Ebola An Emerging Infectious Disease Case Study
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Emerging and Re-Emerging Infectious Diseases, An Issue of Infectious Disease Clinics of North America E-Book
Pandemic
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Emerging Viral Diseases
Emerging Infectious Diseases with Limited Treatment Options: the Case of Ebola Hemorrhagic Fever in Uganda and Shiga Toxin Producing Escherichia Coli in the United States
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In consultation with Consulting Editor, Dr. Helen Boucher, Drs. Zumla and Hui have assembled an excellent clinical overview of the current priorities in treating emerging and re-emerging infections. A number of landmark events have occurred in the area of epidemic infections. The frequency and diversity of serious and drug/antibiotic-resistant infections are increasing. New and re-emerging infectious disease outbreaks continue to cause much human suffering and loss of life worldwide. Current priority infectious diseases concerns that threaten global health security are covered in this issue: Cholera; Typhoid and antibiotic-resistant strains; multi—drug-resistant Tuberculosis; Invasive Meningococcal disease; Invasive Pneumococcal disease; antibiotic-resistant bacterial, viral, and protozoal infections; diphtheria; pandemic influenza; MERS; SARS; Measles; viral haemorrhagic fevers; wild-type Polio virus; Zika; antibiotic-resistant sexually transmitted diseases; drug-resistant Malaria; ARV-resistant HIV; and fungal infections. This issue’s clinical review articles, written by authoritative and renowned experts in the area would, have broad appeal, from general internists to respiratory specialists. It should also prove interesting to infectious diseases specialists, health practitioners in the tropics, pulmonologists, internal medicine fellows, family physicians, and health-care policy makers in the west and developing countries. Medical students, postgraduates, and research fellows (both undergraduates and postgraduates) will also find this issue useful and to be a updated reference in the field of respiratory medicine, tropical medicine, and infectious diseases.

Pandemic

Emerging Infectious Diseases Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, Ebola for Medical Professionals has earned an impeccable reputation as an authoritative and exciting curated
research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola, curated by our experts for maximal significance. Articles include: Transmission dynamics and control of Ebola virus disease (EVD): a review; Ebola, epidemics, and ethics - what we have learned; Outbreaks of Ebola virus disease in Africa: the beginnings of a tragic saga; Need of surveillance response systems to combat Ebola outbreaks and other emerging infectious diseases in African countries; Recombinant lentogenic Newcastle disease virus expressing Ebola virus GP infects cells independently of exogenous trypsin and uses macropinocytosis as the major pathway for cell entry; Impact on nurses of ebola outbreak; Guidance for contact tracing of cases of Lassa fever, Ebola or Marburg haemorrhagic fever on an airplane: results of a European expert consultation; “A time of fear”: local, national, and international responses to a large Ebola outbreak in Uganda; Prediction and identification of mouse cytotoxic T lymphocyte epitopes in Ebola virus glycoproteins; Induction of ebolavirus cross-species immunity using retrovirus-like particles bearing the Ebola virus glycoprotein lacking the mucin-like domain; Ebola haemorrhagic fever outbreak in Masindi District, Uganda: outbreak description and lessons learned; Tackling Ebola: new insights into prophylactic and therapeutic intervention strategies; Full-length Ebola glycoprotein accumulates in the endoplasmic reticulum; A bioengineering approach for rational vaccine design towards the Ebola Virus; Large serological survey showing cocirculation of Ebola and Marburg viruses in Gabonese bat populations, and a high seroprevalence of both viruses in Rousettus aegyptiacus; Effect of Ebola virus proteins GP, NP and VP35 on VP40 VLP morphology; Packaging of actin into Ebola virus VLPs; and Ebola virus infection inversely correlates with the overall expression levels of promyelocytic leukaemia (PML) protein in cultured cells.
Emerging Viral Diseases The 2014–2015 Ebola epidemic in western Africa was the longest and most deadly Ebola epidemic in history, resulting in 28,616 cases and 11,310 deaths in Guinea, Liberia, and Sierra Leone. The Ebola virus has been known since 1976, when two separate outbreaks were identified in the Democratic Republic of Congo (then Zaire) and South Sudan (then Sudan). However, because all Ebola outbreaks prior to that in West Africa in 2014–2015 were relatively isolated and of short duration, little was known about how to best manage patients to improve survival, and there were no approved therapeutics or vaccines. When the World Health Organization declared the 2014-2015 epidemic a public health emergency of international concern in August 2014, several teams began conducting formal clinical trials in the Ebola affected countries during the outbreak. Integrating Clinical Research into Epidemic Response: The Ebola Experience assesses the value of the clinical trials held during the 2014–2015 epidemic and makes recommendations about how the conduct of trials could be improved in the context of a future international emerging or re-emerging infectious disease events.

Emerging Infectious Diseases with Limited Treatment Options: the Case of Ebola Hemorrhagic Fever in Uganda and Shiga Toxin Producing Escherichia Coli in the United States Finalist for the Los Angeles Times Book Prize | A New York Times Editor's Choice “[A] grounded, bracingly intelligent study” —Nature Prizewinning science journalist Sonia Shah presents a startling examination of the pandemics that have ravaged humanity—and shows us how history can prepare us to confront the most serious acute global health emergency of our time. Over the past fifty years, more than three hundred infectious diseases have either emerged or reemerged, appearing in places where they’ve never before been seen. Years before the sudden arrival of COVID-19, ninety percent of epidemiologists predicted that one of them would cause a deadly pandemic sometime in the next two generations. It might be Ebola, avian flu, a drug-resistant superbug, or something completely new, like the novel virus the world is confronting today. While it was impossible to predict the emergence of SARS-CoV-2—and it remains
impossible to predict which pathogen will cause the next global outbreak—by unraveling the stories of pandemics past we can begin to better understand our own future, and to prepare for what it holds in store. In Pandemic: Tracking Contagions, from Cholera to Ebola and Beyond, Sonia Shah interweaves history, original reportage, and personal narrative to explore the origins of epidemics, drawing parallels between cholera—one of history’s most deadly and disruptive pandemic-causing pathogens—and the new diseases that stalk humankind today. She tracks each stage of cholera’s dramatic journey, from its emergence in the South Asian hinterlands as a harmless microbe to its rapid dispersal across the nineteenth-century world, all the way to its latest beachhead in Haiti. Along the way she reports on the pathogens now following in cholera’s footsteps, from the MRSA bacterium that besieges her own family to the never-before-seen killers coming out of China’s wet markets, the surgical wards of New Delhi, and the suburban backyards of the East Coast. Delving into the convoluted science, strange politics, and checkered history of one of the world’s deadliest diseases, Pandemic is a work of epidemiological history like no other, with urgent lessons for our own time. “Shah proves a disquieting Virgil, guiding us through the hells ruled by [infectious diseases] . . . the power of Shah's account lies in her ability to track simultaneously the multiple dimensions of the public-health crises we are facing.”

—The Chicago Tribune

Ebola for Medical Professionals Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, A Physician's Guide to Ebola has earned an impeccable reputation as an authoritative and exciting curated research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola,
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Emerging Zoonoses The book begins with a review of zoonotic pandemics of the past: the “Black Death” or bubonic plague of the Middle Ages, the Spanish Influenza pandemic (derived from avian influenza) of the early 20th century, to the more modern pandemic of AIDS/HIV infection, which originated in Africa from primates. However, the majority of chapters focus on more recent zoonoses,
which have been recognized since the late 20th century to the present: · SARS and MERS coronaviruses · New avian influenza viruses · The tick-borne Henan fever virus from China · The tick-borne Heartland virus from the United States · Recently recognized bacterial pathogens, such as Streptococcus suis from pigs. In addition, reemergence of established zoonoses that have expanded their niche are reviewed, such as the spread of Zika virus and Chikungunya virus to the Western Hemisphere, and the emergence and spread of Ebola virus infection in Africa. A chapter is also devoted to an overview of the mechanisms and various types of animals involved in the transmission of diseases to humans, and the potential means of control and prevention. Many endemic and sporadic diseases are still transmitted by animals, through either direct or indirect contact, and zoonoses are estimated to account for about 75% of all new and emerging infectious diseases. It is predicted by public health experts that the next major pandemic of infectious disease will be of animal origin, making Emerging Zoonoses: A Worldwide Perspective a crucial resource to all health care specialists by providing them with much needed information on these zoonotic diseases.

Global Management of Infectious Disease After Ebola Overuse of antibiotics, ease of global travel and now terrorism are some of the reasons for the alarming increase in new, antibiotic resistant or "conquered" infectious diseases.

Ebola Virus Disease: Progress So Far in the Management of the Disease This book discusses the emerging challenges of the filovirus infections Ebola and Marburg virus disease. It reviews the complex ecology and role played by bats and other suspected intermediate hosts, including pigs. Also examined are the challenges for other modes of transmission and early diagnosis and detection. The immunology and pathogenesis of the infections and the impact on the host?s immune systems are discussed. The rare occurrence of Marburg virus infection in pregnancy and the long-term consequences of sexual
transmission by survivors is further examined. These discussions have the potential to support future management of outbreaks and guide research for vaccines and medication for Ebola and Marburg disease.

Emerging Infectious Diseases From SARS to avian influenza, Ebola virus and MERS-CoV, infectious diseases have received increasing attention in recent decades from scientists, risk managers, the media and the general public. What explains the constant emergence of infectious diseases? What are the related challenges? In five chapters, experts from different scientific fields analyse the ecological, social, institutional and political dynamics associated with emerging infectious diseases. This book discusses how the concepts, scientific results and action plans of international or governmental organizations are constructed and coordinated. In clear straightforward language, this book explores the continuities and discontinuities that occur with emerging infectious diseases, both in terms of collective action and in our relationship to the biological world. This book — coordinated by Serge Morand (Ecologist) and Muriel Figuié (Sociologist), and prefaced by Frédéric Keck (Anthropologist) — includes contributions from Claude Gilbert and Nathalie Brender (Political Scientists), François Roger (Veterinary Epidemiologist) and Patrick Zylberman (Health Historian).

Global Management of Infectious Disease After Ebola Emerging infectious diseases are diseases that newly emerge in a population or change the frequency or spatial distribution of their occurrence. Ebola Hemorrhagic Fever (EHF) and Shiga Toxin-producing Escherichia coli (STEC) infections are among diseases that emerged in the 1970s. The two diseases have limited treatment options with no vaccines. This paper is based on two case studies. The first case study utilized data from the 2007/2008 EHF outbreak in Uganda and investigated the epidemiological and clinical aspects of the outbreak. The second case study was based on a study done on STEC isolates collected from beef cattle at the North
Dakota State University Research Extension Center in Dickinson. The study investigated the prevalence of the common pathogenic STEC serotypes. The driving factors for the emergence of EHF and STEC, their prevention and control strategies and their challenges were discussed based on the case studies.

Ebola Virus Disease The contributions by epidemic modeling experts describe how mathematical models and statistical forecasting are created to capture the most important aspects of an emerging epidemic. Readers will discover a broad range of approaches to address questions, such as Can we control Ebola via ring vaccination strategies? How quickly should we detect Ebola cases to ensure epidemic control? What is the likelihood that an Ebola epidemic in West Africa leads to secondary outbreaks in other parts of the world? When does it matter to incorporate the role of disease-induced mortality on epidemic models? What is the role of behavior changes on Ebola dynamics? How can we better understand the control of cholera or Ebola using optimal control theory? How should a population be structured in order to mimic the transmission dynamics of diseases such as chlamydia, Ebola, or cholera? How can we objectively determine the end of an epidemic? How can we use metapopulation models to understand the role of movement restrictions and migration patterns on the spread of infectious diseases? How can we capture the impact of household transmission using compartmental epidemic models? How could behavior-dependent vaccination affect the dynamical outcomes of epidemic models? The derivation and analysis of the mathematical models addressing these questions provides a wide-ranging overview of the new approaches being created to better forecast and mitigate emerging epidemics. This book will be of interest to researchers in the field of mathematical epidemiology, as well as public health workers.

Bats and Viruses Climate change is one of the most widely debated and worrisome topics of our time.
As environmental changes become more prevalent, there has been evidence to suggest that there is a correlation between the environment and a substantial increase of infectious diseases and viruses around the globe. Examining the Role of Environmental Change on Emerging Infectious Diseases and Pandemics investigates the impact of climate change in relation to the emergence and spread of global diseases. Highlighting epidemiological factors and policies to govern epidemics and pandemics, this publication is a critical reference source for medical professionals, students, environmental scientists, advocates, policy makers, academics, and researchers.

Emerging Challenges in Filovirus Infections This book traces the social and environmental determinants of human infectious diseases from the Neolithic to the present day. Despite recent high profile discoveries of new pathogens, the major determinants of these emerging infections are ancient and recurring. These include changing modes of subsistence, shifting populations, environmental disruptions, and social inequalities. The recent labeling of the term "re-emerging infections" reflects a re-emergence, not so much of the diseases themselves, but rather a re-emerging awareness in affluent societies of long-standing problems that were previously ignored. An Unnatural History of Emerging Infections illustrates these recurring problems and determinants through an examination of three major epidemiological transitions. The First Transition occurred with the Agricultural Revolution beginning 10,000 years ago, bringing a rise in acute infections as the main cause of human mortality. The Second Transition first began with the Industrial Revolution; it saw a decline in infectious disease mortality and an increase in chronic diseases among wealthier nations, but less so in poorer societies. These culminated in today's "worst of both worlds syndrome" in which globalization has combined with the challenges of the First and Second Transitions to produce a Third Transition, characterized by a confluence of acute and chronic disease patterns within a single global disease ecology. This accessible text is suitable for advanced undergraduate and graduate level students and researchers in...
the fields of epidemiology, disease ecology, anthropology, health sciences, and the history of medicine. It will also be of relevance and use to undergraduate students interested in the history and social dynamics of infectious diseases.

Examining the Role of Environmental Change on Emerging Infectious Diseases and Pandemics

Academic Paper from the year 2018 in the subject Health - Miscellaneous, grade: na, University of Western Sydney, language: English, abstract: Infectious diseases are a constant threat to human life. Various scientific research findings since the 19th century have, however, paved the way for an improved comprehension of infectious diseases with regards to their natural history and the preventive measures to control them. These measures include vector control, immunisation, and water treatment. The implementation of these measures over the last century brought about huge victories for mankind in the battle to control infectious diseases. A good example of such victories is the eradication of smallpox in the year 1979. In recent decades nonetheless, the incidence of infectious diseases which were thought to be well controlled has increased in several locations across the world. Antimicrobial resistance is also on the rise globally and diseases which were previously unknown to man have also emerged. These issues have become global problems which require urgent assessment and resolution. This essay is an in-depth critical review of the literature on Ebola, one of the emerging communicable diseases. The essay will discuss the concept of disease emergence, provide a brief history about the Ebola virus, review the factors that have contributed to the emergence of Ebola infection, discuss some of the current policies to control this disease and make recommendations on strategies to improve on the current Ebola control policies.

Emerging Infectious Diseases Authored by two professionals in the medical and science fields, Ebola: An Emerging Infectious Disease Case Study analyzes the recent outbreak of the virus from a variety of
angles and provides context for our understanding of emerging infectious diseases, how they are treated, and how agencies and governments respond to them.

Emerging Communicable Diseases: Ebola New emerging diseases, new diagnostic modalities for resource-poor settings, new vaccine schedules all significant, recent developments in the fast-changing field of tropical medicine. Hunter’s Tropical Medicine and Emerging Infectious Diseases, 10th Edition, keeps you up to date with everything from infectious diseases and environmental issues through poisoning and toxicology, animal injuries, and nutritional and micronutrient deficiencies that result from traveling to tropical or subtropical regions. This comprehensive resource provides authoritative clinical guidance, useful statistics, and chapters covering organs, skills, and services, as well as traditional pathogen-based content. You’ll get a full understanding of how to recognize and treat these unique health issues, no matter how widespread or difficult to control. Includes important updates on malaria, leishmaniasis, tuberculosis and HIV, as well as coverage of Ebola, Zika virus, Chikungunya, and other emerging pathogens. Provides new vaccine schedules and information on implementation. Features five all-new chapters: Neglected Tropical Diseases: Public Health Control Programs and Mass Drug Administration; Health System and Health Care Delivery; Zika; Medical Entomology; and Vector Control – as well as 250 new images throughout. Presents the common characteristics and methods of transmission for each tropical disease, as well as the applicable diagnosis, treatment, control, and disease prevention techniques. Contains skills-based chapters such as dentistry, neonatal pediatrics and ICMI, and surgery in the tropics, and service-based chapters such as transfusion in resource-poor settings, microbiology, and imaging. Discusses maladies such as delusional parasitosis that are often seen in returning travelers, including those making international adoptions, transplant patients, medical tourists, and more.
Hunter's Tropical Medicine and Emerging Infectious Diseases E-Book Emerging Infectious Diseases offers an introduction to emerging and reemerging infectious disease, focusing on significant illnesses found in various regions of the world. Many of these diseases strike tropical regions or developing countries with particular virulence, others are found in temperate or developed areas, and still other microbes and infections are more indiscriminate. This volume includes information on the underlying mechanisms of microbial emergence, the technology used to detect them, and the strategies available to contain them. The author describes the diseases and their causative agents that are major factors in the health of populations the world over. The book contains up-to-date selections from infectious disease journals as well as information from the Centers for Disease Control and Prevention, the World Health Organization, MedLine Plus, and the American Society for Microbiology. Perfect for students or those new to the field, the book contains Summary Overviews (thumbnail sketches of the basic information about the microbe and the associated disease under examination), Review Questions (testing students' knowledge of the material), and Topics for Further Discussion (encouraging a wider conversation on the implications of the disease and challenging students to think creatively to develop new solutions). This important volume provides broad coverage of a variety of emerging infectious diseases, of which most are directly important to health practitioners in the United States.

Current Topics in Zika In the past half century, deadly disease outbreaks caused by novel viruses of animal origin - Nipah virus in Malaysia, Hendra virus in Australia, Hantavirus in the United States, Ebola virus in Africa, along with HIV (human immunodeficiency virus), several influenza subtypes, and the SARS (sudden acute respiratory syndrome) and MERS (Middle East respiratory syndrome) coronaviruses - have underscored the urgency of understanding factors influencing viral disease emergence and spread. Emerging Viral Diseases is the summary of a public workshop hosted in March 2014 to examine factors driving the appearance, establishment, and spread of emerging, re-emerging
and novel viral diseases; the global health and economic impacts of recently emerging and novel viral
diseases in humans; and the scientific and policy approaches to improving domestic and international
capacity to detect and respond to global outbreaks of infectious disease. This report is a record of the
presentations and discussion of the event.

Mathematical and Statistical Modeling for Emerging and Re-emerging Infectious Diseases Ebola virus
disease is one of the most deadly emerging infectious diseases in the world which causes severe
haemorrhagic fever, with a mortality rate of 50-90%. Following the largest outbreak in West Africa in
2014 which was the most deadly of all time challenging global health, so much concern has been tilted
towards the management of the disease. Some of the major global challenges that prolonged and
escalated the gravity of the 2014 outbreak were the lack of prompt, reliable and affordable diagnostic
tools, but most importantly no specific treatment and vaccines were available to manage the infection.
Though certain non-licensed experimental drugs as well as vaccines were introduced during the 2014
outbreak that contributed towards the control of the epidemic, their efficacy was yet to be confirmed in
randomized trials. Presently, a few rapid diagnostic test kits have been approved by FDA and WHO.
Also, several experimental drugs and vaccines are undergoing randomized clinical trials with a few
currently at phase III. Thus, it is our hope that most of these drugs and vaccines will be available in
future to better manage re-emerging Ebola infections or outbreaks.

Neoliberal Ebola This volume examines the most important socio-cultural, political, economic, and
policy issues related to emerging infectious diseases in Africa. The volume covers the work of the
Global Emerging Pathogens Treatment Consortium (GET); it looks at the challenges of science
education and communication in Africa, the global health and governance of pandemics and epidemics,
and more. It looks beyond such threats as Ebola, SARS, and Zika to consider the ways communities
have sought to contain these and other deadly pathogens. The chapters provide a better understanding of a global health problem from an African perspective, which help clarify to readers why some responses have worked while others have not. Overall, the volume captures the state of the art, science, preparedness, and evolution of a topic important to the health of Africa and the world. It has a broad appeal across disciplines, from medical science and biomedical research, through research ethics, regulation and governance, science and health communication, social sciences, and is also of interest to general readers.

Emerging Infectious Diseases Sourcebook This work unites the insights of ebola's first responders with those the world's foremost experts in law, economics, vaccine development, and global migration to identify missed opportunities from the Ebola crisis - and to apply these lessons to emerging infectious disease threats.

Integrating Clinical Research into Epidemic Response Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, Ebola Virus Disease: A Guide for Corporations and Large Institutions has earned an impeccable reputation as an authoritative and exciting curated research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola, curated by our experts for maximal significance. Articles include: Transmission dynamics and control of Ebola virus disease (EVD): a review; Ebola, epidemics, and ethics - what we have learned; Outbreaks of Ebola virus disease in Africa: the beginnings of a tragic saga; Need of surveillance response systems to combat Ebola outbreaks and
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Ebola in a Nutshell This volume compiles five papers modeling the effects of neoliberal economics on the emergence of Ebola and its aftermath. Neoliberalism is currently the world’s primary economic philosophy. It centers international relations around globalizing laissez-faire economics for multinational companies, promoting free trade, deregulating economic markets, and shifting state expenditures in favor of private property. The multidisciplinary teams represented here place both Ebola Makona, the Zaire Ebola virus variant that has infected 28,000 in West Africa, and Ebola Reston, which is currently emerging in industrial hog farms in the Philippines and China, within a multi-plank modeling framework. Using a stochastic extinction model that one group spatializes, environmental stochasticity across the ecologies in which Ebola evolves is treated as an ecosystemic prophylaxis. An agroecological logic gate is developed for epidemic control. A Black-Scholes model explicitly links economic margins across agricultural systems to success in biocontrol. This new control theory is further developed around the data-rate and rate-distortion theorems, a turbulence model, and cognitive symmetry breaking. Lastly, a model of pandemic penetrance is used to explore the domino effects of serious outbreaks amplifying
through the cascades of disasters that can follow deadly pandemics. All the models presented are contextualized by socioeonomic geographies specific to outbreak locales. Together the models suggest shifts in regional agroeconomics under the neoliberal doctrine, driving deforestation and monoculture production, destroying the ecosystemic “friction” with which local forests typically disrupt Ebola transmission. The resulting collapse in such an ecological function accelerates pathogen spillover and propagation across the remaining host populations. The failure on the part of current control efforts to assimilate such a structural context may render even an efficacious vaccine dysfunctional. The authors propose an alternate science of disease and an adjunct program of interventions useful to researchers and public health officials alike.

An Unnatural History of Emerging Infections

A Physician's Guide to Ebola This title presents the history of epidemiology. Vivid text details how early studies of the spread of disease led to vaccines and medications that can halt pandemics. It also puts a spotlight on the brilliant scientists who made these advances possible. A case study on the current Ebola outbreak is also included. Useful sidebars, rich images, and a glossary help readers understand the science and its importance. Maps and diagrams provide context for critical discoveries in the field. Aligned to Common Core Standards and correlated to state standards. Essential Library is an imprint of Abdo Publishing, a division of ABDO.

Ebola Virus Disease "This new work updates the highly regarded first edition and is equally excellent. It offers a wealth of timely information about a variety of emerging and reemerging infections. This is an excellent reference for anyone interested in emerging infections, and will be a valuable resource for health science students, especially those in nursing and public health. Highly recommended. Upper-
level undergraduates through professionals/practitioners."--Choice Emerging, re-emerging, and antibiotic-resistant infectious diseases continue to increase at an alarming rate throughout the world. Written for a wide range of health professionals, particularly nurses, this revised edition provides a comprehensive and up-to-date overview of these diseases: their epidemiology, clinical manifestations, prevention, and treatment. With contributions by a multidisciplinary team of nurses, physicians, and infectious disease specialists, the book includes material on the most recent and important new emerging infectious diseases: Avian influenza and SARS Issues of demographics and microbial resistance Special topics, including bioterrorism Behavioral and cultural factors Infectious etiologies of chronic diseases Travel and recreational exposure Each chapter is amply illustrated with clinical case examples to demonstrate the pitfalls in differential diagnosis and elucidate proper management and treatment. Valuable appendices provide critical reference information for each of the bacterial, viral, fungal, and parasitic diseases.

Infectious Disease--a Global Health Threat Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, Ebola in a Nutshell has earned an impeccable reputation as an authoritative and exciting curated research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola, curated by our experts for maximal significance. Articles include: Transmission dynamics and control of Ebola virus disease (EVD): a review; Ebola, epidemics, and ethics - what we have learned; Outbreaks of Ebola virus disease in Africa: the beginnings of a tragic saga; Need of surveillance response systems to combat Ebola outbreaks and other emerging infectious diseases in African countries; Recombinant
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The Science of Ebola Essential resource for the fight against emerging infectious diseases Incidences such as the 2014 Ebola epidemic in West Africa and the 2015 appearance of Zika in Brazil provide dramatic evidence of the continued ability of microbes to emerge, spread, adapt, and threaten global health. The challenge facing infectious disease specialists and public health professionals is to improve and find new diagnostic, therapeutic, and prevention strategies. The editors of the 10th installment of the Emerging Infections series have compiled the perspectives of leading infectious disease experts into 22 chapters that provide important updates on a broad range of emerging and reemerging bacterial, viral, parasitic, and fungal infectious diseases in the United States and globally. In addition to
focusing on MERS, Ebola virus disease, chikungunya, and Zika virus disease, Emerging Infections 10 explores the global threat of antimicrobial resistance in reviews on carbapenem-resistant Enterobacteriaceae, multiply-resistant gonococcal infections, non-typhoidal Salmonella infections, and artemisinin-resistant Plasmodium falciparum malaria. Topics include both recently- and long-recognized diseases that pose challenges for the clinical, laboratory, research, public health, and animal health communities. Emerging Infections 10 presents new and emerging strategies to prevent, control, and eradicate infectious diseases and guides readers to the primary literature where they can explore individual topics in greater depth. This book is a valuable reference for professionals in microbiology, epidemiology, public health, and clinical and veterinary medicine.

Epidemiology: The Fight Against Ebola & Other Diseases This book is a world geography of emerging diseases from antiquity to the present day. The last four decades of human history have seen the emergence of an unprecedented number of 'new' infectious diseases: the familiar roll call includes AIDS, Ebola, H5N1 influenza, hantavirus, hepatitis E, Lassa fever, legionnaires' and Lyme diseases, Marburg fever, Rift Valley fever, SARS, and West Nile. The book looks at the epidemiological and geographical conditions which underpin disease emergence. What are the processes which lead to emergence? Why now in human history? Where do such diseases emerge and how do they spread or fail to spread around the globe? What is the armoury of surveillance and control measures that may curb the impact of such diseases? Using hundreds of specially-drawn maps to chart the source areas of new diseases and their pathways of spread, it concludes that it is the quantitative pace of emergence, rather than its intrinsic nature, that separates the present period from earlier centuries. The book is divided into three main sections: Part 1 looks at early disease emergence, Part 2 at the processes of disease emergence, and Part 3 at the future for emergent diseases.
Infections and Inequalities Approximately 75% of emerging infectious diseases are zoonoses, and the rate of emergence of zoonotic diseases is on the rise. Bats are being increasingly recognised as an important reservoir of zoonotic viruses of different families, including SARS coronavirus, Nipah virus, Hendra virus and Ebola virus. Understanding bats’ role in emerging zoonotic diseases is crucial to this rapidly expanding area of research. Bats and Viruses: A New Frontier of Emerging Infectious Diseases provides an updated overview of research focusing on bat biology and the role bats play as hosts of many major zoonotic viruses. The text covers bat biology, immunology, and genomics. Chapters also delve into the various major bat-borne virus families, including lyssaviruses, paramyxoviruses, coronaviruses, filoviruses and reoviruses, among others. Edited by leaders in the field, Bats and Viruses: A New Frontier of Emerging Infectious Diseases is a timely, invaluable reference for bat researchers studying microbiology, virology and immunology, as well as infectious disease workers and epidemiologists, among others.

Ebola Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, The Science of Ebola has earned an impeccable reputation as an authoritative and exciting curated research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola, curated by our experts for maximal significance. Articles include: Transmission dynamics and control of Ebola virus disease (EVD): a review; Ebola, epidemics, and ethics - what we have learned; Outbreaks of Ebola virus disease in Africa: the beginnings of a tragic saga; Need of surveillance response systems to combat Ebola outbreaks and other emerging infectious diseases in African countries; Recombinant lentogenic Newcastle disease
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Emerging Infectious Diseases Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, A Student's Guide to Ebola has earned an impeccable reputation as an authoritative and exciting curated research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola, curated by our experts for maximal significance. Articles include: Transmission dynamics and control of Ebola virus disease
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Socio-cultural Dimensions of Emerging Infectious Diseases in Africa Paul Farmer has battled AIDS in rural Haiti and deadly strains of drug-resistant tuberculosis in the slums of Peru. A physician-anthropologist with more than fifteen years in the field, Farmer writes from the front lines of the war against these modern plagues and shows why, even more than those of history, they target the poor. This "peculiarly modern inequality" that permeates AIDS, TB, malaria, and typhoid in the modern world,
and that feeds emerging (or re-emerging) infectious diseases such as Ebola and cholera, is laid bare in Farmer's harrowing stories of sickness and suffering. Challenging the accepted methodologies of epidemiology and international health, he points out that most current explanatory strategies, from "cost-effectiveness" to patient "noncompliance," inevitably lead to blaming the victims. In reality, larger forces, global as well as local, determine why some people are sick and others are shielded from risk. Yet this moving account is far from a hopeless inventory of insoluble problems. Farmer writes of what can be done in the face of seemingly overwhelming odds, by physicians determined to treat those in need. Infections and Inequalities weds meticulous scholarship with a passion for solutions—remedies for the plagues of the poor and the social maladies that have sustained them.

Emerging Infections 10 Zika was an arbovirus not considered relevant until the epidemics of 2007, where in the islands of the Pacific, Yap, Micronesia, and others, and later in the Americas in 2015-2016, it created a significant public health threat. Zika is a flavivirus that has been especially important not just for the high number of cases but also for its related morbidity. In the case of adult population, multiple neurological diseases are already associated and in pregnant women because of its confirmed teratogenic capacity, leading to microcephaly as well as other central nervous system (CNS) birth defects. This book tried to update the significant epidemiological and clinical research in many aspects with a multinational perspective.

Ebola "Provides basic consumer health information about the immune system, facts about the spread of disease, information on emerging infectious diseases, international travel guidance, diagnostic tests, treatment methods, and prevention and vaccination programs, along with reports on current research initiatives and additional resources"--
Emergence of infectious diseases Connecting minds with knowledge. With its acclaimed authors, cutting-edge content, emphasis on medical relevance, and coverage based on landmark research, Ebola: Science, Research and Self-Study Guide has earned an impeccable reputation as an authoritative and exciting curated research journal and learning aid, perfect for students, medical professionals and other sophisticated readers. Hundreds of hours were spent compiling and editing this volume such that its readers are conveniently brought up-to-speed on the subject, presenting many of the latest and most important developments in the field. This volume presents 20 cutting-edge research papers on ebola, curated by our experts for maximal significance. Articles include: Transmission dynamics and control of Ebola virus disease (EVD): a review; Ebola, epidemics, and ethics - what we have learned; Outbreaks of Ebola virus disease in Africa: the beginnings of a tragic saga; Need of surveillance response systems to combat Ebola outbreaks and other emerging infectious diseases in African countries; Recombinant lentogenic Newcastle disease virus expressing Ebola virus GP infects cells independently of exogenous trypsin and uses macropinocytosis as the major pathway for cell entry; Impact on nurses of ebola outbreak; Guidance for contact tracing of cases of Lassa fever, Ebola or Marburg haemorrhagic fever on an airplane: results of a European expert consultation; “A time of fear”: local, national, and international responses to a large Ebola outbreak in Uganda; Prediction and identification of mouse cytotoxic T lymphocyte epitopes in Ebola virus glycoproteins; Induction of ebolavirus cross-species immunity using retrovirus-like particles bearing the Ebola virus glycoprotein lacking the mucin-like domain; Ebola haemorrhagic fever outbreak in Masindi District, Uganda: outbreak description and lessons learned; Tackling Ebola: new insights into prophylactic and therapeutic intervention strategies; Full-length Ebola glycoprotein accumulates in the endoplasmic reticulum; A bioengineering approach for rational vaccine design towards the Ebola Virus; Large serological survey showing cocirculation of Ebola and Marburg viruses in Gabonese bat populations, and a high seroprevalence of both viruses in Rousettus aegyptiacus; Effect of Ebola virus proteins GP,
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Mathematical and Statistical Modeling for Emerging and Re-emerging Infectious Diseases The 2014-2015 Ebola outbreak in West Africa shocked the world with its devastation and its rapid migration to multiple continents. As the systems meant to respond to this sort of epidemic failed, the disease exposed not just weaknesses in international infectious disease surveillance and management, but the failures of governments, humanitarian organizations, and international institutions to handle the legal, ethical, and economic questions that arose with an event of this scale. GLOBAL MANAGEMENT OF INFECTIOUS DISEASE AFTER EBOLA unites the insights of Ebola's first responders with those the world's foremost experts in law, economics, vaccine development, and global migration to identify missed opportunities from the Ebola crisis -- and to apply these lessons to emerging infectious disease threats. Framed with critical discussions of both the global health financing infrastructures that precipitated the response and the ethical and human rights dilemmas that resulted from it, this volume is much more than postmortem to an outbreak: it is a vital, sometimes damning examination of where we've been and where we're going in the face of emerging infectious diseases.