

Student Learning Advisory Service

Contact us

Please come and see us if you need any academic advice or guidance.

Canterbury

Our offices are next to Santander Bank

Open

Monday to Friday, 09.00 – 17.00

E: learning@kent.ac.uk

T: 01227 824016

Medway

We are based in room G0-09, in the Gillingham Building and in room DB034, in the Drill Hall Library.

Open

Monday to Friday, 09.00 – 17.00

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The Student Learning Advisory Service (SLAS) is part of the Unit for the Enhancement of Learning and Teaching (UFLT)

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AT A GLANCE/ PHARMACY CALCULATIONS PREVALENCE

Calculating the prevalence of a condition within a given population.



Example 1

If approximately 1 person in 16 in the UK has diabetes, and the UK population is approximately 64 million, approximately how many people in UK have diabetes?

Method

Step 1: Prevalences are fractions

$$\frac{1}{16} \times 64,000,000 = 4,000,000 \checkmark$$

Example 2

If approximately 19 per 10,000 children aged 10-11 years are severely obese, and the local population of children aged 10-11 years is 5,615, approximately how many will be severely obese?

Method

Step 1: Prevalences are fractions

$$\frac{19}{10,000} \times 5,615 = 10.6685 = 11 \checkmark$$

* Individuals – so round to a whole number

Example 3

If, in one year, approximately 396 per 100,000 people in the UK are diagnosed with cancer, and of these, 13% are diagnosed with lung cancer, approximately how many people in the UK are diagnosed with lung cancer in that year? (UK pop = 64 million)

Method

Step 1: Number of cancer diagnoses as a whole

$$\frac{396}{100,000} \times 64,000,000 = 253,440$$

Step 2: Number of lung cancer diagnoses

$$\frac{13}{100} \times 253,440 = \mathbf{32,947} \checkmark$$

Example 4

If, in one year, the death rate from all causes in Scotland was approximately 1,034 per 100,000, and of these, 15.1% were the result of coronary heart disease (CHD), approximately how many people in Scotland died from CHD in that year? (Scotland pop = 5.2 million)

Method

Step 1: Number of deaths as a whole

$$\frac{1034}{100,000} \times 5,200,000 = 53,768$$

Step 2: Number of deaths from CHD

$$\frac{15.1}{100} \times 53,768 = \mathbf{8,119} \checkmark$$

Q1

If 1 person in 400 has Condition A, approximately how many people in a population of 250,000 will have Condition A?

Q2

If 64 people per 100,000 have Condition B, approximately how many people in a population of 24,000 will have Condition B?

Q3

If 150 people per 10,000 have Condition C, and of these 40% have Type-A, approximately how many people in a population of 6,000 will have Condition C, Type-A?

Q4

If women are twice as likely as men to suffer from Condition D, and 268 per 100,000 men suffer from Condition D, approximately how many women in a population of 3.2 million will suffer from Condition D (assuming that women make up 50% of the general population)?

Q5

If 16 in 10,000 people have Condition E, and, of these, 8.5% will have the Type-B form, then approximately how many people in a population of 1.46 million will have the Type-B form of Condition E?

Answers

Q1 = 625. **Q2** = 15. **Q3** = 36. **Q4** = 17152. **Q5** = 199.