

Infectious Diseases- Concept of Emerging Infectious Diseases

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Abstract

Infectious diseases, also referred to as infectiology, may be a medicine handling the diagnosis and treatment of complex infections. An communicable disease specialist's practice consists of managing nosocomial (healthcare-acquired) infections or community-acquired infections and is historically related to travel medicine and medicine. Infectious diseases specialists typically function consultants to other physicians in cases of complex infections, and sometimes manage patients with HIV/AIDS and other sorts of Immunodeficiency. Although many common infections are treated by physicians without formal expertise in infectious diseases, specialists could also be consulted for cases where an infection is difficult to diagnose or manage. they'll even be asked to assist determine the explanation for a fever of unknown origin.

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Introduction

Specialists in infectious diseases can practice both in hospitals (inpatient) and clinics (outpatient). In hospitals, specialists in infectious diseases help make sure the timely diagnosis and treatment of acute infections by recommending the acceptable diagnostic tests to spot the source of the infection and by recommending appropriate management like prescribing antibiotics to treat bacterial infections. surely sorts of infections, involvement of specialists in infectious diseases may improve patient outcomes. In clinics, specialists in infectious diseases can provide long-term care to patients with chronic infections like HIV/AIDS. Infectious diseases is historically related to travel medicine and medicine, as many diseases acquired in tropical and subtropical areas are infectious in nature.

History of the concept of emerging infectious diseases

An emerging communicable disease (EID) is a communicable disease whose incidence has increased recently (in the past 20 years), and will increase within the near future. Such diseases don't respect national boundaries. The minority that are capable of developing efficient transmission between humans can become major public and global concerns as potential causes of epidemics or pandemics. Their many impacts are often economic and societal, also as clinical.

Emerging infections account for a minimum of 12% of all human pathogens. EIDs are often caused by newly identified microbes, including novel species or strains of virus (e.g. novel

coronaviruses, ebolaviruses, HIV). Some EIDs evolve from a known pathogen, as occurs with new strains of influenza. EIDs can also result from spread of an existing disease to a replacement population during a different geographical area, as occurs with West Nile fever outbreaks. Some known diseases also can emerge in areas undergoing ecologic transformation (as within the case of Lyme disease). Others can experience a resurgence as a re-emerging communicable disease, like tuberculosis (following drug resistance) or measles. Nosocomial (hospital-acquired) infections, like methicillin-resistant *Staphylococcus aureus* are emerging in hospitals, and are extremely problematic therein they're immune to many antibiotics. Of growing concern are adverse synergistic interactions between emerging diseases and other infectious and non-infectious conditions resulting in the event of novel syndemics.

Many EID are zoonotic, deriving from pathogens present in animals, with only occasional cross-species transmission into human populations. as an example, most emergent viruses are zoonotic (whereas other novel viruses may be circulating within the species without being recognized, as occurred with hepatitis C). The French doctor Charles Anglada (1809–1878) wrote a book in 1869 on extinct and new diseases. He didn't distinguish infectious diseases from others (he uses the terms reactive and affective diseases, to mean diseases with an external or internal cause, more or less meaning diseases with or without an observable external cause). He writes within the introduction.

A widely held opinion among physicians admits the invariability of pathologies. All the illnesses which have existed or which have an epidemic around us are categorized consistent with arrested and preconceived types, and must enter a method or the opposite into the frameworks established by the nosologists. History and observation protest wildly against this prejudice, and this is often what they teach: Diseases which have disappeared and whose traces are confined to the archives of science, are followed by other diseases, unknown to the contemporary generation, and which come for the primary time to say their rights. In other words, there are extinct and new diseases.

It is this historical existence, this destiny which will be the topic of our talks. I will be able to need to answer, to the extent that our current knowledge allows, questions that you simply have asked yourself, that each thoughtful or just curious mind asks: have the infectious diseases that we observe today always existed? Or have a number of them appeared within the course of history? Can we assume that new ones will appear? Can we assume that a number of these diseases will disappear? Have a number of them already disappeared? Finally, what is going to become of humanity and livestock if, as a result of more and more frequent contacts between people, the amount of infectious diseases continues to increase? The term emerging disease has been in use in scientific publications since the start of the 60s at least and is employed within the modern sense by David Sencer in his 1971 article "Emerging Diseases of Man and Animals" where within the first sentence of the introduction he implicitly defines emerging diseases as "infectious diseases of man and animals currently emerging as public health problems" and as a consequence also includes re-emerging diseases.

Infectious diseases of man and animals currently emerging as public health problems include some old acquaintances and a few that are new in reference to identity or concept.

He concludes the introduction with a word of caution and so communicable disease, one among man's oldest enemies, survives as an adversary that calls forth our greatest efforts.

However to several people within the 60s and 70s the emergence of latest diseases appeared as a marginal problem, as illustrated by the introduction to the 1962 edition of explanation of communicable disease by Macfarlane Burnet to write about communicable disease is nearly to write down down of something that has passed into history as well because the epilogue of the 1972 edition On the idea of what went on within the last thirty years, can we forecast any likely developments for the 1970s? If for this we retain a basic optimism and assume no major catastrophes occur the foremost likely forecast about the longer term of communicable disease is that it'll be very dull. There could also be some wholly unexpected emergence of a replacement and dangerous communicable disease, but nothing of the type has marked the past fifty years.

Throughout the 20th century until 1980, with the exception of the 1918 Spanish flu pandemic, the death rate from infectious diseases within the US was steadily decreasing. However, due to the AIDS epidemic, the death rate from infectious diseases increased by 58% between 1980 and 1992. The concept gained more interest at the top of the 80s as a reaction to the AIDS epidemic. On the side of epistemology, Mirko Grmek worked on the concept of emerging diseases while writing his book on the history of AIDS and later in 1993 published an article about the concept of emerging disease as a more precise notion than the term "new disease" that was mostly utilized in France at that point to qualify AIDS among others.

Also under the shock of the emergence of AIDS, epidemiologists wanted to require a more active approach to anticipate and stop the emergence of latest diseases. Stephen S. Morse from The Rockefeller University in NY was chair and principal organizer of the NIAID/NIH Conference "Emerging Viruses: The Evolution of Viruses and Viral Diseases" held 1–3 May 1989 in Washington, DC. within the article summarizing the conference the authors write.

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