1. Record Nr. UNINA9910828428003321 Autore Campbell Michael J. <1950-> Titolo How to design, analyse and report cluster randomised trials in medicine and health related research / / Michael J. Campbell and Stephen J. Walters Pubbl/distr/stampa Chichester, England:,: Wiley,, 2014 ©2014 **ISBN** 1-118-76360-2 1-118-76345-9 1-118-76359-9 Descrizione fisica 1 online resource (268 p.) Collana Statistics in Practice Disciplina 610.72/4 Soggetti Randomized Controlled Trials as Topic Data Interpretation, Statistical Health Services Research - method Research Design Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover; Title Page; Copyright; Contents; Preface; Acronyms and abbreviations; Chapter 1 Introduction; 1.1 Randomised controlled trials; 1.1.1 A-Allocation at random; 1.1.2 B-Blindness; 1.1.3 C-Control; 1.2 Complex interventions; 1.3 History of cluster randomised trials; 1.4 Cohort and field trials; 1.5 The field/community trial; 1.5.1 The REACT trial; 1.5.2 The Informed Choice leaflets trial; 1.5.3 The Mwanza trial: 1.5.4 The paramedics practitioner trial: 1.6 The cohort trial; 1.6.1 The PoNDER trial; 1.6.2 The DESMOND trial; 1.6.3 The Diabetes Care from Diagnosis trial; 1.6.4 The REPOSE trial 1.6.5 Other examples of cohort cluster trials 1.7 Field versus cohort designs; 1.8 Reasons for cluster trials; 1.9 Between- and within-cluster variation; 1.10 Random-effects models for continuous outcomes; 1.10.1 The model; 1.10.2 The intracluster correlation coefficient; 1.10.3 Estimating the intracluster correlation (ICC) coefficient; 1.10.4

Link between the Pearson correlation coefficient and the intraclass correlation coefficient; 1.11 Random-effects models for binary

outcomes; 1.11.1 The model; 1.11.2 The ICC for binary data; 1.11.3 The coefficient of variation

1.11.4 Relationship between cvc and for binary data 1.12 The design effect; 1.13 Commonly asked questions; 1.14 Websources; Exercise; Appendix 1.A; Chapter 2 Design issues; 2.1 Introduction; 2.2 Issues for a simple intervention; 2.2.1 Phases of a trial; 2.2.1.1 Preclinical; 2.2.1.2 Sequence of phases; 2.2.2 'Pragmatic' and 'explanatory' trials; 2.2.3 Intention-to-treat and per-protocol analyses; 2.2.4 Non-inferiority and equivalence trials; 2.3 Complex interventions; 2.3.1 Design of complex interventions; 2.3.1.1 Theory (preclinical); 2.3.2 Phase I modelling/qualitative designs

2.3.3 Pilot or feasibility studies 2.3.4 Example of pilot/feasibility studies in cluster trials; 2.4 Recruitment bias; 2.5 Matched-pair trials; 2.5.1 Design of matched-pair studies; 2.5.2 Limitations of matched-pairs designs; 2.5.3 Example of matched-pair design: The Family Heart Study; 2.6 Other types of designs; 2.6.1 Cluster factorial designs; 2.6.2 Example cluster factorial trial; 2.6.3 Cluster crossover trials; 2.6.4 Example of a cluster crossover trial; 2.6.5 Stepped wedge; 2.6.6 Pseudorandomised trials; 2.7 Other design issues; 2.8 Strategies for improving precision; 2.9 Randomisation

2.9.1 Reasons for randomisation 2.9.2 Simple randomisation; 2.9.3 Stratified randomisation; 2.9.4 Restricted randomisation; 2.9.5 Minimisation; Exercise; Appendix 2.A; Chapter 3 Sample size: How many subjects/clusters do I need for my cluster randomised controlled trial?; 3.1 Introduction; 3.1.1 Justification of the requirement for a sample size; 3.1.2 Significance tests, P-values and power; 3.1.3 Sample size and cluster trials; 3.2 Sample size for continuous data-comparing two means; 3.2.1 Basic formulae; 3.2.2 The design effect (DE) in cluster RCTs; 3.2.3 Example from general practice

3.3 Sample size for binary data-comparing two proportions

Sommario/riassunto

"A much-needed guide to the design and analysis of cluster randomized trials, How to Design, Analyse and Report Cluster Randomised Trials in Medicine and Health Related Research delivers practical guidance on the design and analysis of cluster randomised trials (cRCTs) in health care research. Detailing how to use Stata and SPSS and R for statistical analysis, each analysis technique is carefully explained with mathematics kept to a minimum. Written in a clear, accessible style by experienced statisticians, the text provides a practical approach for applied statisticians and biomedical researchers" --Provided by publisher.