

COVID-19: Political challenges for public health

L.M. Mukharyamova*, A.R. Zalyaev, E.Yu. Shammazova

Kazan State Medical University, Kazan, Russia

Abstract

The COVID-19 pandemic has become not only an epidemiological and medical problem but also a challenge for all systems of society, a test for political institutions. The real threats to public health and the enormous pressure on public health systems have shaped the unprecedented coercive measures to limit mobility and social exclusion that governments have adopted to control the situation. The effectiveness of political institutions in the implementation of anti-epidemiological measures was different. The review considers interdisciplinary approaches to analyzing a systemic crisis in a pandemic, which has revealed a close relationship between social and economic equality, health equity and population health. The disproportionately high correlation of mortality from new infection with structural inequality at the intersection of status, class, racial/ethnic minority, and profession is shown. The problems of politicization of the pandemic and social polarization, the influence of confidence in the state, the health care system, and healthcare professionals on compliance with recommended behaviors by various social groups are considered. The speed with which new scientific information is generated during a pandemic and the need for a quick response enhance the likelihood of misinformation appearing in the information environment. The article shows the danger of infodemic for the unity of society against the backdrop of the growing role of the media and social networks in supporting the population. Approaches to the problem of vaccine mistrust are examined, the need to develop a policy of equitable distribution of vaccines, educate the population to increase adherence to vaccination is shown. A post-coronavirus strategy for the development of public health has been proposed, which includes increasing investment in health systems, overcoming health inequities, caring for healthcare professionals, and developing biomedical science.

Keywords: the COVID-19 crisis, politicization of the pandemic, trust in institutions, infodemia, vaccination.

For citation: Mukharyamova L.M., Zalyaev A.R., Shammazova E.Yu. COVID-19: Political challenges for public health. *Kazan Medical Journal*. 2021; 102 (1): 39–46. DOI: 10.17816/KMJ2021-39.

COVID-19 as a systemic crisis. The Coronavirus disease 2019 (COVID-19) pandemic has become an unprecedented humanitarian crisis, which, according to many politicians and researchers, will lead to the transition of societies to a new condition [1]. For this reason, not only biomedical problems but also the sociopolitical aspects of the situation are paid attention to all over the world.

Social theorists, together with epidemiologists and public health specialists, doctors, journalists, and civil society leaders, analyze the reactions of governments, regional authorities, and various groups of the population to the epidemic; they also record the actual time of recognition of the situation, the sequence of using tools to mitigate the burden for the healthcare system and for vulnerable groups of population, and the intensity of political measures taken to influence the behavior of the population [2]. The researchers emphasize that the COVID-19 pandemic is not only a public

healthcare problem but also a test for political institutions; it is a public policy problem requiring decisions on the time, executor, purpose, and acceptable consequences of activities that should be performed [3].

Despite the fact that the COVID-19 pandemic still has a short history, it has become an object of study from a variety of perspectives. The main research topic can be called “catastrophe” according to R.Horton, editor-in-chief of one of the most authoritative medical journals *The Lancet*. In the book “The COVID-19 Catastrophe: What Went Wrong and How to Prevent It from Happening Again,” R.Horton discusses the administrative dereliction in most countries at the beginning of the process and the responsibility of politicians and experts to ensure public trust in the state and in healthcare institutions [1].

According to S.Daoudi, the pandemic plays a role similar to the events of September 11, 2001 in

the US, for the advancement of healthcare problems to the forefront of the global security agenda [4].

In the era of a pandemic, society is forced to reduce consumption due to the drop in income and limited production; the decline in living standards also increases social tension, which is already becoming a threat to national security [5]. The instability of economic development and social tensions, leading to the catastrophic consequences of the pandemic on the health of the population around the world, are exacerbated by the neoliberal dismantling of the state healthcare potential in favor of markets in the past few decades [6]. The pandemic has multiplied the limitations of neoliberalism, exposed the shortcomings of neoliberal economies and governments, and highlighted the weakness of this model for public healthcare [7].

According to a special report of Interpol, the COVID-19 pandemic has exposed various problems, such as the integration of organized criminal groups related to the supply of pharmaceuticals into the healthcare sector and the organization of schemes of theft of funds intended to combat COVID-19. In European countries, the illegal circulation of counterfeit and/or low-quality (non-standard) medical, sanitary-hygienic, and pharmaceutical products and personal protective equipment is detected. At the same time, from a public healthcare point of view, the trade in counterfeit new coronavirus testing kits is of utmost concern [8].

In Russia, the media (Novaya Gazeta: “Moscow will spend 192 million rubles to procure tests for coronavirus;” a Kazan company was named as a developer, but its website and telephone number were unspecified) focus on “strange” purchases when, under conditions of advanced readiness to an epidemic, government contracts for coronavirus tests are concluded without a bidding procedure with organizations that have no confirmed qualifications.

Russian researcher A.V.Kornienko draws attention to the unprecedented threats of cartel agreements on the market for medicines, personal protective equipment, and food products [9]. Understanding why the pandemic has led to a deep socioeconomic and political crisis, whether response measures to future crises can be improved, and how social policy can be changed, is critical for all public healthcare professionals and social theorists.

COVID-19 and inequality. Researchers write about global inequalities that have increased during the pandemic. More deaths are reported from COVID-19 in societies with a pronounced economic inequality and some characteristics of the social system (e.g., low levels of trust) [10].

The economic decline during the pandemic has caused an increase in unemployment, and weakened social safety nets are unable to reduce costs for vulnerable groups [11]. Researchers note that even in high-income countries (i.e., UK, US), the government-issued security of employment may not protect low-income groups due to the difficulty of navigating complex benefit systems. In poorer countries, such as India, the impact of inadequate financial protection on low-paid workers may be more severe [12].

The pandemic demonstrates a disproportionately high dependence of mortality on structural inequality at the intersection of status, class, racial/ethnic minority, and occupation. Researchers note that many of the most risky and stressful jobs, which are absolutely essential for the society functioning, involve low wages and are performed by the most marginalized people, such as racial/ethnic minorities, migrants, women, and undocumented workers [13–16]. According to A.Morabia, even factors such as limited access to the Internet in the context of COVID-19 means a lack of access to telemedicine, distance learning, and affiliation with a profession that cannot be adapted for remote work [17]. R.Horton emphasizes that the pandemic has revealed that not only elderly people with chronic diseases are at risk but also dark-skinned people and vulnerable groups in long-stay facilities (nursing homes for the elderly or the disabled); R.Horton comes to the conclusion that focusing not only on medical and biological but also on the sociopolitical aspects of the situation is important [1].

COVID-19 and trust. To understand politics during the COVID-19 pandemic, a comparative analysis of political regimes is promising, as authoritarian regimes do not cope well with the formation of information flows, but they can take effective actions (China). Democratic regimes have difficulty in taking decisive and appropriate measures, but they can benefit from improved information flow and public trust [18]. A separate sector of analysis is the coordination of actions of central authorities and regions. Why do the systems that usually tend to regulate central relations across the entire spectrum of political processes elude this coordination during a pandemic, delegating responsibility to regional elites?

Researchers draw attention to the fact that the pandemic provides governments with wide political freedom of action, on the one hand, and the willingness of the general public to tolerate sometimes disproportionate political reactions, on the other hand [1, 19]. Leaders around the world are attempting to minimize economic, social, and medical threats to the population, but doing so is

accompanied by inroads into democratic principles and human rights [20]; in the countries of the Global South, a serious and dangerous trend toward the militarization of increasingly authoritarian regimes and the use of military forces to expand control at the local and regional levels, can be observed [21].

Almost all countries demonstrate a tendency toward the introduction of the total surveillance of citizens. Communication technologies used to monitor and contain the spread of the virus have potentially serious implications for privacy and freedom of movement.

The pandemic has stimulated a continuation of the debate about democracy and the impact of political regimes on health. It has also raised new questions about the attitude of the population toward the organization of the national healthcare system. Before the new coronavirus infection, coercive measures, such as vaccination, were considered unreasonable because they provoke resistance. The imposition of severe restrictions by governments due to COVID-19, otherwise not perceived as democratic and acceptable, is approved by the public.

Will these restrictive and coercive measures be effective in the long term, and will they change public health norms [22]? Under these conditions, the regulation of people's social behavior becomes an important line of research.

The behavior of people and the adoption of relatively authoritarian measures (e.g., physical distancing or temporary restriction of the activities of enterprises) depend not only on the proper provision of information but also on the level of trust in political institutions [23] and on consent in society. Studies show that political mistrust negatively affects the spread of the COVID-19 pandemic [10,24] and vice versa; the collectivity, homogeneity, and similarity of culture of different groups of the society population give positive results [25].

The analysis of geolocation data reveals that in Italy, political beliefs can limit the effectiveness of government orders on distancing. Residents of regions with extreme right-wing political views and a great amount of protest votes show a slight decline in mobility. Conversely, a sharp decline in mobility is observed in the regions with a high political support for the authorities and restrictions imposed by the current government [26]. This aspect has been confirmed by research conducted using GPS data from smartphones in the US. Party differences correlate with noted differences in behavior, as low social distancing is registered in areas with many Republicans than in areas with many Democrats [27]. Moreover, polarization decreases only in territories with the highest morbidity [28].

One of the cultural barriers to concerted actions within countries is political polarization, namely, the division of the opinions of those discussing into two opposite, mutually exclusive positions. The main trouble of polarization during a pandemic is that it can lead to the fact that different segments of the population, using various sources of information, may come to different conclusions about threats and corresponding actions [29].

Official sources of information explain and justify the current state of affairs and actions of the authorities; in the opposition media, especially in cyberspace and social networks, intellectuals and activists of social movements declare increasingly loud that this crisis should lead to a change in the economic paradigm and politics [21].

Information policies for public healthcare systems are especially important because activities in information consumption significantly increase due to restrictions on mobility and social distancing and the introduction of restrictive measures. Specifically, the peak in media consumption coincides with the first social distancing measures and increases as government reports on the coronavirus, which causes COVID-19, are submitted [30]. The work should be performed not only with traditional media but also with social networking sites and mobile news applications to develop trustworthy reports [31]. The public considers mass media (especially social networks) an important factor of a prosperous life in isolation if they provide support and communication through the dissemination of reliable information, avoiding sensational and false news [32,33].

An important aspect of the problem of trust is the situation called "infodemia" by the World Health Organization (WHO). The increase in the amount of false information can be compared to the uncontrolled spread of a pathogen. The infodemic phenomenon has been recognized as threatening that it raises the question of the need for coordinated response measures [34].

The most common misinformation allegations relate to actions or policies that government agencies are taking to address the COVID-19 problem, whether by individual national/regional/local governments, health authorities or international organizations, such as WHO and the United Nations Organization. The second most common type of accusatory disinformation concerns the spread of the virus through geographic or ethnic communities [35].

Infodemia, according to WHO experts, cannot be stopped but can be counterworked. Doing so requires the formation of the interdisciplinary teams of practitioners and researchers in this sphere.

Vaccination as a public healthcare problem.

The COVID-19 vaccine has become the world's key hope. Mass vaccination with registered agents has been started in several countries; a significant number of vaccines are being developed; and some vaccines are undergoing clinical trials. However, even the availability of a vaccine does not guarantee the sufficient immunization of the population. Mistrust in vaccine has been identified by WHO as one of the 10 healthcare problems [36]. According to experts, the main reasons for refusing vaccination are carelessness, mistrust in vaccine, and lack of convenient access to vaccination services [36].

Violations of the vaccination regime are recorded in almost all countries; an increase in the number of vaccination opponents and in the proportion of doubters is observed [37]. The use of the H1N1 strain vaccine during the 2009 influenza pandemic was low [38]. A study conducted in the European Union in the spring of 2020 showed that significant efforts may be required to ensure an adequate level of vaccination [39]. In light of this situation, the task of generating confidence in the vaccine and the willingness to vaccinate are of fundamental importance. Policymakers, healthcare providers, and doctors must develop effective methods to increase public adherence to vaccination.

Successful vaccination against COVID-19 requires large-scale campaigns to educate the public about the safety and efficiency of the vaccine. Public hesitation about vaccination is complex and context-sensitive, often reflecting various everyday concerns, not just exposure to misinformation [40]. Despite the widespread public perception of the high risk of a pandemic, approximately 25% of respondents in 5 surveys in France, for example, said they will refuse a future vaccine mainly due to concerns about the safety of a vaccine developed during an emergency [41].

Trust in vaccine depends on trust in healthcare professionals, healthcare systems, science, pharmaceutical companies, and the sociopolitical situation. Constantly providing the public with evidence of studies demonstrating the efficacy and safety of a vaccine is required [42]. Open and consistent public disclosure is all the more important as vaccine distrust is intertwined with sociopolitical protest. Forces opposing current governments tend to criticize vaccines, and social groups with extreme political views, ultra-right or far left, are susceptible to vaccine rejection [43]. The achievement of herd immunity through vaccination requires systematic and purposeful work from governments and professionals.

The pandemic has raised the issue of equitable vaccine distribution in a new way. WHO, which

apprehends government nationalism in vaccine use, proposes multilateral legal agreements to ensure global healthcare security and equity [44]. Governments and organizations have pledged a commitment to equitable global access, but the technologies and tools that can be used to vaccinate successfully on a massive scale and in an equitable manner have not been found yet.

An equitable global and national coronavirus vaccine provision is highly improbable without a strong ethical basis for distribution principles [45]. In the contexts of the opposition of public healthcare ethics, expressed in the equitable distribution of limited resources and an orientation toward public safety, and the clinical ethics focused on a particular patient [46], the problems concerning the bioethical examination of political decisions, wide discussion and conviction of people in the fairness, and effectiveness of the measures taken acquire the uttermost importance.

After the COVID-19 pandemic. In substitution for the conclusion. The new coronavirus infection has changed the world. Not only public healthcare professionals but also other professionals in various fields around the world recognize the urgent need for a continued significant investment in public healthcare systems even after the pandemic subsides [47]. All countries in the world must be prepared to face one or another similar modified virus strain in the future, having invested adequate funds in health care, biomedical research and development, and in the economic sustainability of the medical support system. States should take care of public health personnel, ensure their socioeconomic status and professional autonomy, and create a system of qualified health management [48].

COVID-19 has raised awareness that existing social institutions reproduce and exacerbate inequality. Deconstructing inequities and eliminating avoidable differences in health status at the global and national levels are required. Doing so calls for an in-depth research of the impact of inequality on public health and an honest, consistent democratic process that can help all social, ethnic, and racial groups provide social consensus and an open, fair social hierarchy.

Author contributions. A.R.Z. and E.Yu.Sh. conducted the research; L.M.M was responsible for the collection and analysis of the results and was the work supervisor.

Funding. The study was conducted with the financial support of the Russian Foundation for Basic Research and the Expert Institute for Social Research within the scientific project No. 20-011-31521.

Conflict of interest. The authors declare no conflict of interest.

REFERENCES

1. Horton R. *The COVID-19 catastrophe: What's gone wrong and how to stop it happening again*. USA: John Wiley & Sons. 2020; 140 p. ISBN: 978-1-509-54647-3.
2. Capano G., Goyal N., Howlett M. et al. Mobilizing policy (in) capacity to fight COVID-19: Understanding variations in state responses. *Policy and Society*. 2020; 39 (3): 285–308. DOI: 10.1080/14494035.2020.1787628.
3. Poole D.N., Gostin L.O., Escudero D.J. et al. Responding to the COVID-19 pandemic in complex humanitarian crises. *Intern. J. Equity in Health*. 2020; 19 (1): 1–2. DOI: 10.1186/s12939-020-01162-y.
4. Daoudi S. *The war on COVID-19: The 9/11 of health security?* Policy Paper. Policy Center for the New South. 2020; 15 p.
5. Bezuglaya N.S., Shamray I.N. National security and coronavirus disease (COVID-19) pandemic: Challenges to the economic system of the state and prospects for ensuring its security. *Regionologiya*. 2020; 28 (3): 449–469. (In Russ.) DOI: 10.15507/2413-1407.112.028.202003.449-469.
6. Van Barneveld K., Quinlan M., Kriesler P. et al. The COVID-19 pandemic: Lessons on building more equal and sustainable societies. *Economic and Labour Relat. Rev*. 2020; 31 (2): 133–157. DOI: 10.1177/1035304620927107.
7. Saad F.A. Neoliberalism and the COVID-19 pandemic: a political economic analysis. *Scientific works of the Free Economic Society of Russia*. 2020; 223 (3): 565–572. (In Russ.) DOI: 10.38197/2072-2060-2020-223-3-565-572.
8. Davydov V.O. Pandemic speculation: how criminals exploit the COVID-19 crisis (based on a report by executive director Europol C. de Bolle “Pandemic profiteering: how criminals exploit the COVID-19 crisis”). *Izvestiya Tul'skogo gosudarstvennogo universiteta. Ekonomicheskie i yuridicheskie nauki*. 2020; (2): 19–25. (In Russ.)
9. Kornienko A.V. Cartel agreements in the Russian Federation in the context of a pandemic. *Voprosy rossiyskoy yustitsii*. 2020; (7): 173–181. (In Russ.)
10. Elgar F.J., Stefaniak A., Wohl M.J.A. The trouble with trust: Time-series analysis of social capital, income inequality, and COVID-19 deaths in 84 countries. *Soc. Sci. Med*. 2020; 263: 113365. DOI: 10.1016/j.socscimed.2020.113365.
11. Schwalbe N., Lehtimäki S., Gutiérrez J.P. COVID-19: rethinking risk. *The Lancet Global Health*. 2020; 8 (8): 974–975. DOI: 10.1016/S2214-109X(20)-30276-X.
12. Ahmed F., Na'eem A., Pissarides C., Stiglitz J. Why inequality could spread COVID-19. *The Lancet Public Health*. 2020; 5 (5): 240. DOI: 10.1016/S2468-2667(20)30085-2.
13. Bowleg L. We're not all in this together: On COVID-19, intersectionality, and structural inequality. *Am. J. Public Health*. 2020; 110 (7): 917. DOI: 10.2105/AJPH.2020.305766.
14. Gu T., Mack J.A., Salvatore M. et al. Characteristics associated with racial/ethnic disparities in COVID-19 outcomes in an Academic Health Care System. *JAMA Netw. Open*. 2020; 3 (10): e2025197. DOI: 10.1001/jamanetworkopen.2020.25197.
15. Hatef E., Chang H.Y., Kitchen C. et al. Assessing the impact of neighborhood socioeconomic characteristics on COVID-19 prevalence across seven states in the United States. *Front. Public Health*. 2020; 8: 571808. DOI: 10.3389/fpubh.2020.571808.
16. Oberndorfer M., Dorner T., Brunnmayr M. et al. *Equally affected? Health-related and socioeconomic adversities of the COVID-19 pandemic in Vienna*. 2020, September 15. DOI: 10.2139/ssrn.3733369.
17. Morabia A. COVID-19: Health as a common good. *Am. J. Public Health*. 2020; 110 (8): 1111–1112. DOI: 10.2105/AJPH.2020.305802.
18. Greer S.L., King E.J., da Fonseca E.M., Peralta-Santos A. The comparative politics of COVID-19: The need to understand government responses. *Global Public Health*. 2020; 15 (9): 1413–1416. DOI: 10.1080/17441692.2020.17441692.
19. Maor M., Sulitzeanu-Kenan R., Chinitz D. When COVID-19, constitutional crisis, and political deadlock meet: the Israeli case from a disproportionate policy perspective. *Policy and Society*. 2020; 39 (3): 442–457. DOI: 10.1080/14494035.2020.1783792.
20. Prasad A. The organization of ideological discourse in times of unexpected crisis: Explaining how COVID-19 is exploited by populist leaders. *Leadership*. 2020; 16 (3): 294–302. DOI: 10.1177/1742715020926783.
21. Leo G. Social and political consequences of the pandemic on conceptualisation of economies in the West. *Scientific works of the Free Economic Society of Russia*. 2020; 223 (3): 573–576. (In Russ.) DOI: 10.38197/2072-2060-2020-223-3-573-576.
22. Kavanagh M.M., Singh R. Democracy, capacity, and coercion in pandemic response: COVID-19 in comparative political perspective. *J. Health Politics, Policy and Law*. 2020; 45 (6): 997–1012. DOI: 10.1215/03616878-8641530.
23. Ezeibe C.C., Ilo C., Ezeibe E.N. et al. Political distrust and the spread of COVID-19 in Nigeria. *Global Public Health*. 2020; 12: 1753–1766. DOI: 10.1080/17441692.2020.1828987.
24. Guglielmi S., Dotti Sani G.M., Molteni F. et al. Public acceptability of containment measures during the COVID-19 pandemic in Italy: how institutional confidence and specific political support matter. *Intern. J. Sociol. Social Policy*. 2020; (9/10): 1069–1085. DOI: 10.1108/IJSSP-07-2020-0342.
25. Pierre J. Nudges against pandemics: Sweden's COVID-19 containment strategy in perspective. *Policy and Society*. 2020; 39 (3): 478–493. DOI: 10.1080/14494035.2020.1783787.
26. Barbieri P., Bonini B.; Social Science Research Network. *Populism and political (mis-)belief effect on individual adherence to lockdown during the COVID-19 pandemic in Italy*. 2020; 24 p. DOI: 10.2139/ssrn.3640324.
27. Hart P.S., Chinn S., Soroka S. Politicization and polarization in COVID-19 news coverage. *Sci. Commun*. 2020; 42 (5): 679–697. DOI: 10.1177/1075547020950735.
28. Levendusky M., Ryan J., Druckman J.N. et al. Replication data for: “Affective polarization, local contexts and public opinion in America”. *Harvard Dataverse*. 2020; 10.7910/DVN/H7AT3N.
29. Barrios J.M., Hochberg Y. *Risk perception through the lens of politics in the time of the COVID-19 pandemic*. University of Chicago, Becker Friedman Institute for Economics. 2020; Working Paper No. 2020-32. DOI: 10.2139/ssrn.3568766.
30. Tejedor S., Cervi L., Tusa F. et al. Information on the COVID-19 pandemic in Daily Newspapers' Front Pages: Case study of Spain and Italy. *Intern. J. Environmental Res. Public Health*. 2020; 17 (17): 6330. DOI: 10.3390/ijerph17176330.
31. Jiun-Yi Tsai, Joe Phua, Shuya Pan, Chia-chen Yang. Inter-group contact, COVID-19 news consumption, and the moderating role of digital media trust on prejudice toward Asians in the United States: Cross-sectional study. *J. Med. Intern. Res*. 2020; 22 (9): 22767. DOI: 10.2196/22767.

32. Pahayahay A., Khalili-Mahani N. What media helps, what media hurts: A mixed methods survey study of coping with COVID-19 using the media repertoire framework and the appraisal theory of stress. *J. Med. Intern. Res.* 2020; 22 (8): 20186. DOI: 10.2196/20186.
33. Rao H.R., Vemprala N., Akello P., Valecha R. Retweets of officials' alarming vs reassuring messages during the COVID-19 pandemic: Implications for crisis management. *Intern. J. Inform. Manag.* 2020; 55: 102187. DOI: 10.1016/j.ijinfomgt.2020.102187.
34. WHO is working with the Government of the United Kingdom to raise awareness about the dangers of spreading inaccurate and misleading information about the coronavirus pandemic. <https://www.who.int/ru/campaigns/connecting-the-world-to-combat-coronavirus/how-to-report-misinformation-online> (access date: 20.08.2020). (In Russ.)
35. Brennen J.S., Simon F.M., Nielsen R.K. "Covid19" beyond (mis) representation: Visuals in COVID-19 misinformation. *Intern. J. Press/Politics.* 2021; 26 (1): 277–299. DOI: 10.1177/1940161220964780.
36. Ten threats to global health in 2019. <https://www.who.int/news-room/feature-stories/ten-threats-to-global-health-in-2019> (access date: 20.08.2020). (In Russ.)
37. Dror A.A., Eisenbach N., Taiber S. et al. Vaccine hesitancy: the next challenge in the fight against COVID-19. *Eur. J. Epidemiol.* 2020; 35: 775–779. DOI: 10.1007/s10654-020-00671-y.
38. Blasi F., Liberti S., Mantero M., Centanni S. Compliance with anti-H1N1 vaccine among healthcare workers and general population. *Clin. Microbiol. Infect.* 2012; 18: 37–41. DOI: 10.1111/j.1469-0691.2012.03941.x.
39. Neumann-Böhme S., Varghese N.E., Sabat I. et al. Once we have it, will we use it? A European survey on willingness to be vaccinated against COVID-19. *Eur. J. Health Econ.* 2020; 21: 977–982. DOI: 10.1007/s10198-020-01208-6.
40. Kata A. Anti-vaccine activists, Web 2.0, and the postmodern paradigm — An overview of tactics and tropes used online by the anti-vaccination movement. *Vaccine.* 2012; 30 (25): 3778–3789. DOI: 10.1016/j.vaccine.2011.11.112.
41. Verger P., Dubé E. Restoring confidence in vaccines in the COVID-19 era. *Expert Rev. Vaccines.* 2020; 19 (11): 991–993. DOI: 10.1080/14760584.2020.1825945.
42. Taylor S., Landry C.A., Paluszek M.M. et al. A proactive approach for managing COVID-19: The importance of understanding the motivational roots of vaccination hesitancy for SARS-CoV2. *Front. Psychol.* 2020; 11: 2890. DOI: 10.3389/fpsyg.2020.575950.
43. Peretti-Watel P., Seror V., Cortaredona S. et al. A future vaccination campaign against COVID-19 at risk of vaccine hesitancy and politicisation. *Lancet Infect. Dis.* 2020; 20 (7): 769–770. DOI: 10.1016/S1473-3099(20)30426-6.
44. Phelan A.L., Eccleston-Turner M., Rourke M. et al. Legal agreements: barriers and enablers to global equitable COVID-19 vaccine access. *Lancet.* 2020; 396 (10254): 800–802. DOI: 10.1016/S0140-6736(20)31873-0.
45. Liu Y., Salwi S., Drolet B.C. Multivalued ethical framework for fair global allocation of a COVID-19 vaccine. *J. Med. Ethics.* 2020; 46: 499–501. DOI: 10.1136/medethics-2020-106516.
46. Nezhmetdinova F.T., Guryleva M.E. Medical, social and ethical issues related to COVID-19. *Kazan Medical Journal.* 2020; 101 (6): 841–851. DOI: 10.17816/KMJ 2020-841.
47. Kanupriya. COVID-19: A Socio-economic Perspective. *FIIB Business Review.* 2020; 9 (3): 161–166. DOI: 10.1177/2319714520923918.
48. Perkhov V.I., Gridnev O.V. COVID-19 pandemic lessons for policy in the field of public health. *Sovremennye problemy zdravookhraneniya i meditsinskoy statistiki.* 2020; (2): 206–221. (In Russ.) DOI: 10.24411/2312-2935-2020-00043.