


THE SARS-COV-2 PANDEMIC AND THE IMPACT ON MEDICAL PRACTICE

 <https://doi.org/10.56238/sevened2024.031-003>

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ABSTRACT

The COVID-19 pandemic represented an economic, social, and health crisis, requiring health systems to respond to the great pressure of care, due to the large number of infected people, collapsing in several places. In view of this situation, the moral dilemmas, which are common in the practice of medical professionals, have become more exacerbated, for example, when allocating a place for a patient in intensive care, in the face of scarcity. This study is a literature review on productions that addressed ethical dilemmas in the most acute period of the pandemic, concluding that there is a need for permanent education institutions and collective decision-making spaces for ethical decisions, based on moral judgments.

Keywords: Bioethics. Medical ethics. COVID-19. Doctor.

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INTRODUCTION

According to Dantas (2008), the study of ethics involving the exercise of health professions, in particular medicine, has received increasing attention in recent decades, all over the world, especially after the advent of the SARS-CoV-2 pandemic. Favoring the maintenance of this ethic, the Brazilian Society of Bioethics has been established in Brazil since the 1990s, with a plural and multidisciplinary character.

According to Brasil (2001), the study of ethics/bioethics is essential for the training of medical professionals, which should include ethical and humanistic dimensions, developing in the student "capacity for moral judgment" and values oriented towards citizenship. However, during the COVID-19 pandemic, these professionals were in charge of making delicate decisions, this was put in check by the media, since according to some authors, it may have been motivated by structural prejudices in society.

Throughout the text we will see a time frame from the beginning of 2020 to April 2022, on the integration of bioethics in the practice of medicine during the pandemic, this period being chosen due to the need to raise production during the most acute period of the health emergency.

GUIDING QUESTIONS:

- A. What scientific evidence exists on the incorporation of bioethical principles in physicians' decision-making in the care of patients with COVID-19;
- B. What factors favor or hinder the incorporation of these principles into the reality of care

OBJECTIVES

- A. To characterize the scientific production in the period between 2020 and 2022 about the incorporation of the principles of bioethics in medical practice during the COVID 19 pandemic;
- B. Discuss the implication of the main results in light of the Charter of the Declaration of Human Rights 1948 (UN)

METHOD AND METHODOLOGY

It is a bibliographic review based on the definition of Marconi and Lakatos (2005) that aims to study a focus or a subject, not only citing parts of these texts, repeating what is already written, but rather, to be able to have a critical view of what is written, it is a scientific activity that helps to discover and understand reality.



The research was elaborated from the following stages: a) choice of the theme and research questions; b) definition of objectives; c) determination of inclusion and exclusion criteria for the search for scientific studies; d) bibliographic survey in the selected virtual databases; e) interpretation and analysis of the data found; and, f) presentation of the results. The Virtual Health Library (VHL) and the National Center for Biotechnology Information (NIH) of PUBMED were chosen as the starting point for the search for scientific studies related to the theme studied. Through this database, it was possible to access other databases. The Health Sciences Descriptors (DeCS) selected were "Covid-19", "Medical", "Bioethics" and "Professional Practice", which were cross-referenced in order to enable a refinement of the search, using the Boolean operator "*and*".

The search for scientific studies in the databases referred to above was carried out between April and June 2024. The inclusion criteria for studies established for the review were:

- Scientific articles, theses, master's dissertations, monographs;
- Publications with full text available in the consulted databases;
- Publications in Portuguese, English and Spanish;
- Publications from the last two years, from 2020 to April 2024, from the beginning of the SARS-CoV-2 pandemic in the world.

The exclusion criteria included the following intellectual productions: preliminary notes, partial reports (ongoing research), interviews, reviews, opinion articles, conferences and manuals.

In the first search, the descriptor "Covid-19" was used in isolation, resulting in 452,221 publications in the VHL, and 358,065 in the NIH. For the second search, the descriptor was used. "Medical" were located in 8,873 publications in the VHL and in the NIH. In the third search, using the descriptor "Bioethics", 693 publications were found in the VHL, and 181 in the NIH. In the fourth search, the descriptor "Professional Practice" was applied and no publications were identified in the VHL, and 5,534 were seen in the NIH. In the fifth search with the descriptor "Covid-19" associated with the term "Doctor", 853 were identified in the VHL, and 2,068 in the NIH. In the sixth search with the descriptor "Doctor" next to the term "Bioethics", fourteen publications were detected. In the seventh search using the descriptor "Bioethics" associated with the terms "Professional Practice", no publication was found. In the eighth search, the descriptor "Covid-19" was applied and associated with the term "Bioethics", and 89 publications were found. In the ninth search, the descriptors "Covid-19" were used, and the descriptors "Doctors" and "Bioethics", and no publication was identified. In the tenth search, the descriptors "Covid-19" were used, with

the descriptors "Physicians", "Bioethics" and "Professional Practice", and no publications were discovered, as shown in Chart I and Chart II.

With the application of the inclusion and exclusion criteria, of the 132 productions found, 101 were excluded, because they did not meet the previously established parameters, 25 articles were paid, 13 were repeated and 17 were unavailable on the VHL website. And of the 49 productions found on the NIH website, 32 were excluded because they did not meet the previously established parameters, 3 articles were paid, 1 was repeated, and 9 were unavailable. As a result, 9 articles remained as a final sample for interpretation and analysis. This material then underwent a floating exploratory reading to verify its adequacy to achieve the objectives proposed by the present investigation. Then, a critical reading of the same material was carried out, seeking the analytical contribution of the text to the research in question.

To enable the interpretation of the material found, the selected references were organized in a synoptic table according to the following information: title of the article, language, author, title and area of knowledge, year, journal of publication, objectives, methodology and results (Chart III and Chart IV). Then, the data were analyzed descriptively without disregarding some quantitative aspects, when available, and discussed in the light of the pertinent bibliography. As this is a bibliographic research, it was not necessary to submit to an Ethics Committee. There are no conflicts of interest associated with the publication of this article.

Chart I - Table demonstrating the search strategy in the databases for inductive words, taken from the VHL.

Quest	Structure	Search syntax	Result
#1	"Covid-19" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	mh:(covid19) AND (fulltext:("1" OR "1") AND la:("en" OR "es" OR "pt") AND type:(("article" OR "monography" OR "thesis"))) AND (year_cluster:[2020 TO 2022])	157.869
#2	"Doctor" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	mh:(médico) AND (fulltext:("1" OR "1") AND la:("en" OR "es" OR "pt") AND type:(("article" OR "monography" OR "thesis"))) AND (year_cluster:[2020 TO 2022])	8.100



#3	"Bioethics" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	mh:(bioética) AND (fulltext:("1" OR "1") AND la:("en" OR "es" OR "pt") AND type:("article" OR "monography" OR "thesis")) AND (year_cluster:[2020 TO 2022])	693
#4	"Professional practice" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	mh:(prática profissional)AND (fulltext:("1" OR "1") AND la:("en" OR "es" OR "pt") AND type:("article" OR "monography" OR "thesis")) AND (year_cluster:[2020 TO 2022])	0
#1 AND #2	"Covid-19" AND "Médico"	(mh:(médico)) AND (mh:(covid-19)) AND (fulltext:("1") AND la:("en" OR "es" OR "pt") AND type:("article" OR "monography")) AND (year_cluster:[2020 TO 2022])	853
#2 AND #3	"Medical" AND "Bioethics"	(mh:(médico)) AND (mh:(bioética)) AND (fulltext:("1") AND la:("en" OR "es" OR "pt") AND type:("article" OR "monography")) AND (year_cluster:[2020 TO 2022])	14
#3 AND #4 AND	"Bioethics" AND "Professional Practice"	(mh:(bioethics)) AND (mh:(professional practice))	0
#1 AND #3	"Covid-19" AND "Bioética"	(mh:(covid-19)) AND (mh:(bioética)) AND (fulltext:("1") AND la:("en" OR "es" OR "pt") AND type:("article" OR "monography")) AND (year_cluster:[2020 TO 2022])	89
#1 AND #2 AND #3	"Covid-19" AND "Médico" AND "Bioética"	(mh:(covid-19)) AND (mh:(médico)) AND (bioética) AND (fulltext:("1") AND la:("en") AND type:("article")) AND (year_cluster:[2020 TO 2022])	0
#1 AND #2 AND #3 AND #4	"Covid-19" AND "Medical" AND "Bioethics" AND "Professional Practice"	(MH:(COVID-19)) AND (mh:(medical)) AND (mh:(bioethics)) AND (mh:(professional practice))	0



Chart II - Table demonstrating the search strategy in the databases for inducing words, taken from the NIH.

Search	Structure	Search syntax	Result
#1	"Covid-19" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	("covid 19"[MeSH Terms]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	126,263
#2	"Doctor" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	("physicians"[MeSH Terms]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	9,938
#3	"Bioethics" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	("bioethics"[MeSH Terms]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	181
#4	"Professional practice" Filters: Articles, Theses and Dissertations, Portuguese, English and Spanish, 2020 to April 2022.	("professional practice"[MeSH Terms]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	5,534
#1 AND #2	"Covid-19" AND "Médico"	("covid 19"[MeSH Terms] AND "physicians"[MeSH Terms]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	2,068
#2 AND #3	"Medical" AND "Bioethics"	("physicians"[MeSH Terms] AND "bioethics"[MeSH Terms]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	12



#3 AND #4 AND	"Bioethics" AND "Professional Practice"	("bioethics"[MeSH Terms] AND "professional practice"[MeSH Terms]) AND ((ffrft[Filter] AND fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	25
#1 AND #3	"Covid-19" AND "Bioética"	("covid 19"[MeSH Terms] AND "bioethics"[MeSH Terms]) AND ((ffrft[Filter] AND fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	47
#1 AND #2 AND #3	"Covid-19" AND "Médico" AND "Bioética"	("covid 19"[MeSH Terms] AND "physicians"[MeSH Terms] AND "bioethics"[MeSH Terms]) AND ((ffrft[Filter] AND fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	2
#1 AND #2 AND #3 AND #4	"Covid-19" AND "Medical" AND "Bioethics" AND "Professional Practice"	("covid 19"[MeSH Terms] AND "physicians"[MeSH Terms] AND "bioethics"[MeSH Terms] AND "professional practice"[MeSH Terms]) AND ((ffrft[Filter] AND fft[Filter]) AND (2020/1:2022/4[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))	0

RESULTS AND DISCUSSION

- i. The content of the ten scientific articles that met the previously established inclusion criteria was analyzed. To facilitate the interpretation and presentation of the results, Chart III and Chart IV were prepared containing the following data: title, language, author, title and area of knowledge, year, journal of publication, research objectives, methodological aspects and main results of each study.
- ii. The ten articles analyzed were published between 2020 and 2024, with two publications available in trilingual mode (English, Spanish, and Portuguese), one in Spanish, seven in English. Regarding the journal of publication, the "Bioethics Journal" stood out with the publication of two articles referring to the theme of bioethics in the context of COVID-19. Regarding authorship, articles published by



two or more authors stood out. In the articles that explained the authors' titles, it is noted that the majority are physicians.

With regard to methodological aspects, most articles with a qualitative approach were observed, as they deal with subjective and personal subjects. As stated by Neves (1996), the qualitative study uses a set of different interpretative techniques that aim to describe and decode the components of a complex system of meanings. Aiming to translate and express meaning of the phenomena of the social world. The critical reading of the selected articles demonstrated that the qualitative approach was adequately aligned with the objects of study, allowing the achievement of the proposed objectives.

A major obstacle found in the research is the lack of use of the Health Sciences Descriptors (DeCS) "Professional Practice", although there are articles with this theme, the descriptor was not applied to these articles, especially in the VHL.

Chart III - Characteristics of the articles published on the theme of Bioethics in medical professional practice in the context of COVID-19, found on the VHL platform.

Title/Language	Author/Degree	Year	Magazine	Objectives	Methodology	Result
<i>Bioethics and the allocation of resources in the covid-19 pandemic</i> (Portuguese, English and Spanish)	Authors: Storto, GG; Arita, STAR; Santos, MS; Yay, JS. Titration: No specification of the title.	2021	Bioethics Journal	The objective of this literature review is to understand and compile the main extraordinary protocols based on ethical, legal, and scientific criteria – and, above all, on human rights – established to guide the allocation of resources during the first six months of the pandemic in Brazil.	This research included studies carried out both in Brazil and in other countries, including recommendation articles and clinical practice manuals produced due to 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 bioethical guidelines aimed at the pandemic recommend that it is up to the State to guarantee full and equitable access to health, as provided for in the Federal Constitution, especially in periods of crisis. Studies corroborate this premise and affirm that there should be ICU beds, ventilators, personal protective equipment (PPE) and all the necessary material to care for everyone who needs care in



						public institutions.
<i>Relational autonomy: lessons from COVID-19 and twentieth-century philosophy (English)</i>	Authors: Gómez-Vírseda, C; Usanos, RA. Titration: No specification of the title.	2021	With Health Care Philos	To show how six different philosophical branches—namely, philosophy of nature, philosophical anthropology, existential phenomenology, discourse ethics, hermeneutics, and cultural anthropology—incorporated the category of relation throughout the twentieth century.	Hypothetical-deductive. Our hypothesis is that medical ethics has not definitively incorporated the concept of relations into the core of the decision-making process. To achieve a successful onboarding, we proceed in four steps.	As a result of this ability, Dasein is said to be a "being in the world." Therefore, the question of being must begin with the analysis of Dasein. A first approach to this question states that "the essence of this being is in its 'being' [being relative to]" (Heidegger 1962, p. 67). In other words, your existence, your way of being in the world, is open. He is an open being.
<i>Recommendations of the Uruguayan Society of Intensive Care Medicine on bioethical aspects in the Covid-19 pandemic (Spanish)</i>	Authors: Giordano, A; Canale, A; Pontet, J; Reyes, N; Cacciatori, A; Correa, H; Núñez, LA. Degree: 7 Doctors.	2021	Medical Journal of Uruguay	Perform a bioethical analysis to guide the care of critically ill patients. Specific objectives: 1) To analyze the fundamental bioethical principles in this context, 2) To support physicians in making difficult decisions, 3) To	SUMI generated a collective work environment whose work method was deliberative. The documentation uses the literature review and existing protocols.	The work proposes a documented theoretical analysis of the bioethical principles involved in the context of the Pandemic, on the scenarios of health demand and on the foundations for a change of ethical



				make explicit the criteria for allocating resources, 4) To define lines of action in the face of a possible "health disaster" scenario.		criteria in a scenario of saturation of the system.
<i>Covid-19 and ageism: ethical evaluation of the distribution of health resources</i> (Portuguese, English and Spanish)	Authors: Soares, TA; Corradi-Perini, C; Macedo, CPL; Ribeiro, URVCO. Degree: 2 specialists, 1 Master, 1 PhD.	2021	Bioethics Journal	The objective is to think about the bioethical implications of this type of discrimination with regard to the principles of justice and human dignity, considering the global health scenario and the current COVID-19 pandemic.	Documentary research was carried out on the themes of covid-19, ageism and allocation of resources in health. The critical analysis of the literature found, national and international, founded this theoretical essay.	Thus, arguments that use as justification the low probability of recovery of the elderly infected by the coronavirus do not take into account one of the main characteristics of aging: heterogeneity in terms of functionality and health status.
<i>Fair and equitable subject selection in concurrent COVID-19 clinical trials</i> (English)	Autores: Jansen, MO; Angelos, P; Schrantz, SJ; Donington, JS; Madariaga, MLJ; Zakrison, TL. Title: 2 Physicians, 3 Specialist Physicians and 1 General Surgeon.	2020	J Med Ethics	In response to this experience, we propose several guidelines that aim to reinforce fair and equitable subject selection for concurrent COVID-19 trials.	The application method introduces technological and language-related barriers that can hinder the fair selection of subjects. These barriers include speaking a non-native language, lack of access to technology, and lower levels of health literacy.	As a result, investigators and treating physicians must decide which patient has priority in receiving investigative resources, raising questions about how to select patients equitably and fairly.



Chart IV - Characteristics of articles published on the topic of Bioethics in medical professional practice in the context of COVID-19, found on the NIH platform.

Title/Language	Author/ Degree	Year	Magazine	Objectives	Methodology	Result
<i>Work of a paediatric bioethics centre during the COVID-19 pandemic first phase (English)</i>	Autores: Brierley J, Aylett S, MacNiven A, Dittborn M. Degree: 4 PHD in pediatrics.	2021	Arch Dis Child	Decisions with an ethical component have been controversial during the COVID-19 pandemic, whether it's leaked intensive care unit (ICU) rationing documents, transferring people to nursing homes to 'protect the National Health Service', or the duty to treat patients despite inadequate personal protective equipment. To counter criticism of ethics itself and to help those planning ethical support, we describe the practical work of a bioethics team at a children's hospital in supporting children, families, and physicians during this unprecedented time.	Three phases of activity: (i) preparation: we composed several documents to support/guide the hospital teams and, together with colleagues, we provided them to the regional inpatient, community and hospice environments. We adapted existing mechanisms to combat moral injury to the workforce; (ii) Activity (March-June 2020): Was highest in our rapid response service, where children/families find treatment decisions difficult with medical teams. Education provided 'pandemic webcasts' on broader decision-making and concerns about children's health. Staff support was essential, especially for those allocated to overburdened local adult ICUs. The survey ascertained the opinions of young people about the pandemic; (iii)	Our bioethics team's role during the pandemic included: case reviews via videoconference, many involving innovative therapy for critically ill children with COVID-19/Paediatric-Inflammatory-Multisystem-Temporally Associated SARS-CoV-2 Syndrome together with their parents; processes to protect the health team from moral damage and research/education activities focused on the specific pediatric ethics that emerged during the pandemic.



					reflection: focused on (a) research on future relocation to adult services and minimization of moral distress/injury.	
<i>Priority-setting dilemmas, moral distress and support experienced by nurses and physicians in the early phase of the COVID-19 pandemic in Norway (Inglés)</i>	Autores: Miljeteig, I., Forthun, I., Hufthammer, K. O., Engelund, I. E., Schanche, E., Schaufel, M., & Onarheim, K. H. Titration: No specification of the title.	2021	Nursing Ethics	Describe dilemmas of priority setting, moral distress and support experienced by nurses and doctors in all medical specialties in the early phase of the COVID-19 pandemic in western Norway.	A hospital- based cross- sectional survey was conducted from April 23 to May 11, 2020.	Among the 1,606 respondents, 67% experienced prioritization dilemmas in the previous two weeks. Health care workers who were directly involved in COVID-19 care, were redeployed, or worked in psychiatry/addiction medicine experienced it more often.
<i>Ventilator Triage Policies During the COVID-19 Pandemic at U.S. Hospitals Associated With Members of the Association of Bioethics Program Directors (English)</i>	Authors: Antommaria AHM, Gibb TS, McGuire AL, Wolpe PR, Wynia MK, Applewhite MK, Caplan A, Diekema DS, Hester DM, Lehmann LS, McLeod- Sordjan R, Schiff T, Tabor HK, Wieten SE, Eberl JT; Titration: No specification of the title.	2020	Ann Intern Med	Characterize the development of ventilator screening policies and compare the content of the policies.	Mixed-methods content research and analysis. U.S. hospitals associated with the members of the Association of Bioethics Program Directors. Characteristics of institutions and policies, including screening criteria and members of the screening committee.	Sixty-seven program directors responded (response rate, 91.8%); 36 (53.7%) hospitals did not yet have a policy and 7 (10.4%) hospitals could not be shared. The 29 institutions offering policies were distributed relatively evenly across the 4 U.S. geographic regions (range 5-9 policies per region). Among the 26 unique policies analyzed, 3 (11.3%) were produced by state health departments.
<i>Who Gets the Last Bed? A Discrete-Choice Experiment Examining General Population Preferences for Intensive Care Bed</i>	Autores: Street AE, Street DJ, Flynn GM Titration: No specification of the title.	2021	Med Decis Making	Explore key patient attributes important to members of the Australian general population when prioritising patients for the	A discrete choice experiment run online asked respondents (N = 306) to imagine that the number of COVID-19 cases had increased and	A latent class model with 3 classes was found to be the most informative. Two classes valued active decision- making and were slightly more likely to choose patients with care

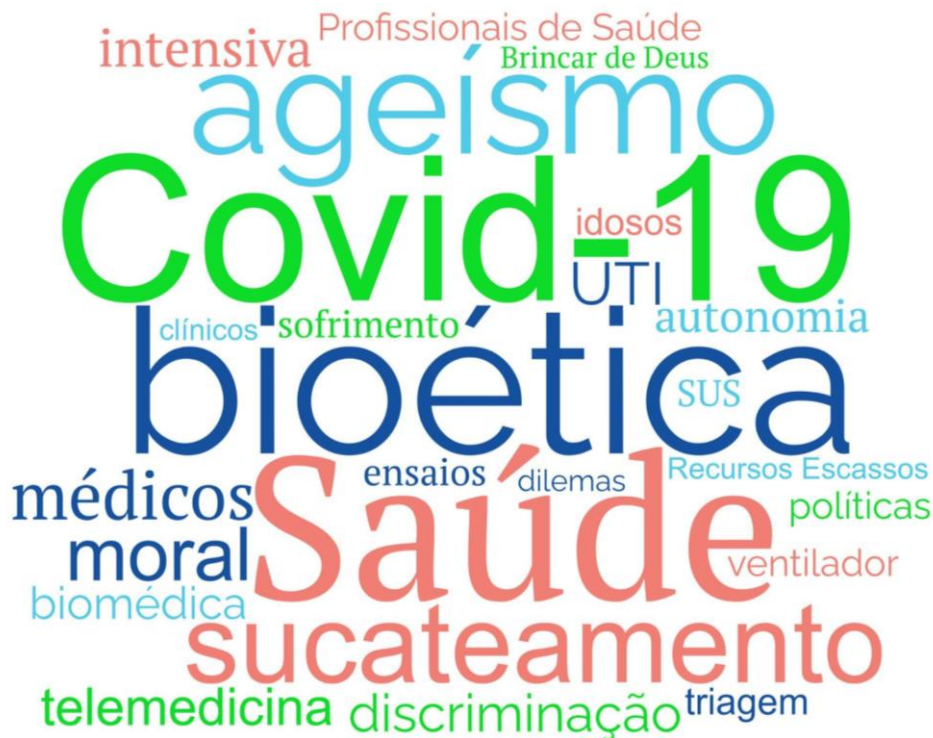


<p><i>Prioritization in a Pandemic (English)</i></p>			<p>final intensive care unit (ICU) bed in a pandemic overcapacity setting.</p>	<p>that they were lay members of a panel tasked with allocating the final ICU bed. They had to decide which patient was most deserving for each of the 14 pairs of patients. The patients were characterized by 5 attributes: age, occupation, caregiver status, health before infection, and prognosis. Respondents were randomly allocated to one of 7 sets of 14 pairs. Multinomial, mixed logit, and latent class models were used to model the observed choice behavior.</p>	<p>responsibilities over those without. One of these classes placed a stronger value on prognosis, with a decreasing likelihood of bed allocation for those aged 65 years and older. The other placed a high value on prognosis and age, with a decreasing likelihood of bed allocation for those aged 45 and older and a slight preference in favor of frontline health workers.</p>
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After reading the articles, we observed that in relation to the techniques used for data collection, the one that stood out the most were semi-structured and structured interviews. As exposed by Manzini (2004) in his study, the interview is a process of social interaction, the data are of a social nature, and this needs to be taken into account in the interpretation of the results. Like Minayo (1994), who understands qualitative study as one that works with the universe of meanings, motives, aspirations, beliefs, values and attitudes. In view of the above, the choice of semi-structured and structured interview formats is considered appropriate to achieve the objectives established in the articles.

According to the analysis of the articles, we noticed how the medical professional has difficulty in making decisions, mainly based on the current ethical aspects, which can often act in an ageistic manner, taking only chronological age as a motivation for the distribution of respiratory devices. As predicted by the methodology, content analysis was carried out according to Laurence Bardin, where the units of meaning emerged, which were grouped in order to form a word cloud with these elements, elaborated from Wordclouds(R). In the

image below (Image 1), the longer the word, the more this unit appeared during the analysis:



The schematic representation of this cloud reveals that the core of the researched scientific production covered the theme of bioethics and COVID-19, establishing interfaces with important aspects such as: scrapping, ageism and health, among other subjects less frequently addressed, namely: telemedicine, politics, suffering, playing God.

In addition, the following analytical categories were established after the floating reading of the articles selected for study: 1) Medical practice and bioethical dilemmas experienced in the COVID-19 pandemic: reflections on scientific production in the period from 2020 to 2024; and, 2) Interfaces, gaps and challenges of scientific production in bioethics and their implications for *praxis* in the light of the Charter of the Declaration of Human Rights.

CATEGORY 1 – MEDICAL PRACTICE AND BIOETHICAL DILEMMAS EXPERIENCED IN THE COVID-19 PANDEMIC.

This category addresses the scientific production on the dilemmas experienced by physicians, in various scenarios, during the COVID-19 pandemic. The articles addressed bioethical dilemmas in a tangential way, but more specifically deal with the consequences of the decision, with regard to the psychic suffering in the professional due to the decision



process, and this can be exemplified by the recurrent discussion that the professionals attributed to this aspect the practice of "playing God". The COVID-19 pandemic has ignited numerous bioethical debates and, according to Gómez-Virseda and Usanos (2021), has put into question many principles and assumptions of bioethics, demanding new moral responses.

The bioethical current of principlism addresses in its principles central moral norms to judge the ethics of an action, focusing on the moral principles that supported the act. The principle of autonomy is related to self-determination or self-government (REGO, PALÁCIOS and SIQUEIRA-BATISTA, 2009).

Sometimes, as seen in the articles, the user's autonomy is put in the background under the argument that he does not have enough knowledge to decide about his therapy and ends up being taken exclusively by health professionals, ignoring the subject's desires and perspectives and a moral obligation to respect the user's autonomy (REGO, PALÁCIOS and SIQUEIRA-BATISTA, 2009).

Among the ethical questions, ageism emerged in several publications because the user's age is one of the main indicators for deciding on the granting of intensive care unit beds and ventilators, as this population is considered by many to be more vulnerable and dependent. The term was proposed in 1969 by Robert Neil and can be represented by "ageism", and means discrimination carried out solely on the basis of age. This may indicate the lack of medical health protocols for the allocation of scarce resources, even more so in a scenario of an emerging disease, which prioritizes issues beyond age group and biologicism, but bringing bioethical issues to these protocols.

Such a scenario was evident during the pandemic with the health crisis of lack of beds for elderly patients demonstrated in Italy during the pandemic, a country with a large part of the elderly population. This is stated in the review carried out by Storto et al (2021), in which it is stated that protocols pointed out that it is ethically justifiable to "prioritize the most affected and the youngest".

The COVID-19 pandemic has opened up the ageism that is present in society's daily life in a less noticeable way, as criteria such as chronological age were overvalued by some professionals and protocols. In this sense, we can verify the statement made by Soares et al (2021): "the pandemic exposes ageism, which has always been present in social reality, but, like other existing discriminatory practices, it manifested itself in most cases in a veiled way."

In this sense, we can still verify in the selected articles statements regarding age discrimination in health care during the pandemic:



"It is common, for example, for surgeries to be contraindicated for the elderly without considering the real chances of success of the procedure. Chronological age also appears to influence medical professionals in decisions about non-cardiac resuscitation order." (Soares et al, 2021, p. 243)

In addition, in a global context, protocols were constructed, in which the age criterion exerted a strong influence on the allocation of scarce beds, as we can see:

"The first protocol for the allocation of scarce resources in the covid-19 pandemic was issued by the Società Italiana di Anestesia, Analgesia, Rianimazione and Intensive Care (Siaarti). One of the measures proposed to limit admission to intensive care was chronological age – together with the presence of comorbidity and functional status (...). (Soares et al, 2021, p 244)

"Chronological age continued to be used as a criterion in policies enacted in other European countries, such as Switzerland, and in the United States, especially in protocols for prioritizing resources and triage for intensive care, often arbitrarily, without standardizing age cutoff points." (Soares et al, 2021, p 244)

On the other hand, it is important to highlight, given its national relevance and its function of ethical standardization for the medical category, Resolution 2,156/2016 of the Federal Council of Medicine, which established that age could not be a criterion of discrimination for the decision of admission and discharge in intensive care units. Such a position is consistent with the Universal Declaration of Human Rights, which emphasizes the right to life and non-discrimination for any condition, in this sense, including age.

In addition, another important aspect to be addressed is the gap in the transversal approach to ethics and bioethics in the curricula of undergraduate medical courses. In this sense, the lack of preparation in medical practice is a reflection of a lack of training since graduation.

The National Curriculum Guidelines for Medicine (CNE, 2014) indicate that the graduate must have a general, humanistic, critical, reflective and ethical education, with a commitment to the defense of citizenship and human dignity. Such determinations corroborate the Constitutional Charter of 1988, which places the right to health as a right of all. The challenge presented is more than the construction of isolated disciplines of Bioethics, but that such contents and debates appear longitudinally throughout the medical training curriculum.

In the pandemic scenario, the psychic suffering of the physician was evident during the pandemic, with concerns about his own health and that of those close to him, dealing with a disease in discovery and aggravated by the bioethical dilemmas, many of them arising from the scarcity of vacancies in intensive care units and the scrapping pointed out in the articles.



In addition, the articles point out that in times of pandemic it is ethically justifiable that it is necessary, due to the high demand and limited capacity to provide assistance to health systems, the rationing of resources.

"The scrapping of public health services undermines the system's capacity in human and material aspects, being a structural problem that the population has faced for decades, without receiving sufficient attention from the body politic. During the pandemic, this deficit became even more evident, as public health spending grew minimally in Brazil compared to other countries, such as Italy and Spain, and the expansion of beds was insufficient to meet the growing demand" (STORTO et al, 2021, p. 826)

"(...) in order to inhibit any possibility of scarcity, it is up to the State to offer resources, including financial, social, and psychosocial support, as well as meeting basic needs, such as food, water, and other essential items, with an emphasis on vulnerable populations." (STORTO et al, 2021, p; 826)

The articles expose the wound, but do not give the remedy for a multifactorial issue and that there was not, due to multifactorial issues, but mainly due to the exhaustion of health systems and shortage of professionals, the right to life fully guaranteed and fairly for all, as prescribed in the Universal Declaration of Human Rights.

element. The alternatives are in the service, but not with a deeper impact such as in professional training, requiring structural changes in the context of medical training at its various levels and a proactive role of ethics committees, with a role of discussion, reflection and improvement, as opposed to a punitive view.

The Charter of the Declaration of Human Rights can bring elements that help moral judgment, as an important factor to aid decision-making. The Universal Declaration of Human Rights was adopted and approved by the United Nations Assembly on December 10, 1948. The Declaration states that all men are born free and equal and that they shall not be subjected to discrimination on account of race, color, sex, language, religion, political or other opinion, national or social origin, property, birth, or any other condition. Life is seen as a right of every human being and must be preserved, therefore, a dilemma arises in the context of the pandemic, in which the right to live collides with the scarcity of public and private resources, necessary for the maintenance of life.

Bioethics is essential for medical practice and is essential for the maintenance of life, and should be observed by health professionals. Bioethics allows moral judgments to be made based on systems of balancing principles, by adopting them as *prima facie*, without hierarchy between them. Bioethics has a role in shaping medical practice for the most appropriate decision-making, after the analysis of several factors and their considerations, considering that the professional, not only during the pandemic, is faced with ethical



dilemmas, whether due to patient issues or those imposed by the health system itself, such as the absence of equipment and medications.

The interface between Bioethics and professional performance can occur in three dimensions: programmatic, which is what we have instituted the Medical Ethics Committees, clinical protocols and guidelines and which shows that the implementation of these assumptions is weakened in practice, as we have, several times, documents at the level of scientific excellence, but in practice there is a lack of structuring of the reality of the service for this to actually be implemented.

In this sense, we bring the statement of the UN Human Rights Committee: "The UN Human Rights Committee states that the promotion of care that prioritizes the right to life requires 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." (STORTO et al, 2021)

Another issue is how the procedures are described and how the situations occur in real life, with overcrowding, deficit of professionals and other issues that move the plane away from ideas of actions and, in addition, a third, which is the lack of institutional culture for discussing bioethics within the culture of permanent education and permanent and inclusive instances in institutions and which comes from the initial training of health professionals, by not carrying out a transversal discussion about ethics during the completion of the teaching itinerary, going through the residency, seen at most as isolated disciplines in the curriculum.

In addition to these factors, the socioeconomic aspect presented by the studies should be presented, which directly reflect on health care, accentuating the social determination of the health-disease process.

Although equity is one of the principles of the Unified Health System and this has a role in the defense of ethical issues, if a right and individual autonomy is observed, Brazil is a developing country, with an exacerbation of inequity and the pandemic was a factor in increasing poverty, depriving the population of basic needs such as work, food and full access to health.

Technological and industrial dependence on developed countries was one of the facts that worsened the health crisis for countries like Brazil, experiencing a shortage of personal protective equipment and vaccines, as well as equipment such as mechanical ventilators and essential drugs for intensive care.

The human dimension of the practice of decoding ethical aspects in the dynamics of the professional routine must be taken into account, in this sense presented as this occurs on a daily basis, that is, how professionals, based on their own constructions, outline their



decisions, in the midst of the absence of decision support bodies, and another element of this same dimension is the illness of the professionals themselves, whether due to the issues of precarious work or even the constant experience in scenarios of scarcity that lead them to make quick decisions.

The perception of a given regulation varies, even, for each professional, performing its own balance, being able to demonstrate in practice how health professionals interpret the code of ethics and implement it at the bedside, on the pandemic front and in their consultations. This aspect imposes limits and points out weaknesses in the application of regulations, when not carried out through constant reflections on ethics and praxis.

CONCLUSION

Autonomy, especially in the hands of the medical profession, is a characteristic of the profession, however, this fact requires that we advance in moral education and in in-depth discussions of bioethics in undergraduate courses and in continuing education in health services. Professionals on the front line dealt with several dilemmas without the necessary instruments to make moral decisions and using, several times, their own concepts and values, emphasizing that the pandemic was an aggravation of a reality present throughout their professional lives.

In this context, it is essential to oppose the erasure of the subject and practice the shared decision with the other members of the care team, with the user and with their families. Considering that autonomy can be seen from several perspectives, one of them being the autonomy of the individual, who has the right to choose his or her therapies, except in the case of death, and of the professionals, who must limit the choices of users, within a context of clarification.



REFERENCES

1. Antommaria, A., Gibb, T. S., McGuire, A. L., Wolpe, P. R., Wynia, M. K., Applewhite, M. K., Caplan, A., Diekema, D. S., Hester, D. M., Lehmann, L. S., McLeod-Sordjan, R., Schiff, T., Tabor, H. K., Wieten, S. E., Eberl, J. T., & Task Force of the Association of Bioethics Program Directors. (2020). Ventilator triage policies during the COVID-19 pandemic at U.S. hospitals associated with members of the Association of Bioethics Program Directors. **Annals of Internal Medicine**, 173(3), 188–194. <https://doi.org/10.7326/M20-1738>
2. Brasil. Ministério da Educação. Conselho Nacional de Educação. (2001). Diretrizes curriculares nacionais do curso de graduação em medicina. Disponível em: <http://portal.mec.gov.br/cne/arquivos/pdf/CES04.pdf> [Acessado em 13 de junho de 2022]
3. Brierley, J., Aylett, S., MacNiven, A., & Dittborn, M. (2021). Work of a paediatric bioethics centre during the COVID-19 pandemic first phase. **Archives of Disease in Childhood**, 106(9), 906–910. <https://doi.org/10.1136/archdischild-2020-320375>
4. Dantas, F., & Sousa, E. G. (2008). Ensino da deontologia, ética médica e bioética nas escolas médicas brasileiras: Uma revisão sistemática. **Revista Brasileira de Educação Médica**, 32(4), 507-517. <https://doi.org/10.1590/S0100-55022008000400014>
5. Giordano, Á., et al. (2021). Recomendaciones de la Sociedad Uruguaya de Medicina Intensiva sobre los aspectos bioéticos en la pandemia COVID-19. **Revista Médica Uruguaya**, 37(1), e501. <https://doi.org/10.29193/rmu.37.1.10>
6. Gómez-Vírseda, C., & Usanos, R. A. (2021). Relational autonomy: Lessons from COVID-19 and twentieth-century philosophy. **Medicine, Health Care, and Philosophy**, 24(4), 493–505. <https://doi.org/10.1007/s11019-021-10035-2>
7. Jansen, M. O., Angelos, P., Schrantz, S. J., Donington, J. S., Madariaga, M., & Zakrison, T. L. (2021). Fair and equitable subject selection in concurrent COVID-19 clinical trials. **Journal of Medical Ethics**, 47(1), 7–11. <https://doi.org/10.1136/medethics-2020-106590>
8. Lakatos, E. M., & Marconi, M. A. (2005). **Fundamentos de metodologia científica**. São Paulo: Atlas.
9. Manzini, E. J. (2004). Entrevista semi-estruturada: Análise de objetivos e de roteiros. In **A pesquisa qualitativa em debate**. Anais... Bauru: USC.
10. Miljeteig, I., Forthun, I., Hufthammer, K. O., Engelund, I. E., Schanche, E., Schaufel, M., & Onarheim, K. H. (2021). Priority-setting dilemmas, moral distress and support experienced by nurses and physicians in the early phase of the COVID-19 pandemic in Norway. **Nursing Ethics**, 28(1), 66–81. <https://doi.org/10.1177/0969733020981748>
11. Minayo, M. C. de S., et al. (1994). **Pesquisa social: teoria, método e criatividade**. Petrópolis: Vozes.
12. Neves, J. L. (1996). Pesquisa qualitativa - características, usos e possibilidades. **Caderno de Pesquisa em Administração**, 1(3), 2º sem.



13. Street, A. E., Street, D. J., & Flynn, G. M. (2021). Who gets the last bed? A discrete-choice experiment examining general population preferences for intensive care bed prioritization in a pandemic. *Medical Decision Making: An International Journal of the Society for Medical Decision Making*, 41(4), 408–418. <https://doi.org/10.1177/0272989X21996615>
14. Soares, T. S., et al. (2021). Covid-19 e ageísmo: Avaliação ética da distribuição de recursos em saúde. *Revista Bioética*, 29(2), 242-250. <https://doi.org/10.1590/1983-80422021292461>
15. Storto, G. G., et al. (2021). Bioética e a alocação de recursos na pandemia de COVID-19. *Revista Bioética*, 29(4), 825-831. <https://doi.org/10.1590/1983-80422021294516>
16. Wynne, K. J., Petrova, M., & Coghlan, R. (2020). Dying individuals and suffering populations: Applying a population-level bioethics lens to palliative care in humanitarian contexts: Before, during and after the COVID-19 pandemic. *Journal of Medical Ethics*, 46(8), 514–525. <https://doi.org/10.1136/medethics-2019-105943>