



# Problem Statement: Hospital Resource Utilization

You have been given a dataset containing information about hospital resources, such as ICU beds, ventilators, and doctor shifts. The goal is to analyze this dataset to monitor resource availability, identify utilization patterns, and ensure better patient care and hospital efficiency.

## 🔑 Key Business Questions (KPIs for Dashboard)

1. Total ICU Beds vs Occupied Beds
  - How many ICU beds are available vs currently in use?
2. Ventilator Utilization
  - How many ventilators are in use, and what is the utilization rate?
3. Doctor Shift Coverage
  - How many doctors are on shift per day/week?
  - Are there gaps in coverage?
4. Bed Occupancy Rate by Department
  - Which departments (ICU, Emergency, Surgery) have the highest occupancy?
5. Average Patient Stay (if patient data is included)
  - How long patients stay in ICU on average.
6. Resource Utilization Trend Over Time
  - How does ICU bed/ventilator usage change daily or weekly?
7. Critical Alerts
  - Highlight when occupancy/utilization > 80% (threshold warning).