

-- Hospital Data Analysis using SQL--

1. Total Number Of Patients

Write an SQL query to find the total number of patients across all hospitals.

Answer:

```
Select Sum(Patients_count) As Total_Patients  
from Hospital_records;
```

Output:

Data Output		Messages	Notifications
			Showing rows: 1 to 1
	total_patients bigint		
1	9347		

2. Average Number of Doctors per Hospital

Retrieve the average count of doctors available in each hospital.

Answer:

```
Select hospital_name,  
AVG(doctors_count) As Total_Doctors  
From hospital_records  
Group By hospital_name;
```

Output:

Data Output		Messages	Notifications
			Showing rows: 1 to 10
	hospital_name character varying (100)	total_doctors numeric	
1	City Hospital	24.700000000000000	
2	Healing Touch	25.6428571428571429	
3	Global Medicare	28.7272727272727273	
4	Fortis Care	24.5454545454545455	
5	Sunrise Medical	28.625000000000000	

3. Top 3 Departments with the Highest Number of Patients

Find the top 3 hospital departments that have the highest number of patients.

Answer:

```
Select department,  
sum(patients_count) AS Highest_number_of_patients  
from hospital_records  
Group BY department  
Order by Highest_number_of_patients  
Desc limit 3;
```

Output:

Data Output Messages Notifications		
	department character varying (100)	highest_number_of_patients bigint
1	Urology	1766
2	Neurology	1229
3	ENT	1064

4. Hospital with the Maximum Medical Expenses

Identify the hospital that recorded the highest medical expenses.

Answer:

```
Select hospital_name,  
MAX(medical_expenses) AS MAX_medical_expenses  
From hospital_records  
Group by hospital_name  
order by MAX_medical_expenses DESC limit 1;
```

Output:

Data Output Messages Notifications		
	hospital_name character varying (100)	max_medical_expenses numeric
1	Healing Touch	49955.41

5. Daily Average Medical Expenses

Calculate the average medical expenses per day for each hospital.

Answer:

```
Select hospital_name,admission_date,  
Avg(medical_expenses) AS avg_daily_expenses  
From hospital_records  
Group by hospital_name,admission_date  
order by admission_date;
```

Output:

The screenshot shows a database interface with a toolbar at the top and a table below it. The table has three columns: hospital_name, admission_date, and avg_daily_expenses. The data includes rows for Apollo Health, Global Medicare, Metro Hospital, Global Medicare, and Wellness Clinic, with their respective average daily expenses.

	hospital_name	admission_date	avg_daily_expenses
1	Apollo Health	2023-01-11	22456.610000000000
2	Global Medicare	2023-01-16	17999.480000000000
3	Metro Hospital	2023-01-18	35570.840000000000
4	Global Medicare	2023-01-18	46741.910000000000
5	Wellness Clinic	2023-01-20	26646.520000000000

6. Longest Hospital Stay

Find the patient with the longest stay by calculating the difference between Discharge Date and Admission Date.

Answer:

```
Select hospital_name,  
(discharge_date - admission_date) AS stay_days  
From hospital_records  
Order by stay_days  
Desc limit 1;
```

Output:

The screenshot shows a database interface with a toolbar at the top and a table below it. The table has two columns: hospital_name and stay_days. It shows a single row for Apollo Health with a stay of 15 days.

	hospital_name	stay_days
1	Apollo Health	15

7. Total Patients Treated Per City

Count the total number of patients treated in each city.

Answer:

```
SELECT location,  
SUM(patients_count) AS total_patients  
FROM hospital_records  
GROUP BY location;
```

Output:

Data Output Messages Notifications		
	location character varying (100)	total_patients bigint
1	Bangalore	955
2	Jaipur	1505
3	Lucknow	1264
4	Mumbai	483
5	Kolkata	596

8. Average Length of Stay Per Department

Calculate the average number of days patients spend in each department.

Answer:

```
SELECT department,  
AVG(discharge_date - admission_date) AS avg_stay_days  
FROM hospital_records  
GROUP BY department;
```

Output:

Data Output Messages Notifications		
	department character varying (100)	avg_stay_days numeric
1	Dermatology	5.600000000000000
2	Oncology	8.111111111111111
3	ENT	8.083333333333333
4	Neurology	9.250000000000000
5	Gynecology	7.666666666666667

9. Identify the Department with the Lowest Number of Patients

Find the department with the least number of patients

Answer:

```
SELECT department,  
       SUM(patients_count) AS total_patients  
    FROM hospital_records  
   GROUP BY department  
  ORDER BY total_patients ASC  
 LIMIT 1;
```

Output:

Data Output Messages Notifications		
SQL		
	department character varying (100)	total_patients bigint
1	Cardiology	544

10. Monthly Medical Expenses Report

Group the data by month and calculate the total medical expenses for each month.

Answer:

```
SELECT TO_CHAR(admission_date, 'YYYY-MM') AS month,  
       SUM(medical_expenses) AS total_expenses  
    FROM hospital_records  
   GROUP BY month  
  ORDER BY month;
```

Output:

Data Output Messages Notifications		
SQL		
	month text	total_expenses numeric
1	2023-01	173971.54
2	2023-02	301722.72
3	2023-03	199247.42
4	2023-04	88995.93
5	2023-05	222986.72