

Bias

Bias is the deviation of results from the truth, due to systematic error(s) in the methods used.

Clinical effectiveness

Clinical effectiveness is the extent to which a treatment, procedure or service does patients more good than harm. Ideally, the determination of clinical effectiveness is based on the results of a randomised controlled trial (RCT). This is also known simply as 'effectiveness'.

Cochrane Collaboration

Cochrane Collaboration is an international endeavour in which people from many different countries systematically find, appraise and review available evidence from randomised controlled trials (RCTs). The Cochrane Collaboration's aims are to develop and maintain systematic, up-to-date reviews of RCTs of all forms of health care and to make this information readily available to clinicians and other decision-makers at all levels of health care systems. Areas which have been reviewed to date include effective care in pregnancy and childbirth and stroke. The UK Cochrane Centre is based in Summertown in Oxford.

Confidence interval (CI)

Confidence interval is the range within which the true size of effect (never exactly known) lies with a given degree of assurance. People often speak of a '95% confidence interval' (or '95% confidence limits'). This is the range which includes the true value in 95% of cases.

Controls

Controls in a randomised controlled trial (RCT) are people in a comparison group. They are allocated a different treatment from the subjects of the study.

Critical Appraisal

Critical Appraisal is the process of assessing and interpreting evidence, by

systematically considering its validity, results and relevance to your own work.

Homogeneity

Homogeneity means 'similarity'. Studies are said to be homogeneous if their results vary no more than might be expected by the play of chance. The opposite of homogeneity is heterogeneity.

MEDLINE

MEDLINE is an electronic database which summarises thousands of pieces of biomedical research literature published in selected journals. It is available through most health service libraries. It can be accessed by CD-ROM, through 'Datastar', by telephone and by other means.

Meta-analysis

Meta-analysis is a statistical technique which summarises the results of several studies into a single estimate, giving more weight to results from larger studies.

Number needed to treat (NNT)

Number needed to treat is one measure of a treatment's clinical effectiveness. It is the number of people you would need to treat with a specific intervention (e.g. aspirin for people having a heart attack) to see one occurrence of a specific outcome (e.g. prevention of death).

Odds

Odds is a term little used outside gambling and statistics. It is defined as the ratio of the probability of an event happening, to that of its not happening. Think of it as meaning 'risk'.

Odds ratio

Odds ratio (OR) is one measure of a treatment's clinical effectiveness. If it is equal to 1, then the effects of the treatment are no different from those of the control treatment. If the OR is greater

(or less) than 1, then the effects of the treatment are more (or less) than those of the control treatment. Note that the effects being measured may be adverse (e.g. death, disability) or desirable (e.g. stopping smoking).

Placebo therapy

Placebo therapy is a biologically inert treatment often given to controls in trials.

Publication bias

Publication bias results from the fact that studies with 'positive' results are more likely to be published.

Randomised controlled trial

A randomised controlled trial (RCT) is a trial in which subjects are randomly assigned to two groups: one (the experimental group) receiving the intervention that is being tested, and the other (the comparison group or controls) receiving an alternative treatment. The two groups are then followed up to see if any differences between them result. This helps people assess the effectiveness of the intervention.

Review

A review is any summary of the literature.

Systematic review

A systematic review is a review in which evidence on a topic has been systematically identified, appraised and summarised according to predetermined criteria (some people call this an 'overview').

Validity

Validity refers to the soundness or rigour of a study. A study is valid if the way it is designed and carried out means that the results are unbiased — that is, it gives you a 'true' estimate of clinical effectiveness.