

Case 26: Drug Effects in Different Hospitals

A pharmaceutical company conducts a study in three hospitals to evaluate a new drug. Data is collected on whether patients received the drug and whether they recovered, with the following details:

- Hospital A: Smaller hospital, fewer patients.
- Hospital B: Medium-sized hospital, moderate volume of patients.
- Hospital C: Large hospital, higher patient volume.

TABLE 5.12: Treatment vs. Recovery Across Hospitals.

	Hospital A		Hospital B		Hospital C	
	Rec.	Unrec.	Rec.	Unrec.	Rec.	Unrec.
Treated	8	2	15	5	25	10
Untreated	3	5	7	10	12	18

Determine if there is a significant association between the treatment and recovery, adjusting for the confounding factor of the hospitals.

Initial Questions

1. What are the research objectives?
2. What are the statistical questions?
3. What is the response variable, and what is the data type of the response variable?
4. What are the explanatory variables of interest?
5. Are there covariates?
6. What is the population of interest?
7. What is the subject, and what is the number of distinct subjects?
8. Are there subject-level data?
9. Are response variables dependent (repeated measures / clustered subjects)?
10. Are the subjects selected randomly?
11. Are the subjects randomly assigned to different groups?

Initial Thoughts