

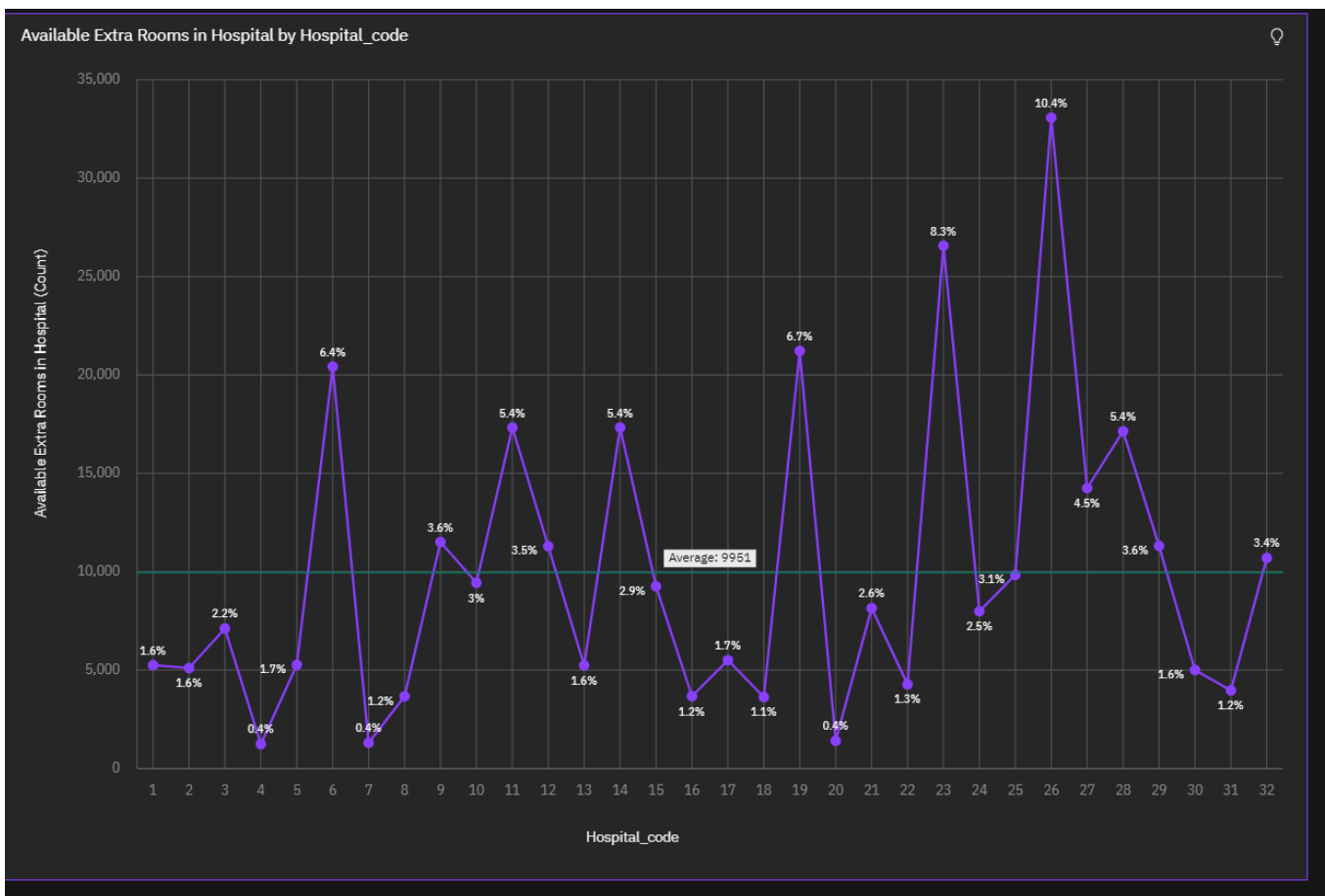
REPORT

Date	12 November 2022
Team ID	PNT2022TMID54247
Project Name	Analytics For Hospital Health Data.
Team Members	Jagadeesh R(TL), Karthik K(TM-1), Hariharan C(TM-2), Deepak Raj S(TM-3).

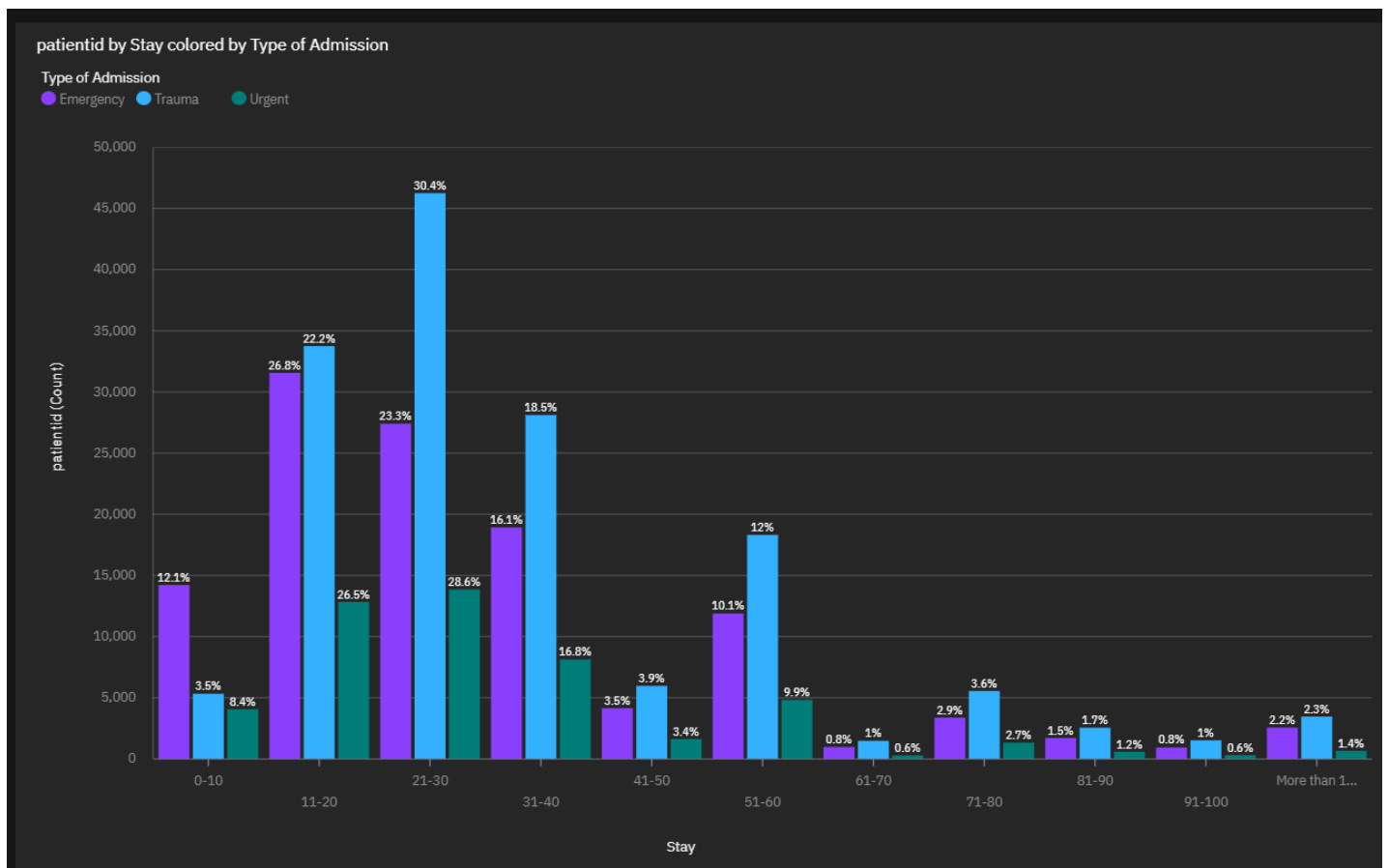
Analytics For Hospitals' Health-Care Data

Recent Covid-19 Pandemic has raised alarms over one of the most overlooked areas to focus: Health-care Management. While healthcare management has various use cases for using data science, patient length of stay is one critical parameter to observe and predict if one wants to improve the efficiency of the healthcare management in a hospital.

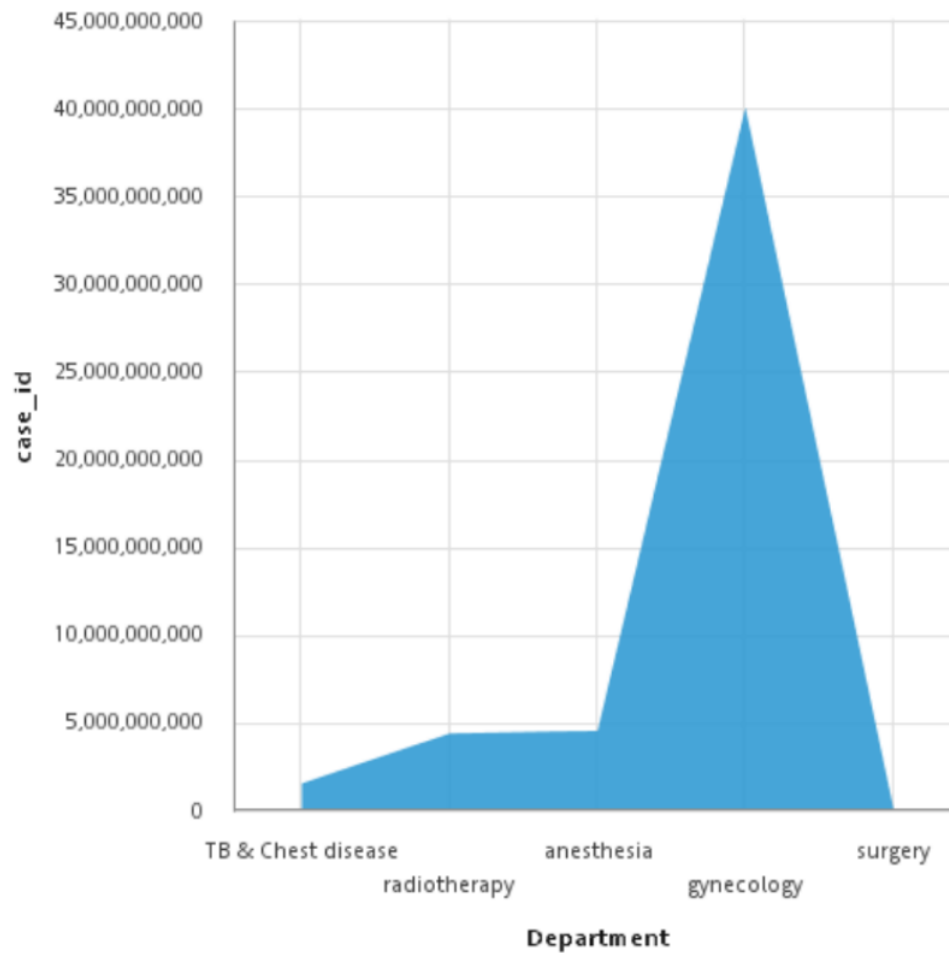
This parameter helps hospitals to identify patients of high LOS-risk (patients who will stay longer) at the time of admission. Once identified, patients with high LOS risk can have their treatment plan optimized to minimize LOS and lower the chance of staff/visitor infection. Also, prior knowledge of LOS can aid in logistics such as room and bed allocation planning. And our goal is to accurately predict the Length of Stay for each patient on case-by-case basis so that the Hospitals can use this information for optimal resource allocation and better functioning. The length of stay is divided into 11 different classes ranging from 0-10 days to more than 100 days.



The more number of extra rooms are available in the Hospital code – 26 & the percentage of available extra room in HC – 26 is 10.4%. But in HC – 4 there are only 0.4% rooms only available.



The total patient id count is 318k in that the most number of peoples are in the Admission type Trauma – 30.4% to take treatment. But in admission type Trauma 2.3% patients are staying more than 100 days. And in the admission type Emergency & Urgently admitted patients are also staying more than 100 days. And there are 5 wards they are p, q, r, s, t. In that the ward – R has more cases. In the hospital region X the admission count in the gynecology is Higher when compared to other regions y and z. while comparing y and z the hospital region z has very less admission count in the gynecology department.

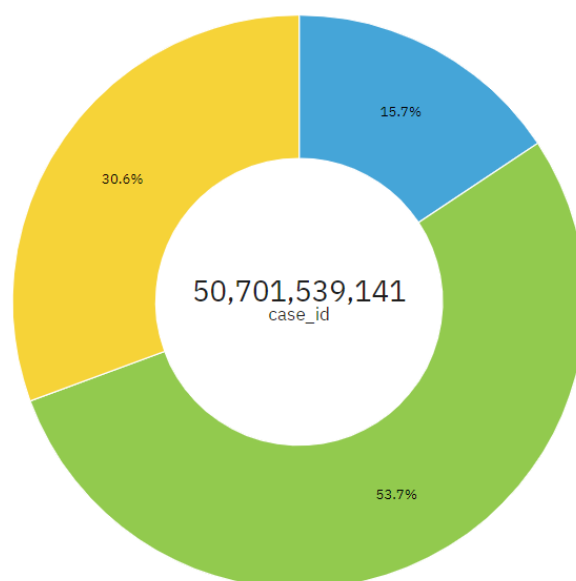


In the gynecology department the patient's severity of illness is Moderate. But the gynecology department has more cases when compared to other Departments.

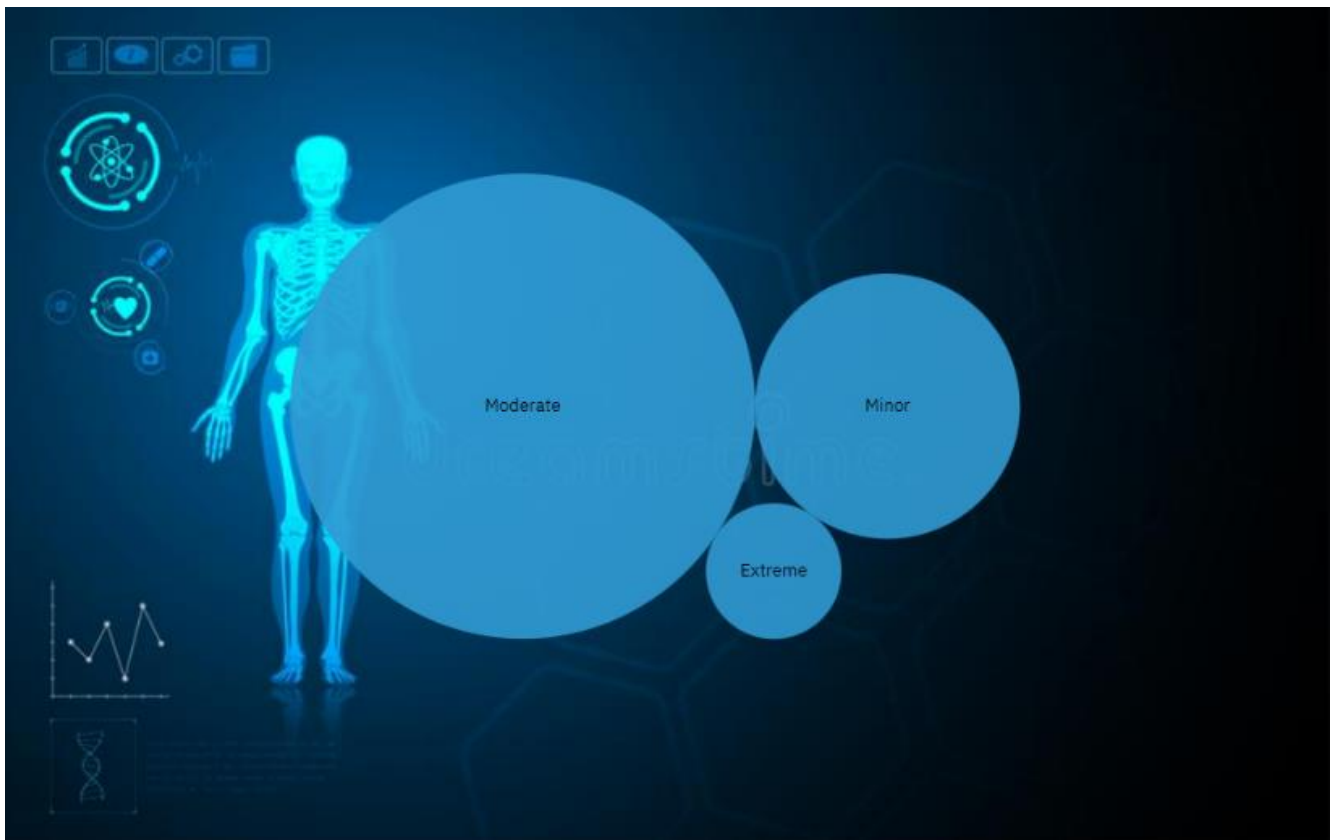


Severity of Illness

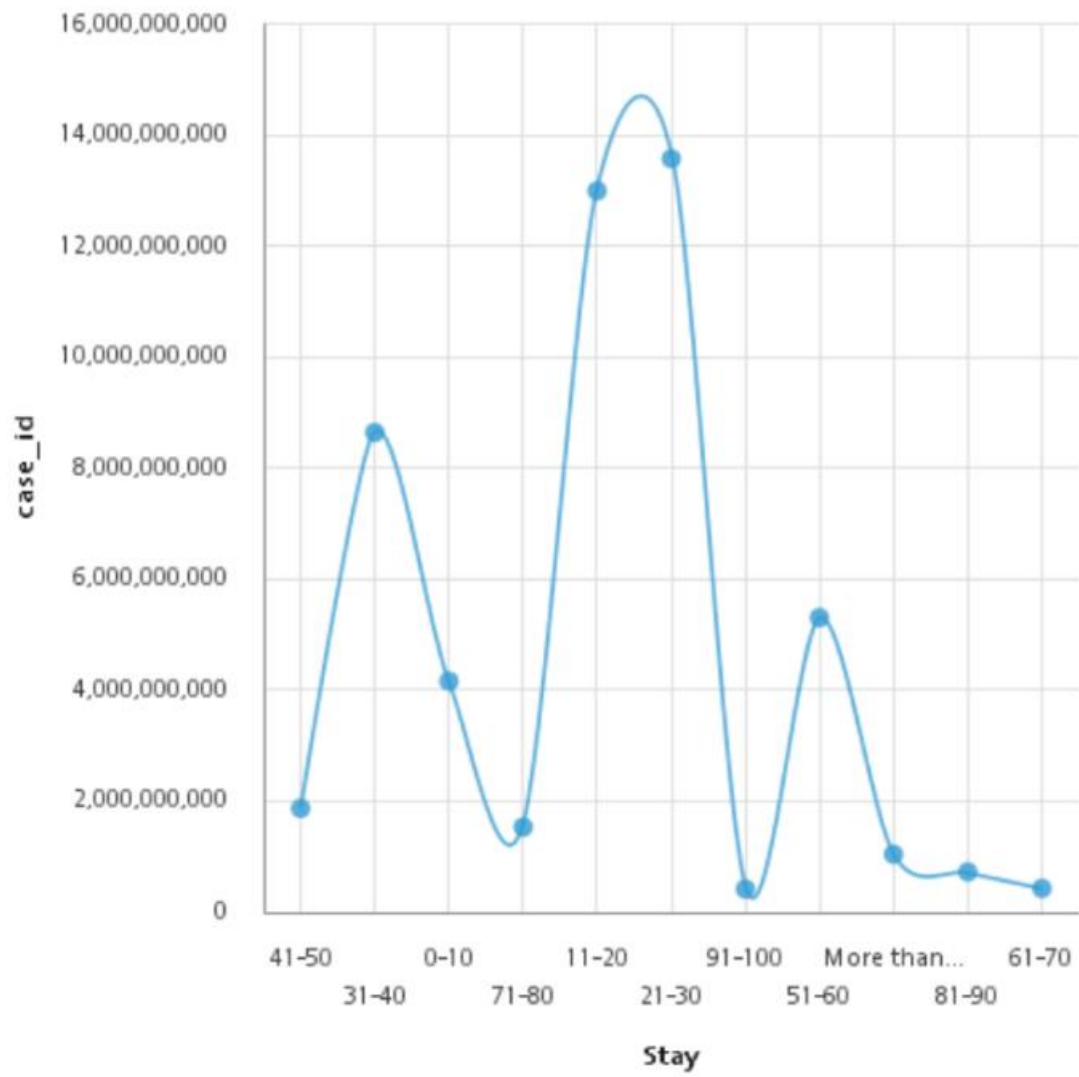
● Extreme ● Moderate ● Minor



The severity of illness is divided into 3 types. They are Extreme, Moderate, Minor. In that the Patients those who having moderate illness is high when compared to Extreme and Minor illness.



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The patients length stay is higher particularly in the period of stay between 20-30 days.

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ANALYTICS FOR HOSPITAL'S HEALTH-CARE DATA

case_id	Department	Age	Stay
50,701,539,141	TB & Chest disease	31-40	41-50
		41-50	31-40
	radiotherapy	71-80	0-10
	anesthesia	0-10	71-80
	gynecology	21-30	11-20
	surgery	11-20	21-30
Ward_Type	Ward_Facility_Code	91-100	91-100
S	F	51-60	51-60
T	B	81-90	More than 100 Days
R	C	61-70	81-90
U	D		61-70
Q	A		
P	E		

1,045,782
Visitors with Patient

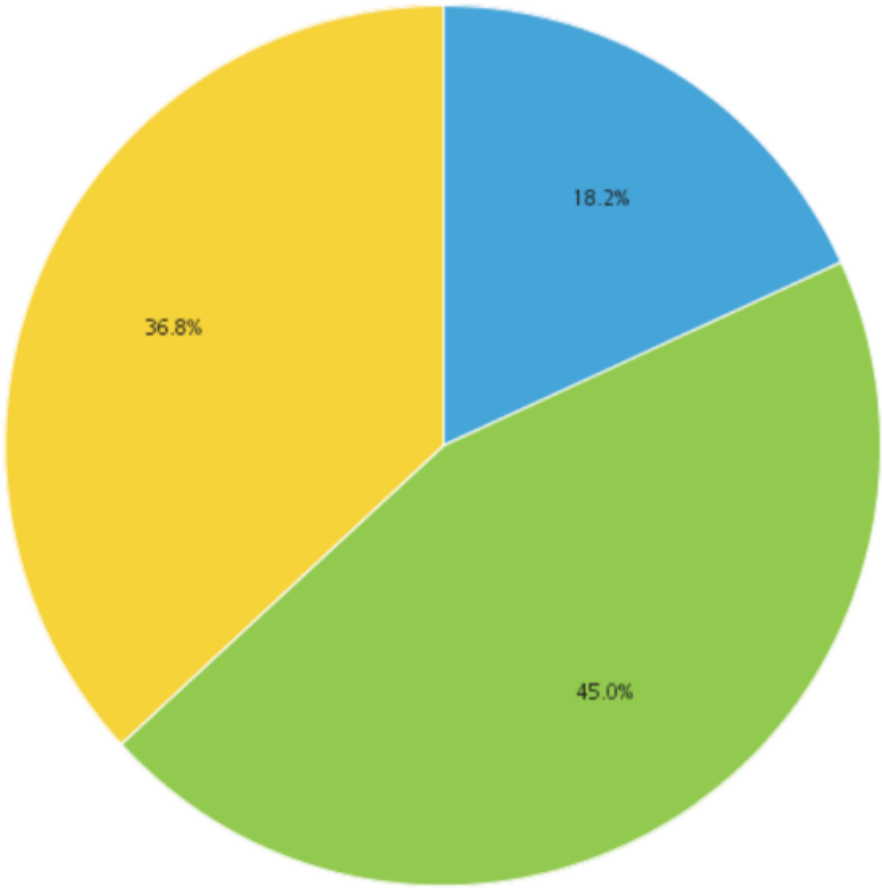
5,833,415
Hospital_code

Hospital_type_code
f
b
g
c
e
a
d

1,018,246
Available Extra Rooms in Hospital

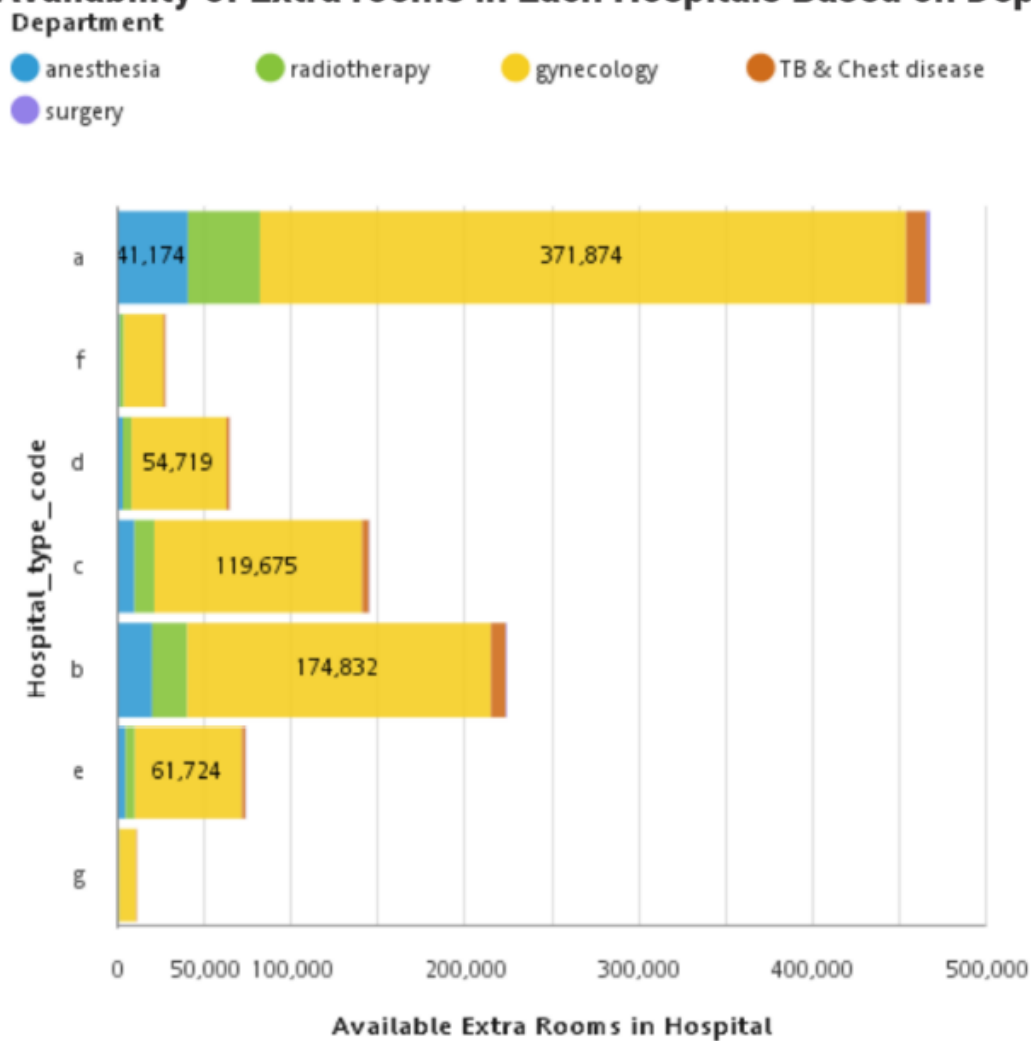
Type of Admission

Urgent Trauma Emergency



In the Admission type Trauma more number of patients have been Admitted and in urgent type Admission there only less number peoples are admitted.

Availability of Extra rooms in Each Hospitals Based on Departments



The Hospital type code -a has more number of extra rooms. And particularly the Hospital type code – a has 371k extra rooms.

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