

Stat 104 – Lecture 15

Quantitative Variables

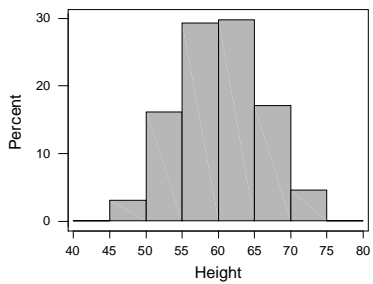
- Discrete variables
 - Bag O' Chips
 - Rake it in!TM
 - Binomial
 - Win points with Bag O' Chips
 - O+ blood type.

1

Quantitative Variables

- Continuous variables
 - Height
 - Heart Rate

2



Stat 104 – Lecture 15

Describe the sample

- Shape is symmetric and mounded in the middle.
- Centered at 60 inches.
- Spread between 45 and 75 inches.
- 30% of the sample is between 60 and 65 inches.

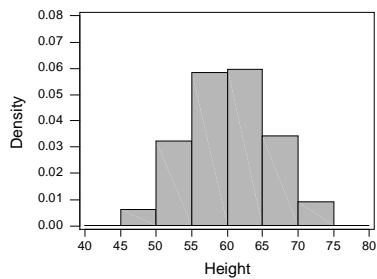
4

Normal Models

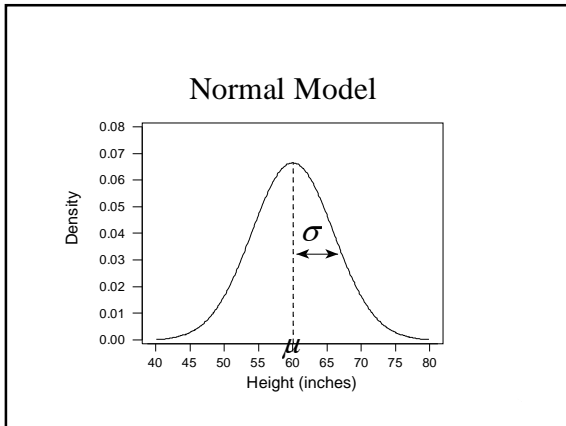
- Our conceptualization of what the distribution of an entire population of values would look like.
- Characterized by a bell shaped curve with population parameters
 - Population mean = μ
 - Population standard deviation = σ .

5

Sample Data



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Normal Model

- Height
- Center:
 - Mean, $\mu = 60$ in.
- Spread:
 - Standard deviation, $\sigma = 6$ in.

8

68-95-99.7 Rule

- 68% of the values fall within 1 standard deviation of the mean.
- 95% of the values fall within 2 standard deviations of the mean.
- 99.7% of the values fall within 3 standard deviations of the mean.

9
