Medication
1	77.00	Hypertension	Physical Therapy
1	63.29	Hypertension	Surgery
2	78.00	Asthma	Counseling
2	54.50	Asthma	Medication
2	47.20	Asthma	Physical Therapy
Total	50.23		



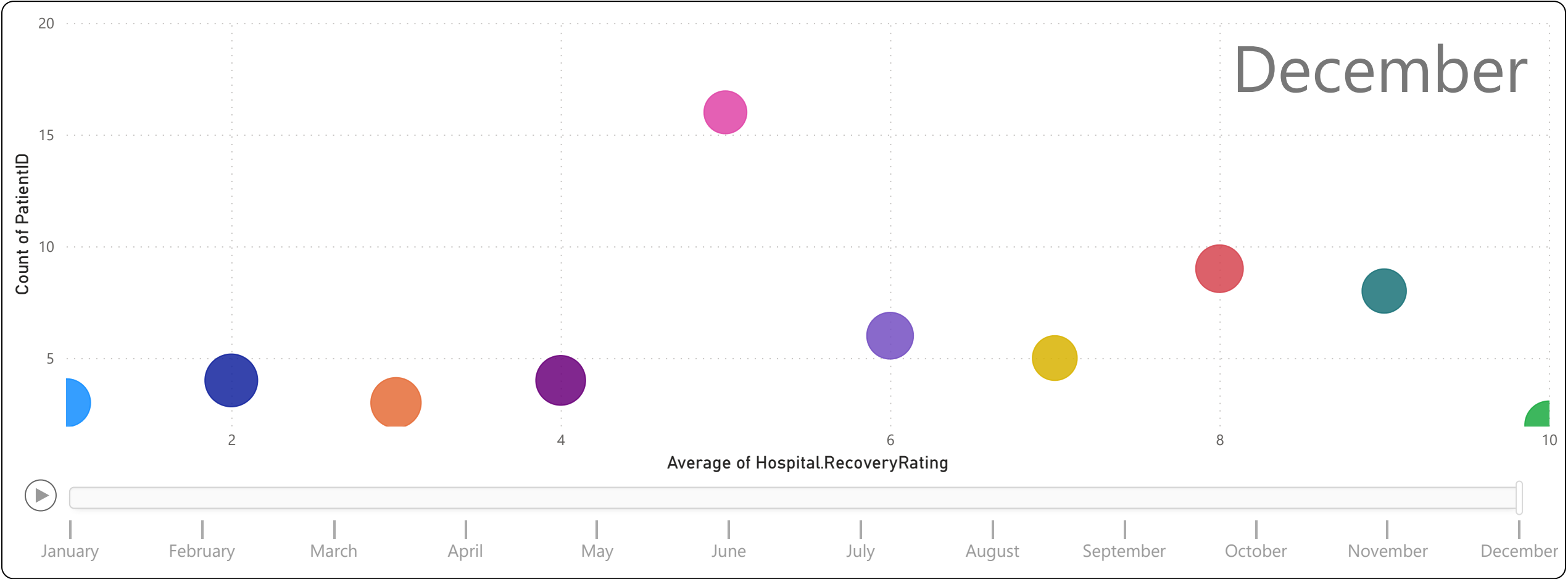
23 Data Modeling: Cohort Analysis Based on Admission Date

Perform a cohort analysis of patients based on their admission date. Analyze the recovery ratings and treatment costs for different cohorts.

2021

2022

2023



24 Advanced Data Transformation: Predicting Future Hospital Capacity Needs

Using historical admission trends, create a model in Power BI to predict future hospital capacity needs. How does this vary by hospital?

Cedar Sinai Clinic	Green Valley Medical Center	Maple Grove Health Facility	Riverside Hospital	Silver Oak Medical Plaza
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