

Measurement of Mortality

(ii) Specific Death Rate is (SDR)

The formula for calculating specific death rate is :-

$$SDR = \frac{\text{No. of death}}{\text{No. of Population}} \times 1000$$

Example :- Calculate age specific death rate from the following data :

<u>Age Group</u>	<u>Population</u>	<u>Death</u>
0-10	15,000	360
10-20	20,000	400
20-30	10,000	280
30-40	5,000	180
40-50	10,000	100

Solution:-

Age Group

Population

Death

SDR

0-10	15,000	360	$\frac{360}{15,000} \times 1000 = 24$
10-20	20,000	400	20
20-30	10,000	280	28
30-40	5,000	180	36
40-50	10,000	100	10

(iii) Standardized death rate is

The formula for calculating rate is: —

$$\text{Standardized death rate} = \frac{\sum (\text{Specific death rate})}{\text{Total}}$$

Q:- Compute the standardized death rates for Towns A and B from the following data

Age-Group	Town A		Population
	Population	Death	
0-10	15,000	360	40,000
10-20	20,000	400	52,000
20-30	10,000	280	8,000
30-40	5,000	180	10,000
40-50	10,000	100	15,000

Solution:- Making population of town A as standard population.

Age group	Town A				Town B			
	Population	Death	Specific death rate	Population X Specific death rate	Population	Death	Specific death rate	Population X Specific death rate
0-10	15,000	360	$\frac{360}{15,000} \times 1000 = 24$	15,000 X 24 = 360,000	40,000	1,000	$\frac{1,000}{40,000} \times 1000 = 25$	15,000 X 25 = 375,000
10-20	20,000	400	20	400,000	52,000	1,040	20	400,000
20-30	10,000	280	28	280,000	8,000	240	30	300,000
30-40	5,000	180	36	180,000	10,000	150	15	75,000
40-50	10,000	100	10	1,00,000	15,000	200	13.33	133,300
	Total population = 60,000			Σ (Population X Specific death rate) = 1,320,000				Σ (Population X Specific death rate) = 1,283,300

Standardized death rate for town A = $\frac{\Sigma (\text{Population} \times \text{Specific death rate})}{\text{Total population}}$

$$= \frac{1,320,000}{60,000} = 22$$

Standardized death rate for town B = $\frac{\Sigma (\text{Population} \times \text{Specific death rate})}{\text{Total population}}$

$$= \frac{1,283,300}{60,000}$$

$$= 21.38$$

Now, we can say that the death rate of town A is higher than in town B, hence town B is more healthy.