

National Non-Hodgkin Lymphoma Audit: Statistics Cheat Sheet

A guide to statistics used in the National Non-Hodgkin Lymphoma Audit's *State of the Nation Patient and Public Report and Infographic*.

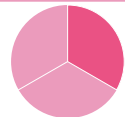
Statistics help us to better understand non-Hodgkin lymphoma care so that we can improve it.

Proportions

A proportion shows how large one part of a group is compared to all parts of the group (the whole).

Proportions describe information in a way that is easy to compare.

Different ways that proportions can be written

			
Fraction name	Quarter	Third	Half
Fraction	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{2}$
x in y people	1 in 4 people	1 in 3 people	1 in 2 people
Percentage (%)	25%	33%	50%

Fractions

A fraction is made up of a top and a bottom part:

- Top part (numerator): shows the part of the group that you're interested in.
- Bottom part (denominator): shows how big the whole group is.

Examples of fractions: half $\frac{1}{2}$, third $\frac{1}{3}$, quarter $\frac{1}{4}$

Percentages %

Percentages are a way of thinking of a proportion out of 100. e.g. 20% means 20 out of 100.

x in y people



Statistics describe groups of people, not individuals
You are not a number. Your care is personal.

Averages

When describing groups of people using numbers, there are different ways to find a "typical" value or the average.

Mean

The mean is what most people call the average. Add up all the numbers then divide by how many numbers there are.

Example: We know the ages of 5 people:

60	65	68	70	72
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The mean age of these people is:
 $(60 + 65 + 68 + 70 + 72) \div 5 = 67$.

Median

The median is the middle number when all of the numbers are arranged from smallest to largest.

Example: We know the ages of 5 people:

60	65	68	70	72
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The median age of these people is 68. After ordering the ages from smallest to largest, half of the people are younger than 68 and half are older.

The median is often used for things like age because it isn't affected by very young or very old ages.

Variation

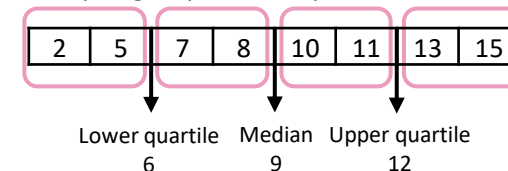
Variation tells us about differences within a dataset and how spread out the values are.

Looking at variation between care providers can identify differences in care and opportunities for improvement.

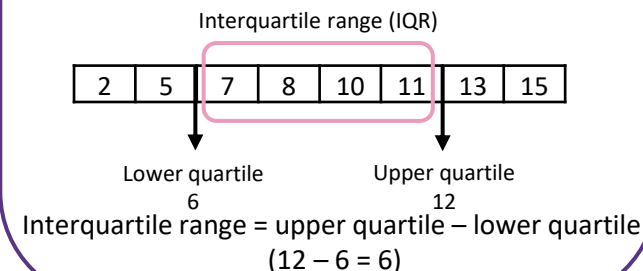
Interquartile Range (IQR)

The interquartile range (IQR) describes how spread out the middle half of a dataset is. The IQR avoids the problem of single very large or very small values making the overall range appear large, even when most values are close together.

To find the IQR, the values in a group of data are ordered from smallest to largest then divided into four equal groups called 'quartiles'.



The interquartile range is the range in between the lower and upper quartiles.



Missing data can impact the accuracy of results.
More complete data leads to more reliable findings.



NNHLA
National Non-Hodgkin
Lymphoma Audit