

**Journal Of Epidemiology**

POPULATION HEALTH SCIENCE formalizes an emerging discipline at the crossroads of social and medical sciences, demography, and economics—an emerging approach to population studies that represents a seismic shift in how traditional health sciences measure and observe health events. Bringing together theories and methods from diverse fields, this text provides grounding in the factors that shape population health. The overall approach is one of consequentialist science: designing creative studies that identify causal factors in health with multidisciplinary rigor. Distilled into nine foundational principles, this book guides readers through population science studies that strategically incorporate:

- macrosocial factors
- multilevel, lifecourse, and systems theories
- prevention science fundamentals
- return on investment
- equity and efficiency
- Harnessing the power of scientific inquiry and codifying the knowledge base for a burgeoning field, POPULATION HEALTH SCIENCE arms readers with tools to shift the curve of population health.

"Even fully updated chapters include entries on the links between health and discrimination, income inequality, social networks and emotion, while four all-new chapters examine the role of policies in shaping health, including how to translate evidence into action with multi-level interventions."

It is an inescapable fact that causation, both generally (in populations), and specifically (in individuals), cannot be observed. Rather, causation is determined when it can be inferred that the risk of an observed injury or disease from a plausible cause is greater than the risk from other plausible causes. While many causal evaluations performed in forensic medicine are simplified by the fact that the circumstances surrounding the onset of an injury or disease clearly rule out competing causes (eg, a death following a fall), there are many cases that present a more complicated picture. It is these types of investigations, in which an analysis of comparative levels of risk from competing causes is needed to arrive at a reliable and accurate determination of the most likely cause, that forensic epidemiology (FE) is directed at. In Forensic Epidemiology, the authors present the legal and scientific theories underlying the methods by which risk is used in the investigation of individual causation. Methods and principles from epidemiology are combined with those from a multitude of other disciplines, including general medicine, pharmacology, forensic pathology, biostatistics, and biomechanics, inter alia, as a basis for investigating the plausibility of injury and disease exposures and mechanisms. The ultimate determination of the probability of causation (PC) results from an assessment of the strength of association of the investigated relationship in the individual, based on a comparison between the risk of disease or injury from the investigated exposure versus the risk of the same disease or injury occurring at the same point in time in the individual, but absent the exposure. The principles and methods described in Forensic Epidemiology will be of interest to those who work and study in the fields of forensic medicine, epidemiology, and the law. Historical perspective on how epidemiologic evidence of causation has been used in courts in the US and Europe Theory and science underlying the use of risk to assess individual causation Primer on epidemiologic methods, and various measures used to arrive at individualized comparative risk assessments and PC The use of statistical methods applied to publicly available data for ad hoc analysis of PC applicable to the specific circumstances of a case Background on complementary disciplines, including forensic pathology, death investigation, biomechanics, and survival analysis Examples of applied FE in the investigation of traffic injury and death, automotive and other product defect litigation, medical negligence, and criminal prosecution and defense

Journal of Epidemiology and Community Health  
 The CDC Field Epidemiology Manual  
 Surveys, Epidemiological Research, Programme Evaluation, Clinical Trials  
 Epidemiology for the Uninitiated  
 Principles and Practices  
 Mathematical Epidemiology of Infectious Diseases Model Building, Analysis and Interpretation O. Diekmann University of Utrecht, The Netherlands J. A. P. Heesterbeek Centre for Biometry Wageningen, The Netherlands The mathematical modelling of epidemics in populations is a vast and important area of study. It is about translating biological assumptions into mathematics, about mathematical analysis aided by interpretation and about obtaining insight into epidemic phenomena when translating mathematical results back into population biology. Model assumptions are formulated in terms of, usually stochastic, behaviour of individuals and then the resulting phenomena, at the population level, are unravelled. Conceptual clarity is attained, assumptions are stated clearly, hidden working hypotheses are attained and mechanistic links between different observables are exposed. Features: \* Model construction, analysis and interpretation receive detailed attention \* Uniquely covers both deterministic and stochastic viewpoints \* Examples of applications given throughout \* Extensive coverage of the latest research into the mathematical modelling of epidemics of infectious diseases \* Provides a solid foundation of modelling skills The reader will learn to translate, model, analyse and interpret, with the help of the numerous exercises. In literally working through this text, the reader acquires modelling skills that are also valuable outside of epidemiology, certainly within population dynamics, but even beyond that. In addition, the reader receives training in mathematical argumentation. The text is aimed at applied mathematicians with an interest in population biology and epidemiology, at theoretical biologists and epidemiologists. Previous exposure to epidemic concepts is not required, as all background information is given. The book is primarily aimed at self-study and ideally suited for small discussion groups, or for use as a course text.

Advances in genomics are expected to play a central role in medicine and public health in the future by providing a genetic basis for disease prediction and prevention. The transplantation of human gene discoveries into meaningful actions to improve health and prevent disease depends on scientific information from multiple disciplines, including epidemiology. This book describes the important role that epidemiologic methods play in the continuum from gene discovery to the development and application of genetic tests. It proceeds systematically from the fundamentals of genome technology and gene discovery, to epidemiologic approaches to gene characterization in the population, to the evaluation of genetic tests and the use in health services. These methodologic approaches are then illustrated with several disease-specific case studies. The book provides a scientific foundation that will help researchers, policy makers, and practitioners integrate genomics into medical and public health practice. The Encyclopedia of Epidemiology presents its state-of-the-art information from the field of epidemiology in a less technical and accessible style and format. With more than 600 entries, no single reference provides as comprehensive a resource in as focused and appropriate manner. The entries cover every major facet of epidemiology, from risk ratios to case-control studies to mediating and moderating variables, and much more. Relevant topics from related fields such as biostatistics and health economics are also included.

Human Genome Epidemiology  
 Population Health Science

Mathematical Epidemiology of Infectious Diseases  
 Abstracts of the 30th Annual Meeting, Edmonton, Alberta, Canada, June 12-14, 1997  
**Vols. 2-7 include Proceedings of the Society of Hygiene and Public Health of Johns Hopkins University.**  
**During the past twenty years there has been a dramatic increase in obesity in the United States. An estimated thirty percent of adults in the US are obese; in 1980, only fifteen percent were. The issue is gaining greater attention with the CDC and with the public health world in general. This book will offer practical information about the methodology of epidemiologic studies of obesity, suitable for graduate students and researchers in epidemiology, and public health practitioners with an interest in the issue. The book will be structured in four main sections, with the majority of chapters authored by Dr. Hu, and some authored by specialists in specific areas. The first section will consider issues surrounding the definition of obesity, measurement techniques, and the designs of epidemiologic studies. The second section will address the consequences of obesity, looking at epidemiologic studies that focus on cardio-vascular disease, diabetes, and cancer. The third section will look at determinants of obesity, reviewing a wide range of risk factors for obesity including diet, physical activity and sedentary behaviors, sleep disorders, psychosocial factors, physical environment, biochemical and genetic predictors, and intrauterine exposures. In the final section, the author will discuss the analytical issues and challenges for epidemiologic studies of obesity.**

**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.**  
**Global Burden of Disease and Risk Factors  
 Public Health and Social Justice in the Age of Chadwick  
 Encyclopedia of Epidemiology  
 Essential Epidemiology  
 Theory to Practice**

A simple and systematic guide to the planning and performance of investigations concerned with health and disease and with health care Offers researchers help in choosing a topic and to think about shaping objectives and ideas and to link these with the appropriate choice of method Fully updated with new sections on the use of the Web and computer programmes freely available in the planning, performance or analysis of studies  
 This intermediate textbook on oral epidemiology is designed to meet the needs of advanced students in the fields of Dentistry and Oral Health and dentists in the early stages of their career. Readers will find detailed information on the epidemiology of individual diseases and disorders and on hot topics and methods in oral health research. The extensive first part of the book explores the international epidemiological literature regarding a wide range of conditions, from dental caries and periodontal diseases to halitosis and malocclusions. In each case, the prevalence, disease-specific measures, and associated factors are identified. Attention is then focused on cutting-edge research topics in oral epidemiology, such as the intriguing mechanisms linking oral diseases and chronic general diseases, life course epidemiology, and the role of socioeconomic determinants of oral health. The final part of the book is devoted to description of the epidemiological methods and tools applied in the field of oral health. Here, the coverage includes validation of questionnaires, data collection and data analyses, and systematic reviews and meta-analyses.

This perennial bestseller is an ideal introduction to epidemiology in health care. The fifth edition 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.  
 A Scientific Foundation for Using Genetic Information to Improve Health and Prevent Disease

The Epidemiologic Study of the Elderly  
 Monograph series  
 Molecular Epidemiology  
 International Journal of Epidemiology (majalah).  
 This text provides a structured discussion, emphasizing principles and methods, of the public health and epidemiologic approach to the investigation of the health problems of older persons. The authors bring a wide variety of backgrounds to this text, including geriatrics, gerontology, sociology, survey research, and economics, as well as epidemiology and biostatistics. There is a synthesis of traditional health measures, such as morbidity and mortality, with more modern health indices such as functional status, social networks and support, medication use and mental and emotional conditions. The text will assist both practitioners and investigators in approaching the health problems of older persons in the community and population context. It is a uniquely comprehensive resource

**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  
 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](http://www.cdcfoundation.org).

**American Journal of Epidemiology  
 An Introduction for Students and Health Professionals  
 Poliomyelitis Surveillance  
 Applied Epidemiology**  
*The new edition of this popular textbook remains a clear and practical introduction to epidemiology for students in all areas of health. By emphasizing the role of epidemiology across a broad range of health monitoring and research, it gives students an understanding of the fundamental principles common to all areas of epidemiology. It also integrates the study of infectious and chronic diseases as well as public health and clinical epidemiology. Avoiding complex mathematics, it steps through the methods and potential problems underlying health data and reports, while maintaining a balance of rigour and clarity. The nuts-and-bolts of epidemiology are embedded in the wider international health perspective through recent and classical examples across different areas of health to engage students from a range of backgrounds. Concepts are illustrated with charts and graphs, and end-of-chapter questions test understanding (with answers provided). Online resources include further exercises, slides for teaching and useful weblinks.*  
*The second edition of this internationally acclaimed title is the ideal handbook for those involved in conducting epidemiological research. The objective of most epidemiological studies is to relate exposure to putative causal agents to the occurrence of a particular disease. The achievement of this objective depends critically on accurate measurement of exposure. This book reviews principles and techniques that can be applied to measuring a wide range of exposures, including demographic, behavioral, medical, genetic, and environmental factors. The book covers questionnaire design, conducting personal interviews, abstracting information from medical records, use of proxy respondents, and measurements from human specimens and in the environment. It gives a comprehensive account of measurement error and the estimation of its effects, and the design, analysis, and interpretation of validity and reliability studies. Emphasis is given to the ways in which the validity of measurements can be increased. Techniques to maximize participation of subjects in epidemiological studies are discussed, and ethical issues relevant to exposure measurement are outlined. This book will serve as a primer for both laboratory and field scientists who are shaping the emerging field of molecular epidemiology. Molecular epidemiology utilizes the same paradigm as traditional epidemiology but uses biological markers to identify exposure, disease or susceptibility. Schulte and Perera present the epidemiologic methods pertinent to biological markers. The book is also designed to enumerate the considerations necessary for valid field research and provide a resource on the salient and subtle features of biological indicators.*

**Social Epidemiology  
 Brazilian Journal of Epidemiology  
 Cancer Epidemiology  
 The SENIC Project  
 Ethics and Epidemiology**  
 A revisionist account of the story of the foundations of public health in industrial revolution Britain.  
 Strategic health planning, the cornerstone of initiatives designed to achieve health improvement goals around the world, requires an understanding of the comparative burden of diseases and injuries, their corresponding risk factors and the likely effects of intervention options. The Global Burden of Disease framework, originally published in 1990, has been widely adopted and accounting and has become the standard to guide the setting of health research priorities. This publication sets out an updated assessment of the situation, with an analysis of trends observed since 1990 and a chapter on the sensitivity of GBD estimates to various sources of uncertainty in methods and data.

Written by epidemiologists, ethicists and legal scholars, this book provides an in-depth account of the moral problems that often confront epidemiologists, including both theoretical and practical issues. The first edition has sold almost three thousand copies since it was published in 1996. This edition is fully revised and includes three new chapters: Ethical Issues in Epidemiology, and Ethical Issues in International Health Research and Epidemiology. These chapters collectively address important developments of the past decade. Three chapters from the first edition have also been reorganized: Ethical Optimized Study Designs in Epidemiology, Ethical Issues in Epidemiologic Research with Children, and The Ethics of Epidemiologic Research with Vulnerable Populations. In these chapters have been integrated into chapters on informed consent, confidentiality and privacy protection, and community-based intervention studies.

Uses of Epidemiology  
 Forensic Epidemiology  
 Principles and Practice  
 Collecting, evaluating and improving measures of disease risk factors  
 Current Bibliography of Epidemiology  
**After 9/11, forensic epidemiology emerged as a leading investigative tool, partnering public health officers with law enforcement like never before. Based on the authors' first-hand experience, Forensic Epidemiology brings to light the vast amounts of information collected by medical examiners that will be useful in advancing death investigation techniques among the forensic science, public health, and law enforcement fields. This practical resource begins with a brief overview of epidemiological science and the history of forensic epidemiology before examining the multiple functions of death certificates and the signature role of forensic epidemiologists in death investigations. Incorporating numerous illustrations and real-world examples, the book: Explains proven methods to collect, analyze, and interpret data for criminal investigations Defines the terminology, methodology, procedures, and goals of all sectors involved for more effective collaboration Examines deaths from natural, suicidal, accidental, homicidal, and undetermined causes Describes the various decomposition states and methods used to establish positive identity The increased frequency of criminal acts that involve deliberate biological and chemical agents underscores the need for collaboration between law enforcement investigators and public health professionals. As Forensic Epidemiology effectively demonstrates, when they work together, they can mount a powerful and successful response to threats to the American public. Dr. Steven A. Koehler was interviewed in Volume 12 of Anil Aggarwal's Internet Journal of Forensic Medicine and Toxicology.**  
**The thoroughly revised and updated Third Edition of the acclaimed Modern Epidemiology reflects both the conceptual development of this evolving science and the increasingly focal role that epidemiology plays in dealing with public health and medical problems. Coauthored by three leading epidemiologists, with sixteen additional contributors, this Third Edition is the most comprehensive and cohesive text on the principles and methods of epidemiologic research. The book covers a broad range of concepts and methods, such as basic measures of disease frequency and associations, study design, field methods, threats to validity, and assessing precision. It also covers advanced topics in data analysis such as Bayesian analysis, bias analysis, and hierarchical regression. Chapters examine specific areas of research such as disease surveillance, ecologic studies, social epidemiology, infectious disease epidemiology, genetic and molecular epidemiology, nutritional epidemiology, environmental epidemiology, reproductive epidemiology, and clinical epidemiology.**

**A basic textbook addressed to medical and public health students, clinicians, health professionals, and all others seeking to understand the principles and methods used in cancer epidemiology. Written by a prominent epidemiologist and experienced teacher at the London School of Hygiene and Tropical Medicine, the text aims to help readers become competent in the use of basic epidemiologic tools and capable of exercising critical judgment when assessing results reported by others. Throughout the text, a lively writing style and numerous illustrative examples, often using real research data, facilitate an easy understanding of basic concepts and methods. Information ranges from an entertaining account of the origins of epidemiology, through advice on how to overcome some of the limitations of survival analysis, to a checklist of questions to ask when considering sources of bias. Although statistical concepts and formulae are presented, the emphasis is consistently on the interpretation of the data rather than on the actual calculations. The text has 18 chapters. The first six introduce the basic principles of epidemiology and statistics. Chapters 7-13 deal in more depth with each of the study designs and interpretation of their findings. Two chapters, concerned with the problems of confounding and study size, cover more complex statistical concepts and are included for advanced study. A chapter on methodological issues in cancer prevention gives examples of epidemiology's contribution to primary prevention, screening and other activities for early detection, and tertiary prevention. The concluding chapters review the role of cancer registries and discuss practical considerations that should be taken into account in the design, planning, and conduct of any type of epidemiological research.**

**Research Methods in Community Medicine  
 Britain, 1800-1854  
 A Textbook on Oral Health Conditions, Research Topics and Methods  
 Principles of Exposure Measurement in Epidemiology  
 American Journal of Hygiene**  
 With continued progress in mapping and sequencing of the human genome, and increasing recognition of the role of genes in disease etiology, there is a need for a more sophisticated approach to the investigation of the causes of complex chronic diseases. This text integrates the principles, methods and approaches of epidemiology and genetics in the study of disease etiology. After a brief historical overview of genetics and epidemiology and their gradual rapprochement, the authors define the central theme of genetic epidemiology as the study of the role of genetic factors and their interaction with environmental factors in the occurrence of disease in populations. They describe fundamental research strategies of genetic epidemiology including population and family studies. Among the former are the study of the distribution of genetic traits and the role of nonspecific genetic indicators (such as inbreeding and admixture) in the occurrence of diseases. Among the latter are the analysis of familial aggregation of disease and its causes by epidemiologic methods as well as techniques of formal genetic analysis (variance components, segregation and linkage analysis). Finally, the authors discuss the increasing applications of genetic epidemiology in preventive medicine, public health surveillance, and the emerging ethical issues regarding use of genetic information in society.

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.

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.

**THE MEASUREMENT OF ILL HEALTH- SYMPOSIUM PUBLISHED IN INTERNATIONAL JOURNAL OF EPIDEMIOLOGY- 2 PARTS.**  
**Research Methods in Occupational Epidemiology  
 Principles and Methods  
 Methods in Social Epidemiology  
 Model Building, Analysis and Interpretation**  
 Social epidemiology is the study of how social interactions—social norms, laws, institutions, convential social conditions and behavior—affect the health of populations. This practical, comprehensive introduction to methods in social epidemiology is written by experts in the field. It is perfectly timed for the growth in interest among those in public health, community health, preventive medicine, sociology, political science, social work, and other areas of social research. Topics covered are: Introduction: Advancing Methods in Social Epidemiology The History of Methods of Social Epidemiology to 1965 Indicators of Socioeconomic Position Measuring and Analyzing 'Race' Racism and Racial Discrimination Measuring Health Inequalities A Conceptual Framework for Measuring Segregation and Its Association with Population Outcomes Measures of Residential Community Contexts Using Census Data to Approximate Neighborhood Effects Community-based Participatory Research: Rationale and Relevance for Social Epidemiology Network Methods in Social Epidemiology Identifying Social Interactions: A Review, Multilevel Studies Experimental Social Epidemiology: Controlled Community Trials Propensity Score Matching Methods for Social Epidemiology Natural Experiments and Instrumental Variable Analyses in Social Epidemiology and Using Causal Diagrams to Understand Common Problems in Social Epidemiology "Publication of this highly informative textbook clearly reflects the coming of age of many social epidemiology methods, the importance of which rests on their potential contribution to significantly improving the effectiveness of the population-based approach to prevention. This book should be of great interest notably to more advanced epidemiology students but also to epidemiologists in general, particularly those concerned with health policy and the translation of epidemiologic findings into public health practice. The cause of achieving a 'more complete' epidemiology envisaged by the editors has been significantly advanced by this excellent textbook." —Moyses Szklo, professor of epidemiology and editor-in-chief, American Journal of Epidemiology, Johns Hopkins University "Social epidemiology is a comparatively new field of inquiry that seeks to describe and explain the social and geographic distribution of health and of the determinants of health. This book considers the major methodological challenges facing this important field. Its chapters, written by experts in a variety of disciplines, are most often authoritative, typically provocative, and often debatable, but always worth reading." —Stephen W. Raudenbush, Lewis-Sebring Distinguished Service Professor, Department of Sociology, University of Chicago "The roadmap for a new generation of social epidemiologists. The publication of this treatise is a significant event in the history of the discipline." —Ichiro Kawachi, professor of social epidemiology, Department of Society, Human Development, and Health, Harvard University "Methods in Social Epidemiology not only illuminates the difficult questions that future generations of social epidemiologists must ask, it also identifies the paths they should boldly travel in the pursuit of answers, if this exciting interdisciplinary science is to realize its full potential. This beautifully edited volume appears at just the right moment to exert a profound influence on the field." —Sherman A. James, Susan B. King Professor of Public Policy Studies, professor of Community and Family Medicine, professor of African-American Studies, Duke University

**American Journal of Epidemiology, Special Issue  
 Modern Epidemiology  
 Obesity Epidemiology  
 Fundamentals of Genetic Epidemiology**