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Bioethics, pandemic and the duty to treat: Discussing the allocation of scarce resources

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***Keywords*— Pandemic. Bioethics. Health Economics.**

***Abstract* — Objectives: To know the ethical parameters in relation to the allocation of scarce resources in the midst of the pandemic. Method: This is an integrative literature review that included articles published in 2020, during the Covid-19 pandemic, in journals indexed in Lilacs and Scielo databases, available for free, and studies discussed in international bioethics forums focused on discussing ethical dilemmas during the pandemic. Results: There are strong justifications for the development and application of triage protocols in case the pandemic exceeds the capacity to provide intensive care to all patients. Conclusion: It is important that hospitals take immediate steps to develop a decision-making process, anticipate what will be the priority criteria in this pandemic moment and involve the ethics team in the institutions, in order to take the burden off the decision of health professionals, which are already overloaded.*

I. INTRODUCTION

COVID-19 is an infectious disease that spread rapidly and required resources beyond what healthcare systems can handle. This new infection with severe clinical manifestations, including death, has reached at least 124 countries and territories [1,3,6]. While the ultimate course and impact of Covid-19 is uncertain, this pandemic is challenging healthcare systems around the world and raising important ethical questions, especially with regard to the potential need for rationing. [1]

The Covid-19 pandemic has led to a severe shortage of many essential goods and services, from hand sanitizers and N-95 masks to Intensive Care Unit (ICU) beds and ventilators1. The Covid-19 outbreak has posed critical challenges for the public health, research and medical communities, even if the ability to provide care is sufficient, a priority must be on the goals of care in the setting of acute life-threatening illness, especially for patients. with life-limiting chronic diseases. [2,5]

According to the Brazilian Ministry of Health, as of April 28, 2020, 71,886 confirmed cases and 5,017 deaths from the disease were recorded in Brazil, according to information provided by the State Health Departments across the country. In the last 24 hours, there were 5,385 new cases and 474 new deaths. Of the 71,886 confirmed cases, 32,544 are considered recovered (45%) and 34,325 are under follow-up. There are still 1,156 deaths under investigation. [15]

The SUS does not have enough ICU beds for the demand of the pandemic, most Brazilian states are unprepared to

serve the serious cases of patients infected by the coronavirus in the public network. In total, counting SUS and private ICUs, Brazil has about 47,000 beds, divided in half in each system. Adding the two together, the average rises to 2.1 for every 10,000 people, below the need observed in the most affected countries. [14,15]

This raises important ethical questions about how we decide who has access to critical care when we cannot provide it to everyone, during a pandemic, we need to respect individual rights and freedoms, considering the needs of the general public. Decisions made in these exceptional times must consider the principles of medical bioethics.[5,9]

From the perspective of this study, the objective is to know, through the literature, the ethical dilemmas in relation to the allocation of scarce resources in the midst of the pandemic.

II. METHOD

In order to reach the objective of this study, an integrative literature review was chosen, which makes it possible to gather and synthesize results from multiple published studies on a delimited topic in a systematic and orderly manner, contributing to the deepening of the investigated topic4. It was developed in six stages: establishment of the theme and research question; definition of inclusion and exclusion criteria for sample selection; categorization of studies; evaluation of included studies; interpretation of results and presentation of the review.

Articles published in 2020, during the Covid-19 pandemic, in journals indexed in Lilacs and Scielo databases available in full, and studies discussed in international bioethics forums aimed at discussing ethical dilemmas during the pandemic were included in this study. Through this, it was possible to carry out a more detailed analysis of bioethics experts, on how to proceed in relation to the allocation of scarce resources in health services around the world.

Thus, in order to refine it, the following inclusion criteria were defined: scientific articles that explained the methodological trajectory adopted; written in Portuguese, English or Spanish without restriction to the year of publication and relate to terminally ill patients or end-of-life patients. Articles that included literature reviews, editorials and proceedings abstracts were excluded.

For data analysis, only studies that were related to the proposed theme were evaluated and selected, initially 16 studies were identified. After reading the abstracts, following the inclusion and exclusion criteria, 9 studies were effectively analyzed because they referred in the results to the bioethics theme in the allocation of health resources in the covid-19 pandemic.

III. RESULTS

A summary of the selected articles is presented in the following table (table 1).

Table 1 – Distribution of studies according to numbering, research objective and research findings. Brasil, 2020.

N	Author / year of Publication	Article title	Periodical	Objetives	Main Results
1	PAULS; MIGNEAULT & BAKEWELL, 2020	Ethical considerations in the allocation of critical care resources when capacity is overwhelmed.	Canadian Jounal of Emergency Medicine	Discuss ethical issues about decisions related to distribution of ICU beds and respirators amid the pandemic of COVID-19.	In the midst of the pandemic, advance directives of will show how an important allies to the management of the Canadian health service.

2	CURTIS; KROSS & STAPLETON, 2020	The Importance of Addressing Advance Care Planning and Decisions About Do-Not-Resuscitate Orders During Novel Coronavirus 2019 (COVID-19)	JAMA Network	Discuss do not Resuscitate orders on of the COVID-19 pandemic	The importance that clinicians have high discussions quality, as much over the planning advanced of service to individuals of community, especially those aged more advanced and with diseases chronicles.
3	TROUG, MITCHELL & DALEY, 2020	The Toughest Triage — Allocating Ventilators in a Pandemic	The new England Jounal of Medicine	Evaluate the screening made in relation to the fans mechanics in United States.	the doctors of United States can take decisions that never had before and for which many of them will not be prepared.
4	EMANUEL et al., 2020	Fair Allocation of Scarce Medical Resources in the Time of Covid-19	The new England Jounal of Medicine	analyze the capacity of management of health system in the states united and the possible choices that doctors and nurses must do.	Guidelines can ensure that doctors and nurses don't have the task of decide, without help, which patients Receive treatment that save lives and which not.
5	GOSTIN; FRIEDMAN & WETTER, 2020	Responding to COVID-19: How to Navigate a Public Health Emergency Legally and Ethically.	The Hastings Center Report	To discuss ethically about the division and asset allocation and services for population in midst of the pandemic.	In a moment of vast inequalities, we are all so safe as the most vulnerable between us United States and in the world. If poor members or disadvantaged of ours community no can practice detachment physical or access health services, we will all run a greater risk.
6	BELINGER et al., 2020	Ethical Framework for Health Care Institutions & Guidelines for Institutional Ethics Services Responding to the Coronavirus	The Hastings Center	The study aims to help structure discussions in progress of worries ethical and predictable under levels of contingency of service and potentially	The institutions of health are crucial to resist and if recover from emergencies of public health. O practice support ethics is crucial to the integrity and the strength well-being of work.

		Pandemic		crisis patterns of attendance.	
7	POOLE et al., 2020	Responding to the COVID-19 pandemic in complex humanitarian crises	The Hastings Center	Analyze better Forms of interventions in order to maximize the effectiveness of actions during the covid-19 pandemic.	Interventions under tailored to the needs of crisis-affected populations, provided with transparent information, in the context of inclusive governance practices, are urgently needed in the global response to the coronavirus pandemic. COVID-19.
8	HICK et al., 2020	Duty to Plan: Health Care, Crisis Standardsof Care, and Novel Coronavirus SARS-CoV-2	National Academy of Medicine	Discuss the application of the standards of care for outpatient and emergency capacity, placed by the coronavirus or other major epidemic or pandemic event.	Health facilities should develop proactive, layered strategies, using the best clinical information available and building on their existing outbreak capacity plans to optimize resource use in the event that the current outbreak spreads and creates severe health demands. resources.
9	KRAMER; BROWN& KOPAR, 2020	Ethics in the Time of Coronavirus: Recommendatios in the COVID-19 Pandemic.	Journal of the American Collegeof Surgeons.	The purpose of this work was to examine and provide recommendatio ns for several of the most pressing ethical challenges, making a comparing the HIV pandemic with the coronavirus (COVID-19) pandemic.	The COVID-19 pandemic is full of uncertainties. Despite being in the early stages of the challenges of this crisis, lessons from the HIV/AIDS pandemic and the models of allocation of scarce resources.

Source: Research Protocol, 2022.

The articles selected in the table above were carefully evaluated and grouped into categories: 1) A stressed health system: response to the allocation of scarce resources amid the pandemic; 2) Bioethics and the duty to treat: the battle for mechanical respirators; 3) Maximizing benefits is key in a pandemic; 4) Why palliative care in the covid-19 pandemic?

IV. DISCUSSION

A stressed health system: response to the allocation of scarce resources amid the pandemic

During a pandemic, when demand increases and resources are overloaded, it is necessary to question which decision-making structures will be adopted in relation to the division of health goods and services for the population5,6,7,8 And how to carry out an ethical screening in this distribution when we are facing a pandemic? Or how to deal with the fact that patients who could benefit from intensive care or who would have received this care under different circumstances, and now would be denied this care.[1]

In the United States, many states have developed rationing strategies during this pandemic. In Italy, Italian guidelines have given a higher priority to access to intensive care, to younger patients with severe illness than to elderly patients. In Canada, much has been said about the importance of advance directives and the participation of bioethics experts in the screening process.[3,6]

There are strong ethical rationales for developing and applying robust systems and screening protocols in the event that a pandemic overwhelms the ability to provide critical care to all patients. Criteria such as age, life stage, mental capacity, physical capacity or disability should not be used alone as an allocation criterion. The moral worth and dignity of all people is equal, regardless of these criteria. [5]

Choosing to set limits on access to treatment is not a discretionary decision, but a necessary response to the overwhelming effects of a pandemic1. This process must be evidence-based, and a transparent set of rules to decide who is critical and who is not., healthcare institutions need to take a clear stand by supporting the frontline who make these decisions. [7]

Institutional ethics services, such as clinical ethics consultant teams and ethics committees5, respond to this practical reality by helping professionals, formulating protocols to help apply guidelines, which ensure that health professionals are not faced with the terrible task of improvise decisions about who to treat or make these decisions in isolation. [9,10]

Bioethics and the duty to treat: the battle for mechanical respirators.

Unlike decisions related to other forms of life-sustaining treatment, the decision to start or stop mechanical ventilation is often a life-or-death choice, because when patients' breathing deteriorates to the point that they need a ventilator, they usually there is only a limited window during which they can be saved. And when the machine is taken from patients who are totally ventilator-dependent, they usually die in a matter of minutes. [2,3]

In normal times, outside of a health crisis, intensive care beds and technology are properly allocated, first-come, first-served. This is unsatisfactory when existing supply is outstripped by demand, as is happening in the Covid-19 pandemic.[10]

Decisions to withdraw ventilators during a pandemic in order to make the resource available to another patient cannot be justified in any of the following ways: they are not being taken at the request of the patient or their representative, nor can it be said that treatment is useless. Once patients have already been placed on mechanical ventilation, decisions to withdraw it are especially difficult. [5,6,7]

As circumstances change and the availability of ventilators and other medical resources increases or decreases, the ethics committee may adjust its rationing criteria to produce the best results. [2] Finally, when a hospital is placed to make decisions that may harm some patients, the use of a committee removes the weight of those options from any individual, spreading the burden among all committee members.[3,11,12]

In addition to removing responsibility for triage decisions from bedside physicians, committee members must also take on the task of communicating the decision to the family, treating physicians may be motivated to try to comfort the family by telling them that mechanical ventilation is not being provided because it would be useless and assuring them that everything has been done. However, it would be up to the committee members to communicate these decisions, as it would ensure that the message was clear and precise, helping to avoid confusion or misunderstandings.[1,2,12]

Maximizing benefits is key in a pandemic

The value of maximizing benefits during the pandemic is most important, as this value reflects the importance of responsible stewardship of resources, with the aim of saving the greatest number of lives as well as improving the quality of life after treatment for individuals.[12,13] Maximizing benefits means that priority is given to those who are sick, but who have a greater chance of recovery and successful

treatment, compared to those who would hardly recover, even if treated, or even those who can recover without treatment. [5,6,7]

As maximizing benefits is critical in a pandemic, removing a patient from a ventilator or an ICU bed to provide them to others who have a better chance of recovery is also justifiable, and patients should be made aware of this possibility in the future. admission.[10,11] However, many guidelines agree that the decision to withdraw a scarce resource to save others in a pandemic context is not an act of killing and does not require patient consent.[11,13]

On the other hand, ICU beds and ventilators are curative rather than preventive. Patients who need them face life-threatening conditions, maximizing benefits requires consideration of prognosis, how long the patient is likely to live if treated, which may mean prioritizing younger patients and those with fewer coexisting conditions.

Fair allocation of resources that prioritizes the value of maximizing benefits applies to all patients in need of resources.1 For example, an allergic physician who experiences anaphylactic shock and needs intubation and life-saving ventilatory support should take priority over Covid-19 patients who are not first-line healthcare workers.[9]

Why palliative care in the covid-19 pandemic?

Any triage system that does not integrate palliative care principles is unethical, patients who have no chance of survival should not be abandoned, but should receive palliative care as a human right. Humanitarian responses that do not include Palliative Care (PC) are clinically deficient and ethically indefensible. [7,8]

Palliative Care by definition is a multidisciplinary approach that prevents and alleviates suffering through early identification, correct assessment and treatment of pain and other problems, whether physical, psychosocial or spiritual, intended for any patient who has a health condition that threatens or limit your life.[5,7,8,9]

The current context frequently and urgently requires health professionals who are in the field to make difficult decisions that involve ethical and technical issues in the face of a disease with little scientific evidence. But COVID-19 makes this more difficult.[10] Time is short when patients rapidly deteriorate and healthcare workers are overwhelmed, isolation is mandatory and families are advised not to touch or even be in the same room as their loved ones. dear.[4,5]

During the COVID-19 pandemic, access to essential palliative care at the end of life, including bereavement support, will be limited in the face of high demands in all countries10,12,13. Strict physical distancing regulations to slow transmission of illness means that patients who die from COVID-19 are often left without their loved ones, who in turn will be unable to say goodbye or perform traditional mourning rituals.[1,2]

In this sense, PC and life-saving treatment should not be considered separate, saving lives is a crucial way to achieve this goal, but it is not the only one. Therefore, the prevention and relief of suffering must be offered to anyone who suffers physically, psychologically, socially or spiritually and not just to those with life-threatening conditions. [10]

Practical steps can be taken such as ensuring access to medications (such as opioids) and protective equipment, considering greater use of telemedicine and video, discussing advanced care plans, providing better training and preparedness across the health workforce, and the role of lay caregivers and the community in general.[2,3,5]

V. FINAL CONSIDERATIONS

In the face of a pandemic, planning is necessary that includes strategies such as preparing, conserving, replacing, adapting, reusing and reallocating resources. It is important for hospitals to take steps now to develop a decision-making process, anticipate what the priority criteria will be at this time, and involve the ethics in institutions in order to take the weight off the decision of health professionals, who are already overloaded.

The urgency with which our practical decisions and organizational protocols are being reconfigured necessarily infuses considerable uncertainty into patient care and leads to considerable variation in treatment. Being told to "do the best you can", while understandable in the current situation, is a suboptimal alternative to carefully considered and systematically enacted guidelines for action.

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