

### Question 1



Females attack rate=  $7/9 = 0.77$

Males attack rate=  $19/87 = 0.22$

Overall attack rate=  $26/96 = 0.27$

### Question 2



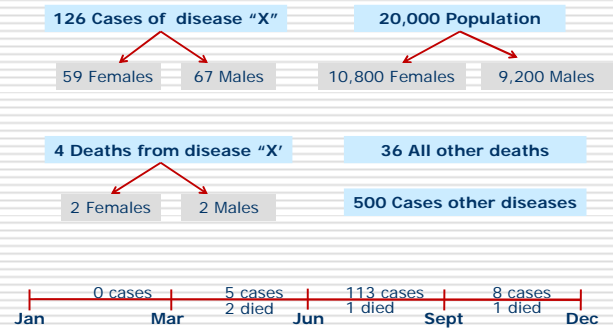
Crude death rate=  $(1,900/212,000) \times 1000 = 8.96$

Cause specific death rate=  $(4/212,000) \times 100,000 = 1.88$

### Question 3

- MS is not curable.
- Lung cancer cases die more than MS cases.

### Question 4



### Question 4a

126 Cases of disease "X"

20,000 Population

59 Females 67 Males

10,800 Females 9,200 Males

Incidence rate of disease "X" =  $(126/20,000) \times 10,000 = 63$

### Question 4b

126 Cases of disease "X"

20,000 Population

59 Females 67 Males

10,800 Females 9,200 Males

Incidence rates Jan-Mar. =  $(0/20,000) \times 100,000 = 0$

Incidence rates Apr-Jun. =  $(5/20,000) \times 100,000 = 25$

Incidence rates Jul-Sep. =  $(113/20,000-5) \times 100,000 = 565$

Incidence rates Oct-Dec. =  $(8/20,000-5-113) \times 100,000 = 40$



### Question 4c

126 Cases of disease "X"

20,000 Population

59 Females 67 Males

10,800 Females 9,200 Males

Incidence rates for males =  $(67/9,200) \times 10,000 = 72.8$

Incidence rates for females =  $(59/10,800) \times 10,000 = 54.6$

### Question 4d

126 Cases of disease "X"

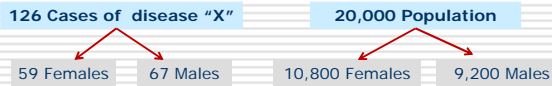
20,000 Population

59 Females 67 Males

10,800 Females 9,200 Males

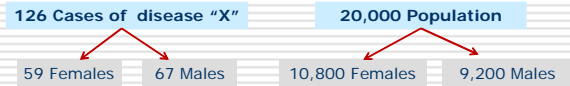
Male cases/ Female cases =  $67/59 = 1.14$

### Question 4e



Age-Group (years)	Population	No. of cases	No. of deaths	Age-specific incidence rates
0-9	3,400	17	2	$(17/3,400) \times 1000 = 5$
10-19	4,200	18		$(18/4,200) \times 1000 = 4.3$
20-29	2,800	9		$(9/2,800) \times 1000 = 3.2$
30-39	2,600	11		$(11/2,600) \times 1000 = 4.2$
40+	7,000	71	2	$(71/7,000) \times 1000 = 10.1$

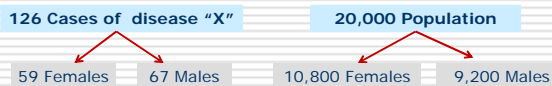
### Question 4f



Point prevalence on June 30 = 3



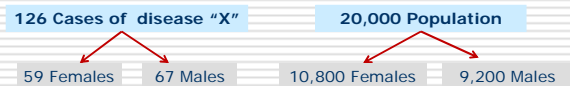
### Question 4g



Point prevalence on Sep. 30 = 115



### Question 4h



Period prevalence Jul. to Sept. = 116



### Question 4i

4 Deaths from disease "X"

20,000 Population

2 Females

2 Males

10,800 Females

9,200 Males

Mortality rate for disease "X" =  $(4/20,000) \times 100,000 = 20$



### Question 4i

4 Deaths from disease "X"

20,000 Population

2 Females

2 Males

10,800 Females

9,200 Males

Age-Group (years)	Population	No. of cases	No. of deaths	Age-specific incidence rates
0-9	3,400	17	2	$(2/3,400) \times 10,000 = 5.9$
10-19	4,200	18		$(0/4,200) \times 10,000 = 0$
20-29	2,800	9		$(0/2,800) \times 10,000 = 0$
30-39	2,600	11		$(0/2,600) \times 10,000 = 0$
40+	7,000	71	2	$(2/7,000) \times 10,000 = 2.9$

### Question 4k

4 Deaths from disease "X"

20,000 Population

2 Females

2 Males

10,800 Females

9,200 Males

Female mortality rate for disease "X" =  $(2/10,800) \times 10,000 = 1.8$

Male mortality rate for disease "X" =  $(2/9,200) \times 10,000 = 2.2$

### Question 4l

4 Deaths from disease "X"

126 Cases of disease "X"

2 Females

2 Males

59 Females

67 Males

Case fatality rate for disease "X" =  $(4/126) \times 1,000 = 31.7$

## Question 4m

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500 Cases other diseases

126 Cases of disease "X"

59 Females

67 Males

Proportionate morbidity rate =  $(126 / (500 + 126)) \times 1,000 = 201.3$

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