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Bioethics and resource allocation in the COVID-19 pandemic

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Abstract

This work evaluates, from the perspective of Bioethics, the structural, institutional and emotional impact of the allocation of scarce resources during the COVID-19 pandemic, a disease that emerged at the end of 2019 and has become one of the greatest challenges of society. The analysis of the selected articles indicates that, even after the expansion of beds in holy houses and philanthropic hospitals, demand remained higher than supply. Thus, it is necessary to restructure care with recommendation measures and protocols that prioritize health professionals and a better prognosis, with longer life after treatment, and exclude any priority by class or non-medical social influence. The adoption of these care measures and protocols optimizes treatment and maximizes resources, covering a greater number of patients and enabling the provision of treatment with fair, ethical and resolute measures.

Keywords: Resource allocation. Coronavirus infections. Bioethics.

Resumo

Bioética e a alocação de recursos na pandemia de covid-19

Este trabalho avalia, sob a ótica da bioética, o impacto estrutural, institucional e emocional da alocação de recursos escassos durante a pandemia de covid-19, doença que emergiu no final de 2019 e se tornou um dos maiores desafios da sociedade. A análise dos artigos selecionados indica que, mesmo após ampliação de leitos em santas casas e hospitais filantrópicos, a demanda continuou maior que a oferta. Desse modo, é necessário reestruturar o atendimento com medidas de recomendação e protocolos que priorizem profissionais da saúde e melhores prognósticos, com maior tempo de vida pós-tratamento, e excluam qualquer prioridade por classe ou influência social não médica. A adoção dessas medidas e protocolos de atendimento otimiza o tratamento e maximiza os recursos, abrangendo um número maior de doentes e possibilitando a oferta de tratamento com medidas justas, éticas e resolutivas.

Palavras-chave: Alocação de recursos. Infecções por coronavírus. Bioética.

Resumen

Bioética y asignación de recursos en la pandemia de covid-19

Este trabajo evalúa, desde la perspectiva de la Bioética, el impacto estructural, institucional y emocional de la asignación de recursos escasos durante la pandemia de covid-19, una enfermedad que surgió a finales de 2019 y se ha convertido en uno de los mayores retos de la sociedad. El análisis de los artículos seleccionados indica que, incluso después de la expansión de camas en santas casas y hospitales filantrópicos, la demanda se mantuvo por encima de la oferta. Así, es necesario reestructurar el funcionamiento con medidas de recomendación y protocolos que prioricen a los profesionales de la salud y un mejor pronóstico, con una vida más larga después del tratamiento, y excluir cualquier prioridad por clase o influencia social no médica. La adopción de estas medidas y protocolos de atención optimiza el tratamiento y maximiza los recursos, cubriendo un mayor número de pacientes y permitiendo la prestación del tratamiento con medidas justas, éticas y resolutivas.

Palabras clave: Asignación de recursos. Infecciones por coronavirus. Bioética.

Research

The authors declare no conflict of interest.

COVID-19 emerged in late 2019 and was declared a pandemic in March 2020, making it one of modern society's greatest challenges. According to the United Nations' (UN) High Commissioner for Human Rights, Michelle Bachelet, the disease caused by the new coronavirus (SARS-CoV-2) is a test not only for the world's health systems, but also for the ability of nations to work together towards a common goal [1]. According to the World Health Organization (WHO), about 14% of patients develop the severe form of the disease, requiring hospitalization and oxygen therapy, and 5% need intensive care.

The growth in demand challenged national planning for crises of unprecedented proportions, affecting population protection systems, especially the most vulnerable sectors. This exposed deficiencies in several areas such as sanitation, housing and other factors that shape a nation's health markers [1]. In the United States, masks for professionals quickly sold out; in Italy, the number of beds in intensive care units (ICU) and ventilators were insufficient, forcing professionals to decide where resources would be used; in South Korea, people died in their homes waiting for a hospital bed [2].

In this scenario of public calamity, bioethics raises important questions to be considered so resource allocation occurs in the most fair, equitable and adequate way possible in view of the extraordinary measures adopted to prevent the spread of the disease and protect the lives of citizens [3]. To this end, decisions and coping practices must be based on ethics and the legal aspects of each country, based on scientific evidence and, above all, human rights [2-4].

This literature review sought to understand and compile the main extraordinary protocols based on ethical, legal and scientific criteria – and on human rights – established to guide the allocation of resources during the first six months of the pandemic in Brazil.

Method

This research compiled works conducted in Brazil and other countries, including recommendation articles and clinical practice manuals produced because of the pandemic, as well as review articles, medical consensuses and theses. Articles that dealt exclusively with the allocation of scarce resources or bioethics were excluded.

The works were selected through an active search on the Google Scholar and Virtual Health Library databases, as well as a specific search by authors and contact with researchers. Using the descriptors "resource allocation" and "covid-19," 476 studies were found and, after refinement with the descriptor "bioethics", 38 studies remained. These articles were analyzed, first based on their titles and then on their abstracts; three studies that related the allocation of scarce resources to bioethical issues and the pandemic were selected to be fully examined, according to the established criteria.

Results and discussion

Bioethical guidelines aimed at the pandemic [3] advocate that the State is responsible for guaranteeing full and equitable access to health, as provided for in the Federal Constitution, especially in periods of crisis. Studies corroborate this premise and state that there should be ICU beds, ventilators, personal protective equipment (PPE) and all the material necessary to assist all who require care in public institutions [1,2,4,5]. However, the real situation shows that the constitutional requirement was not fulfilled, as in the case of the state of Ceará, as data show signs of collapse even before the pandemic and indicate that the expenditure authorized by the Ministry of Health (MS) between 2002 and 2015 was insufficient [5].

The underfunding of public health services impairs the system's human and material capacity, a structural problem that the population has faced for decades and with insufficient attention given by the political body. The pandemic made such deficit even more evident, as spending on public health increased minimally in Brazil compared to other countries, such as Italy and Spain, and the expansion of the number of beds was insufficient for the growing demand [5]. Changes in agility to adapt the structure and provide funding [5] had little

relevance given the severity of the crisis and the vulnerability in which the population that depends on public health finds itself.

Limited material and human resources and the lack of resilience of health services to deal with crisis situations lead to greater challenges in health care. The disease represents thus a public health risk, demanding a coordinated response from the articulations between public health and bioethics [1]. According to article 5 of the Brazilian Federal Constitution, the right to life is inalienable and must be respected regardless of public health emergencies [3].

Thus, to inhibit any possibility of scarcity [2,4], it is up to the State to offer resources, including financial, social and psychosocial support, and meet the basic needs – such as food, water, and other essential items – of its population, especially the more vulnerable [5]. The effective action of the State would safeguard the lives of both patients and health professionals, as greater investments and the optimization of care would reduce the spread of the disease, the aggravation of cases and the burden on workers [2,4].

The UN Human Rights Committee [1] states that the promotion of care that prioritizes the right to life demands a regulatory structure in hospitals and health institutions, reinforcing the importance of establishing prior conducts and reorganizing the system and the sectors that receive investments. It is also noteworthy that the right to life encompasses the right to a correct diagnosis through tests and examinations, adequate care, access to effective emergency services, ventilatory support and an ICU bed, if necessary [3].

In these circumstances, the systematization of the screening is necessary due to the low availability of ICU beds in relation to the number of patients who need intensive care. Therefore, regulations associated with the training and qualification of the triage team must be set, as well as clear, transparent and scientifically-based protocols [2,4,6] in line with the Brazilian legal framework [4]. Erroneous clinical judgments about the feasibility or relevance of intensive care can thus be avoided, so that the rationing of resources is guided by solidly structured bioethical principles.

The protocol of the Brazilian Association of Intensive Medicine (Amib) [4] suggests, for each health institution or region, the constitution of a special team for screening. This group, which should be formed by professionals who are not participating in the care of patients with COVID-19, would be responsible for the impartial and technically based allocation of scarce resources. The recommendation suggests at least three health professionals per team, two physicians and a member of the multidisciplinary team, and, if possible, a bioethicist and a community member to reinforce the decisions and make them even more transparent to the population [4].

The decision making process of screening must be recorded in detail in medical records. Moreover, the communication with patients and family members must be effective to optimize the transparency of each indicated procedure [2,4]. Thus, the process would be in accordance with bioethical principles and current legislation in the country, which guarantees the patient the right to receive relevant and reliable information about their disease and participate in decision making regarding their own treatment [3].

Rationing measures

In pandemic times, resource rationing is ethically justifiable [2,4]. Different studies claim that the ethical values that guide this premise are:

- Maximize service, saving as many lives and years of life as possible;
- Treating patients with similar prognoses equally, through random selection, considering that the service "by order of arrival" does not offer equity and should not be used;
- Promote and reward instrumental values, prioritizing care to those who can contribute or who have already contributed to the context of care, as a form of retribution – for this value there is the retrospective approach, which prioritizes those who have already contributed positively, and the prospective approach, regarding those who will still contribute positively; and
- Prioritize those affected the most and the youngest [2,4].

Criteria for admission to the intensive care unit

In May 2020, the growth in the number of ICU beds in charity and philanthropic hospitals was enabled, prioritizing – and expanding primary care – the support of specialized care [5]. However, considering the evolution of COVID-19 cases, the system remains unable to meet the demand [5]. Therefore, clear and well-defined criteria for the admission of patients to ICU beds are needed.

Considering the maximization of benefits, it is understood that admission to ICU is based on the patient's needs, as well as on their prognosis and potential benefit [2,4]. Patients with a high probability of recovery and without limitations in therapeutic support would thus be listed as the first to receive beds [4].

Then come those who need intensive monitoring, but have no limitations regarding support, who would preferably be monitored in semi-intensive units; those who need interventions but have a low probability of recovery or limited support; and those who need intensive monitoring and have limited therapeutic intervention, also in semi-intensive support [4]. Finally, patients with terminal-stage disease with no possibility of recovery would be treated preferentially in palliative care units [4].

Therefore, considering statistics and epidemiology, it is assumed that younger patients without comorbidities will respond better to treatment and live longer after cure, benefiting the most from the allocation of these resources [2-4,6]. All patients should also be treated equally, distributing resources regardless of whether they are infected with coronavirus or facing another disease [2-4]. The fight against COVID-19 must involve balance with the attention to other health problems that may be neglected due to lack of resources.

Furthermore, when patients who need an ICU bed have a similar classification according to pre-established protocols, random selection should be prioritized [2-4], also performed by the triage team, so as not to overload the clinical team responsible for care [4]. The only distinctions would be applied to health professionals, compared to patients who do not fight the virus [2-4,6] and in relation to older adults and people with disabilities [3,4].

Recommendations for health professionals

Above all, it is emphasized that health professionals must have access to appropriate PPE, tests, ICU beds, ventilators, treatments and vaccines, so that they can have guaranteed care if they get sick [2,4,6]. Since they represent the majority of care provided to the population given the waste of resources, their health must be assured, thinking not only about their rights – to life, as described in the Constitution – but also about the instrumental value of these people [2,4,6].

Such prioritization should aim at frontline health professionals and those who care for patients and maintain the operation of this critical structure, not belonging to social classes with greater purchasing power [2,3], as occurred in some cases. It should also not be forgotten that sick health professionals cannot provide services to patients with COVID-19 or any other condition.

Furthermore, professional prioritization must be integral, not just in cases of COVID-19 [2-4], so that, if they need care for any disease and a citizen who does not work on the front line is affected by SARS-CoV-2, the bed will be directed to the health professional. In general, the adoption of these recommendations will help to manage resources and provide support for medical decisions during the pandemic – especially regarding ethical conduct –, relieving these workers' emotional burden and offering equal and quality service [2,4-6].

Recommendations for older adults and people with disabilities

According to Albuquerque and collaborators [3], resource allocation guidelines must respect the right to non-discrimination, guaranteed by the Federal Constitution to all citizens, emphasizing older adults and people with disabilities, which corroborates Amib's recommendations [4]. Thus, the State must adopt measures to mitigate inequalities and vulnerabilities so that the pandemic does not have a disproportionate effect on patients from vulnerable groups [3]. Regarding the prophylactic approach, risk groups need to be prioritized immediately after the health professionals, following the epidemiological model of the disease [4].

The greatest controversy found in this study is related to the allocation of resources for curative care. About this, a study recommends considering the individual prognosis [2], which could mean prioritizing young patients and those with fewer comorbidities to the detriment of older adults and people with disabilities.

On the other hand, Amib recommends that the criterion of the chance of being benefited be equally applied to all, regardless of subjective assessments about quality of life, which could harm older adults, people with disabilities and even psychiatric patients. Like the single criterion, such as age, this could be considered unconstitutional due to its discriminatory bias [4].

Thus, the use of tracking scores for the status of critically ill patients was suggested as a solution, such as the Sequential Organ Failure Assessment (Sofa) and the Acute Physiology and Chronic Health Evaluation (Apache), widely used in intensive care [4]. To assess comorbidities that impair quality of life, reducing life expectancy to less than one year, the Supportive and Palliative Care Indicators Tool (Spict) was used and, to determine the status of these patients, the Eastern Cooperative Oncology Group (Ecog) scale was used [4]. In case of draw, it is recommended to prioritize the patient with the lowest Sofa score and clinical judgment by the responsible triage team [4].

The right to non-discrimination is thus ensured and equity guaranteed during the crisis period, since, also in compliance with the principles of the Unified Health System (SUS), each patient must have their specificities respected in order to protect those in a situation of greater vulnerability.

Considerations on the right to advance directives of will

Advance directives of will (ADW) serve to ensure, among others, the right to consent to treatments and procedures or their refusal [3], however most patients do not have access to this document at the time of hospitalization. For this reason, the studies were unanimous in stating that these patients should be guided and questioned at the appropriate time regarding the definition of procedures that they consider or not relevant in case of terminal illness [2,4], in line with Resolution 1995/2012, of the Federal Council of Medicine (CFM) [4].

Right to continuity of palliative care

It is important to emphasize that patients to whom it is not possible to provide intensive care should not be forgotten or placed on the sidelines of health care. Under the light of bioethics and human rights, everyone has the right to continue assistance in case of non-election to scarce resources [2-4].

Once primary and secondary care are able to provide the relevant care, the number of critically ill patients who need tertiary and quaternary services is reduced. Patients who need palliative care should be referred to appropriate care units and, preferably, specialized in this type of approach [2-4]. Thus, the legal formalization of guidelines will contribute to uniformity and consistency in the application of protocols in any health institutions.

Periodic reassessment of patients

It is recommended that patients elected during resource allocation are periodically reassessed to avoid dysthanasia. For this, one should not only consider the expected period of clinical recovery, called "therapeutic trial," but avoid obstinate measures and perform reverse screening. It seeks to facilitate discharges from the ICU and contribute to the provision of beds [4], aiming to maximize resources and respect the right not to be subjected to torture [3].

A study by Emanuel and collaborators [2] corroborates this recommendation by stating that removing a patient from the ICU bed to offer it to another is justifiable in pandemic times, however, they need to be informed of this possibility during hospital admission. If this occurs, the patient must be guaranteed their right to receive full and equal care from qualified professionals outside the intensive environment [3].

Final considerations

The COVID-19 pandemic became a serious global challenge, as it promoted a call for the

revitalization of the universal values contained in human rights norms. In this context, the expansion in the number of ICU beds was insufficient to meet the demand. Extraordinary conduct criteria had to be established, outlining fundamental recommendations to maximize scarce resources, optimize treatment and reduce the professionals' emotional burden.

To guarantee ethics and transparency during the pandemic, it is fundamental to form screening teams, align a judicious evidence-based protocol, and outline rules and premises that respect legal guidelines. Such measures also aim to prioritize health professionals and save as many lives and years of life as possible through better prognoses and contributions to the fight against the disease. Discriminatory bias regarding age, social class and degree of influence can also be avoided.

The importance of investing in basic and specialized sectors is highlighted, in order to cover all health needs. Inequality and the lack of access to health can then be reduced, as well as the frailty of maintaining the right to life in the country.

Limitations of this study include the scarcity of literature on the subject, as the pandemic is an extraordinary and very recent situation. However, it was possible to list extremely relevant factors for the implementation of fair, ethical and effective measures to the challenge that now afflicts humanity.

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Research