

... about confidence intervals

- ◆ Confidence intervals give an indication of the strength of the evidence for a result.
- ◆ Calculating the confidence interval around a result gives you a range of values within which you can expect the true value for a population to fall, with a specific level of certainty (usually 95%).
- ◆ A confidence interval that includes the value of 'no difference' indicates that the treatment under investigation is not statistically significantly different from the control.

Example: the difference between two treatments is a reduction in the length of the hospital stay by 2.0 days (95% CI: -0.54 to 2.7). The 95% CI includes zero and implies that there may be no difference between treatments; and the evidence, if considered, is weak

For a result that is presented as a ratio, such as a risk or hazard ratio, the CI should not contain 1.0.

Example: a risk ratio associated with a treatment that is calculated to be 0.88 (95% CI: 0.67 to 1.17) is not considered statistically significant; whereas one of 0.88 (95% CI: 0.67 to 0.92) would be.

- ◆ If CIs for the effects of two treatments overlap, then there is the possibility that there is no significant difference between the effects.
- ◆ The narrower the CI, the more reliable the results are. Larger studies (those with more events), or larger pools of results from several studies, generate narrower CIs.

Compare an absolute risk reduction of 5% (95% CI: -1.2% to 12%) for a study group of 100 subjects with a risk reduction of 5% (4.7% to 5.3%) for a sample size of 10000.