

## Chapter 2: Basic Data Analysis – Summary Statistics and Graphs

Meaning of the Variables

- $P_L$  → large
- $P_S$  → smaller
- $s$  = 8.1
- $\bar{x}$  = mean
- $x$  = random variable

→ larger proportion↓  
population  
SDsample  
8.1Formulas➤ Relative Risk (RR) =

$$\frac{P_L}{P_S}$$

➤ Attributable Risk (AR) =

$$P_L - P_S$$

➤ Attributable Risk % (AR %) =

$$\frac{AR}{P_L} \times 100$$

➤ Number Needed to Change (NNC) =

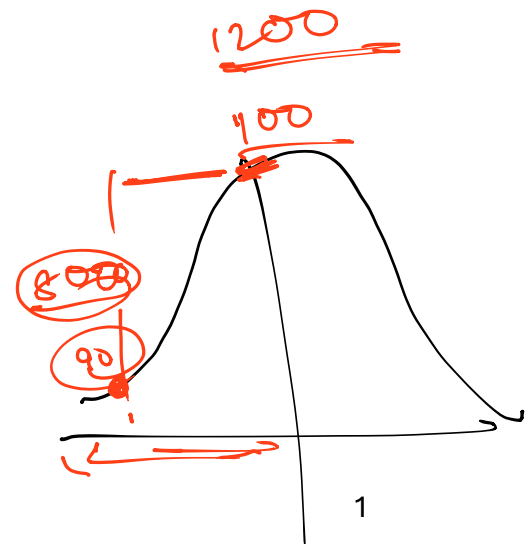
$$\frac{1}{AR}$$

➤ Coefficient of Variation (CV) = z-score =z-score

$$\frac{n - \bar{x}}{s} \times 100$$

$$\frac{P_S}{P_L} \rightarrow \text{why not}$$

$$\frac{0.1}{0.5} \Rightarrow \underline{\underline{0.2}}$$



### Mean and Standard Deviation Practice

A	B	C
22.73	5.139	2195
25.65	4.919	1615
12.374	6.197	1697
5.192	4.323	1832
21.59	10.10	1921
19.77	8.212	
18.96	6.23	

1. Calculate the mean and standard deviation of data sets A, B, and C

A:  $\bar{x} = 18.00988$ ,  $s = 6.9943$   
 B:  
 C:

2. Which data set is MORE consistent: (Arrange the Dataset in the order of their consistency)

$\Rightarrow 0.0509$

### Risk Practice!

smoking	Sick	Healthy	Total
Low Iron Consumption	232	4,321	4653
Normal iron consumption	2,768	25679	28447
Total	3,000	30,000	33000

1a. What is RISKY:

low iron

1b. What is the RISK:

being sick due to

2. Calculate the RR:

$\Rightarrow 1.9095$

$$\frac{P_L}{P_S}$$

3. Calculate the AR:

$\Rightarrow P_L - P_S \Rightarrow 0.0436$

$$\frac{P_L - P_S}{P_L} \times 100$$

4. Calculate the AR%:

$\Rightarrow 47.6326\%$

5. Calculate the NNC:

$$\Rightarrow \frac{1}{AR} =$$

Suppose that the data set has a mean of 1421 and a standard deviation of 233.4. Answer the following questions:

6. Calculate the CV:

0.1643

7. Calculate the z-score with a data value of 1430:

=> 0.03856

**Risk Practice!**

	Sick	Healthy	Total
Low Iron Consumption	150	4,500	
Normal iron consumption	2,500	25,000	
Total	3,650	29,500	

1a. What is RISKY:

1b. What is the RISK:

8. Calculate the RR:

9. Calculate the AR:

10. Calculate the AR%:

11. Calculate the NNC:

Suppose that the data set has a mean of 1520 and a standard deviation of 210.2. Answer the following questions:

12. Calculate the CV:

13. Calculate the z-score with a data value of 1500: