

1. Record Nr.	UNINA9910460494803321
Autore	Chan B. K. C (Bertram Kim-Cheong)
Titolo	Biostatistics for epidemiology and public health using R // Bertram K. C. Chan, PhD, PE
Pubbl/distr/stampa	New York, New York : , : Springer Publishing Company, , 2016 ©2016
ISBN	0-8261-1026-6
Descrizione fisica	1 online resource (460 p.)
Disciplina	610.15195
Soggetti	Biometry Epidemiology Programming languages (Electronic computers) Public health Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Cover; Title; Copyright; Contents; Preface; Share Biostatistics for Epidemiology and Public Health Using R; Chapter 1: Introduction; 1.1 Medicine, Preventive Medicine, Public Health, and Epidemiology; Medicine; Preventive Medicine and Public Health; Public Health and Epidemiology; Review Questions for Section 1.1; 1.2 Personal Health and Public Health; Personal Health Versus Public Health; Review Questions for Section 1.2; 1.3 Research and Measurements in EPDM and PH; EPDM: The Basic Science of PH; Main Epidemiologic Functions; The Cause of Diseases; Exposure Measurement in Epidemiology Additional IssuesReview Questions for Section 1.3; 1.4 BIOS and EPDM; Review Questions for Section 1.4; References; Chapter 2: Research and Design in Epidemiology and Public Health; Introduction; 2.1 Causation and Association in Epidemiology and Public Health; The Bradford-Hill Criteria for Causation and Association in Epidemiology; Legal Interpretation Using Epidemiology; Disease Occurrence; Review Questions for Section 2.1; 2.2 Causation and Inference in Epidemiology and Public Health; Rothman's Diagrams for Sufficient Causation of

Diseases; Causal Inferences; Using the Causal Criteria
Judging Scientific Evidence Review Questions for Section 2.2; 2.3
Biostatistical Basis of Inference; Modes of Inference; Levels of
Measurement; Frequentist BIOS in EPDM; Confidence Intervals in
Epidemiology and Public Health; Bayesian Credible Interval; Review
Questions for Section 2.3; 2.4 BIOS in EPDM and PH; Applications of
BIOS; BIOS in EPDM and PH; Processing and Analyzing Basic
Epidemiologic Data; Analyzing Epidemiologic Data; Using R; Evaluating
a Single Measure of Occurrence; Poisson Count (Incidence) and Rate
Data; Binomial Risk and Prevalence Data
Evaluating Two Measures of Occurrence-Comparison of Risk: Risk Ratio
and Attributable Risk Comparing Two Rate Estimates: Rate Ratio rr ;
Comparing Two Risk Estimates: Risk Ratio RR and Disease (Morbidity)
Odds Ratio DOR ; Comparing Two Odds Estimates From Case-Control:
The Salk Polio Vaccine Epidemiologic Study; Review Questions for
Section 2.4; Exercises for Chapter 2; Using Probability Theory; Disease
Symptoms in Clinical Drug Trials; Risks and Odds in Epidemiology;
Case-Control Epidemiologic Study; Mortality, Morbidity, and Fertility
Rates; Incidence Rates in Case-Cohort Survival Analysis
Prevalence Mortality Rates; Estimating Sample Sizes; References;
Appendix; Chapter 3: Data Analysis Using R Programming;
Introduction; 3.1 Data and Data Processing; Data Coding; Data Capture;
Data Editing; Imputations; Data Quality; Producing Results; Review
Questions for Section 3.1; 3.2 Beginning R; R and Biostatistics; A First
Session Using R; The R Environment; Review Questions for Section 3.2;
3.3 R as a Calculator; Mathematical Operations Using R; Assignment of
Values in R and Computations Using Vectors and Matrices;
Computations in Vectors and Simple Graphics
Use of Factors in R Programming
