

The following manuscript was accepted for publication in Pharmaceutical Sciences. It is assigned to an issue after technical editing, formatting for publication and author proofing Citation: Hanaee J, Rashidi MR. Higher Education System in light of Covid-19, Pharm. Sci. 2020, doi: 10.34172/PS.2020.45

Higher Education System in light of Covid-19

Jalal Hanaee¹ and Mohammad Reza Rashidi^{1,2*}

¹Faculty of Pharmacy, Tabriz University of Medical Sciences

²Stem Cell and Regenerative Medicine Institute, Tabriz University of Medical Sciences

*Corresponding author, Email: rashidi@tbzmed.ac.ir)

There is a while that the world is involved in a major crisis called Covid-19, and the medical community as well as the health system has been in the center of this crisis. In keeping with the efforts and measures of the medical group in order to treat this disease, we witness an ongoing attempt of researchers and scientific centers to find suitable drug interventions to stop or treat Covid-19. In spite of serious health threats, this crisis can be an opportunity for some thinkers and policy makers to review the performance and approach of health system and higher education, and some of necessities and shortcomings that should be considered by the health system, especially the scientific centers and higher education.

One of these shortcomings and gaps is related to the mission and goals that should have been considered and addressed by institutions of higher education and health system in their programs. The Covid-19 crisis further showed that the awareness and cooperation of society in the realization of health system programs are how much important which has not been paid attention by higher education centers. This is what should be considered as an important part of the “knowledge translation” in the mission and major goals of all universities and even research centers and take the responsibility of transferring academic teachings and research findings in the field of medicine and health in the most transparent and easiest way to various social groups. During the crisis of Covid-19 it became clear that most people do not have the required knowledge, skills and even theoretical information about the health issues.

The chaos in the preparation, production and distribution of information related to this disease, multiplicity of centers providing such information, and confusion in distinguishing correct information from false information and rumors are quite evident. There is also confusion in the

production and dissemination of information, not only at international level but also at the level of governments and higher education centers. Unfortunately, currently, there is a lack of an active, dynamic and efficient system in the preparation of the evidence-based medical information and guidelines to provide them quickly to medical groups, health sectors and medical centers in critical situations such as Covid-19, let alone the public.

The COVID-19 pandemic has been accompanied not only by extensive scientific endeavors and a growing volume of researches, but also by an infodemic spread of misinformation deriving from various unreliable sources. This clearly showed that it is necessary to establish a systematic structure to improve the flow of correct and reliable information at every level such as governments, universities, research centers, and in particular the community, to tackle infodemic of misinformation and rumors.

Epidemic diseases such as the Covid-19, reveals that based on the conditions of modern world, all individuals and countries are in a ship called the glob that any damage in a region of this ship, constitutes a damage to the entire ship and so its inhabitants, and therefore, everyone should look after each other to cope with the virus. Unfortunately, instead of global action against the virus, we have witnessed the borders between the countries, and very sadly, insisting on keeping sanction against the countries involved in this disease.

Another issue is a big gap between executive institutions with active management programs and actions in higher education centers on one side, and executive institutions that are involved in progressing the goals and management programs of the health system, on the other side. Furthermore, the covid-19 clearly indicated that the gap between executive institutions and organizations with the society is another challenging issue that has not been considered remarkably by either universities or governmental organizations. The lack of coordination between internal and external organizational units, providing programs based on try and error, lack of prompt action required in decision-making, incomplete implementation of programs, mainly due to the same lack of coordination, are among the consequences of this gap. Such a gap is more than that of the difference between policies, routed in the lack of common scientific language of all groups involved in the crisis.

Revealing and highlighting insufficiency of "Research and Technology management" system of the scientific and research centers is another achievement of the Covid-19. Whereas Covid-19 as

a global crisis has involved all societies and has shown how the fate of all people in all countries is tied to each other, and should be a major problem of all human beings, it became clear that the human society lacks the internationally morality-oriented system to manage and solve global problems. Instead, a negative competition, which mostly originated from economic and even political issues, has been started among research centers and governments.

The whole world was expected to apply the efforts jointly and coherent, in a consistent and organized manner, at least in the field of scientific and research programs to solve the current crisis. Unfortunately, the vacancy of a global organization, such as the World Health Organization (WHO), which can play a key role in directing global joint actions to cope with Covid-19 is seen. This can lead to an increase in efficiency, and prevent the loss of assets and also reduction in the expenses of research programs. It was also found that ethics-centered attitude toward health-related researches is one of the serious deficiencies that mankind must plan to improve it.

If a research and development management system would have been conducted by the WHO, at least for those that threaten the whole human health (like what has been happened with Covid-19), in such emergency cases, every country may have appropriate reaction in determining its research priorities and effective implementation. For example, instead of any university and research center acting for research on drug discovery for Covid-19, the main research and scientific-research facilities should be spent on epidemiological research, social medicine, comprehensive and reliable clinical data of patients, and conducting research in the field of health management. Certainly, along with this, the national and international research groups for discovering new medications would be formed. The crisis also revealed the importance of free access to scientific findings.

According to what has been said, the following suggestions can be made:

- 1) The necessity of having a knowledge translation unit at international level (Global Knowledge Translation) with the leadership of the WHO, and also at national level (National Knowledge Translation) in each country in order to prepare and disseminate the most updated and scientific findings in the field of health and medicine, to deliver to the medical staff and especially the community, in a coherent, reliable, rapid, smooth, easy and transparent way.
- 2) The necessity of defining the status and role of people and different organizations and social groups in the health system and how their participation at times that community health, especially in the public level, is threatened.

- 3) The need to provide management guidance on how to deal with emergency crisis which threaten the health of the community at the national and international level. The Covid-19 crisis is a good opportunity to understand the features and requirements of such a comprehensive, integrated and coherent program in the health field.
- 4) The need to define and establish an integrated, comprehensive and ethical-oriented “global research and technology management” system with the leadership of the WHO, integrative, holistic and ethical-oriented.
- 5) The need for definition and creation of “national research and technology management” system in line with "global research and technology management" system. If the global system is not formed, this "national research and technology management" system can play the role of leadership for determining the research priorities (appropriate with its conditions), and activities in emergency cases at the national level.