Antimicrobial Resistance Amr Epha

STEPHANY DONAVAN

Steering Against Superbugs Cambridge University Press
Antimicrobial resistance is recognised among the world's most challenging problems. Despite its global spread, Africa, specifically sub-Saharan Africa, is the most affected by this malaise. Poor living conditions and inadequate access to sanitation and potable water supplies are among contributing factors that have influenced a high disease burden on the continent, requiring extensive antimicrobials. Weak health systems and the absence of firm policies further aggravate the problem, as the use of antimicrobials is mostly unregulated. The increasing demand for animal protein to meet the starving populations' demands has also influenced the use of these antimicrobials, including those banned on other continents, for food animal production. The ripple effect of indiscriminate use in humans and animals is the massive discharge of antimicrobials, their residues, antimicrobial-resistant microorganisms and their associated genes into the environment. This 14-chapter unique masterpiece presents the AMR problem in African, addressing the various compartments of the One Health – humans, animals, and the environment, to illustrate the need for concerted efforts in the fight against AMR, especially in Africa. Authors from the four cardinal points present diverse aspects of AMR in Africa, starting with behavioural and social drivers of AMR in Africa. Antimicrobial stewardship in an African context is also discussed. AMR in humans is presented through studies on antibiotic-resistant neonates and nontyphoidal Salmonella infections and the clinical relevance of the genetics of viral resistance. Topics on AMR in mastitis, biosecurity in animal farming and the linkage between disinfectants and AMR are discussed. The environmental dimension of AMR is discussed, notably in the aquatic environment, and its implication for aquaculture and irrigation and using nanomaterials to treat polluted waters from such environments are highlighted. Finally, Africa's rich floral diversity is portrayed as an eco-friendly and cost-effective approach to combat AMR. Hopefully, the work presented will spur greater collaboration between scientists, environmental, animal and human health practitioners, the general population, and policymakers to assimilate and implement the One Health approach to combating AMR, rather than working in silos on their various sectors

Anti-infective Therapy Springer Nature
Avoiding infection has always been expensive. Some human populations escaped tropical infections by migrating into cold climates but then had to procure fuel, warm clothing, durable housing, and crops from a short growing season. Waterborne infections were averted by owning your own well or supporting a community reservoir. Everyone got vaccines in rich countries, while people in others got them later if at all. Antimicrobial agents seemed at first to be an exception. They did not need to be delivered through a cold chain and to everyone, as vaccines did. They had to be given only to infected patients and often then as relatively cheap injectables or pills off a shelf for only a few days to get astonishing cures. Antimicrobials not only were better than most other innovations but also reached more of the world's people sooner. The problem appeared later. After each new antimicrobial became widely used, genes expressing resistance to it began to emerge and spread through bacterial populations. Patients infected with bacteria expressing such resistance genes then failed treatment and remained infected or died. Growing resistance to

antimicrobial agents began to take away more and more of the cures that the agents had brought.
On Airs, Waters and Places Library of Alexandria
In January of 2015, under the 1st International Caparica Conference in Antibiotic Resistance, a Research Topic entitled: “Surveying Antimicrobial Resistance: Approaches, Issues, and Challenges to overcome”, was published (http://journal.frontiersin.org/researchtopic/3763/surveying-antimicrobial-resistanceapproaches-issues-and-challenges-to-overcome). The problem of antimicrobial resistance (AMR), caused by excessive and inappropriate use of antibiotics, is a public health issue that concerns us all. The introduction of penicillin in the 1940s, the start of the antibiotics era, has been recognized as one of the greatest advances in therapeutic medicine. However, according to the World Health Organization (WHO), AMR infections are now an increasing worldwide public health threat and a post-antibiotic era is imminent, where common infections and minor injuries could be fatal. AMR is a typical ‘One Health’ problem, in which livestock animals and the environment constitute AMR reservoirs and transmission routes to and from the human population. Without effective antimicrobials to counter and prevent infections, other major achievements in modern medicine, such as organ transplantation, cancer chemotherapy and major surgery, risk being compromised. AMR infections in animals have negative outcomes on animal health, welfare, biosecurity and production. In 2006, the ban of growth promoting antibiotics highlighted antibiotic use in animal production as a risk factor in the development of antibiotic resistant bacteria. Bacteria can be transferred to humans via several routes; consumption of animal products, exposure through contact with animals, and the contamination of ground and surface waters by animal waste products. Therefore, it is of utmost importance that antimicrobial use in animals is reduced to a minimum, without compromising animal health and welfare. Mechanisms of bacterial antibiotic resistance are classified according to the types of antibiotic molecules or their targets in the cell. Environmental antibiotic-resistance genes are spread then acquired by clinically relevant microorganisms. Many resistance genes are conveyed into pathogen genomes via mobile genetic elements such as plasmids, transposons or integrons, increasing the propagation of potential resistant pathogens. Substantial progress has already been made in elucidating the basic regulatory networks that endow bacteria with their extraordinary capacity to adapt to a diversity of lifestyles and external stress factors. So how will we face bacteria in the future?
To Love and Let Go Cambridge University Press
At the moment, over 65 million people are forcibly displaced from their homes. The reasons for movement range from extreme weather conditions and environmental disasters, to war, civil and political crises, to the need for basic economic survival. Amongst these 65 million people are those that have been forced to leave a country that is no longer willing or able to offer protection and those who are displaced within their own country's borders. In order to improve conditions for displaced people all over the globe, we need to look at the reason behind their move as this defines their migration status under international law. In its turn, the migration status affects the requirements of other countries to grant asylum, and the individual's right to protection and support. The definition of migration status and its implications has created tension in the public debate on refugees for decades and is today more relevant than ever. In The Health of Refugees: Public Health Perspectives from Crisis to Settlement, the challenges and vulnerabilities created from this debate are addressed by public health policy makers, clinical practitioners, and researchers. An analysis of public health, international law, the history of migration, and the media's role in refugee health, it is a comprehensive and critical work with a strong message in favour of international and interdisciplinary cooperation. With a focus on what international obligations entail when it comes to refugees and migrants, the authors present a reinforced take on our collective responsibility to leave no one behind. The Health of Refugees: Public Health Perspectives from Crisis to Settlement traces the health repercussions on individuals and populations from the moment of forced mass movement due to conflict and other disasters, through to the process of resettlement in other countries. These issues are addressed within the context of other global public health priorities, and are part of the book's critical analysis not only of the particular vulnerabilities created by mobility, but also how these interact and intersect with existing considerations across gender and age in health systems and international law. With a wider geographical area and case studies from all over the globe as a basis for the studies presented, this is a fully updated edition with new material discussing the current political landscape. A truly multidisciplinary book, The Health of Refugees is ideal for public health practitioners, researchers, and postgraduate students. It is also an important work for those involved in non-governmental organisations, international aid, and international development. Furthermore, it provides a critical background for clinicians, mental health workers, and policymakers from health, welfare and migration.
The Oxford Handbook of Comparative Health Law Cambridge University Press
This is the first book to offer a comprehensive guide to involving patients in health technology assessment (HTA). Defining patient involvement as patient participation in the HTA process and research into patient aspects, this book includes detailed explanations of approaches to participation and research, as well as case studies. Patient Involvement in HTA enables researchers, postgraduate students, HTA professionals and experts in the HTA community to study these complementary ways of taking account of patients’ knowledge, experiences, needs and preferences. Part I includes chapters discussing the ethical rationale, terminology, patient-based evidence, participation and patient input. Part II sets out methodology including: Qualitative Evidence Synthesis, Discrete Choice Experiments, Analytical Hierarchy Processes, Ethnographic Fieldwork, Deliberative Methods, Social Media Analysis, Patient-Reported Outcome Measures, patients as collaborative research partners and evaluation. Part III contains 15 case studies setting out current activities by HTA bodies on five continents, health technology developers and patient organisations. Each part includes discussion chapters from leading experts in patient involvement. A final chapter reflects on the need to clearly define the goals for patient involvement within the context of the HTA to identify the optimal approach. With cohesive contributions from more than 80 authors from a variety of disciplines around the globe, it is hoped this book will serve as a catalyst for collaboration to further develop patient involvement to improve HTA. "If you’re not involving patients, you're not doing HTA!" - Dr. Brian O’Rourke, President and CEO of CADTH, Chair of INAHTA
Patient Involvement in Health Technology Assessment National Academies Press
This book highlights various challenges and opportunities for water management and cooperation in South Asia. In light of increasing urbanization and development in the region and related pressure on water resources, the contributions investigate water conflictual and cooperative attitudes and gestures between countries and regions; analyse management trade-offs between nature, agriculture and urban uses; and examine water sustainable management and related policies. By studying major river basins in the region, such as Indus, Ganges, Brahmaputra, Narmada, Godavari and Krishna, the chapters highlight socio-economic, infrastructural, environmental and institutional aspects of water scarcity in South Asia and present best practices for improved sustainable water management and security in the region.
The Evolving Threat of Antimicrobial Resistance World Health Organization
This book provides a multidisciplinary review of antibiotic resistance and unravels the complex and interrelated roles of environmental sources, including pharmaceutical industry effluents, hospital and domestic effluents, wildlife and drinking water. Antibiotic resistance is a global public health issue in which the interface between humans, animals and the environment is particularly relevant. The contrasts seen across different environmental compartments and world regions, which are due to climate, social and policy differences, mean that this problem needs to be analyzed from a multi-geographic and multi-cultural angle. Bringing together contributions from researchers on different continents with expertise in antibiotic resistance in a range of different environmental compartments, the book offers a detailed reflection on the paths that make antibiotic resistance a global threat, and the state-of- the-art in antibiotic resistance surveillance and risk assessment in complex environmental matrices.
Organization and Financing of Public Health Services in Europe Edward Elgar Publishing
How are public health services in Europe organized and financed? With European health systems facing a plethora of challenges that can be addressed through public health interventions there is renewed interest in strengthening public health services. Yet there are enormous gaps in our knowledge. How many people work in public health? How much money is spent on public health? What does it actually achieve? None of these questions can be answered easily. This volume brings together current knowledge on the organization and financing of public health services in Europe. It is based on country reports on the organization and financing of public health services in nine European countries and an in-depth analysis of the involvement of public health services in addressing three contemporary public health challenges (alcohol obesity and antimicrobial resistance). The focus is on four core dimensions of public health services: organization financing the public health workforce and quality assurance. The questions the volume seeks to answer are: o How are public health services in Europe organized? Are there good practices that can be emulated? What policy options are available? o How much is spent on public health services? Where do resources come from? And what was the impact of the economic crisis? o What do we know about the public health workforce? How can it be strengthened? o How is the quality of public health services being assured? What should quality assurance systems for public health services look like? This study is the result of close collaboration between the European Observatory on Health Systems and Policies and the WHO Regional Office for Europe Division of Health Systems and Public Health. It accompanies two other Observatory publications: Organization and financing of public health services in Europe: country reports and The role of public health organizations in addressing public health problems in Europe: the case of obesity alcohol and antimicrobial resistance.
Tackling Antibiotic Resistance from a Food Safety Perspective in Europe Springer
This book presents an authoritative, multi-referenced treatment of all licensed (USA) antibiotics, antifungals and antivirals, including discussions of all drugs expected to be licensed in the near future.
European Union Health Law Bridget Williams Books
The Oxford Handbook of Comparative Health Law addresses some of the most critical issues facing scholars, legislators, and judges today: how to protect against threats to public health that can quickly cross national borders, how to ensure access to affordable health care, and how to regulate the pharmaceutical industry, among many others. When matters of life and death literally hang in the balance, it is especially important for policymakers to get things right, and the making of policy can be greatly enhanced by learning from the successes and failures of approaches taken in other countries. Where there are "common challenges" in law and health, there is much to be gained from experiences elsewhere. Thus, for example, countries that suffered early from the COVID-19 pandemic provided valuable lessons about public health interventions for countries that were hit later. Accordingly, the Handbook considers key health law questions from a comparative perspective. In health law, common challenges are frequent. In addition to ones already mentioned, there are questions about addressing the social determinants of health (e.g., poverty and pollution), organizing health systems to optimize use of available resources, ensuring that physicians provide care of the highest quality, protecting patient privacy in a data-driven world, and properly balancing patient autonomy with the interest in preserving life when reproductive and end-of-life decisions are made. This Handbook's wide scope and comparative take on health law are particularly timely. Economic globalization has made it increasingly important for different countries to harmonize their legal rules. Students, practitioners, scholars, and policymakers need to understand how health laws vary across national boundaries and how reforms can ensure a convergence toward an optimal set of legal rules, or ensure that specific legal arrangements are needed in particular contexts. Indeed, comparative analysis has become essential for legal scholars, and The Oxford Handbook of Comparative Health Law is the only resource that provides such an analysis in health law.
Surveying Antimicrobial Resistance: The New Complexity of the Problem Elsevier
Antimicrobial resistance has existed in nature long before the discovery of antibiotics. The mechanisms of resistance are prevalent among the bacterial population. Over a period of time and facilitated by indiscriminate usage of antibiotics, these mechanisms are transferred from one type of bacteria to another, including the pathogenic ones. In addition, the rate of discovery of novel antimicrobials is much slower than the rate of evolution of antimicrobial resistance. Therefore, there is a need for alternative strategies to control antimicrobial resistance to save lives. In this book, the novel strategies to combat antimicrobial resistance are described, emphasizing collaborative measures of control. We describe the concerted efforts undertaken by global communities to combat antimicrobial resistance in detail. The most efficient strategy could be a behavioral change towards indiscriminate consumption, usage, and prescription of antibiotics.
Water Management in South Asia Springer
The observed concentrations of pharmaceuticals and personal care products (PPCPs) in raw wastewater confirm that municipal wastewater represents the main disposal pathway for the PPCPs consumed in households, hospitals and industry. In sewage treatment plant effluents most PPCPs are still present, since many of these polar and persistent compounds are being removed only partially or, in some cases, not at all. Treated wastewater therefore represents an important point source for PPCPs into the environment. After passing a sewage treatment plant the treated wastewater is mostly discharged into rivers and streams or sometimes used to irrigate fields. If drinking water is produced using resources containing a substantial proportion of treated

wastewater (e.g. from river water downstream of communities) the water cycle is closed and indirect potable reuse occurs. Human Pharmaceuticals, Hormones and Fragrances provides an overview of the occurrence, analytics, removal and environmental risk of pharmaceuticals and personal care products in wastewater, surface water and drinking water. The book covers all aspects of the fate and removal of PPCPs in the whole water cycle: consumption and occurrence, analytical methods, the legal background, environmental risk assessment, human and animal toxicology, source control options, wastewater and drinking water treatment as well as indirect reuse. The book presents a summary of the results obtained during the EU project "Poseidon", combined with further expert knowledge on the field, and is written at a level appropriate for professionals involved in management of water resource quality. Professionals in the field including decision makers, engineers and scientists, as well as students entering the field, will find this an invaluable source of information. First comprehensive study on the assessment, fate and removal of pharmaceuticals and personal care products in wastewater and drinking water treatment. Emphasises the importance of micropollutants in the water cycle, provides methods for quantifying their fate and technologies for their removal.

The Health of Refugees Oxford University Press

Years of using, misusing, and overusing antibiotics and other antimicrobial drugs has led to the emergence of multidrug-resistant 'superbugs.' The IOM's Forum on Microbial Threats held a public workshop April 6-7 to discuss the nature and sources of drug-resistant pathogens, the implications for global health, and the strategies to lessen the current and future impact of these superbugs.

The Kingdom of Thailand Health System Review SAGE

This eight-volume encyclopedia brings together a comprehensive collection of work highlighting established research and emerging science in all relevant disciplines in gerontology and population aging. It covers the breadth of the field, gives readers access to all major sub-fields, and illustrates their interconnectedness with other disciplines. With more than 1300 cross-disciplinary contributors—including anthropologists, biologists, economists, psychiatrists, public policy experts, sociologists, and others—the encyclopedia delves deep into key areas of gerontology and population aging such as ageism, biodemography, disablement, longevity, long-term care, and much more. Paying careful attention to empirical research and literature from around the globe, the encyclopedia is of interest to a wide audience that includes researchers, teachers and students, policy makers, (non)governmental agencies, public health practitioners, business planners, and many other individuals and organizations.

Challenges to Tackling Antimicrobial Resistance Springer Science & Business Media

Distributional cost-effectiveness analysis aims to help healthcare and public health organizations make fairer decisions with better outcomes. It can provide information about equity in the distribution of costs and effects - who gains, who loses, and by how much - and the trade-offs that sometimes occur between equity and efficiency. This is a practical guide to methods for quantifying the equity impacts of health programmes in high, middle, and low-income countries. The methods can be tailored to analyse different equity concerns in different decision making contexts. The handbook provides both hands-on training for postgraduate students and analysts and an accessible guide for academics, practitioners, managers, policymakers, and stakeholders. Part I is an introduction and overview for research commissioners, users, and producers. Parts II and III provide step-by-step guidance on how to simulate and evaluate distributions, with accompanying spreadsheet training exercises. Part IV concludes with discussions about how to handle uncertainty about facts and disagreement about values, and the future challenges facing this growing field. Book jacket.

The Seine River Basin Oxford University Press

Written by an interdisciplinary team of experts, Cardiac Imaging: A Multimodality Approach features an in-depth introduction to all current imaging modalities for the diagnostic assessment of the heart as well as a clinical overview of cardiac diseases and main indications for cardiac imaging. With a particular emphasis on CT and MRI, the first part of the atlas also covers conventional radiography, echocardiography, angiography and nuclear medicine imaging. Leading specialists demonstrate the latest advances in the field, and compare the strengths and weaknesses of each modality. The book's second part features clinical chapters on heart defects, endocarditis, coronary heart disease, cardiomyopathies, myocarditis, cardiac tumors, pericardial diseases, pulmonary vascular diseases, and diseases of the thoracic aorta. The authors address anatomy, pathophysiology, and clinical features, and evaluate the various diagnostic options.Key features: Highly regarded experts in cardiology and radiology offer image-based teaching of the latest techniques Readers learn how to decide which modality to use for which indication Visually highlighted tables and essential points allow for easy navigation through the text More than 600 outstanding images show up-to-date technology and current imaging protocols Cardiac Imaging: A Multimodality Approach is a must-have desk reference for cardiologists and radiologists in practice, as well as a study guide for residents in both fields. It will also appeal to cardiac surgeons, general practitioners, and medical physicists with a special interest in imaging of the heart.

Antibiotic Resistance in the Environment Springer Nature

Antimicrobial Resistance and Food Safety: Methods and Techniques introduces antimicrobial resistant food-borne pathogens, their surveillance and epidemiology, emerging resistance and resistant pathogens. This analysis is followed by a systematic presentation of currently applied methodology and technology, including advanced technologies for detection, intervention, and information technologies. This reference can be used as a practical guide for scientists, food engineers, and regulatory personnel as well as students in food safety, food microbiology, or food science. - Includes analysis of all major pathogens of concern - Provides many case studies and examples of fundamental research findings - Presents recent advances in methodologies and analytical software - Demonstrates risk assessment using information technologies in foodborne pathogens

Antimicrobial Resistance WHO Regional Office for Europe

The steady expansion of the European Union’s involvement in health over the past 20 years has been accelerated by recent events. This handbook offers an up-to-date analytical overview of the most important topics in EU health law and policy. It outlines, as far as possible, the direction of travel for each topic and suggests research agenda(s) for the future.

Antimicrobial Research and One Health in Africa Oxford University Press

Antimicrobial resistance (AMR) is not a recent phenomenon, but it is a critical health issue today. Over several decades, to varying degrees, bacteria causing common infections have developed resistance to each new antibiotic, and AMR has evolved to become a worldwide health threat. With a dearth of new antibiotics coming to market, the need for action to avert a developing global crisis in health care is increasingly urgent. The World Health Organization has long recognized AMR as a growing global health threat, and the World Health Assembly, through several resolutions over two decades, has called upon member states and the international community to take measures to curtail the emergence and spread of AMR. The WHO Global strategy for the containment of antimicrobial resistance, published in 2001, set out a comprehensive set of recommendations for AMR control which remain valid today. This book examines the experiences with implementing some of those recommendations ten years on, the lessons learnt along the way and the remaining gaps.

Antibiotic Resistance Gallery Books

First Published in 2003. Routledge is an imprint of Taylor & Francis, an informa company.

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