



The Necessity of Revising Communicable Disease Surveillance Programs in the World: Lessons from COVID-19 for Decision Makers

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Dear Editor,

December 2019 witnessed the first cases of the SARS-Cov-2 virus in Wuhan (China). In less than four months, it spread quickly to almost every country across the world (1, 2). According to the WHO daily reports on May 18, 2020, about 4.5 million people were infected with COVID-19 and 300 thousand people were died throughout the world (3). Although more than 80% of the new virus is genetically similar to the SARS-Cov-1 virus, it has unknown functional characteristics. The unknown features of COVID-19 disease caused difficulties for its prevention and treatment. Furthermore, regarding the scientific and practical uncertainty around the virus, deciding about choosing the best method of prevention and treatment is difficult (4). The virus is characterized by a high rate of spread, and, of course, all around the world none of the health decision-makers and/or researchers was expecting that one day the world would be engaged with such a contagious disease. Decision-makers of health programs should have been considered the SARS-Cov and MERS-Cov epidemics as the prognosis of larger epidemics (5). After the occurrence of two major epidemics during the past two decades, some researchers were concerned about the possibility of a new epidemic. The past has not been taken too seriously. COVID-19 pandemic is a big surprise for healthcare systems all around the world (6).

It's more than five decades that the priority of decision-making and operational planning is focused on non-communicable diseases (NCDs). First, it was originated in developed countries and gradually expanded to the developing countries. Although it did not pose a serious problem for global programs, the recent pandemic showed that

infectious diseases can still pose a global risk and cause social problems in addition to changes in health structures. These diseases can exacerbate the disability caused by NCDs and take the lives of more people. With these in mind, health decision-makers can take the following points as lessons learned from the recent crisis:

1. Infectious diseases and NCDs should be considered as one integrated priority and be a priority in planning.
2. Special attention should be paid to infectious diseases caused by emerging factors.
3. Health infrastructures necessary for surveillance and control of infectious diseases should be provided.
4. Attempts should be made to include health literacy, as an important precursor, in planning for controlling infectious diseases.
5. It is indispensable to note that from now on, infectious diseases are not limited to developing and under-developed societies. The risk of infectious diseases can be even higher for developed societies. As reported by the WHO, the rates of morbidity and mortality in developed countries are twice than of developing and under-developed countries.
6. It seems that along with the scientific and technological developments of human societies, the emergence and/or re-emergence of new pathogenic factors with higher pathogenicity and higher virulence is possible. As such, long-term measures should be considered to prevent the occurrence of new epidemics. Moreover, early identification methods should be developed, and effective methods of disease control should be considered.
7. Some of the risk factors that may cause an increased prevalence of biological diseases throughout the world

may include the uncontrolled growth of the human population, inadequate health care and public health infrastructure, escalation of globalization, that transmits common diseases between humans and animals that causes climate change, reduced vaccination rates, and overuse of antibiotics. Therefore, it is necessary to pay serious attention to the concepts and principles of sustainable development.

8. Extensive social relations and ease of establishing communications are important achievements of human development. This can be the Achilles heel of societies, including in the COVID-19 crisis. Therefore, planners should pay special attention to the social aspects of this crisis and reconsider the organization of social relations in accordance with emerging threats such as COVID-19.

9. The role of environmental factors in the expansion of such crises should be considered in terms of both scientific and technical aspects;

10. When designing and developing programs for contagious diseases, the likelihood of recurrence of pandemics such as COVID-19 and a coherent program to deal with them should be taken into account.

11. It is essential to establish continuity and coordination between national infectious disease control programs as well as international programs.

12. It is vital to create and optimize crisis management programs.

13. It is necessary to provide the basic infrastructure, such as training skilled and efficient manpower, providing appropriate facilities based on experiences, empowering private and non-profit institutions, and establishing non-governmental organizations for voluntary actions in controlling infectious disease crises.

14. Lobbying and consultation are inevitable tools to create transnational viewpoints in the world and

countries when problems such as the emergence and spread of emerging and re-emerging infectious diseases occur. Establishing ceasefire between the warring parties, lifting sanctions (especially those related to foods and medicines), sheltering refugees and migrants, honesty in providing data, and sharing findings and achievements.

15. Using capacities related to social capital can be effective in controlling the expansion of diseases.

Footnotes

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