

Health Service Analysis

BigQuery Link

<https://console.cloud.google.com/bigquery?sq=556184257603:c8b413a352ca4dedaf1c0fc0abf39a32>

SQL Queries

/* BASIC STATISTICS*/

```
/*Retrieve total number of patients, Employee, Treatments, etc.*/
SELECT
  (SELECT COUNT(*) FROM Hospital.Admitted) AS total_admissions,
  (SELECT COUNT(*) FROM Hospital.Department) AS total_departments,
  (SELECT COUNT(*) FROM Hospital.Employee) AS total_Employee,
  (SELECT COUNT(*) FROM Hospital.Patient_general_details) AS total_patients,
  (SELECT COUNT(*) FROM Hospital.Patient_medical_conditions) AS
total_medical_conditions,
  (SELECT COUNT(*) FROM Hospital.Treatments) AS total_treatments
;
```

/*EMPLOYEE INSIGHTS*/

```
/*Number of Employee by gender.*/
SELECT sex, COUNT(*) AS num_Employee
FROM Hospital.Employee
GROUP BY sex;
```

/*PATIENT INSIGHTS*/

```
/*Patient demographics by gender.*/
SELECT sex, COUNT(*) AS num_patients
FROM Hospital.Patient_general_details
GROUP BY sex;
```

```
/*Most common medical conditions.*/
SELECT medical_history, COUNT(*) AS condition_count
FROM Hospital.Patient_medical_conditions
GROUP BY medical_history
ORDER BY condition_count DESC
LIMIT 5;
```

/*TREATMENT INSIGHTS*/

```
/*Number of Treatments provided by each department.*/
SELECT Department.dep_name, COUNT(Treatments.treatment_id) AS num_treatments
FROM Hospital.Department
LEFT JOIN Hospital.Treatments ON Department.dep_no = Treatments.dep_no
GROUP BY Department.dep_name;
```

```
/*Total fees collected by each department.*/
SELECT Department.dep_name, SUM(Treatments.fees) AS total_fees
FROM Hospital.Department
JOIN Hospital.Treatments ON Department.dep_no = Treatments.dep_no
```

```
GROUP BY Department.dep_name;
```

```
/*Most expensive Treatments.*/
```

```
SELECT treatment_name, fees  
FROM Hospital.Treatments  
ORDER BY fees DESC  
LIMIT 5;
```

```
/*Average fees collected per department.*/
```

```
SELECT d.dep_name, AVG(t.fees) AS avg_fees  
FROM Hospital.Department d  
JOIN Hospital.Treatments t ON d.dep_no = t.dep_no  
GROUP BY d.dep_name;
```

```
/*RESOURCE UTILIZATION*/
```

```
/*Average fees collected per treatment.*/
```

```
SELECT t.treatment_name, AVG(t.fees) AS avg_fees  
FROM Hospital.Treatments t  
GROUP BY t.treatment_name;
```

```
/*DEMOGRAPHIC ANALYSIS*/
```

```
SELECT CASE  
    WHEN DATE_DIFF(CURRENT_DATE, bdate, YEAR) BETWEEN 0 AND 17 THEN '0-17'  
    WHEN DATE_DIFF(CURRENT_DATE, bdate, YEAR) BETWEEN 18 AND 35 THEN '18-35'  
    WHEN DATE_DIFF(CURRENT_DATE, bdate, YEAR) BETWEEN 36 AND 50 THEN '36-50'  
    ELSE '51+'  
END AS age_group,  
COUNT(*) AS num_patients  
FROM Hospital.Patient_general_details  
GROUP BY age_group;
```

```
/*ADMISSION TRENDS*/
```

```
/*Admissions over time acc to month*/
```

```
SELECT EXTRACT(YEAR FROM admit_date) AS year,  
    EXTRACT(MONTH FROM admit_date) AS month,  
    COUNT(*) AS num_admissions  
FROM Hospital.Admitted  
GROUP BY year, month  
ORDER BY year, month;
```