

ETM538HW5

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1. List 10 questions you want to be able to answer using the Hospitals Data Warehouse (10%).

- Which departments generate the most revenue?
- Which departments generate the most revenue per FTE?
- Which departments generate the most revenue per patient?
- Which procedures generate the most revenue?
- Which procedures generate the most revenue per patient?
- Which procedures generate the most revenue per hour?
 - Which procedures can be scaled up to generate more revenue?
- What equipment is required for these procedures?
- What disposables are required for these procedures?
- Which employees generate the most revenue compared with their compensation?
- How flexible is the personnel involved in different procedures?
 - E.g. can the procedure be performed by a tech, a nurse, a doctor, a team, etc.?
- What are the biggest expenses? How can they be minimized?
- What are the drivers of length of hospital stay? E.g. doctor, patient, health record attributes, department, procedure, etc.?
- Which patients have the most complications?
- Which doctors see patients with the highest rates of complications?
- Which complications are covered by insurance (i.e. someone else pays) versus ones the hospital is responsible for (i.e. the hospital loses money)?
- Which services are the most popular?
- Which services are most correlated (if a patient uses one, they're likely to use the other)?
- What are the sources of revenue (e.g. insurance, government, private pay, other)?
- What services require involvement from multiple departments?
- What treatments require involvement from multiple departments?

- What patients require involvement from multiple departments?
- What doctor/nurse teams are most effective (measuring revenue, lower complications, mortality rates, etc.)?
- What is the average fill rate for the hospital beds?
- What seasonal effects can be found?
 - Optional services at the end of the year
 - Flu season
 - Surgical procedures before holidays
- What are the patient mortality rates?
 - By department
 - By doctor
 - By procedure

2 Entities we should include:

- Patients
- Physicians
- Departments
- Visits
- Conditions
- Accounts
- Transactions
- Employees
- Treatments

3 Relationships between entities:

- Patients should link to:
- Visits
 - Accounts
 - Transactions
 - Conditions
 - Treatments
- Physicians should link to:
 - Visits
 - Treatments
 - Departments
- Departments should link to:
 - Physicians
- Visits should link to:
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