Case Study - US Healthcare - II

Steps	Example In this case
Form a Hypothesis (Ho)	Billing Amount is Independent of Admission Type
Alternate Hypothesis (Ha)	Emergency Admission is Costlier
Test it	Use Average Billing By Admission Type
Fail to reject Ho or Reject Ho	If the difference is Huge, we say Ha is likely true.

MEAN =(E3-$E$5)/$E$5

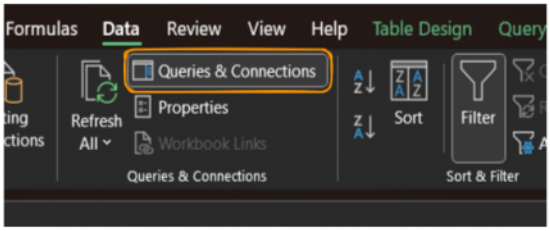
A	B	C	D	E	F
Row Labels	**Average of Billing Amount**		Admission Type	Average Of Billing Amount	% change in billing amount
Elective	23045.23706		Elective	23045.23706	-1%
Emergency	24289.12126		Emergency	24289.12126	=(E3-$E$5)/$E$5
Urgent	22737.09931		Urgent	22737.09931	-3%
Grand Total	**23388.5746**			23357.15255	

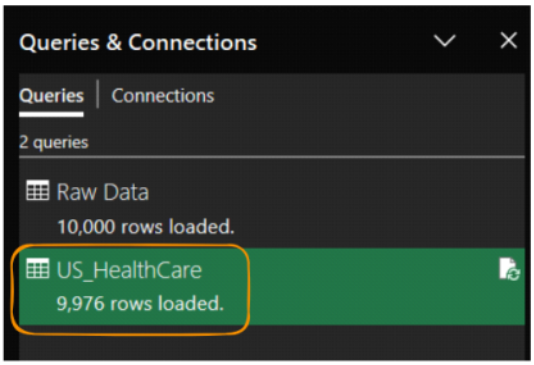
Admission Type	Average Of Billing Amount	% change in billing amount
Elective	23045.23706	-1%
Emergency	24289.12126	4%
Urgent	22737.09931	-3%
	23357.15255	

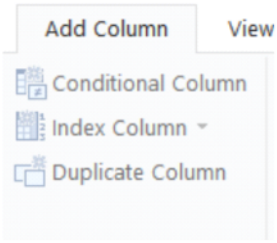
-> Rejecting the Null Hypothesis[Ho] And Accepting the Alternative Hypothesis.
-> Emergency Admission is Costlier.

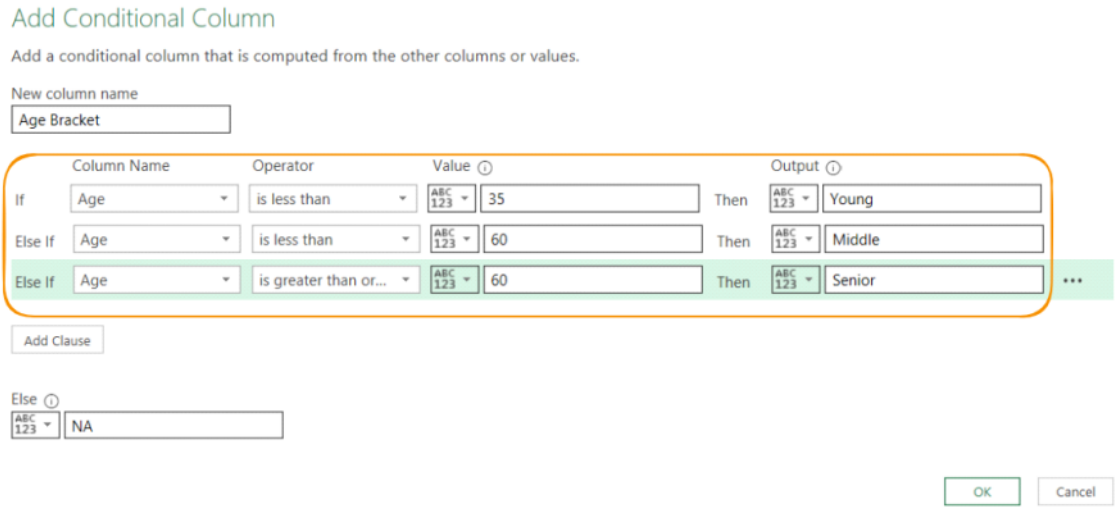
Data Enhancement

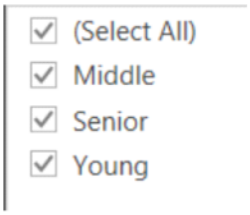
Age Bucket	Age Range
Young	<35
Middle	<60
Senior	>=60







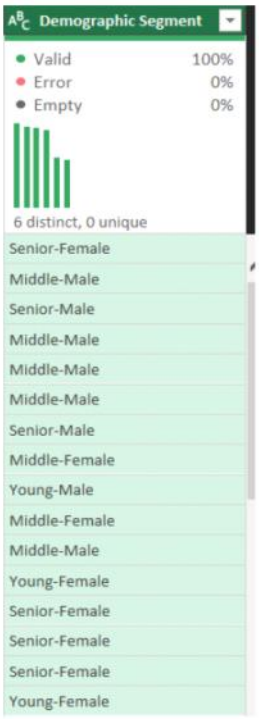


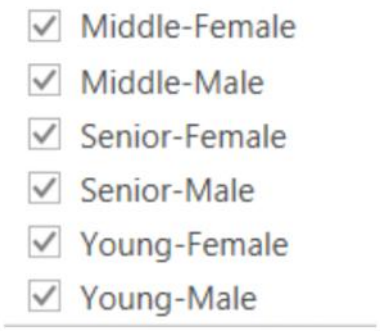


Demographic column

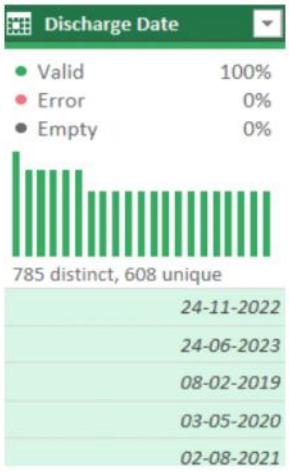
Merging Column of Age Bucket & Gender (X) - Transform table -> Overwrite the data, loosing important column.

Rather, we will prefer ADD Column From Example to create a new column. I can also choose Merge Column under Add Column Tab.





Duration of Stay



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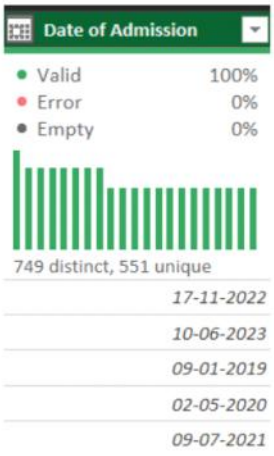
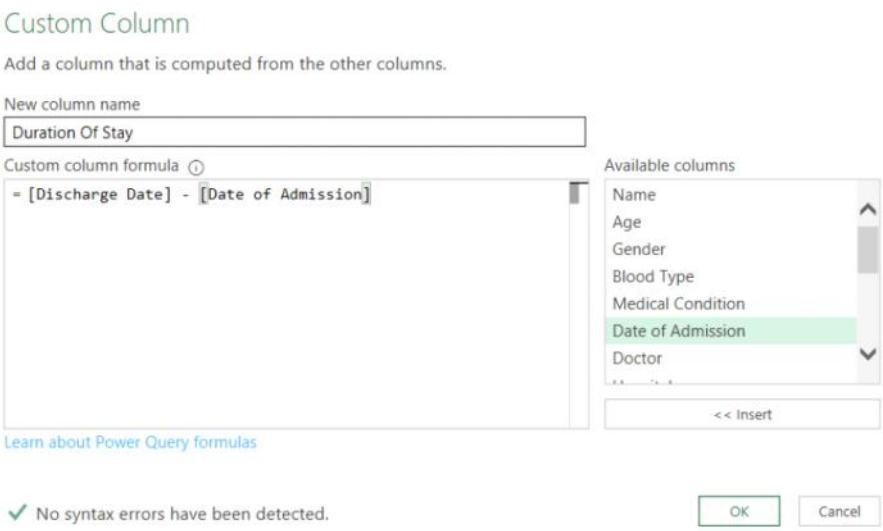
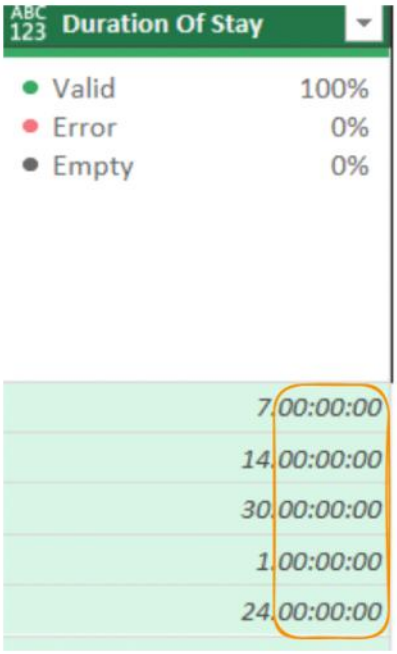
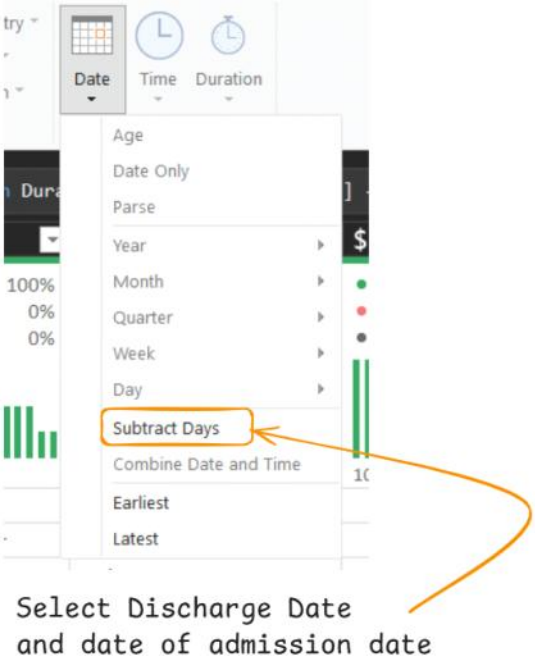




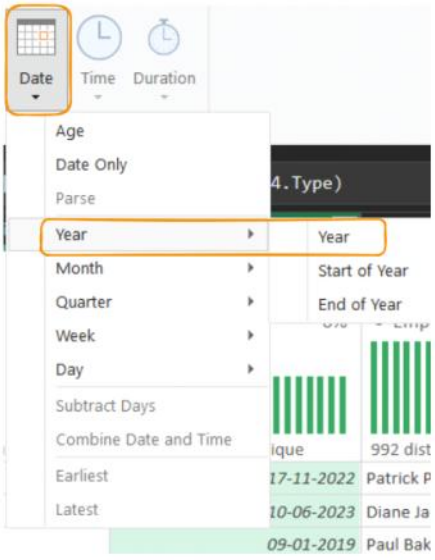


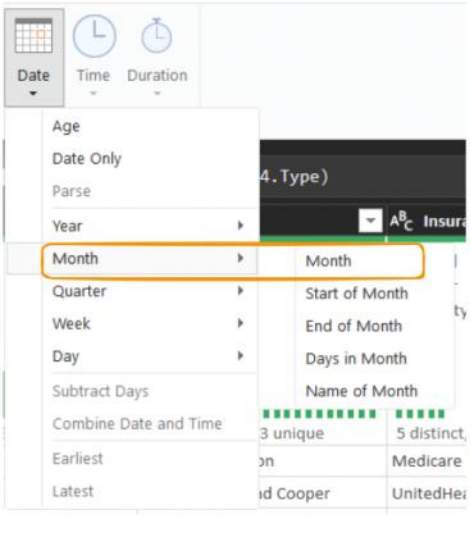
HH:MM:SS

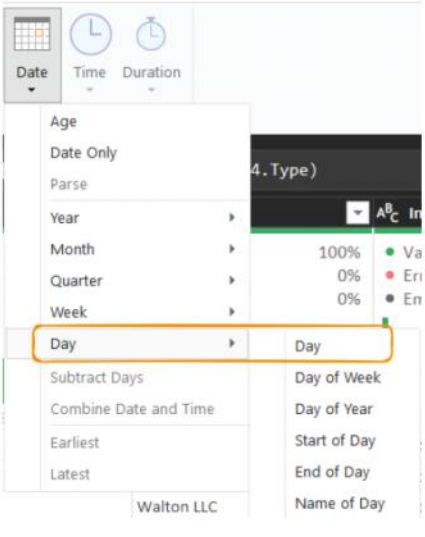


Select Discharge Date
and date of admission date

Age Bucket	Demographic Segment	Duration Of Stay	Year	Month	Day
Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%
3 distinct, 0 unique	6 distinct, 0 unique	31 distinct, 0 unique	6 distinct, 0 unique	12 distinct, 0 unique	31 distinct, 0 unique
Senior	Senior-Female	7	2022	11	17
Middle	Middle-Male	14	2023	6	10
Senior	Senior-Male	30	2019	1	9
Middle	Middle-Male	1	2020	5	2
Middle	Middle-Male	24	2021	7	9
Middle	Middle-Male	3	2020	8	20
Senior	Senior-Male	24	2021	3	22
Middle	Middle-Female	10	2019	5	16
Young	Young-Male	5	2020	12	17
Middle	Middle-Female	1	2022	12	15
Middle	Middle-Male	28	2021	4	13
Young	Young-Female	17	2019	6	9
Senior	Senior-Female	8	2021	11	29
Senior	Senior-Female	16	2021	7	29
Senior	Senior-Female	20	2021	6	14







sample_sales_analysis

Row Labels	Count of Name
Abbott Inc	8
Acevedo and Sons	1
Acevedo LLC	1
Acevedo, Rojas and Smith	1
Acosta and Sons	1
Acosta PLC	1
Acosta, Saunders and Thompson	1
Acosta, Thompson and Schultz	1
Acosta-Bailey	1
Acosta-Chandler	1
Acosta-Holmes	1
Adams and Sons	3
Adams Group	3
Adams Inc	4
Adams Ltd	1

Row Labels	Count of Name
Hypertension	2150
Cancer	1646
Obesity	1622
Arthritis	1582
Asthma	1546
Diabetes	1430
Grand Total	**9976**

Row Labels	Count of Name
Female	5062
Male	4914
Grand Total	**9976**

Row Labels	Count of Name
A-	1234
A+	1238
AB-	1271
AB+	1253
B-	1250
B+	1240
O-	1242
O+	1248
Grand Total	**9976**

Row Labels	Count of Name
⊞ **2018**	**303**
⊞ **2019**	**1965**
⊞ **2020**	**2041**
⊞ **2021**	**2060**
⊞ **2022**	**1993**
⊞ **2023**	**1614**
Grand Total	**9976**

Each Year , Count of patient is consistent, as 2018 having only 3 months data, and 2023 having 10 month.