Universal Health Coverage to counteract the economic impact of the COVID-19 infection: current practices and ethical challenges

MASOUD BEHZADIFAR¹, MOHAMMAD-HASAN IMANI-NASAB¹, MARIANO MARTINI², MAHBUBEH KHATON GHANBARI¹, AHAD BAKHTIARI¹, NICOLA LUIGI BRAGAZZI⁵

¹Social Determinants of Health Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran; ²Department of Health Sciences, University of Genoa, Italy; ³Health Management and Economics Research Center, Iran University of Medical Sciences, Tehran, Iran; ⁴Department of Health Management and Economics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran; ⁵Department of Mathematics and Statistics, York University, Toronto, ON, Canada

Keywords
COVID-19 • Economic crisis • Health crisis • Health policy • Health financing • Universal health coverage • Ethical issues

In late December 2019, the first case of an emerging coronavirus was identified in the city of Wuhan, Hubei province, in mainland China. The novel virus appears to be highly contagious and is rapidly spreading worldwide, becoming a pandemic. The disease is causing a high toll of deaths. Effective public health responses to a new infectious disease are expected to mitigate and counteract its negative impact on the population. However, time and economic-financial constraints, as well as uncertainty, can jeopardize the answer. The aim of the present paper was to discuss the role of Universal Health Coverage to counteract the economic impact of the COVID-19 infection. Appropriate financing of the health system and ensuring equitable access to health services for all can, indeed, protect individuals against high medical costs, which is one of the most important goals of any health system. Financing profoundly affects the performance of the health system, and any policy that the health system decides to implement or not directly depends on the amount of available funding. Developed countries are injecting new funding to cope with the disease and prevent its further transmission. In addition to psychological support and increased societal engagement for the prevention, control, and treatment of COVID-19, extensive financial support to governments by the community should be considered. Developed and rich countries should support countries that do not have enough financial resources. This disease cannot be controlled and contained without international cooperation. The experience of the COVID-19 should be a lesson for further establishing and achieving universal health coverage in all countries. In addition to promoting equity in health, appropriate infrastructure should be strengthened to address these crises. Governments should make a stronger political commitment to fully implement this crucial set of policies and plans.

Healthcare systems and Universal Health Coverage

Healthcare systems around the world are striving to respond to the expectations and needs of their citizens by implementing different policies and programs and ensuring that they are continually enhancing and improving community health [1]. However, unexpected challenges could arise due to environmental issues, increased urbanization, globalization and aging. All these factors can, indeed, accelerate the transmission of communicable diseases worldwide, leading to viral outbreaks [2]. Due to the pace of change in the world, health systems need to implement adequate reforms and preparedness plans. In addition to crises such as emerging diseases, due to political and economic crises, health systems have faced many problems in financing and providing appropriate healthcare services to society [3]. In many cases, the response of health systems to these crises is inadequate even with anticipatory plans, potentially because of the overwhelmed and strained public health capacity, and the high costs incurred [4]. Little funding and scarcity of resources, lack of human resources and equipment, inadequate government support, poor information systems infrastructure, and insurance problems are among the factors that can impact the adequacy of health systems’ response [1, 5]. Health systems should be resilient and continue providing basic care, even during the most challenging circumstances, including public health emergencies. Empowering healthcare settings’ capacity following the International Health Regulations (IHR 2005) is an essential element of the universal health coverage (UHC) program. Health emergency preparedness, as a critical element of UHC, can help prevent and adequately respond to disasters, minimizing their health and economic impact [6]. UHC is one of the Sustainable Development Goals (SDGs) [7, 8] in that it ensures that all community members have access to preventive, therapeutic, rehabilitation, and supportive healthcare in an effective and appropriate fashion. These high-quality health provisions are tailored to their needs [9]. Efforts to expand UHC represent fundamental health policy reforms as they enable to achieve valuable suc-
cess by the implementation of various programs [10]. Many countries have taken steps to achieve UHC, including Thailand [11], and Turkey [12] in order to protect their population against health costs by providing appropriate services [13].

Dr Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO), has recently stated that “universal health coverage is ultimately a political choice. It is the responsibility of every country and national government to pursue it.” Strengthening health systems is the best way to protect against health crises, and achieving UHC is the best strategy to make health systems resilient [14]. The aim of the present paper was to discuss the role of UHC to counteract the economic impact of the currently ongoing pandemic.

The COVID-19 outbreak

In late December 2019, the first case of an emerging coronavirus (“Severe Acute Respiratory Syndrome Coronavirus type 2” or SARS-CoV-2) was identified. The novel virus appears to be highly contagious and is rapidly spreading worldwide, becoming a pandemic. The disease is causing a high toll of deaths [15, 16]. In 2009, when an outbreak caused by a novel strain of influenza A virus, H1N1, occurred, the WHO reported that H1N1 spread to 214 countries, affecting about 1.5 million people and killing 25,000 people [17]. The pandemic caused by the COVID-19 has a higher speed, incidence and mortality rates compared to H1N1, and the trend seems to be increasing [18].

Given that behavioral, non-pharmacological interventions (NPIs), such as social distancing, self-isolation, quarantine and lock-down of entire communities and territories, are an effective way to prevent and control this disease interrupting the transmission chain and considering that, in the absence of specific therapeutics or vaccines, people will be unable to be engaged in social activities for a long time, it seems that COVID-19 can cause many health and economic problems [19]. Health systems in every country should respond effectively to this infectious disease reducing its impact on the general population, since inappropriate responses to this crisis can have a profound effect on the countries [20, 21].

UHC-related service coverage index (SCI) improved from 2000 to 2017, but the pace of progress has slowed since 2010, and the coverage needs to double at least to reach the SDG target of UHC by 2030. Policy priorities for country groups can vary depending on the situation of each country, ranging from building the foundations of health systems (for countries with low service coverage and relevant financial hardship) to continue providing efficient, high-quality healthcare services (for high and upper-middle-income countries) [22]. Therefore, health system’s appropriate responses to a crisis depend on the readiness and preparedness of that country based on UHC-related achievement indicators.

Effective public health responses to a new infectious disease are expected to mitigate and counteract its negative impact on the population. However, time and economic-financial constraints, as well as uncertainty, can jeopardize the answer [23].

Previous experience with emerging pathogens, such as the virus of the “Severe acute respiratory syndrome” (SARS) and H1N1 have shown that countries’ health systems must respond to different aspects of the disease [17]. In all countries, health policy- and decision-makers are working to identify the virus in infected people and to prevent further infections and transmission of the disease to other individuals. In addition to health promotion activities such as public health education, monitoring people’s movement, reducing people’s social interactions and contacts, identification of people with the COVID-19 infection is important [24]. The high cost of diagnosis is one of the main concerns of implementing this policy. Many people refuse to go to health centers and receive services because of the high costs they can incur, and are concerned that they will not be able to pay for them if their testing is positive and the hospitalization and treatment process begins [25].

Appropriate financing of the health system and ensuring equitable access to health services for all can protect individuals against high medical costs, which is one of the most important goals of any health system. Financing profoundly affects the performance of the health system, and any policy that the health system decides to implement or not directly depends on the amount of available funding [26, 27].

The high cost of diagnosis and treatment of the COVID-19 infection makes it impossible for most the vulnerable individuals to access healthcare services [16]. It seems that due to the problems that COVID-19 has caused to the economies of countries, including the shutdown of many economic activities and making many people staying home instead of going to work, attention to the economic issues of families should be taken seriously by governments [28]. During crises, governments are under heavy economic pressure to maintain essential services, especially those provided in the health sector, and people expect governments to pay more attention to health issues [29].

Access to health services for all means achieving equity in health. The COVID-19 infection requires a range of services and equipment that must be provided by governments to ensure that no financial problems arise [30]. People’s healthcare processes associated with the COVID-19 infection can include: visits by physicians and health centers, diagnostic tests (kits,Computed Tomography scans), with, in case of positive test and symptoms, hospitalization and related treatment costs (medications) [31]. Each of these services costs a lot to individuals, especially in developing countries. If people are recovering and are discharged from hospitals to their homes, people should spend their time at home recovering, and home care will also be expensive [3]. Also, due to illness, people are forced to stop doing work-related activities.
Failure to do business, fear of unemployment and job loss are also other major concerns. People need to have hygienic detergents (antiseptics) and masks to prevent the disease [32]. Lack of access for all to COVID-19 services can cause health inequality. All governments should do their best to avoid this, despite the economic problems and lack of funding [33]. Especially in relation to COVID-19, hospital services are very important. The need to deal with this crisis requires the implementation of a wide range of policies and programs that respond to the needs of all who may be infected [34].

Regarding the costs of diagnosis and treatment, governments can make them free of charge by allocating and releasing new funds. Of course, this is a tough program and it will face resistance, but it is valuable in the face of the benefits it will have. Introducing essential subsidies for people’s living expenses, giving public subsidies to health-related industries, providing social security policies for sick, disabled and unemployed people can alleviate their worries about dealing with their illness. In particular, in the present crisis, poor subjects should be given much attention [16, 23].

The role of UHC can be more relevant when crises such as the COVID-19 infection occur. Proper implementation of this policy, while ensuring equity in health, can ensure the use of services among all people. Even though governments may not cover all the costs of health provisions, UHC would help reduce the costs [13, 35, 36]. In the post-coronavirus period, we will need to update UHC standards with criteria such as global health security, information transparency, and new related ethical principles [35], which represent future ethical challenges that need to be addressed. Information transparency and cooperation between countries will accelerate the control and management of outbreaks, especially if caused by emerging and unknown pathogens, by sharing data in real-time. Big data analytics is expected to play a major role in this regard [37].

Governments can also greatly help reduce costs by alleviating the worries of many individuals with different insurance conditions. One of the important plans in this crisis is to waive COVID-19 related costs. Insurance can implement emergency programs that give their users discounts or incentive programs to encourage people in good economic conditions to help poor subjects [13, 36]. Due to the uncertainty of the diagnostic or therapeutic processes related to COVID-19, insurers can change the service packages they covered before the disease and implement some degrees of flexibility with respect to the disease [38].

In some countries, health infrastructure is not sufficiently developed. These countries are facing great issues with COVID-19, with a large number of people refusing to go to health centers because of financial inability. Failure to follow patients will lead to further transmission of the disease to other people in the community. Without evaluating and treating these people, it is very difficult to deal with the COVID-19 infection [39].

Strengthening the health financing response to COVID-19 can be done by:

- reducing out-of-pocket payments, which represent a major barrier to access to treatment and preventive services, expanding health services with public funding [40];
- using a variety of financial resources, including donations, national reserve funds, and prioritizing budget [41];
- accelerating the transfer of financial resources to providers so that there is no interruption in the delivery of services and speeding up the supply of goods and equipment needed [40];
- improving payment methods in coordination with insurance organizations [42];
- finding new ways to cover healthcare provisions during crisis, including post-treatment care [42];
- ensuring government commitment to pay public and private providers for COVID-19 related services to disadvantaged people [41, 42];
- enforcing juridical provisions as adequate response to crisis [41]; and,
- guaranteeing tax discounts and waivers to providers [41].

Since increasing individual funding is not enough to achieve UHC, countries should use various financial resources to attain UHC. Indicators of the achievement of these goals could be:

- the population proportion that has access to essential high-quality health services; and,
- the population proportion that spends a large amount of its household income on health.

Ensuring the establishment of critical elements of UHC is a way to strengthen healthcare systems in terms of resources availability, constraints, accessibility, and capacity. There are several lessons that can be learnt from the COVID-19. Several ethical principles related to healthcare need to be properly addressed in order to ensure people’s access to health services, since health is a human right. Both at the individual and collective level, UHC is the best way to protect people from unexpected crises and to guarantee this human right by optimizing resource allocation, especially in settings characterized by economic-financial constraints [43].

Due to the lack of resources, various health-related ethical principles during the pandemic have been faced, challenging the healthcare providers, especially when they had to choose between treating an old, frail subject or managing a young patient. Other ethical issues concerned financing schemes for the implementation of prevention and treatment interventions by governments, as well as the testing procedures of candidate vaccines among volunteers [44].

Achieving UHC means to have a more responsive healthcare system, able to meet the needs of the population. Therefore, countries with better UHC indicators and standards will face fewer moral and ethical challenges in delivering healthcare services and provisions [9].
Conclusion

Funding mechanisms and processes vary across countries. Health policy- and decision-makers should work together with governments to develop appropriate policies to ensure good decision making. The economy of countries will be affected by the COVID-19. Undoubtedly, in developing countries no additional economic resources can be used during this crisis. Developed countries are trying to face the pandemic by injecting new funding to cope with the disease and prevent its further transmission. In addition to psychological support and increased societal engagement for the prevention, control and treatment of COVID-19, extensive financial support to governments by the community should be considered, especially in developing settings. Developed and rich countries should support those countries that do not have enough financial resources. This disease cannot be, indeed, controlled and contained without international cooperation and collaborations among stakeholders. The experience of the COVID-19 should be a lesson for further developing and establishing UHC in all countries. In addition to promoting equity in health, appropriate infrastructure should be strengthened in order to address future crises. Governments should make a stronger political commitment to fully implement this crucial set of policies and reforms.

Acknowledgements

Funding sources: this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of interest statement

The authors declare no conflict of interest.

Authors’ contributions

MB, NLB designed the study; MB, MHI-N conceived the study; MB, NLB and MM drafted the manuscript; MB, MKG, MM, AB revised the manuscript. MB, NLB, MM, AB, MHI-N and MKG performed a search of the literature. MB, NLB and MM designed the study. MB, MHI-N conceived the study; MB, NLB and MM drafted the manuscript; MB, MHI-N and MKG performed a search of the literature. All authors critically revised the manuscript. MB, NLB and MM drafted the manuscript; MB, MHI-N conceived the study; MB, NLB and MM drafted the manuscript; MB, MHI-N and MKG performed a search of the literature. All authors have read and approved the latest version of the paper for publication.

References

[1] Chin MH, King PT, Jones RG, Jones B, Ameratunga SN, Muramatsu N, Derrett S. Lessons for achieving health equity comparing Aotearoa/New Zealand and the United States. Health Politics and Policy 2018;122(8):837-53. https://doi.org/10.1016/j.healthpol.2018.05.001
[2] McDaid D, Quaglio G, Correia de Campos A, Dario C, Van Woensel L, Karapiperis T, Reeves A. Health protection in times of economic crisis: challenges and opportunities for Europe. J Public Health Policy 2013;34(4):489-501. https://doi.org/10.1057/jphp.2013.35
[3] Bloom DE, Cadarette D. Infectious disease threats in the twenty-first century: strengthening the global response. Front Immunol 2019;10:549. https://doi.org/10.3389/fimmu.2019.00549
[4] Bredenkamp C, Evans T, Lagrada L, Langenbrunner J, Nanchuk S, Palo T. Emerging challenges in implementing universal health coverage in Asia. Soc Sci Med 2015;145:243-8. https://doi.org/10.1016/j.socscimed.2015.07.025.
[5] Cuevas García-Dorado S, Cornelsen L, Smith R, Walls H. Economic globalization, nutrition and health: a review of quantitative evidence. Global Health 2019;15(1):15. https://doi.org/10.1186/s12992-019-0456-z
[6] World Health Organization. Strategic Partnership for International Health Regulations (2005) and Health Security (SPH) 2020 [updated 7 May 2020]. Available from: https://extranet.who.int/sp/
[7] Pallangyo ES, Ndirangu E, Mwasha L, Lyimo M, Namukwaya C, Premji S, Squires A. Task shifting to attain Sustainable Development Goals and Universal Health Coverage: What are the consequences to the nursing and midwifery profession? Int J Nurs Stud 2020;102:103453. https://doi.org/10.1016/j.ijnurstu.2019.103453
[8] Bergen N, Ruckert A, Labonté R. Monitoring Frameworks for universal health coverage: what about high-income countries? Int J Health Policy Manag 2019;8(7):387-93. https://doi.org/10.15171/ijhpm.2019.21
[9] World Health Organization. Universal health coverage (UHC) 2018 [updated 23 May 2020]. Available from: http://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)
[10] Watkins DA, Qi J, Wakawatsu Y, Pickersgill SJ, Horton SH, Jamison DT. Resource requirements for essential universal health coverage: a modelling study based on findings from Disease Control Priorities, 3rd edition. Lancet Glob Health, 2020;8(6):e829-e9. https://doi.org/10.1016/S2214-109X(20)30121-2
[11] Berman P, Azhar A, Osborn EJ. Towards universal health coverage: governance and organisational change in ministries of health. BMJ Glob Health 2019;4(6):e001735. DOI: 10.1136/bmjgh-2019-001735
[12] Atun R, Aydin S, Chakraborty S, Sümür S, Aran M, Gürol I, Nazlıoğlu S, Özgülcü S, Aydoğan U, Aya Br, Dilmen U, Akdağ R. Universal health coverage in Turkey: enhancement of equity. Lancet 2013;382(9886):65-99. https://doi.org/10.1016/S0140-6736(13)61051-X
[13] Williams JS, Walker RJ, Egede LE. Achieving equity in an evolving healthcare system: opportunities and challenges. Am J Med Sci 2016;351(1):33-43. https://doi.org/10.1097/ajms.2015.10.012
[14] Ghebreyesus TA. All roads lead to universal health coverage 2020 [updated 7 May 2020]. Available from: https://www.who.int/news-room/commentaries/detail/all-roads-lead-to-universal-health-coverage
[15] Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? Lancet 2020 pii: S0140-6736(20):30627-9. https://doi.org/10.1016/S0140-6736(20)30627-9
[16] Livingston E, Bucher K. Coronavirus Disease 2019 (COVID-19) in Italy. JAMA 2020. https://doi.org/10.1001/jama.2020.4344
[17] Gable L, Courtney B, Gatter R, Kinney ED. Global public health legal responses to H1N1. J Law Med Ethics 2011;39(Suppl 1):46-50. https://doi.org/10.1111/j.1748-720X.2011.00565.x
[18] Suner S. Assessing and planning health actions during a crisis. Turk J Emerg Med 2015;15(Suppl 1):8-10. https://doi.org/10.5505/1304.7361.2015.59365
[19] Tambo E, Madjou G, Khayeka-Wandabwa C, Tekwku EN, Olabubi OA, Midzi N, Bengyella L, Adedeji AA, Ngogang JY. Can free open access resources strengthen knowledge-based
emerging public health priorities, policies and programs in Africa? F1000Res 2016;5:853. https://doi.org/10.12688/f1000research.6862.1

[20] Spina S, Marruzzo F, Migliari M, Stucchi R, Sforza A, Fumagalli R. The response of Milan’s Emergency Medical System to the COVID-19 outbreak in Italy. Lancet 2020;395(10227):e49-e50. https://doi.org/10.1016/S0140-6736(20)30493-1

[21] Bragazzi NL, Alicino C, Truichi C, Paganino C, Barberis I, Martini M, Sticchi L, Trinka E, Brigo F, Ansaldi F, Icardi G, Orsi A. Global reaction to the recent outbreaks of zika virus: insights from a big data analysis. PLoS One 2017;12(9):e0185263. https://doi.org/10.1371/journal.pone.0185263

[22] World Health Organization. Primary Health Care on the Road to Universal Health Coverage 2019 monitoring report 2019 [updated 7 May 2020]. Available from: https://www.who.int/healthinfo/universal_health_coverage/report/2019/en/

[23] Phelan AL, Katz R, Gostin LO. The novel coronavirus originating in Wuhan. China: challenges for global health governance. JAMA 2020. https://doi.org/10.1001/jama.2020.1097

[24] Feldstein LR, Ellis EM, Rowhani-Rahbar A, Hennessey MJ, Feldstein LR, Ellis EM, Rowhani-Rahbar A, G, Balabanova D. Towards an understanding of resilience: a scoping review of the international literature. BMC Health Serv Res 2017;17(1):636. https://doi.org/10.1186/s12913-017-2585-5

[25] Kim JM, Chung YS, Jo HJ, Lee NJ, Kim MS, Woo SH, Park S, Kim JW, Kim HM, Han MG. Identification of coronavirus isolated from a patient in Korea with COVID-19. Osong Public Health Res Perspect 2020;11(1):3-7. https://doi.org/10.24171/j.fphr.2020.11.1.02

[26] Roncarolo F, Boivin A, Denis JL, Hébert R, Lehoux P. What do we know about the needs and challenges of health systems? A scoping review of the international literature. BMC Health Serv Res 2017;17(1):636. https://doi.org/10.1186/s12913-017-2585-5

[27] Reich NG, Lessler J, Varma JK, Vora NM. Quantifying the risk and cost of active monitoring for infectious diseases. Sci Rep 2018;8(1):1093. https://doi.org/10.1038/s41598-018-19406-x

[28] Bedford J, Enria D, Giesecke J, Heymann DL, Ihekweazu C, Reich NG, Lessler J, Varma JK, Vora NM. Quantifying the risk and cost of active monitoring for infectious diseases. Sci Rep 2018;8(1):1093. https://doi.org/10.1038/s41598-018-19406-x

[29] Kim JM, Chung YS, Jo HJ, Lee NJ, Kim MS, Woo SH, Park S, Kim JW, Kim HM, Han MG. Identification of coronavirus isolated from a patient in Korea with COVID-19. Osong Public Health Res Perspect 2020;11(1):3-7. https://doi.org/10.24171/j.fphr.2020.11.1.02

[30] Hubel J, Mayhew S, Legido-Quigley H, Martineau F, Karanikolas M, Blanchet K, Liverani M, Yei Mokuwa E, McKay G, Balabanova D. Towards an understanding of resilience: responding to health systems shocks. Health Policy Plan 2018;33(1):1144. https://doi.org/10.1093/heapol/czx183

[31] Halloran ME, Longini IM Jr. Emerging, evolving, and established infectious diseases and interventions. Science 2014;345(6202):1292-4. https://doi.org/10.1126/science.1254166

[32] Gase LN, Pennotti R, Smith KD. “Health in All Policies”: taking stock of emerging practices to incorporate health in decision making in the United States. J Public Health Manag Pract 2013;19(6):529-40. https://doi.org/10.1097/PHH.0b013e318290fcfe

[33] WHO. Coronavirus disease 2019 [updated 27 March 2020]. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen.

[34] COVID-19 Coronavirus Pandemic 2020 [updated March 29, 2020]. Available from: https://www.worldometers.info/corona/

[35] Jain V, Alam A. Redefining universal health coverage in the age of global health security. BMJ Glob Health 2017;2(2):e000255. DOI: 10.1136/bmjgh-2016-000255

[36] Zagmutt FJ, Semper SH, Hanson TR. Disease spread models to estimate highly uncertain emerging diseases losses for animal agriculture insurance policies: an application to the U.S. farm-raised catfish industry. Risk Anal 2013;33(10):1924-37. https://doi.org/10.1111/risa.12038

[37] Bragazzi NL, Dai H1, Damiani G, Behzadifar M, Martini M, Wu J. How big data and artificial intelligence can help better manage the COVID-19 Pandemic. Int J Environ Res Public Health. 2020;17(9):pii: E3176. https://doi.org/10.3390/ijerph17093176

[38] Ivers LC, Walton DA. Novel Coronavirus Disease (COVID-19): global health equity in pandemic response. Ann Trop Med Hyg 2020. https://doi.org/10.4269/ajarpm.20-0260

[39] Wang Z, Tang K. Combating COVID-19: health equity matters. Nat Med 2020;26(4):458. https://doi.org/10.1038/s41591-020-0823-6

[40] Akinleye FE, Akinbolaji GR, Olasupo JO. Towards universal health coverage: lessons learnt from the COVID-19 pandemic in Africa. Pan Afr Med J 2020;35(Suppl 2):128. https://doi. org/10.11604/pamj.supp.2020.35.2.24769

[41] Lal A, Erondon NA, Heymann DL, Gitahi G, Yates R. Fragmented health systems in COVID-19: rectifying the misalignment of global health security. BMJ Glob Health 2017;2(2):e000255. DOI: 10.1136/bmjgh-2016-000255

[42] Bedford J, Enria D, Giesecke J, Heymann DL, Ihekweazu C, Reich NG, Lessler J, Varma JK, Vora NM. Quantifying the risk and cost of active monitoring for infectious diseases. Sci Rep 2018;8(1):1093. https://doi.org/10.1038/s41598-018-19406-x

[43] Bedford J, Enria D, Giesecke J, Heymann DL, Ihekweazu C, Reich NG, Lessler J, Varma JK, Vora NM. Quantifying the risk and cost of active monitoring for infectious diseases. Sci Rep 2018;8(1):1093. https://doi.org/10.1038/s41598-018-19406-x

[44] Rosenbaum L. Facing Covid-19 in Italy - ethics, logistics, medical resources in the time of Covid-19. N Engl J Med 2020. https://doi.org/10.1056/NEJMp2005492

[45] Lal A, Erondon NA, Heymann DL, Gitahi G, Yates R. Fragmented health systems in COVID-19: rectifying the misalignment of global health security and universal health coverage. Lancet 2020;S0140-6736(20)32228-5. https://doi.org/10.1016/S0140-6736(20)32228-5

[46] Brady E, Carmone AE, Das S, Hurley R, Martinez Vergara MT, Malata A. Harnessing the Power of Networks of Care for Universal Health Coverage. Health Syst Reform 2020;6(2):e1840825. https://doi.org/10.1080/23288604.2020.1840825

[47] Emanuel EJ, Persad G, Upshur R, Thome R, Parker M, Glickman A, Zhang C, Boyle C, Smith M, Phillips JP. Fair allocation of scarce medical resources in the time of Covid-19. N Engl J Med 2020 382(21):2049-55. https://doi.org/10.1056/NEJMsb2005114

[48] Rosenbaum L. Facing Covid-19 in Italy - ethics, logistics, and therapeutics on the epidemic’s front line. N Engl J Med 2020;382(20):1873-5. https://doi.org/10.1056/NEJMhp2005492

Received on May 14, 2020. Accepted on May 26, 2020.

Correspondence: Masoud Behzadifar, Social Determinants of Health Research Center, Lorestan University of Medical Sciences Anooshiravan Rezaei Square, Khorramabad, Iran. E-mail: masoudbehzadifar@gmail.com

How to cite this article: Behzadifar M, Imani-Nasab MH, Martini M, Ghanbari MK, Bakhtiari A, Bragazzi NL. Universal Health Coverage to counteract the economic impact of the COVID-19 infection: current practices and ethical challenges. J Prev Med Hyg 2020;61:E520-E524. https://doi.org/10.15167/2421-2448/jpmh2020.61.4.1581

© Copyright by Pacini Editore Srl, Pisa, Italy

This is an open access article distributed in accordance with the CC-BY-NC-ND (Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International) license: The article can be used by giving appropriate credit and mentioning the license, but only for non-commercial purposes and only in the original version. For further information: https://creativecommons.org/licenses/by-nc-nd/4.0/deed.en