

# **Answer Business Ad-Hoc Question Massachusetts General Hospital (MGH)**

# Business Ad-Hoc Question

- How many patients have been admitted or readmitted over time?

153 Patient

- How long are patients staying in the hospital, on average?

1417.77 Minute

# Business Ad-Hoc Question

- How many procedures are covered by insurance?

47701 Procedures

- Is there a correlation between the number of procedures performed and the duration of the procedures performed?

-0.03 (very weak negative correlation or almost no correlation)

# Business Ad-Hoc Question

- What percentage of visits had at least one medical procedure?

52.6%

- How much is the average cost per visit?

3639.68 Dollar

# Business Ad-Hoc Question

- Identify the most frequently performed medical procedure for each diagnosis, but only show procedures performed at least 5 times.

diagnose ▼	procedur ▼	count_of_procedureanddiagnose ▼
Neoplasm of prostate	Prostatectomy	6
Sinusitis (disorder)	Depression screening (procedu...	13
Overlapping malignant neoplas...	Combined chemotherapy and r...	15
Blighted ovum	Depression screening	9
COVID-19	Oxygen administration by mask...	162
Viral sinusitis (disorder)	Hospice care (regime/therapy)	408
Secondary malignant neoplas...	Combined chemotherapy and r...	6
Malignant neoplasm of breast (...)	Hospice care (regime/therapy)	295
Malignant tumor of colon	Combined chemotherapy and r...	33
Alzheimer's disease (disorder)	Hospice care (regime/therapy)	252
Fetus with unknown complicati...	Depression screening	26
Acute bacterial sinusitis (disor...	Assessment using Morse Fall S...	8
Sepsis (disorder)	Resuscitation using intravenou...	8
Acute bronchitis (disorder)	Measurement of respiratory fu...	170

diagnose ▼	procedur ▼	count_of_procedureanddiagnose ▼
Acute viral pharyngitis (disorder)	Hospice care (regime/therapy)	137
Hyperlipidemia	Hospice care (regime/therapy)	1408
Streptococcal sore throat (diso...	Throat culture (procedure)	56
Primary small cell malignant neoplasm of lung TNM stage 1 (disorder)	Hospice care (regime/therapy)	230
Non-small cell carcinoma of lu...	Magnetic resonance imaging for measurement of brain volume (procedure)	6
Normal pregnancy	Auscultation of the fetal heart	1065
Suspected lung cancer (situati...	Plain chest X-ray (procedure)	5
Concussion with no loss of con...	Hospice care (regime/therapy)	61
Anemia (disorder)	Peripheral blood smear interpr...	53
Chronic congestive heart failur...	Hospice care (regime/therapy)	286
Opioid abuse (disorder)	Psychosocial care (regime/ther...	16
Injury of anterior cruciate ligam...	Surgical manipulation of joint o...	7
Neoplasm of prostate	Prostatectomy	6

# Business Ad-Hoc Question

- Identification of patients who had a visit with the same diagnosis within 30 days

There is 164 Patient

Query results						
JOB INFORMATION		RESULTS	CHART	JSON	EXECUTION DETAILS	EXECUTION GRAPH
Row	year_	month	Patient	diagnose	count_of_diagnose	
1	2011		9fd941d1-a6a1-a223-c359-757...	Malignant neoplasm of breast (disorder)	3	
2	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	3	
3	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	20	
4	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	21	
5	2011		c1ac6ea2-b7a6-8bbb-2b2d-aaf...	Chronic congestive heart failure (disorder)	2	
6	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	19	
7	2011		c1ac6ea2-b7a6-8bbb-2b2d-aaf...	Chronic congestive heart failure (disorder)	19	
8	2011		a80b1160-93f0-db7e-9f23-04e...	Primary small cell malignant neoplasm of lung TNM stage 1 (disorder)	2	
9	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	17	
10	2011		814f74d5-6a86-0d84-915d-ea8...	Chronic congestive heart failure (disorder)	16	
11	2011		c1ac6ea2-b7a6-8bbb-2b2d-aaf...	Chronic congestive heart failure (disorder)	10	
12	2011		8fe3348d-477f-541e-96df-bbe5...	Normal pregnancy	2	
13	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	17	
14	2011		814f74d5-6a86-0d84-915d-ea8...	Chronic congestive heart failure (disorder)	16	
15	2011		0517eef6-a917-9ec3-dea0-cb1...	Asthma	2	
16	2011		8fe3348d-477f-541e-96df-bbe5...	Normal pregnancy	2	
17	2011		f4cde0dc-db22-5d98-5228-551...	Chronic congestive heart failure (disorder)	20	
18	2011		814f74d5-6a86-0d84-915d-ea8...	Chronic congestive heart failure (disorder)	3	
19	2011		102be01d-73ab-4e7c-6b48-dc7...	Asthma	2	



# Generated Data Project Massachusetts General Hospital (MGH)



# Operation Excellence Department Project

## Emergency Department Lead Time Optimization

### Problem Statement:

The high waiting time of patients in the emergency department causes patient dissatisfaction

### Metric:

- the number of emergency department patients over time
- the length of encounter time for emergency department patients over time
- the length of time for each procedure performed by emergency department patients over time.



# Operation Excellence Department Project

## Generated Data Required

MGH\_Performance\_Report

File Edit View Insert Format Data Tools Extensions Help

Menus 100% \$ % .0 .00 123 Defaul... 11 B I A

G567 2011

Temporary filter 1 Range: A1:J32402

	A	B	C	D
1	date_time	count_of_patie	duration_encounter_minu	avg_duration_per_prosedure_minu
177	2011-01-22 21:00:00.000000 UTC	1	60	0
233	2011-01-29 21:00:00.000000 UTC	1	60	0
280	2011-02-04 18:00:00.000000 UTC	1	60	0
431	2011-02-23 15:00:00.000000 UTC	2	120	45
511	2011-03-05 15:00:00.000000 UTC	1	60	0
567	2011-03-12 15:00:00.000000 UTC	1	60	0
711	2011-03-30 15:00:00.000000 UTC	1	60	0
735	2011-04-02 15:00:00.000000 UTC	1	60	0
791	2011-04-09 15:00:00.000000 UTC	1	60	0
944	2011-04-28 18:00:00.000000 UTC	1	60	0
1015	2011-05-07 15:00:00.000000 UTC	1	60	0
1183	2011-05-28 15:00:00.000000 UTC	1	60	0
1556	2011-07-14 06:00:00.000000 UTC	1	60	28
1687	2011-07-30 15:00:00.000000 UTC	1	60	0
1784	2011-08-11 18:00:00.000000 UTC	1	60	0
1911	2011-08-27 15:00:00.000000 UTC	1	60	0
2191	2011-10-01 15:00:00.000000 UTC	1	60	0
2399	2011-10-27 15:00:00.000000 UTC	1	7440	0
2400	2011-10-27 18:00:00.000000 UTC	1	7440	0
2401	2011-10-27 21:00:00.000000 UTC	1	7440	0
2402	2011-10-28 00:00:00.000000 UTC	1	7440	0
2403	2011-10-28 03:00:00.000000 UTC	1	7440	0
2404	2011-10-28 06:00:00.000000 UTC	1	7440	0
2405	2011-10-28 09:00:00.000000 UTC	1	7440	0
2406	2011-10-28 12:00:00.000000 UTC	1	7440	0

+ ≡ Report Raw

# Operation Excellence Department Project

Create Report for  
internal user

