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INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic is the greatest threat to public health today. The disease arose at a time when it was widely believed that humankind had only one last frontier to conquer in public health—to master techniques for the definitive treatment of genetic and hereditary diseases, as well as neoplasms and degenerative diseases. The emergence of a new infectious disease, caused by a virus previously believed to be harmless to human beings, generated a global crisis and caused the medical scientific community to thoroughly review existing concepts concerning prevention, epidemiology, and treatment (1).

The crisis caused by COVID-19 not only affected individuals’ health, but also exposed a need for reflection on social and cultural habits, the means of economic production, public administration policies, and government functioning, amongst other important issues (2,3,4). It highlighted a crisis of values, demanding a review of medical activity priorities, research investments, and financing in health science, as well as the gap between individual and collective health. In addition to compromising health and threatening survival at both the individual and collective levels, this crisis raised questions about our current approaches to the environment and sustainability.

We are being challenged and surrounded by uncertainties, and simultaneously learning how to deal with the pandemic and its sudden, merciless, and guideless outbreak. The learning opportunity has been immense, but the scientific community has been reduced to mere observers - as if we are enrolled in an observational-type cohort study - in which exposure to the virus leads to the first set of observed results. Major epidemics such as COVID-19, natural disasters that threaten large populations, and climatic emergencies and their consequences, demand effective management and public health actions, as well as environmental, socio-economic, and health policies. These areas, however, lack comprehensive or cohesive bioethical consideration.

The principles of bioethics are indispensable across all levels of coping with the pandemic, ranging from patient care to the issue of resource allocation. A theoretical framework is required to establish and support decisions, which, although legal, lack an ethical basis to be clearly translated to affected individuals and populations.

Beneficence and non-maleficence

Ensuring adequate levels of public health care clearly constitutes the cornerstone of the global fight against the pandemic, driving all aspects of COVID-19 therapy. The principles of beneficence and non-maleficence guide all parameters of patient care. Thus, any decision—even those based on epidemiological and scientific evidence—may appear like mere authoritarian impositions if they are not perceived through an ethical lens (5).

Thus, health professionals should adopt the perspective of collectivity—and not individual or specific measures of care—when discussing the evidence regarding the effectiveness of measures, whether therapeutic, device-based, or behavioral. Public comments made without solid scientific evidence could exacerbate health problems and generate conflicts. Thus, it is mandatory for professionals to exercise extra care in their discourse so as not to expose information that could bring potential harm to the population (6).

In the current scenario, discussing information without appropriate evidence can lead to political antagonism, contaminate the medical and scientific environment, and lead to disputes that are not grounded on science, but rather, on political passions, which certainly does not contribute to the non-maleficence principle. The preservation of these principles is necessarily based on the veracity of information regarding the diagnosis, risks of treatment courses, adverse effects of medication, and scientific research protocol involving human beings, on which bioethics is founded.

Equity and autonomy

The above-mentioned topics are especially significant in bioethics and require in-depth discussions. Moreover, the long durations for which intensive care beds are occupied, and the lack of human and material resources to meet the pandemic’s needs, demand extensive discussions on resource allocation, as well as the exercise of equity and autonomy. Should human dignity be reduced to the values on some cold score scales, with patient’s probability of survival, quality of life after recovery and age being parameters when deciding upon the allocation of intensive care beds? (7)

In the context of a pandemic, clinical severity criteria should not be considered in isolation. The probability of...
CONCLUSION

During calamities, individual survival depends on collective survival, and individual protective actions depend on synergistic collective action. No individual can protect only himself or herself during a pandemic or natural disaster. Every protective or preventive action demands a collective approach, even if it curtails individual freedom to a certain degree, especially if such liberty poses a threat to collective well-being.

In addition to the principles, several particular values should be more explicit in reflection and bioethical actions. The bioethical practice is essentially democratic, seeking to give voice to patients as well as their family members or representatives, in search of their individual value. However, it is also pluralist, in which discussions regarding ethical issues and cases and their dilemmas takes place in multidisciplinary committees, in which we consider different opinions, even if they are antagonistic.

Another essential value in practice and bioethical action is veracity, as sharing true information regarding the diagnosis, the risks of treatment, the adverse effects of a medicine, and the protocol of scientific research involving human beings, is the foundation on which bioethics is built.

A third fundamental value is solidarity, under which people are not only obliged to each other but to the collective as well—it is a mutual connection between two or more people dependent on each other. Solidarity is an essential and indispensable value in combating a pandemic such as COVID-19. Without solidarity, any public or collective health action is bound to fail.

A fourth value, which concerns the majority of bioethical actions at the individual or collective level, is cooperation. This is understood as acting together with others toward the same purpose.

Without clear ethical values such as democracy, the veracity of information, solidarity among people, and cooperation in collective actions, which can be easily understood by individuals and the community, many of the necessary measures to combat a severe pandemic such as COVID-19 will neither be well accepted nor effective.

The COVID-19 pandemic has led to important reflections, meetings, and discussions, thereby triggering several provocations, actions, and improvements in bioethics committees. This allows not only inter-disciplinary growth but also mediation with health professionals, and enables the population to reconcile and guide different, even antagonistic, opinions. The bioethical reflections resulting from the pandemic will certainly help us emerge better and stronger from the crisis.

REFERENCES

1. Gates B. Responding to Covid-19 — A Once-in-a-Century Pandemic? N Engl J Med. 2020;382(18):1677-9. https://doi.org/10.1056/NEJMp2003762
2. Eng Koon O. The Impact of Sociocultural Influences on the COVID-19 Measures—Reflections From Singapore. J Pain Symptom Manage. 2020; 60(2):e90-e92. https://doi.org/10.1016/j.jpainsymman.2020.04.022
3. McKibbin WJ, Fernando R. The Global Macroeconomic Impacts of COVID-19: Seven Scenarios. CAMA Working Paper No.19/2020. Available from: https://ssrn.com/abstract=3547729. https://doi.org/10.2139/ssrn.3547729
4. The Lancet: Most comprehensive study to date provides evidence on optimal physical distancing, face masks, and eye protection to prevent spread of COVID-19. Available from: https://www.eurekalert.org/pub_releases/2020-06/lpss060120.php
5. Recomendaciones para la toma de decisiones éticas sobre el acceso de pacientes a unidades de cuidados especiales en situaciones de pandemia. Available from: http://www.bioeticaayderecho.ub.edu/sites/default/files/doc_recom-pandemia.pdf
6. Articles 111, 112 and 113 from Brazilian Medical Ethics Code. Available from: https://portal.cfm.org.br/images/PDF/em2019.pdf

7. Non-Discrimination in the Stewardship and Allocation of Resources During Health System Catastrophes Including COVID-19. Approved by the Executive Committee of the Board of Regents on behalf of the Board of Regents on March 26, 2020. Available from: https://www.acponline.org/acp_policy/policies/acp_policy_on_non-discrimination_in_the_stewardship_of_healthcare_resources_in_health_system_catastrophes_including_covid-19_2020.pdf

8. Geripal. Rationing Life Saving Treatments in the Setting of COVID Pandemics: A Podcast with Doug White and James Frank. Available from: https://www.geripal.org/2020/03/rationing-life-saving-treatments-in-COVID19.html#more

9. World Health Organization. Integrating palliative care and symptom relief into the response to humanitarian emergencies and crises. 2018. Available from: https://apps.who.int/iris/bitstream/handle/10665/274565/9789241514460-eng.pdf?sequence=1&isAllowed=y

10. Caetano R, Silva AB, Guedes ACCM, Paiva CCN, Ribeiro GDR, Santos DL, et al. Challenges and opportunities for telehealth during the COVID-19 pandemic: ideas on spaces and initiatives in the Brazilian context. Cad Saude Publica. 2020;36(5):e00088920. https://doi.org/10.1590/0102-311x00088920

11. Ellis LD. Embracing the benefits of virtual visits during the COVID-19 pandemic. Available from: https://discoveries.childrenshospital.org/benefits-of-telehealth-visits/