



## Infectious Diseases: Emerging and Re-Emerging Threats

Grobusch Martin\*

Department of Internal Medicine & Infectious Diseases, University of Heraklion, Heraklion, Greece

### DESCRIPTION

The Disease refers to conditions that prevent normal tissue function. For Instance, Cystic fibrosis, atherosclerosis, and measles are all diseases. However, the causes of each of these diseases are essentially different. Cystic Fibrosis (CF) is caused by a specific genotype that disrupts chloride ion transport across cell membranes, culminating in exceptionally thick mucus production. As a result, cystic fibrosis is best classified as a hereditary or metabolic disease. Atherosclerosis, which can lead to heart attacks and strokes, is sometimes referred to be an ageing disease since it usually manifests later in life after cholesterol plaques have grown up and partially clogged arteries. Measles, on the other hand, is an infectious condition that arises when a person catches the measles virus from an outside source. An infectious disease is one that is caused by the invasion of a host by agents whose actions affect the host's tissues causing disease and can be spread to other people that is, they are infectious.

Professionals in the field of public health once speculated that it would be possible to "close the book" on the study and treatment of infectious illnesses one day. However, it is now obvious that endemic diseases, as well as newly emerging diseases (e.g., SARS), re-emerging diseases (e.g., West Nile virus), and even intentionally disseminated infectious diseases (e.g., anthrax from bioterrorism), continue to constitute a significant threat worldwide. Many endemic diseases have been controlled over the past several decades thanks to a global effort to identify and characterized infectious agents, decipher the underlying pathways by which many of the world's most severe infections are caused by them, and they research preventative measures and cures for them. Infectious diseases, despite great progress, continue to pose important problems as new microbial threats appear and return. Some of the rising and reemerging hazards include HIV/AIDS, malaria, TB, influenza, SARS, West Nile virus, Marburg virus, and bioterrorism. The government, on the other hand, is becoming participating in more targeted countermeasure development initiatives. Partnerships between government, industry, and academia are essential in this regard

as we strive to preserve and upgrade our armamentarium in the fight against the germs that constitute an ever-present threat to humanity.

Infections that have previously existed but are now quickly expanding in incidence, geographical range, or human host range are known as re-emerging and resurging infections. Some of the same causes that produce newly emerging infectious diseases, such as microbial evolutionary vigour, zoonotic encounters, and environmental invasion, are also responsible for re-emergence. Some illnesses, such as cholera and malaria, may experience resurgences or at least cyclical resurgences as a result of climate change. Immunodeficiency associated with AIDS, as well as chemotherapy for cancer, immune-mediated diseases, and transplantation, has contributed to an enormous global increase in the number of immunosuppressed people over the last few decades probably more than 1% of the world's population, allowing many opportunistic infections to resurface.

HIV, which has infected over 60 million people worldwide, is the most common cause of human immune deficiency and makes people more vulnerable to a variety of opportunistic diseases such as *Pneumocystis carina*, fungus, TB, protozoa, and herpes viruses. Breakthroughs in cancer treatment and immunosuppressive treatments used to treat immune-mediated disorders and transplant recipients might leave patients vulnerable to opportunistic infections. Human organ donation increases the danger of infection from undiagnosed pathogens in donor tissues, while animal organ transplantation increases the risk of animal germs being transmitted to humans.

Tuberculosis has resurfaced as a result of the causative bacteria's evolution. The disease has developed resistance to the antibiotics used to treat tuberculosis either through mutation or genetic exchange, and long-term antibiotic use both within an individual and across a population has favored the pathogen's spread. Malaria has developed medicine resistance, and the vector mosquito has developed pesticide resistance as well. The reemergence of illnesses like diphtheria and whooping cough pertussis is linked to a lack of population vaccination. When the number of immune individuals in a group falls below a certain

**Correspondence to:** Grobusch Martin, Department of Internal Medicine & Infectious Diseases, University of Heraklion, Heraklion, Greece, Email: m.grobusch@amsterdammc.nl

**Received:** 03-Mar-2022, Manuscript No. CMO-22-16132; **Editor assigned:** 07-Mar-2022, PreQC No. CMO-22-16132 (PQ); **Reviewed:** 22-Mar-2022, QC No. CMO-22-16132; **Revised:** 31-Mar-2022, Manuscript No. CMO-22-16132 (R); **Published:** 05-Apr-2022, DOI: 10.35248/2327-5073-22.11.275

**Citation:** Martin G (2022) Infectious Diseases: Emerging and Re-Emerging Threats. Clin Microbiol. 11:275.

**Copyright:** © 2022 Martin G. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

threshold, the pathogen is introduced into the population, resulting in a disease outbreak.