

Global Experiences in Dealing with Biological Epidemics with an Emphasis on COVID-19 Disease: Approaches and Strategies

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Abstract : Background: The World Health Organization has identified COVID-19 as a public health emergency and is urging governments to stop the virus transmission by adopting appropriate policies. In this regard, authorities have taken different approaches to cut the chain or controlling the spread of the disease. Now, the questions we are facing include what these approaches are? What tools should be used to implement each preventive protocol? In addition, what is the impact of each approach? Objective: The aim of this study was to determine the approaches to biological epidemics and related prevention tools with an emphasis on COVID-19 disease. Data sources: Databases including ISI web of science, PubMed, Scopus, Science Direct, Ovid, and ProQuest were employed for data extraction. Furthermore, authentic sources such as the WHO website, the published reports of relevant countries, as well as the Worldometer website were evaluated for gray studies. The time-frame of the study was from 1 December 2019 to 30 May 2020. Methods: The present study was a systematic study of publications related to the prevention strategies for the COVID-19 disease. The study was carried out based on the PRISMA guidelines and CASP for articles and AACODS for grey literature. Results: The study findings showed that in order to confront the COVID-19 epidemic, in general, there are three approaches of "mitigation", "active control" and "suppression" and four strategies of "quarantine", "isolation", "social distance" and "lockdown" in both individual and social dimensions to deal with epidemics. Selection and implementation of each approach requires specific strategies and has different effects when it comes to controlling and inhibiting the disease. Key finding: One possible approach to control the disease is to change individual behavior and lifestyle. In addition to prevention strategies, use of masks, observance of personal hygiene principles such as regular hand washing and non-contact of contaminated hands with the face, as well as an observance of public health principles such as sneezing and coughing etiquettes, safe extermination of personal protective equipment, must be strictly observed. Have not been included in the category of prevention tools. However, it has a great impact on controlling the epidemic, especially the new coronavirus epidemic. Conclusion: Although the use of different approaches to control and inhibit biological epidemics depends on numerous variables, however, despite these requirements, global experience suggests that some of these approaches are ineffective. The use of previous experiences in the world, along with the current experiences of countries, can be very helpful in choosing the accurate approach for each country in accordance with the characteristics of that country and lead to the reduction of possible costs at the national and international levels.

Keywords : novel corona virus, COVID-19, approaches, prevention tools, prevention strategies

Conference Title : ICCID 2021 : International Conference on Common Infectious Diseases

Conference Location : Lisbon, Portugal

Conference Dates : February 08-09, 2021