

Ethical-professional decision-making in exceptional situations given the Covid-19 pandemic: a scoping review

Tomada de decisões ético-profissionais em situações de excepcionalidade à pandemia da Covid-19: revisão de escopo

Toma de decisiones ético-profesionales en situaciones excepcionales en la pandemia de Covid-19: revisión de alcance

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ABSTRACT

Objective: to present an overview of the ethical-professional decision-making process in exceptional situations at the beginning of the COVID-19 pandemic. **Method:** this is a scoping review, including documents published between December 2019 and July 2020 in the following databases: Google Scholar, PubMed, Scopus, SciELO, CINAHL and BVS. The PRISMA-ScR Checklist was adopted to present the review. **Results:** a total of 28 documents were selected, organized into five categories: Technical-Medical-Scientific Requirement, Justice and Equality, Health History, Commission for Shared Decision-Making and Severe Respiratory Condition. **Conclusion:** the criteria indicated to prioritize the care process targeted at critically-ill patients with COVID-19 were as follows: technical-medical-scientific parameters; severity of the clinical condition; older age; being a health professional; presence of incurable underlying diseases; carrying out draws; and patients with a higher survival probability.

Descriptors: Bioethics; Equality in Access to the Health Services; Decision-making.

RESUMO

Objetivo: apresentar um panorama sobre o processo de tomada de decisões ético-profissionais em situações de excepcionalidade no início da pandemia da Covid-19. **Método:** trata-se de uma revisão de escopo, incluindo documentos publicados entre dezembro/2019 a julho/2020 nas seguintes bases de dados: Google Acadêmico, PubMed, Scopus, Scielo, CINAHL e BVS. Adotou-se o PRISMA-ScR Checklist para apresentação da revisão. **Resultados:** foram selecionados 28 documentos, organizados em cinco categorias: Requisito Técnico-Médico-Científico, Justiça e Equidade, Histórico de Saúde, Comissão para Tomada de Decisão Compartilhada e Quadro Respiratório Grave. **Conclusão:** os critérios indicados para priorizar o processo de atenção direcionado a pacientes graves com Covid-19 foram: parâmetros técnico-médico-científico, gravidade do quadro clínico, maior idade, ser profissional da saúde, presença de doenças de base incurável, realização de sorteio e pacientes com maior probabilidade de sobrevivência.

Descritores: Bioética; Equidade no Acesso aos Serviços de Saúde; Tomada de Decisões.

RESUMEN

Objetivo: presentar un panorama del proceso de toma de decisiones ético-profesionales en situaciones excepcionales al comienzo de la pandemia de Covid-19. **Método:** se trata de una revisión de alcance, que incluye documentos publicados entre diciembre de 2019 y julio de 2020 en las siguientes bases de datos: *Google Scholar*, PubMed, Scopus, Scielo, CINAHL y BVS. Se adoptó la PRISMA-ScR Checklist para presentar la revisión. **Resultados:** fueron seleccionados 28 documentos, organizados en cinco categorías: Requerimiento Médico Científico Técnico, Justicia y Equidad, Historial de Salud, Comisión para la Toma de Decisiones Compartidas y Cuadro Respiratorio Grave. **Conclusión:** los criterios señalados para priorizar el proceso de atención dirigido a pacientes críticos con Covid-19 fueron: parámetros médicos científicos técnicos, gravedad del cuadro clínico, mayor edad, ser profesional de la salud, presencia de enfermedades de base incurables, realizar sorteos y pacientes con mayor probabilidad de supervivencia.

Descritores: Bioética; Equidad en el Acceso a los Servicios de Salud; Toma de Decisiones.

INTRODUCTION

The disease caused by the new coronavirus is known as COVID-19. In 2019, when the first cases were publicly reported in Wuhan, China, a global health emergency was triggered, classified by the World Health Organization (WHO) as an event of a pandemic dimension⁽¹⁾. It is an extremely contagious virus transmitted by direct contact with contaminated secretions⁽²⁾.

Serious patients with COVID-19 have overloaded the health systems of several countries, including Brazil, raising questions about the ethics adopted in the decision-making process (allocation of resources, prioritization in triage, care and provision of Intensive Care Units-ICUs) by the health professionals in relation to the care standards in this situation^(3,4).

During the peak of the pandemic, many regions reached the maximum occupancy rate of ICU beds, where the numbers of vacancies and health professionals were not enough to care for so many critically-ill patients⁽⁵⁾. Therefore, health professionals were assigned the task of making decisions about the occupation of ICU beds, as well as classifying care prioritization⁽⁶⁾.

Ethical-professional decision-making is based on clinical protocols and bioethical principles that assume centrality in the resolution of conflicting issues in the clinical context. The analysis and resolution of situations of difficult moral mediation require a comprehensive view⁽⁷⁾ and prudence so that the actors involved can choose the best course of action to be put into practice⁽⁸⁾.

In this context, the following research question was formulated: Which are the ethical-professional criteria adopted by the health team to support the decision-making process in the face of the unavailability of beds/equipment to care for critically-ill patients with COVID-19? The objective of this study is to present an overview of ethical-professional decision-making in exceptional situations at the beginning of the COVID-19 pandemic.

METHOD

Research description

This is a scoping review, according to the Joanna Briggs Institute (JBI) protocol⁽⁹⁾, following five methodological stages for its

development: Definition of the research question; Eligibility criteria; Search strategy; Data extraction; and Data analysis and disclosure of the results⁽¹⁰⁻¹²⁾.

Protocol and registration

The protocol that guided this study is registered on the OPEN SCIENCE FRAMEWORK-OSF Platform, available at: <https://osf.io/9yd2s/>.

Eligibility criteria: inclusion and exclusion criteria

The JBI recommendations⁽⁹⁾ were also used for the eligibility criteria. Studies without design restrictions were included, which could be articles or technical notes made available in full, which referred to the ethical-professional requirements adopted by the health team to support the decision-making process in the care of critically-ill patients with COVID-19 in the Portuguese, English and Spanish languages and from December 2019 to July 2020, a period understood as the first phase of the COVID-19 pandemic.

Studies whose content did not meet the objective of this research were excluded, as well as repeated studies, duplicates, abstracts of simple conferences and prefaces.

Information sources

The search was carried out in August 2020 in the following databases: Google Scholar, PubMed (PubMed National Library Medicine), Scopus, SciELO (Scientific Electronic Library Online), CINAHL (Cumulative Index to Nursing and Allied Health Literature) and BVS (*Biblioteca Virtual de Saúde*).

Search strategy

The research question was elaborated using the PCC (Population, Concept and Context) acronym (Figure 1)⁽¹³⁾.

The Descriptors in Health Sciences (*Descritores em Ciências da Saúde*, DeCS) and Medical Subject Headings (MeSH) and their combinations were used (Figure 1).

The search strategy that was used in the BVS database is identified in Figure 2.

Acronym	Descriptors
Population (P)	Health professionals
	Health personnel
Concept (C)	Ethical-professional requirements
	Bioethics
Context (C)	Autonomous decision-making process in triage for prioritization of services for critically-ill patients with COVID-19
	Professional Autonomy, Decision-Making; Critical Care; Clinical Protocols; Health Resources; Access to the Health Services; Quality of Health Care; Equality in Access to the Health Services; Intensive Care Units, Coronavirus Infections.

Figure 1 - PCC acronym and indication of the descriptors used in the search. Brasília, DF, Brazil, 2020
Source: Prepared by the authors, 2021.

Database	Search strategy
BVS	(tw:(Pessoal de Saúde)) AND (tw:(Bioética)) AND (tw:(Autonomia Profissional)) AND (tw:(Tomada de Decisões)) AND (tw:(Cuidados Críticos)) OR (tw:(Protocolos Clínicos)) OR (tw:(Recursos em Saúde)) OR (tw:(Acesso aos Serviços de Saúde)) OR (tw:(Qualidade da Assistência à Saúde)) OR (tw:(Equidade no Acesso aos Serviços de Saúde)) OR (tw:(Governo)) AND (tw:(Unidades de Terapia Intensiva)) AND (tw:(Betacoronavírus)) OR (tw:(2019-nCov)) OR (tw:(Novo Coronavírus (2019-nCoV))) OR (tw:(SARS-CoV-2)) AND (tw:(Saúde Pública)) AND (tw:(Estresse Psicológico)) OR (tw:(Infecções por Coronavírus)) OR (tw:(Covid-19)) OR (tw:(Doença pelo Novo Coronavírus (2019-nCoV))) OR (tw:(Doença por Coronavírus 2019-nCoV)) OR (tw:(Doença por Novo Coronavírus (2019-nCoV))) OR (tw:(Epidemia pelo Novo Coronavírus (2019-nCoV))) OR (tw:(Epidemia pelo Novo Coronavírus 2019)) OR (tw:(Epidemia por 2019-nCoV)) OR (tw:(Epidemia por Novo Coronavírus 2019)) OR (tw:(Infecção pelo Coronavírus 2019-nCoV)) OR (tw:(Infecção por Coronavírus 2019-nCoV)) OR (tw:(Surto pelo Novo Coronavírus (2019-nCoV),)) OR (tw:(Surto pelo Novo Coronavírus 2019)) OR (tw:(Surto por 2019-nCoV)) OR (tw:(Surto por Coronavírus 2019-nCoV)) OR (tw:(Surto por Novo Coronavírus (2019-nCoV))) OR (tw:(Surto por Novo Coronavírus 2019)) AND (tw:(Assistência à Saúde)) OR (tw:(Sinais e Sintomas)) AND (tw:(Respiração Artificial)) OR (tw:(Sistemas de Saúde)) AND (tw:(Morte)) OR (tw:(Óbito)) OR (tw:(Organização Mundial da Saúde)) OR (tw:(Estratégias de Saúde)) OR (tw:(-Compreensão))

Figure 2 - BVS database search strategy. Brasília, DF, Brazil, 2020
Source: Prepared by the authors, 2021.

Study selection

The articles retrieved were consolidated in a spreadsheet for the duplicity analysis. The first and second readings were carried out in pairs, based on the eligibility criteria.

Data extraction

Extraction of the findings was performed by identifying the authors, year, journal, type of publication, indexed database, language, type of study, and ethical-professional criteria adopted for critically-ill patients with COVID-19.

Risk of bias analysis and quality of evidence

The study was guided by the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist⁽¹⁴⁾, following the JBI protocol⁽⁹⁾.

Synthesis of the results

The data obtained were consolidated into five categories: Technical-Medical-Scientific Requirement, Justice and Equality, Health History, Commission for Shared Decision-Making and Severe Respiratory Condition.

Descriptive analysis was adopted for the synthesis of the findings, based on the categories defined. The results are presented in absolute numbers and percentages in order to quantify the findings.

RESULTS

A total of 572 records were retrieved (Figure 3), and 28 published documents were included in the review, distributed into articles (85.7%) and technical notes (14.3%), all published in 2020 (Figure 4).

Among the documents analyzed, 75% were published in English and 25% in Portuguese. In relation to the type of study, the majority (78%) consisted of literature reviews, 15% were technical notes, and interpretative analysis and field research had only one record each, representing 3.5% each (Figure 4).

In the ethical-professional criteria by category, the following percentage distributions were obtained: 36% presented Health History as a criterion (category 3), 18% used Technical-Medical-Scientific

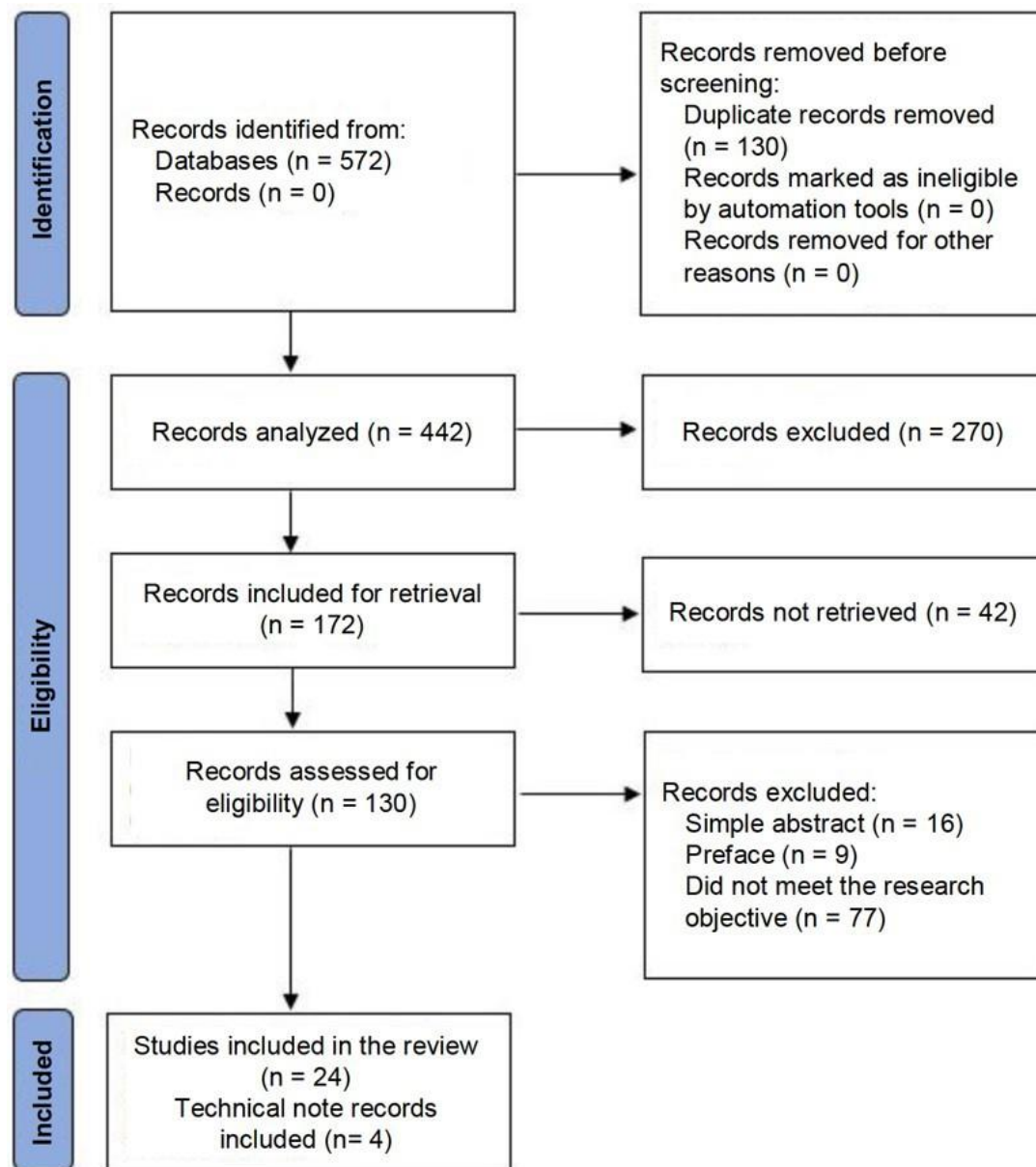


Figure 3 - Flowchart corresponding to the search and selection of documents in accordance with PRISMA-ScR. Brasília, DF, Brazil, 2020

Source: Prepared by the authors, 2021.

Authors	Language	Type of study	Journal	Type of publication	Synthesis of the Ethical-Professional Criteria for Decision-Making
Category 1. Technical-Medical-Scientific Requirement					
Gonçalves and Dias ⁽¹⁵⁾	Portuguese	Literature Review	Diversitates Int. J.	Article	Predominance of technical-medical-scientific parameters. They mention tie-breaking criteria, such as life cycle, draw and prioritization of health professionals.
Rubio et al. ⁽¹⁶⁾	English	Narrative Review	Medintensiva	Article	Technical-medical-scientific parameters.
Parsons and Johal ⁽¹⁷⁾	English	Review	J Med Ethics	Article	Technical-medical-scientific parameters.
Chase ⁽¹⁸⁾	English	Review	J Am Geriatr Soc	Article	Technical-medical-scientific parameters.
Laventhal et al. ⁽¹⁹⁾	English	Review	Pediatrics	Article	Technical-medical-scientific parameters.
Category 2. Justice and Equality					
Costa et al. ⁽²⁰⁾	Portuguese	Interpretive Analysis	Diversitates Int. J.	Article	Protocols that are guided by ethical issues and distributive justice observing technical-medical-scientific parameters.
Torres et al. ⁽²¹⁾	Portuguese	Literature Review	Revista de Bioética y Derecho Perspectivas Bioéticas	Article	Guided by ethics requiring equal treatment conditions and technical standards to avoid subjectivity.
Marinho et al. ⁽²²⁾	Portuguese	Technical Note	Repositório Institucional da Fiocruz	Technical Note	Objective criteria regardless of the group to which the patient belongs.
Farrell et al. ⁽²³⁾	English	Review	J Am Geriatr Soc	Article	Guided by ethical and distributive justice issues observing technical-medical-scientific parameters.
Haas et al. ⁽²⁴⁾	English	Review	Crit Care	Article	Guided by ethical and distributive justice issues observing technical-medical-scientific parameters
Category 3. Health history					
Jafarey ⁽²⁵⁾	English	Review	J Pak Med Assoc	Article	Based on the prognostic criteria of acute disease and expected benefits of the treatment; Advanced chronic diseases; Collegiate decision-making procedure.
Boas ⁽²⁶⁾	Portuguese	Technical Note	Geriatr Gerontol Aging	Technical Note	Based on the need for constant monitoring and recovery possibilities. Communication between the health team, the patient and the family is essential.
Siqueira-Batista et al. ⁽²⁷⁾	Portuguese	Technical Note	Repositório Institucional da Fiocruz	Technical Note	Based on the severity of the clinical condition and the history of incurable or progressive diseases.

Authors	Language	Type of study	Journal	Type of publication	Synthesis of the Ethical-Professional Criteria for Decision-Making
Vergano et al. ⁽²⁸⁾	English	Review	Crit Care	Article	Based on the severity of the clinical condition and the history of incurable or progressive diseases.
Pattison ⁽²⁹⁾	English	Review	Intensive Crit Care Nurs.	Article	Based on the survival probability.
Hulsbergen et al. ⁽³⁰⁾	English	Review	Acta Neurochir (Wien)	Article	Prioritize the most severe cases and maximize the benefits and role of age and comorbidity.
Solnica et al. ⁽³¹⁾	English	Review	J Med Ethics	Article	Based on the severity of the clinical condition and the history of incurable or progressive diseases.
Herreros et al. ⁽³²⁾	English	Review	J Med Ethics	Article	Based on the severity of the clinical condition and the history of incurable or progressive diseases.
Vincent and Creteur ⁽³³⁾	English	Review	Eur Heart J Acute Cardiovasc Care	Article	Address the prognosis of acute illness and expected benefits of the treatment, as well as potentially fatal advanced chronic diseases (comorbidities).
White and Lo ⁽³⁴⁾	English	Review	JAMA	Article	Based on the probability of survival to hospital discharge and long-term survival based on the presence or absence of comorbidities that influence survival.
Category 4. Commission for Shared Decision-Making					
Engstrom et al. ⁽³⁵⁾	Portuguese	Technical Note	Repositório Institucional da Fiocruz	Technical Note	They recommend the creation of a commission to share decisions.
Rello et al. ⁽³⁶⁾	English	Review	Anaesth Crit Care Pain Med	Article	They recommend the creation of a commission to share decisions.
Warrillow et al. ⁽³⁷⁾	English	Review	Crit Care Resusc	Article	A committee was assembled to develop guidelines outlining the key principles that should be followed during the pandemic. Collegiate decision-making procedure (physicians and other health professionals).
Maves et al. ⁽³⁸⁾	English	Review	Chest	Article	Decisions made collaboratively.
Category 5. Severe Respiratory Condition					
Grasselli et al. ⁽³⁹⁾	English	Review	JAMA	Article	Protocols based on respiratory symptoms.
Bhatraju et al. ⁽⁴⁰⁾	English	Field Research in Hospital	N Engl J Med	Article	Protocol based on respiratory failure.
Singh and Moodley ⁽⁴¹⁾	English	Review	South African Medical Journal	Article	Protocol based on respiratory failure.

Authors	Language	Type of study	Journal	Type of publication	Synthesis of the Ethical-Professional Criteria for Decision-Making
Zhao et al. ⁽⁴²⁾	English	Retrospective Review of Medical Records	PLoS One	Article	Protocol based on respiratory failure and failure of another organ that requires monitoring in the ICU.

Figure 4 - Categories of the documents, considering authors, language, type of article, journal, type of publication and synthesis of ethical-professional criteria. Brasília, DF, Brazil, 2020

Source: Prepared by the authors, 2021.

Requirements (category 1), and categories 2 (Justice and Equality), 4 (Establishment of a Commission for Shared Decision-Making) and 5 (Severe Respiratory Condition) had a percentage of 14% each (Figure 4).

DISCUSSION

The limitation of clinical beds in ICUs imposes on health professionals the responsibility to decide, based on pre-established criteria, who will have access priority to the respirators, while the others wait in a queue. However, COVID-19 is a disease that is extremely lethal in severe cases and the waiting time for care can be fatal⁽²⁶⁾.

It was verified that the patient's clinical condition, encompassing the severity of the disease, in most cases should be a care priority^(27,31,32) and, if it is not possible to attend to all patients, a priority schedule is subsequently devised, which ranges from older age⁽³⁰⁾, being a health professional⁽¹⁵⁾ and presence of incurable diseases, to performing a draw to prioritize care⁽¹⁵⁾.

In Brazil, a protocol was developed by the Brazilian Association of Intensive Medicine (*Associação de Medicina Intensiva Brasileira*, AMIB)⁽⁴³⁾, which establishes criteria for priority access to the ICU, one of its objectives being to eliminate the health professionals' subjective decision through technical-medical-scientific requirements.

The AMIB document is based on a protocol⁽⁴⁴⁾ and the following stand out among its guidelines: priority for people with a greater chance of survival⁽²⁵⁾ and guarantee of equality between individuals who go through different life cycles. Thus, people in the first cycles of life would have priority over those in the final stage, such as older adults⁽²⁰⁾. However, this document was criticized for violating equality between people, with age group being a criterion of a discriminatory nature that called into question the principles of solidarity and equality

that support the Brazilian health system, issues problematized in review studies^(21,22).

In this sense, the understanding of the commission assembled by the Brazilian Society of Geriatrics and Gerontology is that the age criterion should not be a predictor of critical illness with regard to mortality and quality of life of aged individuals who occupy ICU beds, also defended in other research studies^(20,23,24).

This commission considered that this type of interpretation goes against the guidelines established by the Federal Council of Medicine (*Conselho Federal de Medicina*, CFM), which, in Resolution No. 2,156/2016⁽⁴⁵⁾, establishes that the criteria for accessing ICUs beds must be in line with the following aspects: Patients who need some intervention to stay alive, who have a significant chance of achieving recovery and who do not have any therapeutic support limitations, as indicated in some studies⁽²⁵⁻²⁸⁾; as well as patients who need constant follow-up and monitoring⁽²⁹⁾.

The patient's age is an important element, but it is not the only one that must be considered⁽²⁴⁾. An independent and active aged patient with no previous medical conditions, for example, may take precedence over a younger individual with advanced cancer, severe heart failure or alcoholic cirrhosis⁽²¹⁾.

The categorization by health conditions is adopted by the recommendation of the Federal Council of Medicine of Rio de Janeiro (CREMERJ)⁽⁴⁶⁾. This document points out the importance of transparency in the allocation of resources, the departure from the age criterion and analysis of clinical severity, which establishes the understanding that respiratory diseases, heart diseases, diabetes, hypertension and neoplasms increase the lethality of the disease^(30,31).

The methodological construction of criteria for access to the ICU based on the patient's history of serious, incurable or progressive disease is

based on both a technical and ethical perspective, due to the nature of work in care for health and with others^(29,30,34).

From an ethical perspective, it is indispensable to note that no medical decision should be guided by issues of race, skin color, gender, sexuality, religion, social status, nationality, ethnicity, political orientation, profession and age. Any decision motivated by one of these elements must be considered discriminatory, injuring the right to life and dignity of the human person^(22,23).

Clinical observations about the COVID-19 severity degrees allow inferring that, in its most severe stage, respiratory failure is a characteristic symptom, which is a warning sign of the risk of death. This diagnosis has guided several hierarchy protocols regarding the priority of medical care in the ICU^(27,36,39), taking as a reference a Unified Prioritization Score (*Escore Unificado para Priorização, EUP-ICU*)⁽²⁵⁾.

In Brazil, the adoption of the respiratory failure criterion appears in recommendation No. 05/2020 of the Pernambuco Federal Council of Medicine

(*Conselho Federal de Medicina do Pernambuco, CREMEPE*)⁽⁴⁷⁾, which also recommends that a screening team be set up that brings together health professionals with expertise in urgency/emergency, bioethics and intensive care, which will be responsible for decision-making based on technical and ethical perspectives, opting for the most rational route⁽⁴⁷⁾.

The creation of a commission to share decisions on the priority of ICU care is a technical criterion that has been adopted in many countries with a view to reducing the pressure exerted on health professionals⁽³⁵⁻³⁸⁾. It is necessary to remember that these shared decisions must be aligned with the bioethical principles of justice and equality⁽²⁴⁾.

These recommendations were systematized in a flowchart and published with the aim of promoting a protocol, based on technical and ethical perspectives, for cases in which it is necessary to decide on a priority order for access to the ICU. These include criteria related to health history, justice and equality, and severe respiratory symptoms⁽⁴⁸⁾ (Figure 5).

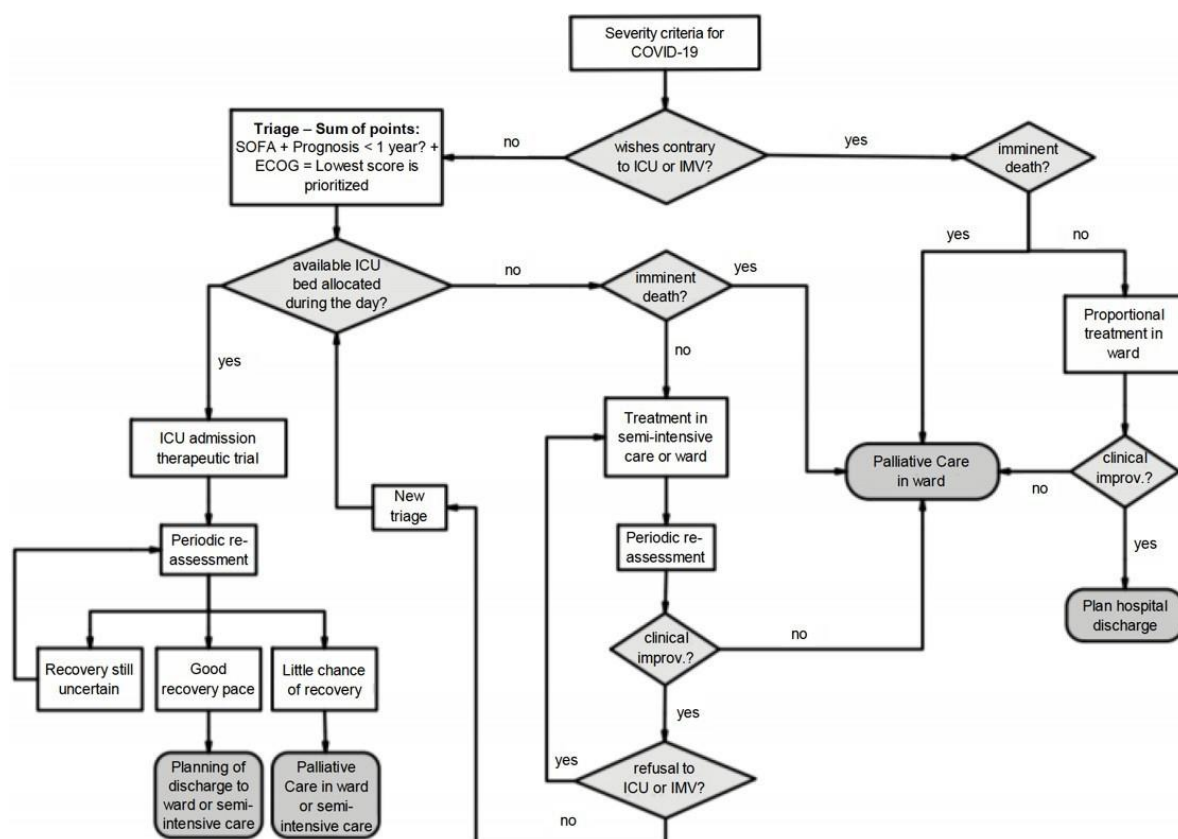


Figure 5 - Flowchart of the AMIB protocol for allocating depleted resources during the pandemic. Brasília, DF, Brazil, 2021

Source: AMIB, 2020b.

The main study limitation refers to the reduced number of available papers that address bio-ethical issues and principles in the pandemic context.

CONCLUSION

This study gathered diverse scientific evidence available at the time of its conduction on the different ethical-professional criteria that may support health professionals in decision-making in triage, care, treatment and prioritization of services to care for severe COVID-19 patients.

The criteria for priority in the care of severe COVID-19 patients were as follows: technical-medical-scientific parameters, severity of the clinical condition, older age, being a health

professional, presence of incurable underlying diseases, draws and patients with greater survival probability.

Only one of the papers disclosed field research results; the other studies had literature reviews as design, which shows the need to carry out empirical research to analyze the complexity of the debates that emerged in this exceptional context.

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