GLOSSARY

Adjusted analysis[1]: when groups differ on baseline characteristics (eg, age), analyses of outcome data are statistically modified to account for these differences.

Before-after design: data are collected from the same participants both before and after the introduction of an intervention.

Cohort study: a group of people with a common characteristic or set of characteristics are followed up for a specified period of time to determine the incidence of some outcome; there is no comparison group.

Confidence interval (CI): quantifies the uncertainty in measurement; usually reported as 95% CI, which is the range of values within which we can be 95% sure that the true value for the whole population lies.

Confounder[2]: a variable that affects the observed relation between 2 other variables (eg, alcohol is related to lung cancer, but does not cause the disease; instead, both alcohol and lung cancer are related to smoking, and it is the smoking that causes lung cancer).

Crossover trial: a method of comparing 2 interventions in which patients are switched to the alternate intervention after a specified period of time.

Discounted[3]: an economic adjustment based on the assumption that people place greater value on something they have today than something they will have in the future.

Fixed effects model[4]: gives a summary estimate of the magnitude of effect in meta-analysis. It takes into account within-study variation but not between-study variation and hence is usually not used if there is significant heterogeneity.

Hermeneutic phenomenology[5]: the study of the methodological principles of interpretation by using narrative texts to explain a phenomenon.

Heterogeneity[4]: the degree to which the effect estimates of individual studies in a meta-analysis differ significantly.

Intention to treat analysis (ITT): all patients are analysed in the groups to which they were randomised, even if they failed to complete the intervention or received the wrong intervention.

Interrupted time series[6]: involves multiple observations over time on the same units (eg, particular individuals) or on different, but similar, individuals (eg, same community or worksite); requires knowing when an intervention took place in order to compare before and after treatment.

Markov Monte Carlo simulation model[7]: a decision analysis that tries to more accurately represent the complex processes involved in transitions in and out of various states of health.

Meta-analysis[1]: a method for combining the results of several independent studies that measure the same outcomes so that an overall summary statistic can be calculated.

Multivariate analysis[1]: analysis involving multiple independent or dependent variables.

Naturalistic inquiry[8]: The goal of this research is to understand how individuals construct reality within their own natural setting and context.

Number needed to harm (NNH)[9]: number of patients who, if they received the experimental treatment, would lead to 1 additional person being harmed compared with patients who receive the control treatment; this is calculated as 1/absolute risk increase (rounded to the next whole number), accompanied by the 95% confidence interval.

Number needed to treat (NNT): number of patients who need to be treated to prevent 1 additional negative event; this is calculated as 1/absolute risk reduction (rounded to the next whole number), accompanied by the 95% confidence interval.

Quality adjusted life years gained: difference (in years) in life expectancy with an intervention versus without an intervention, taking into account not only the additional years but also the quality of life during the period of extended life.

Quasi-experimental[6]: studies that do not use random assignment to create the comparison groups; designs include cohort analytic, interrupted time series, and correlational designs.

Quasi-randomised study: participants are not randomly allocated to groups, but some other form of allocation is used (eg, day of the week, month of birth).

Random effects model[4]: gives a summary estimate of the magnitude of effect in meta-analysis. It takes into account both within-study and between-study variance and gives a wider confidence interval to the estimate than a fixed effects model if there is significant between-study variation.

Relative benefit increase (RBI): the proportional increase in the rates of good events between experimental and control participants; it is reported as a percentage (%).

Relative benefit reduction (RBR): the proportional decrease in rates of good events between experimental and control participants; it is reported as a percentage (%).

Relative risk (RR): risk of adverse effects with a treatment relative to risk for those who do not receive treatment.

Relative risk increase (RRI): the proportional increase in the rates of bad events between experimental and control participants; it is reported as a percentage (%).

Relative risk reduction (RRR): the proportional reduction in the rates of bad events between experimental and control participants; it is reported as a percentage (%).

Sensitivity analysis: tests the robustness of the observed results relative to sensible modifications in important variables.

Stratified randomisation[4]: used in trials to ensure that equal numbers of participants with a particular characteristic (eg, age) are allocated to each comparison group.

Weighted: statistical analysis accounts for differences in certain important variables.

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