



## PREVALENCE

### DEFINITION

Prevalence refers to the total number of individuals who have a disease or condition at a particular time. A **prevalence rate** would express the frequency of a disease in a particular population for a specific time period. This would include both existing cases and newly diagnosed cases of disease in the population.

### CALCULATING A PREVALENCE RATE

$$\text{Prevalence Rate} = \frac{\text{\# of cases of a disease in a specified time period}}{\text{\# of persons at risk of the disease in a specified time period}}$$

The prevalence rate calculated using the formula above should be multiplied by a factor of ten in order to express it as a whole number. For example, a rate of 0.00025 would be multiplied by 100,000 and expressed as 25 per 100,000.

### PEEL PUBLIC HEALTH EXAMPLE

The table below provides the prevalence of ischemic heart disease in Peel and Ontario between 2009 and 2013.

### ISCHEMIC HEART DISEASE PREVALENCE

PREVALENCE <sup>†</sup> OF ISCHEMIC HEART DISEASE AMONG POPULATION AGED 20 YEARS AND OLDER, PEEL AND ONTARIO, 2009-2013				
YEAR	PEEL		ONTARIO	
	Number	Age-sex Adjusted <sup>†</sup> Prevalence Rate per 1,000	Number	Age-sex Adjusted <sup>†</sup> Prevalence Rate per 1,000
2009	45,416	50.0	646,120	53.1
2010	46,000	48.3	639,510	51.0
2011	46,622	46.7	631,454	48.8
2012	46,968	44.8	622,185	46.6
2013	47,163	42.7	611,526	44.4

<sup>†</sup>Age-sex adjusted to the 1991 Census population.

**Note:** Prevalence determined using the ischemic heart disease algorithm from: Tu K, Mitiku T, Lee DS, Guo H, Tu JV. Validation of Physician Billing and Hospitalization Data to Identify Patients with Ischemic Heart Disease Using Data from the Electronic Medical Record Administrative data Linked Database (EMRALD). Can J Cardiol; 26: e225-8.

**Source:** Ischemic Heart Disease Database, 1996-2013, Institute for Clinical Evaluative Sciences.

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# Quick Stats

## READING THE TABLE:

- Within the table, look at the column: “Age-sex Adjusted<sup>†</sup> Prevalence Rate per 1,000” and the row “2013”

## INTERPRETATION OF THESE DATA:

- In 2013, the age-adjusted prevalence rate of ischemic heart disease in Peel was 42.7 per 1,000 population. This is similar to Ontario’s rate of 44.4 per 1,000.

## VISUAL REPRESENTATION OF PREVALENCE:

In this diagram, incident cases are represented by the flow of water into the bathtub (the new cases of the disease or condition). Prevalent cases are represented by the level of water in the bathtub (i.e., the number of cases of the disease or condition that have occurred in the population).

