**Package Pricing at Mission Hospital**

# CASE QUESTIONS

1. Develop a simple linear regression model to check if there is an association between total cost and body weight? For the model developed, interpret the regression coefficient for body weight.
2. Is it possible to conclude that a patient weighing 51 kg is likely to spend at least INR 1,000 more than a patient weighing 50 kg at 5% significance?
3. At the time of admission, a patient’s body weight is 50 kg. At 95% confidence level, what will be the maximum cost of treatment for this patient?
4. Mission Hospital is planning to introduce a package price for the treatment and has decided to charge INR 3,00,000 for patients weighing 50 kg. What is the probability that the treatment cost will exceed the package price?
5. Build a model between total cost and gender. There is a belief that the cost of treatment for males is INR 20,000 more than females. Validate this statement at 5% significance.
6. Develop a model and validate if married people spend INR 50,000 INR more than unmarried people in treatment cost.
7. Develop a multiple regression model and identify statistically significant predictors that Mission Hospital can use to determine the treatment cost.
8. Recommend a multiple regression model that Mission hospital can use for predicting the treatment cost at the time of admission.