

Modern Infectious Disease Epidemiology

Outbreak Investigations Around the World is a collection of 17 case studies - some never before published - that uncover the details of actual infectious disease outbreaks from within the U.S. and around the world. Each case study is retold by the investigator who recalls the critical issues considered along the way. At the conclusion of each chapter, the investigator reviews the methods and processes that were employed to execute the investigation. Some of the most interesting investigations included in the text are: Legionnaires' pneumonia in Philadelphia the beginning of the AIDS epidemic

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.

Essentials of Infectious Disease Epidemiology is devoted specifically to the methods required to study infectious disease making the perfect introduction to the field for undergraduate and introductory masters-level public health students. It will provide students with the requisite skills to conduct, evaluate, and understand the field of infectious disease epidemiology.

Features modern research and methodology on the spread of infectious diseases and showcases a broad range of multi-disciplinary and state-of-the-art techniques on geo-simulation, geo-visualization, remote sensing, metapopulation modeling, cloud computing, and pattern analysis Given the ongoing risk of infectious diseases worldwide, it is crucial to develop appropriate analysis methods, models, and tools to assess and predict the spread of disease and evaluate the risk. Analyzing and Modeling Spatial and Temporal Dynamics of

Infectious Diseases features mathematical and spatial modeling approaches that integrate applications from various fields such as geo-computation and simulation, spatial analytics, mathematics, statistics, epidemiology, and health policy. In addition, the book captures the latest advances in the use of geographic information system (GIS), global positioning system (GPS), and other location-based technologies in the spatial and temporal study of infectious diseases. Highlighting the current practices and methodology via various infectious disease studies, *Analyzing and Modeling Spatial and Temporal Dynamics of Infectious Diseases* features: Approaches to better use infectious disease data collected from various sources for analysis and modeling purposes Examples of disease spreading dynamics, including West Nile virus, bird flu, Lyme disease, pandemic influenza (H1N1), and schistosomiasis Modern techniques such as Smartphone use in spatio-temporal usage data, cloud computing-enabled cluster detection, and communicable disease geo-simulation based on human mobility An overview of different mathematical, statistical, spatial modeling, and geo-simulation techniques *Analyzing and Modeling Spatial and Temporal Dynamics of Infectious Diseases* is an excellent resource for researchers and scientists who use, manage, or analyze infectious disease data, need to learn various traditional and advanced analytical methods and modeling techniques, and become aware of different issues and challenges related to infectious disease modeling and simulation. The book is also a useful textbook and/or supplement for upper-undergraduate and graduate-level courses in bioinformatics, biostatistics, public health and policy, and epidemiology. Marking the 50th anniversary of the foundation of the International Epidemiological Association, this is a compendium by the world's leading epidemiologists of how the subject has developed in the past 50 years. Der Erzähler erfindet (»Ich stelle mir vor:«) mögliche Lebensgeschichten dreier Personen: Da ist Gantenbein, der einen Blinden spielt, um so genauer seine Umwelt beobachten zu können. Oder da ist Enderlin, der immer »ein fremder Herr« bleibt. Auch Svoboda muß die Erfahrung machen, daß Liebe und Ehe endlich sind. Übrig im Spiel der erdichteten Rollen bleibt: Gantenbein. 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 contributions from sixteen experts in a variety of epidemiologic sub-disciplines, this new edition is by far the most comprehensive and cohesive text on the principles and methods of epidemiologic research. The book covers a broad range of concepts and methods, including epidemiologic measures of occurrence and effect, study designs, validity, precision, statistical interference, and causal diagrams. Topics in data analysis range from Bayesian analysis, sensitivity analysis, and bias analysis, with an extensive overview of modern regression methods including logistic and survival regression, splines, hierarchical

(multilevel) regression, propensity scores and other scoring methods, and g-estimation. Special-topics chapters cover disease surveillance, ecologic studies, social epidemiology, infectious disease epidemiology, genetic and molecular epidemiology, nutritional epidemiology, environmental epidemiology, reproductive epidemiology, clinical epidemiology, and meta-analysis.

Mathematical epidemiology of infectious diseases usually involves describing the flow of individuals between mutually exclusive infection states. One of the key parameters describing the transition from the susceptible to the infected class is the hazard of infection, often referred to as the force of infection. The force of infection reflects the degree of contact with potential for transmission between infected and susceptible individuals. The mathematical relation between the force of infection and effective contact patterns is generally assumed to be subjected to the mass action principle, which yields the necessary information to estimate the basic reproduction number, another key parameter in infectious disease epidemiology. It is within this context that the Center for Statistics (CenStat, I-Biostat, Hasselt University) and the Centre for the Evaluation of Vaccination and the Centre for Health Economic Research and Modelling Infectious Diseases (CEV, CHERMID, Vaccine and Infectious Disease Institute, University of Antwerp) have collaborated over the past 15 years. This book demonstrates the past and current research activities of these institutes and can be considered to be a milestone in this collaboration. This book is focused on the application of modern statistical methods and models to estimate infectious disease parameters. We want to provide the readers with software guidance, such as R packages, and with data, as far as they can be made publicly available.

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.

Molecular Tools and Infectious Disease Epidemiology examines the opportunities and methodologic challenges in the application of modern molecular genetic and biologic techniques to infectious disease epidemiology. The application of these techniques dramatically improves the measurement of disease and putative risk factors, increasing our ability to detect and track outbreaks, identify risk factors and detect new infectious agents. However, integration of these techniques into epidemiologic studies also poses new challenges in the design, conduct, and analysis. This book presents the key points of consideration when integrating molecular biology and epidemiology; discusses how using molecular tools in epidemiologic research affects program design and conduct; considers the ethical concerns that arise in molecular epidemiologic studies; and provides a context for understanding and interpreting scientific literature as a foundation for subsequent practical experience in the laboratory and in the field. The book is recommended for graduate and advanced undergraduate students studying infectious disease epidemiology and molecular epidemiology; and for the epidemiologist wishing to integrate molecular techniques into his or her studies. Presents the key points of consideration when integrating molecular biology and

epidemiology Discusses how using molecular tools in epidemiologic research affects program design and conduct Considers the ethical concerns that arise in molecular epidemiologic studies Provides a context for understanding and interpreting scientific literature as a foundation for subsequent practical experience in the laboratory and in the field

Read a fascinating interview with editor Tener Goodwin Veenema! Tener Veenema Interview Disaster planning and emergency preparedness have never been more critical to the nurses who serve as our front-line response. Today's pandemic threats of global terrorism, disease, and natural disasters make this comprehensive handbook of best practices a necessity--meeting the need for a nursing workforce that is adequately prepared to respond to any disaster or public health emergency. In addition to a thorough update based on the most recent recommendations, this second edition contains six new chapters: Emergency Health Services (EMS and other first responders) Burn Assessment and Management Explosive & Traumatic Terrorism Caring for High-Risk, High-Vulnerability Patients Emerging Infectious Disease (avian and other flu pandemics) Chemical Decontamination All content reflects the guidelines provided in the Federal Disaster Response Plan and the National Incident Management System (NIMS) and therapeutic recommendations from the national Centers for Disease Control and Prevention. Disaster Nursing will prepare any nurse or EMS team to provide health care under a variety of disaster conditions.

Hardly a day goes by without news headlines concerning infectious disease threats. Currently the spectre of a pandemic of influenza A|H1N1 is raising its head, and heated debates are taking place about the pro's and con's of vaccinating young girls against human papilloma virus. For an evidence-based and responsible communication of infectious disease topics to avoid misunderstandings and overreaction of the public, we need solid scientific knowledge and an understanding of all aspects of infectious diseases and their control. The aim of our book is to present the reader with the general picture and the main ideas of the subject. The book introduces the reader to methodological aspects of epidemiology that are specific for infectious diseases and provides insight into the epidemiology of some classes of infectious diseases characterized by their main modes of transmission. This choice of topics bridges the gap between scientific research on the clinical, biological, mathematical, social and economic aspects of infectious diseases and their applications in public health. The book will help the reader to understand the impact of infectious diseases on modern society and the instruments that policy makers have at their disposal to deal with these challenges. It is written for students of the health sciences, both of curative medicine and public health, and for experts that are active in these and related domains, and it may be of interest for the educated layman since the technical level is kept relatively low.

Infectious disease surveillance has evolved at an extraordinary pace during the past several decades, and continues to do so. It is increasingly used to inform public health practice in addition to its use as a tool for early detection of epidemics. It is therefore crucial that students of public health and epidemiology have a sound understanding of the concepts and principles that underpin modern surveillance of infectious disease. Written by leaders in the field, who have vast hands-on experience in conducting surveillance and teaching applied public health, Concepts and Methods in Infectious Disease Surveillance is comprised of four sections. The first section provides an overview, a description of systems used by public health jurisdictions in the United States and legal considerations for surveillance. The second section presents chapters on major program-area or disease-specific surveillance systems, including those that monitor bacterial infections, foodborne diseases, healthcare-associated infections, and HIV/AIDS. The following section is devoted to methods for conducting surveillance and also approaches for data analysis. A concluding section summarizes communication of surveillance findings, including the use of traditional and social media, in addition to showcasing lessons learned from the New York City Department of Health's experience in surveillance and

epidemiology training. This comprehensive new book covers major topics at an introductory to intermediate level, and will be an excellent resource for instructors. Suitable for use in graduate level courses in public health, human and veterinary medicine, and in undergraduate programs in public-health-oriented disciplines, *Concepts and Methods in Infectious Disease Surveillance* is also a useful primer for frontline public health practitioners, hospital epidemiologists, infection control practitioners, laboratorians in public health settings, infectious disease researchers, and medical and public health informaticians interested in a concise overview of infectious disease surveillance.

This book focuses on how to formulate a mental health response with respect to the unique elements of pandemic outbreaks. Unlike other disaster psychiatry books that isolate aspects of an emergency, this book unifies the clinical aspects of disaster and psychosomatic psychiatry with infectious disease responses at the various levels, making it an excellent resource for tackling each stage of a crisis quickly and thoroughly. The book begins by contextualizing the issues with a historical and infectious disease overview of pandemics ranging from the Spanish flu of 1918, the HIV epidemic, Ebola, Zika, and many other outbreaks. The text acknowledges the new infectious disease challenges presented by climate changes and considers how to implement systems to prepare for these issues from an infection and social psyche perspective. The text then delves into the mental health aspects of these crises, including community and cultural responses, emotional epidemiology, and mental health concerns in the aftermath of a disaster. Finally, the text considers medical responses to situation-specific trauma, including quarantine and isolation-associated trauma, the mental health aspects of immunization and vaccination, survivor mental health, and support for healthcare personnel, thereby providing guidance for some of the most alarming trends facing the medical community. Written by experts in the field, *Psychiatry of Pandemics* is an excellent resource for infectious disease specialists, psychiatrists, psychologists, immunologists, hospitalists, public health officials, nurses, and medical professionals who may work patients in an infectious disease outbreak.

Die konnatale Zytomegalievirusinfektion (CMV) ist die häufigste intrauterin übertragene Virusinfektion, mit teilweise schwerwiegenden Folgen für das noch ungeborene Kind. Dieses Buch ist die bisher einzige Zusammenfassung der bis ins Jahr 2001 erschienenen Literatur zur Inzidenz und Prävalenz der CMV-Infektion in der Schwangerschaft, der Übertragungsrate, den Auswirkungen auf das Kind, möglicher diagnostischer und therapeutischer Strategien, sowie einer auf den publizierten Daten beruhenden Kosten-Nutzen-Rechnung. Ein allgemeiner Teil, sowie die Darstellung möglicher pathophysiologische Mechanismen der transplazentaren Übertragung vervollständigen das Thema. Als konkretes Beispiel wurde die in der Steiermark aufgetretene konnatale CMV Infektion herangezogen. Das Buch liefert Basisinformationen zum Thema der konnatalen CMV und einen Überblick vom derzeitigen Stand des Wissens und den therapeutischen Möglichkeiten.

Highly practical yet authoritative, the new edition of *Modern Infectious Disease Epidemiology* has been thoroughly updated and revised in line with changing health concerns. This successful book continues to outline the tools available to the infectious disease student or clinician seeking a thorough background in the epidemiology of infectious and communicable diseases. Building on many case studies and practical scenarios included, the book then uses the tools learnt to illustrate the fundamental concepts of the study of infectious diseases, such as infection spread, surveillance and control, infectivity, incubation periods, seroepidemiology, and immunity in populations. New edition of this popular book, completely revised and updated Retains the clarity and down-to-earth approach praised in previous editions Successfully combines epidemiological theory with the principles of infectious disease treatment and control A highly experienced author brings a personal and unique approach to this important subject All students of epidemiology, infectious disease medicine and microbiology will find this text

invaluable, ensuring its continued popularity.

A Historical Introduction to Mathematical Modeling of Infectious Diseases: Seminal Papers in Epidemiology offers step-by-step help on how to navigate the important historical papers on the subject, beginning in the 18th century. The book carefully, and critically, guides the reader through seminal writings that helped revolutionize the field. With pointed questions, prompts, and analysis, this book helps the non-mathematician develop their own perspective, relying purely on a basic knowledge of algebra, calculus, and statistics. By learning from the important moments in the field, from its conception to the 21st century, it enables readers to mature into competent practitioners of epidemiologic modeling. Presents a refreshing and in-depth look at key historical works of mathematical epidemiology Provides all the basic knowledge of mathematics readers need in order to understand the fundamentals of mathematical modeling of infectious diseases Includes questions, prompts, and answers to help apply historical solutions to modern day problems

Only a few decades ago, we were ready to declare victory over infectious diseases. Today, infectious diseases are responsible for significant morbidity and mortality throughout the world. This book examines the epidemiology and social impact of past and present infectious disease epidemics in the developing and developed world. In the introduction, the authors define global health as a discipline, justify its critical importance in the modern era, and introduce the Millennium Development Goals, which have become critical targets for most of the developing world. The first half of the volume provides an epidemiological overview, exploring early and contemporary perspectives on disease and disease control. An analysis of nutrition, water, and sanitation anchors the discussion of basic human needs. Specific diseases representing both "loud" and "silent" emergencies are investigated within broader structures of ecological and biological health such as economics, education, state infrastructure, culture, and personal liberty. The authors also examine antibiotic resistance, AIDS, malaria, tuberculosis, and pandemic influenza, and offer an epilogue on diseases of affluence, which now threaten citizens of countries both rich and poor. A readable guide to specific diseases, richly contextualized in environment and geography, this book will be used by health professionals in all disciplines interested in global health and its history and as a textbook in university courses on global health.

Communicable diseases are major global health concerns that can devastate whole populations. This revised and updated textbook examines communicable diseases at the community level from an epidemiological perspective, covering both theory and practice in a systematic and globally comprehensive overview of communicable diseases and their control. It includes expanded coverage of epidemiology and clinical aspects, many summary tables and coverage of both developed and developing countries from tuberculosis and malaria to bioterrorism and hospital infections, drawing on the author's personal experience of working in many global locations.

Reinhard Kaiser-Mühlecker schreibt die Geschichte zweier Brüder und ihrer Heimat in Oberösterreich – ein mit biblischer Wucht erzählter Roman um Missverständnisse, Tötungen, Familientragödien und Befreiungsversuche. Alexander kehrt von seinem Auslandseinsatz als Soldat internationaler Truppen in die Heimat zurück. Seine Unruhe treibt ihn bald wieder fort. Sein jüngerer Bruder Jakob führt unterdessen den elterlichen Hof. Als sich sein Freund aufhängt, wird Jakob die Schuldgefühle nicht mehr los. Der Vater fabuliert von phantastischen Geschäftsideen, während er heimlich Stück für Stück des Ackerlandes verkaufen muss. Mit großer poetischer Ruhe und Kraft erzählt Reinhard Kaiser-Mühlecker von den Menschen, die durch Verwandtschaft, Gerede, Mord und religiöse Sehnsüchte aneinander gebunden sind. Es ist die Geschichte zweier Brüder, die dieser Welt zu entkommen versuchen – eine zeitlose und berührende Geschichte von zwei Menschen, die nach Rettung suchen.

The Oxford Textbook of Infectious Disease Control: A Geographical Analysis from Medieval

Quarantine to Global Eradication is a comprehensive analysis of spatial theory and the practical methods used to prevent the geographical spread of communicable diseases in humans. Drawing on current and historical examples spanning seven centuries from across the globe, this indispensable volume demonstrates how to mitigate the public health impact of infections in disease hotspots and prevent the propagation of infection from such hotspots into other geographical locations. Containing case studies of longstanding global killers such as influenza, measles and poliomyelitis, through to newly emerged diseases like SARS and highly pathogenic avian influenza in humans, this book integrates theory, data and spatial analysis and locates these quantitative analyses in the context of global demographic and health policy change. Beautifully illustrated with over 100 original maps and diagrams to aid understanding and assimilation, in six sections the authors examine surveillance, quarantine, vaccination, and forecasting for disease control. The discussion covers theoretical approaches, techniques and systems central to mitigating disease spread, and methods that deliver practical disease control. Essential information is also provided on the geographical eradication of diseases, including the design of early warning systems that detect the geographical spread of epidemics, enabling students and practitioners to design spatially-targeted control strategies. Despite the early hope of eradication of many communicable diseases after the global eradication of smallpox by 1979, the world is still working at the control and elimination of the spatial spread of newly-emerging and resurgent infectious diseases. Learning from past examples and incorporating modern surveillance and reporting techniques that are used to design value-for-money spatially-targeted interventions to protect public health, the Oxford Textbook of Infectious Disease Control is an essential resource for all those working in, or studying ways to control the spread of communicable diseases between humans in a timely and cost-effective manner. It is ideal for specialists and students in infectious disease control as well as those in the medical sciences, epidemiology, demography, public health, geography, and medical history.

Argues that illnesses such as AIDS and drug-resistant tuberculosis, malaria, and typhoid target poor communities.

Now in a fully revised Fourth Edition, *Modern Epidemiology* remains the gold standard text in this complex and evolving field. This edition continues to provide comprehensive coverage of the principles and methods for the design, analysis, and interpretation of epidemiologic research. Featuring a new format allowing space for margin notes, this edition

- Reflects both the conceptual development of this evolving science and the increasing role that epidemiology plays in improving public health and medicine.
- Features new coverage of methods such as agent-based modeling, quasi-experimental designs, mediation analysis, and causal modeling.
- Updates coverage of methods such as concepts of interaction, bias analysis, and time-varying designs and analysis.
- Continues to cover the full breadth of epidemiologic methods and concepts, including epidemiologic measures of occurrence and effect, study designs, validity, precision, statistical interference, field methods, surveillance, ecologic designs, and use of secondary data sources.
- Includes data analysis topics such as Bayesian analysis, probabilistic bias analysis, time-to-event analysis, and an extensive overview of modern regression methods including logistic and survival regression, splines, longitudinal and cluster-correlated/hierarchical data analysis, propensity scores and other scoring methods, and marginal structural models.
- Summarizes the history, specialized aspects, and future directions of topical areas, including among others social epidemiology, infectious disease epidemiology, genetic and molecular epidemiology, psychiatric epidemiology, injury and violence epidemiology, and pharmacoepidemiology.

This unique book covers many major disease surveillance systems, drawing on the experiences of leading experts from around the world. Beginning with an overview of the newly revised International Health Regulations from the World Health Organization, the book

progresses to explore surveillance systems currently in practice. Examples included are as far ranging as surveillance for antimicrobial-resistant foodborne pathogens, vaccine adverse events, influenza and HIV/AIDS, to communicable disease surveillance during complex emergencies in Iraq and Sudan. Infectious Disease Surveillance also covers the use of modern technologies to track infectious diseases, including molecular epidemiologic techniques and electronic means for data collection and distribution. Other chapters discuss evaluation of surveillance methods, ethical considerations and legal issues. The book concludes with a review of historical lessons learned from the application of surveillance in disease control—for smallpox in the 1970s and for severe acute respiratory syndrome (SARS) in 2003. A comprehensive resource to improve the tracking of infectious diseases Offers perspectives on best practices through examples of a wide variety of surveillance systems from around the globe Acts as a starting point for design of new surveillance systems Serves as an easy reference for key information Designed for frontline public health practitioners engaged in communicable disease control, epidemiologists, clinical microbiologists, and students of public health and epidemiology, this book portrays both the conceptual framework and the practical aspects of infectious disease surveillance.

The second edition of Modern Infectious Disease Epidemiology, in line with changing health concerns, is a thorough revision of the first. Written from an infectious disease perspective throughout, the book aims to teach epidemiology to those with a background in this field. It seeks to fill the gap between the standard textbooks of epidemiology, which rarely approach the subject from an infectious disease perspective, and standard books on infection surveillance and control, which tend to slant more towards microbiology and practical measures than towards analytical epidemiology. Divided into two parts, the first covers the tools of epidemiology much like other textbooks, but always from an infectious disease perspective. The second covers the role of contact pattern from an assessment angle, and uses the tools learnt to illustrate the study of fundamental infectious disease concepts, such as infectivity, incubation periods, seroepidemiology and immunity. This detailed theoretical epidemiology textbook is clearly set out, with an expanded chapter on practical statistical methods, and a new chapter on descriptive epidemiology. Key features include new clinical examples and infectious disease problems of recent interest, such as tuberculosis and vCJD. All students of epidemiology, infectious disease medicine, and microbiology will find this an invaluable guide. Modern Infectious Disease Epidemiology, Third Edition CRC Press

Schon unmittelbar nach Beginn des Corona-Lockdowns wurde über dessen Notwendigkeit diskutiert: War das Virus vielleicht doch »nur« eine harmlose Grippe? Wäre das »Schwedische Modell« eine realistische Alternative auch in anderen Ländern gewesen? Wieso hat die Politik in vielen Ländern das Risiko des größten Wirtschaftseinbruchs seit Jahrzehnten in Kauf genommen? Dirk Richter analysiert die Pandemie-Entwicklung im Frühjahr 2020 sowie deren Hintergründe und kommt zu dem Schluss: Die Maßnahmen wären nicht zwingend notwendig gewesen, aber länger zurückliegende Fehleinschätzungen und aktuelle gesellschaftliche Entwicklungen haben sie unvermeidlich gemacht.

An up-to-date and comprehensive treatment of biosurveillance techniques With the worldwide awareness of bioterrorism and drug-resistant infectious diseases, the need for surveillance systems to accurately detect emerging epidemics is essential for maintaining global safety. Responding to these issues, Disease Surveillance brings together fifteen eminent researchers in the fields of medicine, epidemiology, biostatistics, and medical informatics to define the necessary elements of an effective disease surveillance program, including research, development, implementation, and operations. The surveillance systems and techniques presented in the text are designed to best utilize modern technology, manage emerging public health threats, and adapt to environmental changes. Following a historical overview detailing the need for disease surveillance systems, the text is divided into the following three parts: Part

One sets forth the informatics knowledge needed to implement a disease surveillance system, including a discussion of data sources currently used in syndromic surveillance systems. Part Two provides case studies of modern disease surveillance systems, including cases that highlight implementation and operational difficulties as well as the successes experienced by health departments in the United States, Canada, Europe, and Asia. Part Three addresses practical issues concerning the evaluation of disease surveillance systems and the education of future informatics and disease surveillance practitioners. It also assesses how future technology will shape the field of disease surveillance. This book's multidisciplinary approach is ideal for public health professionals who need to understand all the facets within a disease surveillance program and implement the technology needed to support surveillance activities. An outline of the components needed for a successful disease surveillance system combined with extensive use of case studies makes this book well-suited as a textbook for public health informatics courses.

This unique textbook presents the field of modern epidemiology as a whole; it does not restrict itself to particular aspects. It stresses the fundamental ideas and their role in any situation of epidemiologic practice. Its structure is largely determined by didactic viewpoints. Epidemiology is the art of defining and investigating the influence of factors on the health of populations. Hence the book starts by sketching the role of epidemiology in public health. It then treats the epidemiology of many particular diseases; mathematical modelling of epidemics and immunity; health information systems; statistical methods and sample surveys; clinical epidemiology including clinical trials; nutritional, environmental, social, and genetic epidemiology; and the habitual tools of epidemiologic studies. The book also reexamines the basic difference between the epidemiology of infectious diseases and that of non-infectious ones. The organization of the topics by didactic aspects makes the book ideal for teaching. All examples and case studies are situated in a single country, namely Vietnam; this provides a particularly vivid picture of the role of epidemiology in shaping the health of a population. It can easily be adapted to other developing or transitioning countries. This volume is well suited for courses on epidemiology and public health at the upper undergraduate and graduate levels, while its specific examples make it appropriate for those who teach these fields in developing or emerging countries. New to this edition, in addition to minor revisions of almost all chapters:

- Updated data about infectious and non-infectious diseases
- An expanded discussion of genetic epidemiology
- A new chapter, based on recent research of the authors, on how to build a coherent system of Public Health by using the insights provided by this volume.

Commended in the Public Health category of the 2002 BMA Medical Book Competition Awards.

Infektionskrankheiten sind weltweit für ca. ein Drittel aller Todesfälle verantwortlich. Das Auftreten neuer Erreger und Wiederauftreten von alten Infektionskrankheiten stellt ständig neue Herausforderungen für Ärzte, Biologen, Public Health Experten und die Politik. Moderne Surveillance und Kontrollmaßnahmen müssen den ständig veränderten Situationen angepasst werden. Das vorliegende Buch vermittelt fundierte Kenntnisse einer modernen Infektionsepidemiologie durch problembasiertes Erlernen von Grundkenntnissen über Prinzipien und Konzepte der Infektionsepidemiologie, Mathematische Modellierung, Präventionsstrategien z.B. durch Impfungen. Es behandelt wichtige infektionsepidemiologische Problemstellungen von neuen Infektionskrankheiten, nosokomialen Infektionen, BSE und weltweit weiterhin zunehmenden Krankheiten wie Malaria, Dengue, Tuberkulose und Ebola. Dem Buch liegt eine CD-ROM mit einfach handhabbaren Programmen und Datensätzen für praktische Übungen bei.

Recent years have seen an explosion in new kinds of data on infectious diseases, including data on social contacts, whole genome sequences of pathogens, biomarkers for susceptibility to infection, serological panel data, and surveillance data. The Handbook of Infectious Disease

Data Analysis provides an overview of many key statistical methods that have been developed in response to such new data streams and the associated ability to address key scientific and epidemiological questions. A unique feature of the Handbook is the wide range of topics covered. Key features Contributors include many leading researchers in the field Divided into four main sections: Basic concepts, Analysis of Outbreak Data, Analysis of Seroprevalence Data, Analysis of Surveillance Data Numerous case studies and examples throughout Provides both introductory material and key reference material

This book takes a historical and anthropological approach to understanding how non-human hosts and vectors of diseases are understood, at a time when emerging infectious diseases are one of the central concerns of global health. The volume critically examines the ways in which animals have come to be framed as 'epidemic villains' since the turn of the nineteenth century. Providing epistemological and social histories of non-human epidemic blame, as well as ethnographic perspectives on its recent manifestations, the essays explore this cornerstone of modern epidemiology and public health alongside its continuing importance in today's world. Covering diverse regions, the book argues that framing animals as spreaders and reservoirs of infectious diseases – from plague to rabies to Ebola – is an integral aspect not only to scientific breakthroughs but also to the ideological and biopolitical apparatus of modern medicine. As the first book to consider the impact of the image of non-human disease hosts and vectors on medicine and public health, it offers a major contribution to our understanding of human-animal interaction under the shadow of global epidemic threat.

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