

Basic Epidemiological Methods And Biostatistics A Practical Guidebook Jones And Bartlett Series In Health Science And Physical Edu

Includes fold-out companion website information guide.

Basic epidemiology provides an introduction to the core principles and methods of epidemiology, with a special emphasis on public health applications in developing countries. This edition includes chapters on the nature and uses of epidemiology; the epidemiological approach to defining and measuring the occurrence of health-related states in populations; the strengths and limitations of epidemiological study designs; and the role of epidemiology in evaluating the effectiveness and efficiency of health care. The book has a particular emphasis on modifiable environmental factors and encourages the application of epidemiology to the prevention of disease and the promotion of health, including environmental and occupational health.

Statistical ideas have been integral to the development of epidemiology and continue to provide the tools needed to interpret epidemiological studies. Although epidemiologists do not need a highly mathematical background in statistical theory to conduct and interpret such studies, they do need more than an encyclopedia of "recipes." Statistics for Epidemiology achieves just the right balance between the two approaches, building an intuitive understanding of the methods most important to practitioners and the skills to use them effectively. It develops the techniques for analyzing simple risk factors and disease data, with step-by-step extensions that include the use of binary regression. It covers the logistic regression model in detail and contrasts it with the Cox model for time-to-incidence data. The author uses a few simple case studies to guide readers from elementary analyses to more complex regression modeling. Following these examples through several chapters makes it easy to compare the interpretations that emerge from varying approaches. Written by one of the top biostatisticians in the field, Statistics for Epidemiology stands apart in its focus on interpretation and in the depth of understanding it provides. It lays the groundwork that all public health professionals, epidemiologists, and biostatisticians need to successfully design, conduct, and analyze epidemiological studies.

Highly praised for its broad, practical coverage, the second edition of this popular text incorporated the major statistical models and issues relevant to epidemiological studies. Epidemiology: Study Design and Data Analysis, Third Edition continues to focus on the quantitative aspects of epidemiological research. Updated and expanded, this edition

Bayesian Methods in Epidemiology

Methods, Techniques and Applications

Methods in Social Epidemiology

Epidemiology, Biostatistics, and Preventive Medicine

Basic Epidemiology and Biostatistics

Basic Biostatistics for Geneticists and Epidemiologists

Here is a book for clinicians, clinical investigators, trainees, and graduates who wish to develop their proficiency in the planning, execution, and interpretation of clinical and epidemiological research. Emphasis is placed on the design and analysis of research studies involving human subjects where the primary interest concerns principles of analytic (cause-and-effect) inference. The topic is presented from the standpoint of the clinician and assumes no previous knowledge of epidemiology, research design or statistics. Extensive use is made of illustrative examples from a variety of clinical specialties and subspecialties. The book is divided into three parts. Part I deals with epidemiological research design and analytic inference, including such issues as measurement, rates, analytic bias, and the main forms of observational and experimental epidemiological studies. Part II presents the principles and applications of biostatistics, with emphasis on statistical inference. Part III comprises four chapters covering such topics as diagnostic tests, decision analysis, survival (life-table) analysis, and causality.

Presents information from the field of epidemiology in a less technical, more accessible format. Covers major topics in epidemiology, from risk ratios to case-control studies to mediating and moderating variables, and more. Relevant topics from related fields such as biostatistics and health economics are also included.

This straightforward primer in basic statistics emphasizes its practical use in epidemiology and public health, providing an understanding of essential topics such as study design, data analysis and statistical methods used in the execution of medical research.

This perennial bestseller is an ideal introduction to epidemiology in health care. The fifth editon retains the book's simplicity and brevity, at the same time providing the reader with the core elements of epidemiology needed in health care practice and research. The text has been revised throughout, with new examples introduced to bring the book right up to date.

Basic Epidemiological Methods and Biostatistics

Statistical Methods for Global Health and Epidemiology

A Practical Guidebook

Applied Epidemiology

A Study Guide to Epidemiology and Biostatistics

Epidemiology for the Uninitiated

Occupational epidemiology has emerged as a distinct subsdiscipline of epidemiology and occupational medicine, addressing fundamental public health and scientific questions relating to the specification of exposure-response relationships, assessment of the adequacy of occupational exposure guidelines, and extrapolation of hazardous effects to other settings. This book reviews the wide range of principles and methods used in epidemiologic studies of working populations. It describes the historical development of occupational epidemiology, the approaches to characterizing workplace exposures, and the methods for designing and implementing epidemiologic studies. The relative strengths and limitations of different study designs are emphasized. Also included are more advanced discussions of statistical analysis, the estimation of doses to biological targets, and applications of the data derived from occupational epidemiology studies to disease modeling and risk assessment. The volume will serve both as a textbook in epidemiology and occupational medicine courses and as a practical handbook for the design, implementation, and interpretation of research in this field.

Since it first appeared in 1996, the open-source programming language R has become increasingly popular as an environment for statistical analysis and graphical output. This is the first textbook to present classical biostatistical analysis for epidemiology and related public health sciences to students using the R language. Based on the assumption that readers have minimal familiarity with statistical concepts, the author uses a step-by-step approach to building skills. The text encompasses biostatistics from basic descriptive and quantitative statistics to survival analysis and missing data analysis in epidemiology. Illustrative examples, including real-life research problems drawn from such areas as nutrition, environmental health, and behavioral health, engage students and reinforce the understanding of biostatistics and how to perform these analyses using R.

Epidemiologic studies provide research strategies for investigating public health and scientific questions relating to the factors that cause and prevent ailments in human populations. Statistics in Epidemiology: Methods, Techniques and Applications presents a comprehensive review of the wide range of principles, methods and techniques underlying prospective, retrospective and cross-sectional approaches to epidemiologic studies. Written for epidemiologists and other researchers without extensive backgrounds in statistics, this new book provides a clear and concise overview of the statistical tools used in epidemiology. Emphasis is given to the application of these statistical tools, and examples are provided to illustrate direct methods for applying common statistical techniques in order to obtain solutions to problems. Statistics in Epidemiology: Methods, Techniques and Applications goes beyond the elementary material found in basic epidemiology and biostatistics books and provides a detailed account of techniques.

The basis for much of medical public health practice comes from epidemiological research. This text describes current statistical tools that are used to analyze the association between possible risk factors and the actual risk of disease. Beginning with a broad conceptual framework on the disease process, it describes commonly used techniques for analyzing proportions and disease rates. These are then extended to model fitting, and the common threads of logic that bind the two analytic strategies together are revealed. Each chapter provides a descriptive rationale for the method, a worked example using data from a published study, and an exercise that allows the reader to practice the technique. Each chapter also includes an appendix that provides further details on the theoretical underpinnings of the method. Among the topics covered are Mantel-Haenszel methods, rates, survival analysis, logistic regression, and generalized linear models. Methods for incorporating aspects of study design, such as matching, into the analysis are discussed, and guidance is given for determining the power or the sample size requirements of a study. This text will give readers a foundation in applied statistics and the concepts of model fitting to develop skills in the analysis of epidemiological data.

Studying the Occurrence of Illness

A Workbook

A Primer for Clinical Investigators and Decision-Makers

Statistics in Epidemiology

Biostatistics for Epidemiology and Public Health Using R

Research Methods in Occupational Epidemiology

Concise, fast-paced, intensive introduction to clinical research design for students and clinical research professionals Readers will gain sufficient knowledge to pass the United States Medical Licensing Examination part I section in Epidemiology

Biostatistics for Epidemiologists is a unique book that provides a collection of methods that can be used to analyze data in most epidemiological studies. It examines the theoretical background of the methods described and discusses general principles that apply to the analysis of epidemiological data. Specific topics addressed include statistical interference in epidemiological research, important methods used for analyzing epidemiological data, multivariate models, dose-response analysis, analysis of the interaction between causes of disease, meta-analysis, and computer programs. Biostatistics for Epidemiologists will be a useful guide for all epidemiologists and public health professionals who rely on biostatistical data in their work.

For the new edition of Biostatistics and Epidemiology, Dr. Wassertheil-Smoller has included several new chapters (genetic statistics, molecular epidemiology, scientific integrity and research ethics) and a new appendix on the basic concepts of genetics and a glossary of genetic terminology. She has also expanded the coverage of multi-center trials (an important aspect of implementation of the standards of evidence-based medicine), controversies in screening for prostate, colon, breast, and other cancers.

Written by a biostatistics expert with over 20 years of experience in the field, Bayesian Methods in Epidemiology presents statistical methods used in epidemiology from a Bayesian viewpoint. It employs the software package WinBUGS to carry out the analyses and offers the code in the text and for download online.The book examines study designs that

The CDC Field Epidemiology Manual

Basic Statistics and Epidemiology

Modern Methods for Epidemiology

Principles, Methods and Applications

Basic Epidemiology

Epidemiology

Anyone who attempts to read genetics or epidemiology research literature needs to understand the essentials of biostatistics. This book, a revised new edition of the successful Essentials of Biostatistics has been written to provide such an understanding to those who have little or no statistical background and who need to keep abreast of new findings in this fast moving field. Unlike many other elementary books on biostatistics, the main focus of this book is to explain basic concepts needed to understand statistical procedures. This Book: Surveys basic statistical methods used in the genetics and epidemiology literature, including maximum likelihood and least squares. Introduces methods, such as permutation testing and bootstrapping, that are becoming more widely used in both genetic and epidemiological research. Is illustrated throughout with simple examples to clarify the statistical methodology. Explains Bayes’ theorem pictorially. Features exercises, with answers to alternate questions, enabling use as a course text. Written at an elementary mathematical level so that readers with high school mathematics will find the content accessible. Graduate students studying genetic epidemiology, researchers and practitioners from genetics, epidemiology, biology, medical research and statistics will find this an invaluable introduction to statistics.

Analytic procedures suitable for the study of human disease are scattered throughout the statistical and epidemiologic literature. Explanations of their properties are frequently presented in mathematical and theoretical language. This well-established text gives readers a clear understanding of the statistical methods that are widely used in epidemiologic research without depending on advanced mathematical or statistical theory. By applying these methods to actual data, Selvin reveals the strengths and weaknesses of each analytic approach. He combines techniques from the fields of statistics, biostatistics, demography and epidemiology to present a comprehensive overview that does not require computational details of the statistical techniques described. For the Third Edition, Selvin took out some old material (e.g. the section on rarely used cross-over designs) and added new material (e.g. sections on frequently used contingency table analysis). Throughout the text he enriched existing discussions with new elements, including the analysis of multi-level categorical data and simple, intuitive arguments that exponential survival times cause the hazard function to be constant. He added a dozen new applied examples to illustrate such topics as the pitfalls of proportional mortality data, the analysis of matched pair categorical data, and the age-adjustment of mortality rates based on statistical models. The most important new feature is a chapter on Poisson regression analysis. This essential statistical tool permits the multivariable analysis of rates, probabilities and counts.

A NEW AND ESSENTIAL RESOURCE FOR THE PRACTICE OF EPIDEMIOLOGY AND PUBLIC HEALTH The CDC Field Epidemiology Manual is a definitive guide to investigating acute public health events on the ground and in real time. Assembled and written by experts from the Centers for Disease Control and Prevention as well as other leading public health agencies, it offers current and field-tested guidance for every stage of an outbreak investigation -- from identification to intervention and other core considerations along the way. Modeled after Michael Gregg’s seminal book Field Epidemiology, this CDC manual ushers investigators through the core elements of field work, including many of the challenges inherent to outbreaks: working with multiple state and federal agencies or multinational organizations; legal considerations; and effective utilization of an incident-management approach. Additional coverage includes: · Updated guidance for new tools in field investigations, including the latest technologies for data collection and incorporating data from geographic information systems (GIS) · Tips for investigations in unique settings, including healthcare and community-congregate sites · Advice for responding to different types of outbreaks, including acute enteric disease; suspected biologic or toxic agents; and outbreaks of violence, suicide, and other forms of injury For the ever-changing public health landscape, The CDC Field Epidemiology Manual offers a new, authoritative resource for effective outbreak response to acute and emerging threats. *** Oxford University Press will donate a portion of the proceeds from this book to the CDC Foundation, an independent nonprofit and the sole entity created by Congress to mobilize philanthropic and private-sector resources to support the Centers for Disease Control and Prevention’s critical health protection work. To learn more about the CDC Foundation, visit www.cdcfoundation.org.

“Methods of Clinical Epidemiology” serves as a text on methods useful to clinical researchers. It provides a clear introduction to the common research methodology specific to clinical research for both students and researchers. This book sets out to fill the gap left by texts that concentrate on public health epidemiology and focuses on what is not covered well in such texts. The four sections cover methods that have not previously been brought together in one text and serves as a second level textbook of clinical epidemiology methodology. This book will be of use to postgraduate students in clinical epidemiology as well as clinical researchers at the start of their careers.

Epidemiology and Biostatistics

Biostatistics

Fundamentals of Epidemiology and Biostatistics

Clinical Epidemiology and Biostatistics

A Practical Approach

Multivariate Methods in Epidemiology

Featuring articles from the prestigious Encyclopedia of Biostatistics, many of which have been revised and updated to include recent developments, the Encyclopedia of Epidemiologic Methods also includes newly commissioned articles reflecting the latest thinking in Cancer Registries Birth Defect Registries Meta Analysis of Epidemiologic Studies Epidemiology Overview Sample Size Sex Ratio at Birth Software Design and Analysis Featuring contributions from leading experts in academia, government and industry, the Encyclopedia of Epidemiologic Methods has been designed to complement existing texts on the subject by providing further extensive, up-to-date coverage of specialised topics and by introducing the reader to the research literature. Offering a wealth of information in a single resource, the Encyclopedia of Epidemiologic Methods Offers an excellent introduction to a vast array of specialised topics Includes in-depth coverage of the statistical underpinnings of contemporary epidemiologic methods Provides concise definitions and introductions to numerous concepts found in the current literature Uses extensive cross-references, helping to facilitate further research, and enabling the reader to locate definitions and related concepts In addition to featuring extensive articles in the areas of descriptive and analytic epidemiology, the Encyclopedia also provides the reader with articles on case-control design and offers substantial coverage of allied statistical methods.

This book provides not only the theory of biostatistics, but also the opportunity of applying it in practice. In fact, each chapter presents one or more specific examples on how to perform an epidemiological or statistical data analysis and includes download access to the software and databases, giving the reader the possibility of replicating the analyses described.

Routine applications of advanced statistical methods on real data have become possible in the last ten years because desktop computers have become much more powerful and cheaper. However, proper understanding of the challenging statistical theory behind those methods remains essential for correct application and interpretation, and rarely seen in the medical literature. Modern Methods for Epidemiology provides a concise introduction to recent development in statistical methodologies for epidemiological and biomedical researchers. Many of these methods have become indispensable tools for researchers working in epidemiology and medicine but are rarely discussed in details by standard textbooks of biostatistics or epidemiology. Contributors of this book are experienced researchers and experts in their respective fields. This textbook provides a solid starting point for those who are new to epidemiology, and for those looking for guidance in more modern statistical approaches to observational epidemiology. Epidemiological and biomedical researchers who wish to overcome the mathematical barrier of applying those methods to their research will find this book an accessible and helpful reference for self-learning and research. This book is also a good source for teaching postgraduate students in medical statistics or epidemiology.

Comprehensive guide to basic principles of epidemiology and biostatistics. Concise study notes and exercises are included. Emphasis is on application. This edition includes a revised chapter on the appraisal of epidemiological studies, a new section on meta-analysis, and more.

A Guide to Design, Analysis and Discovery

Applied Epidemiology and Biostatistics

An Introduction to Traditional and Modern Epidemiology

Statistical Methods in Epidemiology

Board Review in Preventive Medicine and Public Health

Methods of Clinical Epidemiology

Basic Epidemiology and Biostatistics: A Practical Guide integrates biostatistics, epidemiology and their applications to public health, clinical, and social science projects. The book describes the role of epidemiological methods through selection of study design and project execution, interpretation optimum interpretation of statistical techniques, and the clinical/public health significance of the results. The book also provides analysis of statistical software outcomes and their interpretations, includes guidance for critical evaluation of published scientific reports, and provides technical aspects for decision making and research communication. Basic Epidemiology and Biostatistics provides information that will help public health, health care, and biomedical researchers in planning of their research, its execution and in-depth analysis of the data, and presenting the output from statistical testing. Offers an amalgamation of epidemiology and biostatistics principles Presents a selection of optimum research methodology Provides guidance for the interpretation of data for statistical and clinical significance

*The Biostatistics course is often found in the schools of public Health, medical schools, and, occasionally, in statistics and biology departments. The population of students in these courses is a diverse one, with varying preparedness. The book assumes the reader has at least two years of high school algebra, but no previous exposure to statistics is required. Written for individuals who might be fearful of mathematics, this book minimizes the technical difficulties and emphasizes the importance of statistics in scientific investigation. An understanding of underlying design and analysis is stressed. The limitations of the research, design and analytical techniques are stressed, allowing the reader to accurately interpret results. Real data, both processed and raw, are used extensively in examples and exercises. Statistical computing packages - MINITAB, SAS and Stata - are integrated. The use of the computer and software allows a sharper focus on the concepts, letting the computer do the necessary number-crunching. * Emphasizes underlying statistical concepts more than competing texts * Focuses on experimental design and analysis, at an elementary level * Includes an introduction to linear correlation and regression * Statistics are central: probability is downplayed * Presents life tables and survival analysis * Appendix with solutions to many exercises * Special instructor’s manual with chronic disease, and disease prevention technology.*

You'll find the latest on healthcare policy and financing, infectious diseases, chronic disease, and disease prevention technology. Epidemiology Kept Simple introduces the epidemiological principles and methods that are increasingly important in the practice of medicine and public health. With minimum use of technical language it fully explains terminology, concepts, and techniques associated with traditional and modern epidemiology. Topics include disease causality, epidemiologic measures, descriptive epidemiology, study design, clinical and primary prevention trials, observational cohort studies, case-control studies, and the consideration of random and systematic error in studies of causal factors. Chapters on the infectious disease process, outbreak investigation, and screening for disease are also included. The latter chapters introduce more advanced biostatistical and epidemiologic techniques, such as survival analysis, Mantel-Haenszel techniques, and tests for interaction. This third edition addresses all the requirements of the American Schools of Public Health (ASPH) Epidemiological Competencies, and provides enhanced clarity and readability on this difficult subject. Updated with new practical exercises, case studies and real world examples, this title helps you develop the necessary tools to interpret epidemiological data and prepare for board exams, and now also includes review questions at the end of each chapter. Epidemiology Kept Simple continues to provide an introductory guide to the use of epidemiological methods for graduate and undergraduate students studying public health, health education and nursing, and for all practicing health professionals seeking professional development.

An Introduction to Clinical Research

Encyclopedia of Epidemiologic Methods

Statistics for Epidemiology

Statistical Analysis of Epidemiologic Data

Biostatistics for Epidemiologists

Epidemiologic Methods

This text is an easy-to-understand, application-oriented guidebook for learning the basic principles of epidemiologic investigation. Numerous opportunities are presented to apply and test learning through problems and application exercises. Answers are provided.

Based on Kahn's An Introduction to Epidemiological Methods (Oxford, 1983), this book contains a wealth of new material, including a substantially expanded discussion of the statistical concepts and methods fundamental to epidemiology.

This is the second edition of the first book to provide a complete picture of the design, conduct and analysis of observational studies, the most common type of epidemiologic study. Stressing sample size estimation, sampling, and measurement error, the authors cover the full scope of observational studies, describing cohort studies, case-control studies, cross-sectional studies, and epidemic investigation. The use of statistical procedures is described in easy-to-understand terms.

This second edition of Epidemiologic Methods offers a rigorous introduction to the concepts and tools of epidemiologic research. Aimed chiefly at future epidemiologists, the book offers clear descriptions, practical examples, and question/answer sections for each of the science's key concepts. Authored by two award-winning epidemiology instructors, this book is ideally suited for use as a text in a graduate-level course sequence in epidemiologic methods. The book's chapters are organized around three main themes: general concepts and tools of epidemiology; major study designs; and special topics, including screening, outbreak investigations, and use of epidemiology to evaluate policies and programs. With additional exercises at the end of each chapter and expanded attention to topics such as confounding, this new edition of Epidemiologic Methods is an indispensable resource for the next generation of epidemiologic study.

Biostatistics and Epidemiology

Theory to Practice

Epidemiology Kept Simple

Methods in Observational Epidemiology

A Primer for Health and Biomedical Professionals

A Practical Guide

A thorough, practical reference on the social patterns behind health outcomes Methods in Social Epidemiology provides students and professionals with a comprehensive reference for studying the social distribution and social determinants of health. Covering the theory, models, and methods used to measure and analyze these phenomena, this book serves as both an introduction to the field and a practical manual for data collection and analysis. This new second edition has been updated to reflect the field's tremendous growth in recent years, including advancements in statistical modeling and study designs. New chapters delve into genetic methods, structural confounding, selection bias, network methods, and more, including new discussion on qualitative data collection with disadvantaged populations. Social epidemiology studies the way society's innumerable social interactions, both past and present, yields different exposures and health outcomes between individuals within populations. This book provides a thorough, detailed overview of the field, with expert guidance toward the real-world methods that fuel the latest advances. Identify, measure, and track health patterns in the population Discover how poverty, race, and socioeconomic factors become risk factors for disease Learn qualitative data collection techniques and methods of statistical analysis Examine up-to-date models, theory, and frameworks in the social epidemiology sphere As the field continues to evolve, researchers continue to identify new disease-specific risk factors and learn more about how the social system promotes and maintains well-known exposure disparities. New technology in data science and genomics allows for more rigorous investigation and analysis, while the general thinking in the field has become more targeted and attentive to causal inference and core assumptions behind effect identification. It's an exciting time to be a part of the field, and Methods in Social Epidemiology provides a solid reference for any student, researcher, or faculty in public health.

Applies traditional epidemiologic methods for determining disease etiology to the real-life applications of public health and health services research. This text contains a chapter on the development and use of systematic reviews and one on epidemiology and the law.

Biostatistics and Epidemiology/A Primer for Health Professionals offers practical guidelines and gives a concise framework for research and interpretation in the field. In addition to major sections covering statistics and epidemiology, the book includes a comprehensive exploration of scientific methodology, probability, and the clinical trial. The principles and methods described in this book are basic and apply to all medical subspecialties, psychology and education. The primer will be especially useful to public health officials and students looking for an understandable treatment of the subject.

This book examines statistical methods and models used in the fields of global health and epidemiology. It includes methods such as innovative probability sampling, data harmonization and encryption, and advanced descriptive, analytical and monitoring methods. Program codes using R are included as well as real data examples. Contemporary global health and epidemiology involves a myriad of medical and health challenges, including inequality of treatment, the HIV/AIDS epidemic and its subsequent control, the flu, cancer, tobacco control, drug use, and environmental pollution. In addition to its vast scales and telescopic perspective; addressing global health concerns often involves examining resource-limited populations with large geographic, socioeconomic diversities. Therefore, advancing global health requires new epidemiological design, new data, and new methods for sampling, data processing, and statistical analysis. This book provides global health researchers with methods that will enable access to and utilization of existing data. Featuring contributions from both epidemiological and biostatistical scholars, this book is a practical resource for researchers, practitioners, and students in solving global health problems in research, education, training, and consultation.

Encyclopedia of Epidemiology

Study Design and Data Analysis, Third Edition

A Primer for Health Professionals

Board Review in Preventive Medicine and Public Health prepares physicians for their initial and recertification board exams in the related specialties of preventive, occupational and aerospace medicine. Formatted in a question and answer based style that imitates material on specialty exams, each question is linked to a detailed answer. The book contains over 640 question and answer sets covering areas such as general public health, health management, health law, community health, infectious disease, clinical preventive medicine, occupational medicine, aerospace medicine, environmental medicine, correctional (prison) medicine, emergency preparedness, epidemiology and biostatistics. The book is an essential board preparation for physicians with a background in the fields of preventive medicine, occupational medicine, and aerospace medicine. It is also useful for medical students, public health students and those wishing to gain an understanding of the key points in these fields. Provides a question based format that imitates board exams in preventive, occupational and aerospace medicine Written by a specialist with board certification with the goal of elucidating the format, content and reasoning behind the board certification exam Enhances the reader's understanding of material with clear explanations of answers