

Glossary for biostatistics consult

This is not meant to be a course on biostatistics but rather explanations of terms you might encounter at various stages of your study: planning, analysis and reporting..

TIP: It would be to your advantage to have a look at these short explanations prior to your first (and subsequent) meetings with the biostatistician, as this will facilitate the deliberations.

The biostatistician will in the course of the discussions use other statistical terms that you might not understand but you will at least be able to follow most of the discussion without asking for an explanation of every term.

We have included two links:

1. To an alphabetic statistical glossary from the **Centre for Statistics in Medicine (CSM)** based at Oxford. This glossary covers most of the concepts that you will encounter in your study.

Examples from this glossary are:

Categorical variable

A variable whose value ranges over categories and has no numerical value, such as: red, green, blue.

Clinical significance

A statistically significant result does not necessarily imply that it is useful in a clinical setting (does the treatment reduce a patient's blood pressure by a worthwhile amount? Does it help the patient?). Clinical significance is a matter of judgement taking into account the clinical importance and applicability of the results

Number needed to treat (NNT)

This is one measure of a treatments clinical effectiveness. It is the (average) number of people you would need to treat with a specific intervention (e.g. aspirin for people having a heart attack) to see one additional occurrence of a specific outcome (e.g. prevention of death).

Validity

Validity is the degree to which a measurement truly reflects what it claims to measure. When critically appraising a paper it is important to assess whether any known biases could have affected the results (internal validity).

Link to statistical glossary

<http://www.csm-oxford.org.uk/statistical-resources/statistical-glossary/>

2. To the **BMJ Statistics Notes**, which is, a series of short papers that outline a specific statistical analysis. These notes have been written for clinicians and researcher to help them understand the statistical reasoning behind a specific analysis.

Examples of the notes are:

- One- and two-sided tests of significance BMJ 1994;
- The cost of dichotomising continuous variables BMJ 2006;
- How to obtain the P-value from a confidence interval BMJ 2011.

Link to the notes:

<http://www.csm-oxford.org.uk/publications/bmj-statistics-notes/>

The notes are also available from the BMJ directly

Gie, R., & Beyers, N. (2014). *Getting started in clinical research: Guidance for junior researchers*. Cape Town: Department of Paediatrics and Child Health, Faculty of Medicine and Health Sciences, Stellenbosch University.