Among equity and dignity: an argument-based review of European ethical guidelines under COVID-19

Marta Perin1,2* and Ludovica De Panfilis1

Abstract
Background: Under COVID-19 pandemic, many organizations developed guidelines to deal with the ethical aspects of resources allocation. This study describes the results of an argument-based review of ethical guidelines developed at the European level. It aims to increase knowledge and awareness about the moral relevance of the outbreak, especially as regards the balance of equity and dignity in clinical practice and patient’s care.

Method: According to the argument-based review framework, we started our research from the following two questions: what are the ethical principles adopted by the ethical guidelines produced at the beginning of the COVID-19 outbreak related to resource allocation? And what are the practical consequences in terms of ‘priority’ of access, access criteria, management of the decision-making process and patient care?

Results: Twenty-two ethical guidelines met our inclusion criteria and the results of our analysis are organized into 4 ethical concepts and related arguments: the equity principle and emerging ethical theories; triage criteria; respecting patient’s dignity, and decision making and quality of care.

Conclusion: Further studies can investigate the practical consequences of the application of the guidelines described, in terms of quality of care and health care professionals’ moral distress.

Keywords: COVID-19 pandemic, Allocation of Health Care Resources, Human Dignity, Ethics

Background
After the spread of the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the related CORona VIrus Disease 2019 (COVID-19), many national health care systems had to deal with a dramatic re-organization of services. At the beginning of the outbreak, COVID-19 positive patients with severe illness required highly specialized care, such as mechanical ventilation and extracorporeal membrane oxygenation, which were not readily available or not applicable to a significant number of cases [1–3]. Moreover, the scarce availability of intensive care unit (ICU) beds is common all over the word [4]. It forces health care professionals and health care organizations to continuously balance the principle of patient-centered care, the focus of clinical ethics under normal conditions, and that of public-focused duty to promote equality of persons, which is the focus of public health ethics [5]. More than usual, the spread of Covid-19 highlighted this difficult balancing.

In a short time, the hardest-hit countries, China, USA, Italy and Spain [3, 4] had to deal with issues of allocation of scarce resource. Rationing intensive care beds or specialized services has clinical and ethical implications. The "decision about initiating or terminating mechanical intervention is often truly a life-or-death choice" [7], even if, in the case of Covid-19, data have shown uncertainty...
regarding the efficacy of mechanical ventilation as the outbreak has progressed [8]. However, the allocation of intensive care treatments remains crucial.

The central question regards how to establish a fair resource allocation and how to guarantee that the decisions are made "ethically and consistently, rather than based on individual institution's approaches or a clinician's institution in the heat of the moment" [9].

Resource allocation is a crucial ethical issue because it most fundamentally involves questions of justice. The identification and definition of an equal distribution of resources, opportunities and outcomes among the population represent a concern for national governments and health care facilities. Due to the nature of the pandemic itself, this ethical issue reached a global dimension.

According to the World Health Organization (WHO) [9], developing guidelines on the allocation of scarce resources in outbreak situations require governments, health-care facilities and other involved in such effort to consider the tension between the principles of utility (allocating resources to maximize benefit and minimize burdens) and equity (fair distribution of benefit and burdens); the definition of utility; the needs of vulnerable populations; the fulfillment of reciprocity-based obligations and the provision of supportive and palliative care. The principle of equity in access to health care plays a central role in fair allocation: it “must be upheld, because it lays down in the respect for human dignity and human right framework” (namely, Article 3 of the Oviedo Convention and article 14 of the Unesco Declaration on Bioethics and Human rights, 2005) even in a context of scarce resources [10, 11].

There are multiple ethically permissible approaches to allocating scarce life-sustaining resources, but these theories yield conflicting definitions. For instance, utilitarianism focuses on the maximization of benefit, while egalitarianism focuses on equality of opportunity and need [12].

With COVID-19, health departments, local and national clinical ethics committees, and scientific societies had urgently developed new (or have revised existing) ethical guidelines or ethical recommendations, identifying which criteria should be used to ethically allocate scarce resources and what process should be used to fairly implement allocation decisions [13].

Because the public will bear the consequences of these decisions, knowledge of perspectives and moral points of reference on these issues is critical [14]: unjustified variation could exacerbate structural inequalities, squander valuable resources and undermine public health [13, 14], as demonstrated by the debates about exclusion criteria and discrimination against age and disability that have already arisen in Italy and in the USA [15].

It can be useful to understand and compare the various ethical perspectives involved in ethical guidelines developed during COVID-19 through a full set of published reasons for or against the view in question, which is the central scope of an argument-based review [16].

This study describes the results of an argument-based review of the ethical guidelines developed at the European level to face the health care emergency at the beginning of COVID-19 pandemic.

We analyzed the underpinnings and ethical concepts, as well as their practical consequences, with the aim of increasing knowledge and awareness related to the ethical meanings of the outbreak.

**Methods**

The argument-based review represents one of the different methods for systematic reviews developed in the field of bioethics, and it aims to present an up-to-date comprehensive overview of the ethical arguments and underpinning concepts identified in relation to a certain topic [16–18]. This approach is particularly suitable for our study because it led the researchers to acquire evidence for decision-making in the delivery of healthcare, development of policy, and conduct of medical research [18].

To grasp the underpinnings of ethical theories, their principles and related practical consequences regarding the ethical aspect of allocation resources, we performed the argument-based systematic review of ethical guidelines following the model developed by McCullough et al. [16, 17].

We first articulated our research questions into two relevant conceptual ethical questions; then, we performed a literature search, and finally, we identified, described and analyzed the ethical arguments in connection with the conceptual-ethical questions.

**Research questions**

To understand how European countries dealt with the ethical allocation of scarce health resources at the beginning of the COVID-19 pandemic, we developed the following research questions:

a. What are the ethical principles adopted by the ethical guidelines produced at the beginning of COVID-19 outbreak, related to resource allocation?

b. What are the practical consequences in terms of 'priority' of access, access criteria, management of the decision-making process and patient care?

**Literature search**

Articles were selected based on the following predetermined eligibility criteria for their relevance to our research question:
a. they must be guidelines or recommendation policies;
b. they must be published between March and May 2020;
c. they must be developed in response to the COVID-19 health emergency;
d. they have been developed by institutions suitable to formulate such guidelines (such as local or National Ethical Committees, Health Ministerial Departments, and Scientific Societies);
e. they explicitly deal with the allocation of resource according to an ethical framework;
f. they have been written in English or have been translated in English.

We excluded scientific articles, editorials, book chapters and position papers. Finally, we included further publications using the snowball sampling method and gray literature research. Due to the characteristics of the search literature, we used the following resources: national ethics committee websites, scientific society websites, international organization's websites, collecting specific ethical resources on COVID-19 (see Additional file 1—Appendix 1).

Data extraction and synthesis
We performed a qualitative analysis, adapting the Qualitative Analysis Guide of Leuven—QUAGOL [19]. It offers a comprehensive, systematic but not rigid method to guide the process of qualitative data analysis. Its characteristics lie in the iterative process of digging deeper, constantly moving between the various stages of the process [19].

MP and LDP identified the eligible ethical guidelines. They read each document entirely the first time to have an overview of the topics and relevant arguments; afterwards, they read the documents a second time, focusing specifically on: (a) the ethical framework described and (b) the section describing the allocation of scarce resources.

MP collected the relevant information of each document into a conceptual scheme. It is a synthetic frame where different and relevant concepts are presented and integrated with each others to answer the research questions [18, 19]. Each conceptual scheme highlights the relationships between the ethical framework described in the guideline, the allocation resources argumentation and their practical consequences in clinical practice and decision making process (an example of a conceptual scheme is provided as Additional file 2: Appendix 2). The schemes' adequateness was checked by LDP.

Successively, MP unified all the schemes into a single table (Table 1) to create an overview and provide a comprehensive answer to our research questions. LDP overviewed the process. The table describes the responses to our research questions reporting the ethical principles (question 1) and practical consequences (question 2). We specified the relationships between ethical principles and practical consequences in terms of ‘priority’ of access, access criteria, management of the decision-making process and the emerging patient’s care (question 2).

The documents’ full texts, their relative conceptual schemes, and the final table were iteratively evaluated and checked against previous QUAGOL steps to ensure that they were consistent.

Finally, MP and LDP synthesized a description of the results to be presented in the Results section.

Results
We collected 42 ethical guidelines, and their characteristics are described in Table 2.

The most represented are UK (7 published ethical guidelines), France (6 published guidelines) and Spain (4 published guideline), followed by Switzerland, Germany (3 published guidelines) and Italy (2 ethical guidelines). The majority of the ethical guidelines was published by Scientific Society (21 ethical guidelines) and National Ethic Committees (16 ethical guidelines). 14 ethical guidelines were published in English and 10 ethical guidelines present the English translations and could be included in our analysis. We then excluded an ethical guideline because it presented an updated version.

Finally, twenty-two ethical guidelines met our inclusion criteria and were analyzed by argument-based analysis (as reported in Table 1).

As a result of the analysis and synthesis of the 22 individual guidelines, we ultimately identified the following ethical concepts and their related arguments, as described in Table 3:

1. Equity principle and emerging ethical theories.
2. Triage criteria.
3. Respecting patient dignity.
4. Decision making and quality of care.

Equity principle and the emerging ethical theories
The analysis of the ethical guidelines highlights the central role of equity principle showing different meanings based on its theoretical relationship with three main ethical theories: egalitarianism, utilitarianism, and ethics of care.

The egalitarian approach: equity and non-discrimination
Inspired by the egalitarian approach, 14 ethical guidelines balance the principle of equity intended as equal
| Country | Guidelines' Title | Ethical principles (question 1) | Priority of access (question 2) | Access criteria (question 2) | Un-ethical access criteria (question 2) | Decision making process (question2) | Patient's care approach (question 2) |
|---------|------------------|---------------------------------|-------------------------------|----------------------------|----------------------------------------|-----------------------------------|-------------------------------------|
| Austria | Management of scarce resource in healthcare in the context of the COVID-19 pandemic | 4 ethical principles; Equity equality | Better prognosis | Chronic short-term diseases, Survival probability, Severity of the disease, Status of other previous pathologies, Physical conditions Score system | Age, Social status, Personal relationships with decision makers | Ethics support service/ethical consultation services | Promoting Advance care planning (ACP), offering the best, though not optimal, care for the patient and palliative care when is not possible to treat, applying a fair decision making, assistance to all people without distinctions based on non-medical criteria, providing those who need it with more resources to be able to exercise their rights (e.g. physical or mental/cognitive impairment) |
| Belgium | Ethical principles concerning proportionality of critical care during the COVID-19 pandemic: advice by the Belgian Society of Intensive Care Medicine | Avoid disproportionate treatment apply the triage criteria fairly | Priority to urgencies Apply first come, first served approach to those with the same urgency | Patient’s Advance Directives Presence of fragility/comorbidity Clinical Frailty Score Cognitive disorders in elderly patients Terminal onchological diseases Presence of severe chronic co-morbidities | Age | Team discussion Transparency and evaluation of decisions (using a triage decisions register), Psychological and ethical support for professionals | Promoting ACP, applying triage criteria to all patients, consider age with other clinical parameters (fragility and cognitive ability) |
| Country       | Guidelines’ Title                                                                 | Ethical principles (question 1)                                                                 | Priority of access (question 2)                                                                 | Access criteria (question 2)                                                                 | Un-ethical access criteria (question 2)                                                                 | Decision making process (question 2)                                                                 | Patient's care approach (question 2)                                                                 |
|--------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Council of Europe | COMMITTEE ON BIOETHICS (DH-BIO) DH-BIO Statement on human rights considerations relevant to the COVID-19 pandemic | Respect for human dignity and human right. Apply the principle of equity of access to health care system. Considering human right in the field of medicine (Oviedo Convention). Solidarity and responsibility. | Medical criteria.                                                                 | Protection of the most vulnerable people (persons with disabilities, older persons, refugees and migrants). | The access to existing resources should be guided by medical criteria. To ensure that vulnerabilities do not lead to discrimination in the access to healthcare. |
| Estonia      | Recommendations on clinical ethics for Estonian hospitals for distribution of limited health care resources during the COVID-19 pandemic | Equal treatment. 4 principles of medical ethics. Avoid the greater damage and promote the maximum benefit. Honest and transparent distribution of limited resources. | Prognosis regarding the treatment’s success. The patient’s future quality of life. | The current patient’s clinical status. Presence of comorbidities. The general patient’s health-related status. Presence of other relevant indicators related to prognosis. Patient’s will effectiveness of medical services. | Additional resources (psychologists, consultants..) | Treat all patients equally. Save as many lives as possible. Equal distribution of existing resources. Ensure that the protection of health workers becomes increasingly essential. |
| EGE          | Statement on European Solidarity and the Protection of Fundamental Rights in the COVID-19 Pandemic | Respect for the dignity of the person. Principle of equity. | definition of priorities requires criteria which are always questionable. | Unit of ethics support for health care professionals. | Provide assistance based on the patient's needs. Guarantee continuity of care for other patients who do not accede to intensive treatments. |
| France       | COVID-19 Contribution from the French National Consultative Ethics Committee. Ethical issues in the face of a pandemic | | | | | |
| Country   | Guidelines’ Title                                                                 | Ethical principles                                                                 | Priority of access (question 1)                                      | Access criteria (question 2)                                                                 | Un-ethical access criteria (question 2) | Decision making process (question 2) | Patient’s care approach (question 2) |
|-----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------|-------------------------------------|
| Germany   | Solidarity and Responsibility during the Coronavirus Crisis                        | Dignity, Absolute value of life, Constitutional principles                           | The law does not identify any criteria by which to identify the patients to be denied the treatment | Gender, Ethnicity, Age, Social role, value or presumed life-span                           | Considerations regarding allocation resources should be weighted, justified, transparent, and criteria should be applied uniformly | Equal access for all to health care The state must refrain from norms with which lives are categorized on the basis of gender/ethnicity/age/social role/presumed value or duration of life; The measures required to save as many lives as possible must not go beyond the constitutional framework and the safeguard of the legal system must be considered. |
| Ireland   | Ethical Framework for Decision-Making in a Pandemic                              | Fairness, minimising harm, solidarity and reciprocity                               | Patients with a greater chance of benefitting from the intervention; Some groups at risk and those essential for the management of a pandemic | Patient’s health status before the virus, Presence of comorbidities, Frailty (regardless of age), Estimation on total number of lives saved; total life years saved; how long patients could live in the long term | Age, Social status, Social value, Ethnicity, Gender | Reasonableness, Openness and Transparency, Incusiveness, Responsiveness, Accountability | Maximize the benefits obtained with scarce resources Distribute benefits and risks equally through a multi-principled approach |
| Italy     | Clinical Ethics Recommendations for the Allocation of Intensive Care Treatments in Exceptional, resource-limited circumstances | Clinical appropriateness and Proportionality of care; Distributive justice and Appropriate allocation of resources | Age threshold priority for those patients who are most likely to survive and who'll have several years of life saved | Presence of comorbidities Evaluation of patient’s functional status Presence of patient’s Advance Directives or Advance Care Planning ‘Inappropriateness’ is justified by the extraordinary nature of the situation | Shared decision making process among multiple clinicians Use a ideal list of patients Daily reassessment of appropriateness/ care objectives/proportionality Support to health care professionals | Maximizing benefits for most people Palliative care (also sedation) Evaluation of the situation’s implications on family members |
| Country               | Guidelines’ Title                                                                 | Ethical principles (question 1)                                                                 | Priority of access (question 2) | Access criteria (question 2) | Un-ethical access criteria (question 2) | Decision making process (question 2) | Patient’s care approach (question 2) |
|----------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------|------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| Republic of San Marino | Statement on ethical issues regarding the use of invasive assisted ventilation in patients all age with serious disabilities in relation to Covid-19 pandemic | Respect for human dignity and human rights Equality and non-discrimination (due to disability) Equal opportunities to access | Clinical appropriateness Proportionality of care | Age, Gender Social status, ethnicity, disability | The only parameter for the allocation decisions consists in a correct application of the triage which is based on: (a) the respect for every human life (b) criteria of clinical appropriateness and proportionality of the treatments | |
| Portugal             | CNECV statement: Covid-19 key consideration                                       | Value of life, dignity and integrity of individuals Principle of necessity Principle of solidarity | | | | Permanent support from the members of the local ethics committees to help professionals in the decision-making process |
|                      | Public health emergency situation due to the COVID-19 pandemic - Relevant ethical aspects | Principle of necessity Precautionary principle Proportionality principle Transparency Solidarity Subsidiarity | Medical criteria Evaluation of the respective clinical criteria, including the technical and scientific recommendations issued by the health authorities, professional bodies and scientific societies | | Support for decision-making through members of the health institution not directly involved in intensive care (hospital ethics committees) Principle of decision-making process: reasonableness, transparency, inclusion, reactivity and institutional responsibility | Decisions regarding the allocation resources are based on medical criteria which is based on solid ethical principles (proportionality, reciprocity, equity, trust and solidarity); careful ethical consideration is required on a case-by-case basis |
| Country | Guidelines' Title | Ethical principles (question 1) | Priority of access (question 2) | Access criteria (question 2) | Un-ethical access criteria (question 2) | Decision making process (question2) | Patient's care approach (question 2) |
|---------|------------------|-------------------------------|---------------------------------|-----------------------------|----------------------------------------|-------------------------------------|-------------------------------------|
| Spain   | Report of the Ministry of Health on ethical aspects in pandemic situations: SARS-CoV-2 | Equity and non-discrimination, Solidarity, Justice, Proportionality, Transparency | A hierarchy of priorities must be established, Gravity of the patient's condition, Objective expectations on the patient's short-term recovery to his previous state of health, Date of arrival (not as the only criterion) | Existence or absence of serious concomitant pathologies that would indicate a fatal prognosis (such as a terminal disease with a prognosis of irreversibility or irreversible coma), even if this could lead to further clinical assistance | Age, Disability, Vulnerable children | It is recommended that guidelines are requested and received, for example, by the hospital's ethics and health committee, within the time available | Priorities' definition will be based on objective, generalizable, transparent, public and consensus-based criteria, despite the possibility of evaluating the unique and individual characteristics of each person who has contracted the virus. The maximum benefit in saving lives, which must be made compatible with the continuation of the treatment started with each individual patient. Consider alternative treatments to invasive mechanical ventilation provided in intensive care, even in cases where this does not seem to be indicated |
| Switzerland | Pandemic Covid-19: triage of intensive care treatments in case of scarcity of resources. Indications for the implementation of chapter 9.3 of the directives of the ASSM "Measures of intensive care" (2013), updated version of March 24, 2020 | 4 Principles of medical ethics: equity, save as many lives as possible, protection of the health care professionals involved | Patients who can benefit most from the hospitalization, it also indirectly includes the patient's age (even if it is not considered as a valid criterion itself) | The patient's age, «first principle such as first served», priority to people with a high social value etc. | Early identification of patient's wishes, If ICU treatments are denied, adequate palliative care must be ensured, Determining criterion for triage and short-term prognosis, Further criteria such as first come, first served and, priority to persons with a high social value etc. should be avoided |
### Table 1 (continued)

| Country | Guidelines’ Title                                                                 | Ethical principles                  | Priority of access (question 1)                                                                 | Access criteria (question 2)                                                                 | Un-ethical access criteria (question 2)                                                                 | Decision making process (question 2)                                                                 | Patient’s care approach (question 2)                                                                 |
|---------|----------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| The Holy See | Pandemic and universal Brotherhood: Note on the Covid-19 emergency | Equal value of human life and the dignity of the person (they are always the same and priceless) Justice | Patient’s need patient’s prognosis                                                              | The severity of patient’s illness and his need for treatment                                                              | Age cannot be taken as a single and automatic choice criterion                                      | The allocation criteria should be shared and reasonably founded, to avoid arbitrariness or improvisation in emergency situations | Provide treatments in the best possible way based on the patient’s needs The sick person should be never abandoned, even when there are no more treatments available: palliative care, pain treatment and accompaniment should never be overlooked |
| UNESCO International Bioethics Committee (IBC) and the UNESCO World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) | Statement on COVID-19: Ethical considerations from a global perspective | Principle of justice, beneficence, equity, respect for human dignity Human rights framework recognize the protection of health as a right of each human being | right to health can be guaranteed only by our duty to health                                                              | Recognition of a collective responsibilities for the protection of vulnerable persons and the need to avoid any form of stigmatization and discrimination | Procedures need to be transparent and should respect human dignity                                      | The highest attainable standard of health is a fundamental right of every human being, which means the access to the highest available healthcare |
| UK | Guidance: Responding to COVID-19: the ethical framework for adult social care | Respect, reasonableness, minimizing harm, inclusiveness, flexibility, proportionality, community | Ethical considerations in responding to the COVID-19 pandemic Proportionality, intervention’s effectiveness and necessity Fair and respectful treatment Solidarity | All the people should be treated as moral equals, worthy of respect                                                          | Justification of the decision-making process, considering alternative courses of action, clear, transparent decision-making process Be transparent about why certain decisions are made | Patient’s informed consent Minimize inequalities                                   | Interventions should be evidence-based and proportionate People should be treated as moral equals, worthy of respect |


| Country | Guidelines' Title | Ethical principles (question 1) | Priority of access (question 2) | Access criteria (question 2) | Un-ethical access criteria (question 2) | Decision making process (question 2) | Patient's care approach (question 2) |
|---------|------------------|-------------------------------|-------------------------------|-----------------------------|----------------------------------------|------------------------------------|----------------------------------|
| COVID-19—ethical issues. A guidance note | maximising the overall reduction of mortality and morbidity. Need to maintain vital social functions. | Clinically relevant elements about each patient. Patient's possibilities to benefit from available resources (younger patients will not automatically have priority over older ones). | The presence of comorbidities. Decisions regarding treatments of those who lack decision-making capacity should be made in the same way as for the others. Patients requiring treatment. It would not be ethical to apply these limits in health care access differently to patients with or without appointed or surrogate decision makers, or those with or without particular religious opinions. | The decision making process should be based on the best available clinical data and opinions; consistent with ethical principles and reasoning. Agreed in advance where possible, while recognizing that decisions may need to be made quickly. Revised in changing circumstances as far as possible coherent between different professionals. Communicated openly and transparently. Subjected to change and review as the situation develops. Provide adequate support, including support from the clinical ethics committee and psychologists to health care professionals. | Prioritisation policies: Refuse someone potentially life-saving treatment where someone else is expected to benefit more from the available treatment. No automatic priority. Patients whose treatment is suspended or withdrawn must receive compassionate care and dedicated medical assistance. |
Table 1 (continued)

| Country | Guidelines’ Title | Ethical principles (question 1) | Priority of access (question 2) | Access criteria (question 2) | Un-ethical access criteria (question 2) | Decision making process (question2) | Patient’s care approach (question 2) |
|---------|-------------------|--------------------------------|--------------------------------|------------------------------|----------------------------------------|-----------------------------------|----------------------------------|
|         |                   | Ethical dimension of COVID-19 for front-line staff | Ensuring fair and equitable care Caring for COVID-19 and non-COVID-19 patients | There will be some patients (with or without confirmed COVID-19) for whom admission to ICU would be inappropriate (proportionality) | Assessment and prioritisation decisions are carried out by more than one clinician colleague (multidisciplinary team) | Treatment should be provided, independently of the individual’s background (e.g. disability), where it is considered that it will help the patient survive and not harm their long-term health and wellbeing. Many front-line staff will already be caring for patients for whom any escalation of care, regardless of the current pandemic, would be inappropriate, and must be properly managed. All front-line staff should have discussions with those relevant patients for whom an advance care plan is appropriate |
| Country                                    | Guidelines' Title                              | Ethical principles (question 1)                                                                 | Priority of access (question 2)                                                                 | Access criteria (question 2)                                                                 | Un-ethical access criteria (question 2)                                                                 | Decision making process (question 2)                                                                 | Patient’s care approach (question 2)                                                                 |
|-------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Covid-19 Guidance: Ethical Advice and Support Framework | Respect, Fairness, Minimising harm, Working together, Flexibility, Reciprocity, Capacity and consent | Where there is a decision that a treatment is not clinically appropriate there is not an obligation to provide it. No active steps should be taken to shorten or end the life of an individual, however, the appropriate clinical decision may be to withdraw life prolonging or life sustaining treatment. | Clinicians should act with honesty and integrity in their communication with patients and should communicate clinical decisions and the reasoning behind them transparently. This should be documented appropriately. Ethical advice and support groups will be established as a priority. There must be immediate access to ethical advice if this occurs, to offer an independent view and support in difficult circumstances. Where there are resource constraints, patients should receive the best care possible, while recognising that there may be a competing obligation to the wider population. | All patients should be offered good quality and compassionate care. Patients should be treated as individuals, and not discriminated. Where there are resource constraints, patients should receive the best care possible, while recognising that there may be a competing obligation to the wider population. | Provide the best service possible within the resources available. Where decisions are made to withhold or withdraw some forms of treatment from patients, doctors should still take all possible steps to alleviate the patient’s symptoms and distress and respect their dignity. |
| Coronavirus: Your frequently asked questions | React responsibly and reasonably to the circumstances | Take account of current local and national policies that set out agreed criteria for access to treatment. Take account of patient wishes and expectations. | Be confident that decisions are based on clinical need and the likely effectiveness of treatments. | Don’t unfairly discriminate against particular groups. Be open and honest with patients and the rest of the healthcare team about the decision-making process and the criteria for setting priorities in individual cases. Keep a record of discussion with colleagues and, if possible, with input from local ethics committees. Recognise the significant emotional distress. | | | |
treatment for equal needs with the principle of equality, that is equal treatment regardless of needs. The guidelines describe equality in terms of the respect for the absolute value of life and dignity of the person, as defined by the human rights framework [10, 11, 20–27]. As a result of this approach, triage criteria should be applied to every patient without discrimination or distinction among COVID and non-COVID patients [10, 11, 24–26, 28–31]. Following this perspective, some guidelines apply the “first come, first served” approach to choose between patients with the same urgency and needs [29, 30], even if it cannot be considered as the only criterion for allocation resources.

The utilitarian approach: equity and the best use of resources

10 guidelines balance the principle of equity with the principle of utility, which requires first to identify the type of outcomes that will be counted as improvements to the greatest common benefit. Utility principle is widely described as maximizing the benefits from scarce resources for the greatest number of people. It also consists of the “best value use” of resources [32–34] by reducing mortality and incrementing benefits in the society [5, 35–38]. Following the utilitarian approach, the total number of lives saved [32], the number of years of life saved [36] or the total number of years saved in relation to the quality of life and the capacity of the patient to benefit from the treatment are crucial aspects [30, 32–34, 37, 39]. The Italian ethical guidelines developed by the Italian Society of Anesthesia Analgesia Resuscitation and Intensive Care (SIAARTI) highlight that the “extraordinary nature of the situation” can justify the clinicians’ judgment about the inappropriate access of a patient to intensive treatment, namely to the pursuit of the greatest common benefit [36]. The Estonian ethical guidelines developed by the University of Tartu underlines that the

| Table 2 | Published guidelines characteristics |
|---------|--------------------------------------|
| Characteristics | Number of published ethical guidelines |
| Country | |
| Austria | 1 |
| Belgium | 1 |
| Estonia | 1 |
| France | 6 |
| Finland | 1 |
| Germany | 3 |
| Greece | 1 |
| Ireland | 1 |
| Italy | 2 |
| Luxembourg | 1 |
| Norway | 1 |
| R. of San Marino | 1 |
| Portugal | 2 |
| Slovenia | 1 |
| Spain | 4 |
| Sweden | 1 |
| Switzerland | 3 |
| The Holy See | 1 |
| UK | 7 |
| International organization | 3 |
| Published by Scientific Society (professionals) | 21 |
| National Ethics Committee | 16 |
| Department of Health | 2 |
| International European institution | 3 |
| Language | |
| Just national language | 18 |
| National language and English translation | 10 |
| Just English | 14 |

| Table 3 | Identification of the ethical concept, their related arguments and the reference’s guideline |
|---------|--------------------------------------|
| Ethical Concepts | Related Arguments | Guidelines |
| Equity principle and emerging ethical theories | The egalitarian approach: equity and non discrimination | 10, 11, 20–31 |
| | The utilitarian approach: equity and the best use of resources | 5, 30, 32–39 |
| | The relationship between the equity principle and the Ethics of care framework | 21, 22, 24, 25, 26, 27–31, 33, 34, 37–39 |
| Triage criteria | Quantitative health-related triage criteria | 28–30, 32, 33, 35–37, 39 |
| | Patient-related clinical judgment and questionable criteria | 10, 21, 22, 24–28, 30, 31, 33, 38 |
| | Ethically unacceptable criteria and controversial application | 11, 22, 24, 26, 28–30, 32, 33, 35, 39 |
| Respecting Patient dignity | Palliative care | 11, 24, 26, 28, 30, 33–37 |
| | Considering patient’s will and wishes | 28, 29, 32–36 |
| | Individualized patient’s care | 10, 11, 21, 25, 26, 27, 28, 31–32, 34, 36, 38 |
| Decision making and quality of care | Ethical aspect of communication and triage management | 11, 22, 25, 26, 34, 36–39 |
| | Need of ethical support | 21, 25, 28–30, 32, 34, 36, 37 |
The relationship between equity principle and the ethics of care framework

15 guidelines balance the Beauchamp and Childress’ four principles of medical ethics [25, 27, 31–33], proportionality and appropriateness of care [24, 38, 39], and the health care professional’s responsibility to care [34]. The emerging meaning of equity in allocation resources lies in the concept of decisions taken “case by case”, without automatism or criteria according to which the sick person would be excluded based on belonging to a category established a priori [22, 37] and providing assistance based on the needs of the individual patient, the realistic goal of care and the will of the individual concerned [21, 24–26, 28, 38]. This approach can be related to the ethics of care theoretical framework. It recognizes the value of each personal experience but also that human beings are interdependent [40, 41]. According to ethics of care, every moral choice or ethical issue is conceived as inserted in the relationship of care [42].

Triage criteria

To apply the allocation resources in a practical situation, the guidelines identify a set of “triage criteria”, which identify who and how patients should be prioritized to intensive care. The most favorable prognosis is widely considered the main criterion to prioritize patients.[43] According with the equity principle discussed above, this criterion is defined by 2 different approaches: quantitative health-related triage criteria and patient-related clinical judgment.

Quantitative health-related triage criteria

The ethical guidelines here described define the most favorable prognosis in the patient’s expected treatment outcomes in terms of duration and quality of life after intensive treatment [32, 33, 35, 37, 39]. The presence of life-short chronic diseases, severe comorbidities and the disease severity are also central criteria for non-admission to ICU, and they are usually assessed by score system tools (e.g., the Clinical Frailty Score) [28–30, 32, 33, 35–37].

Some guidelines include age as a possible criterion. For example, two guidelines specify that triage criteria should also be based on the appraisal of the total number of lives saved, life years saved and patient’s years of life [35, 36]. One guideline specifies the possibility to introduce an age threshold to a patient’s access to intensive care due to the extraordinary situation [36], while others specify that age cannot be considered as a criterion in itself but in relation to the current clinical evaluation [29, 33].

Following this approach and the quantity of life-related criteria, some guidelines define those categories of people who do not access treatment: the terminally ill [29], those who do not consent to treatments through Advance Directives [29, 32, 35, 36] or Advance Care Planning [28, 29, 33], and patients with specific clinical diagnoses, such as dementia or cognitive impairments [29]. In this regard, other guidelines specify that the lack of ability to give consent and disability should not be considered a discriminatory factor to access to treatment [28]. One guideline specifies that priority should be a guarantee to a specific group, namely, people at risk and people with essential responsibilities and roles in the pandemic management, due to the principle of reciprocity [35].

The majority of guidelines do not expressly distinguish between withholding and withdrawing treatments. However, according to two guidelines, the physician has the right to withdraw the ICU resources from a patient with a negative prognosis if they are needed for the treatment of a patient with a better prognosis [32, 37]. This practice is linked with the regular assessment of patients: in facts daily re-evaluation of ICU patients is required by all the guidelines to determine whether criteria to undergo intensive treatment are still met.

Patient-related clinical judgment and “questionable criteria”

A number of ethical guidelines do not apply specific health-related clinical triage criteria but adopts a more general patient-related clinical judgment [10, 21, 24–27, 30, 31, 38]. In particular, the guideline developed by the French national Consultative Ethics Committee openly affirms that criteria are always questionable [21], and the German Ethics Committee affirms that any criteria should not overcome the human rights framework [22]. Following this approach, the triage criteria are defined by a case-by-case assessment of the patient’s clinical condition [25] and should take into consideration the urgency, the severity of comorbidity, the proportionality and appropriateness of the invasive treatments, and the treatment’s prognostic efficacy in terms of probable healing [24–26, 28–30]. Timely identification of disproportionate care is also required [29], and there is not an obligation to provide treatment which is not clinically appropriate [38]. In this regard, futility, proportionality or disproportionate care emerged among the ethical guidelines as criteria for withholding treatments and redirecting the therapeutic goal towards palliative care, only when ICU treatments are considered no more beneficial for the patient him/herself.
Moreover, the health care professionals’ duty of care, which is linked to the ethics of solidarity between them and members of society [44], is also considered a relevant aspect to apply triage criteria in such a situation. Ethical guidelines underline clinicians’ responsibility to timely inform patients and their families about triage criteria and, principally, the responsibility to promote a discussion about the patient’s access to intensive care with timely advanced care planning [28–30, 33].

**Ethically unacceptable criteria and controversial application**

The majority of the guidelines report a set of ethically unacceptable criteria, including gender, ethnicity, sexual orientation, religion and political vision. They are justified on the basis of the equality principle with respect to human dignity and the human rights framework [22, 24, 28, 30, 32, 35]. Most of the guidelines place specific attention on age, which cannot be assumed as the only criterion [26, 29, 33], and disability [24, 28, 30, 39]; these groups are considered vulnerable people, and specific attention and particular effort should be made to ensure them equal rights and treatments [11].

Despite this, it is important to point out that there is controversy on the age issue. For example, the Swiss ethical guideline, while declaring to avoid any discrimination based on age, uses the age limit as an exclusion criteria in certain situation [33]. The Belgian document states that age in isolation cannot be used for triage decisions, but should be integrated with other clinical parameters: frailty and reduced cognition. They are specifically described as ‘independent predictors of outcome when elderly patients are admitted to the ICU’, but, as mentioned above, they would be effective only in combination with age [29].

**Respecting patient dignity**

Respecting human dignity is a central aspect of the analyzed guidelines.

While the term ‘dignity’ is cited in each guideline, no explicit description of its meaning is provided. However, the general significance of dignity arose, and it can be described in terms of respecting the intrinsic value of each human being (equality) while differentiating resources among people with different needs (equity) (Table 4).

Moreover, ethical guidelines describe how to respect dignity through the application of palliative care, consideration of patients’ wills, and an individualized patient care.

**Palliative care**

Most of the guidelines include the provision of palliative care for all patients who will not receive ICU treatments. Two ethical guidelines explicitly argue that palliative care represents an approach to respect human dignity: people affected by a serious illness does not lose their intrinsic value as a person nor the right to be supported and protected [24, 34]. Patients who do not meet the triage criteria and cannot accede to intensive treatments, patients at the end of life, or patients who refuse the intervention should all be referred to palliative care, which aims to ensure a death without suffering and proximity to the family, despite the difficulties imposed by the situation [24, 26, 28, 34–37]. Some guidelines emphasize that patients who do not accede to the intensive treatment (or the ones whose treatments should be withdrawn) have the right to receive the best available alternative and compassionate care, that lies in the principle of continuity of care [11, 28, 30, 33, 37], and is supported by the principle of justice [35].

**Considering the patient’s will and wishes**

Another emerging way to respect patient dignity is dealing with patient’s will. A significant number of ethical guidelines include that physicians should take into consideration patient’s Advance Directives and his/her consent to intensive treatment or other treatment. Knowing the patient’s will and discussing the possibility of invasive treatment are associated with respect for the patient’s autonomy and moral values underlined by the 4 principles of medical ethics [28, 29, 32, 33]. The patient’s will represents a tool to help clinicians to make triage decisions and should be carefully evaluated in advance [29, 32, 34–36].

**Individualized patient care**

Some ethical guidelines highlight the necessity to provide individualized and person-centered care, even in the context of a public health emergency. This approach requires paying attention to vulnerabilities and to differentiating treatment considering the individual needs of each patient as the optimal way to avoid discrimination in access to health care [10, 21, 25, 26, 28, 30]. It develops the consideration that all patients should be offered good quality and compassionate care and treated as individuals, while recognizing that there may be a competing obligation to the wider population [11, 27, 38]. According to this approach, ICU treatments would be interrupted or not initiated only if they are considered not beneficial for the individual patient.

The communicative aspects of care and its implication on patients and families are also important for strengthening the care relationship [31, 32, 36, 38]. As specifically noted in the ethical guidelines provided by the General Medical Council, the health care professions should communicate openly and honestly with patients and the rest...
| Country | Guidelines' title | Mention of dignity | Appropriateness and proportionality | Equality | Equity | Emerging meaning of dignity |
|---------|-------------------|--------------------|-----------------------------------|----------|--------|----------------------------|
| Austria | Management of scarce resources in healthcare in the context of the COVID-19 pandemic | The protection of the individuals and their dignity provided for in these fundamental rights implies the duty to provide healthcare to every person regardless of who they are, in other words, without distinction following non-medical criteria | There is no right to medical treatment that is not or no longer medically indicated | Equality is considered as a binding fundamental right. Everyone has a right to life (Article 2 ECHR) and other relevant Fundamental rights in the medical context, such as in particular the right to respect for private life (Article 8 ECHR). (…) There is no justification for excluding a person from treatment based on criteria such as their remaining lifetime or quality of life. At the same time, it needs to be emphasized that there is no right to medical treatment that is not or no longer medically indicated | Equity: Some people are in need of special support to be able to effectively exercise their fundamental right to life and the access to associated medically indicated treatment, e.g. if they have a physical or mental/cognitive impairment. Such cases require not only the same, but possibly more resources to ensure that they have the same chance as people without such impairments | Respecting the intrinsic value of human beings—no discrimination (equality) while differentiate resources among people with different needs (equity) |
| Belgium | Ethical principles concerning proportionality of critical care during the COVID-19 pandemic: advice by the Belgian Society of IC medicine | Disproportionate care should be defined on a scientifically funded estimate of the expected outcome, which implies knowledge of an advanced care plan, the medical condition of the patient, the antecedents, the acute evolution of his condition, and a funded estimate of his prognosis with and without intensive care | In addition, non-COVID-19 patients should be evaluated according to the same criteria in order to avoid discrimination between both groups. Although an increased age is associated with worse outcomes in COVID-19, age in isolation cannot be used for triage decisions, but should be integrated with other clinical parameters. Frailty and reduced cognition, more than age, are independent predictors of outcome when elderly patients are admitted to the ICU | Dignity as respect of patient’s autonomy and patient’s choices and respecting the intrinsic value of human beings—no discrimination (equality) |
### Table 4 (continued)

| Country          | Guidelines’ title                                                                 | Mention of dignity                                                                                                                                       | Appropriateness and proportionality | Equality | Equity | Emerging meaning of dignity |
|------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------|--------|-----------------------------|
| Council of Europe | COMMITTEE ON BIOETHICS (DH-BIO) DH-BIO Statement on human rights considerations relevant to the COVID-19 pandemic | It is essential that decisions and practices meet the fundamental requirement of respect for human dignity and that human rights are upheld. The principle of equity of access to healthcare laid down in Article 3 of the Oviedo Convention must be upheld, even in a context of scarce resources. It requires that access to existing resources be guided by medical criteria, to ensure namely that vulnerabilities do not lead to discrimination in the access to healthcare. This is certainly relevant for the care of COVID-19 patients, but also for any other type of care potentially made more difficult with confinement measures and the reallocation of medical resources to fight the pandemic. The protection of the most vulnerable people in this context is indeed at stake, such as persons with disabilities, older persons, refugees and migrants. This concerns decisions to allocate scarce resources, to provide necessary assistance to those most in need. | Respect the intrinsic value of human beings—no discrimination (equality) while differentiate resources among people with different needs—vulnerable people (equity) |
| Country | Guidelines' title | Mention of dignity | Appropriateness and proportionality | Equality | Equity | Emerging meaning of dignity |
|---------|------------------|--------------------|-------------------------------------|---------|-------|-----------------------------|
| Estonia | Recommendations on clinical ethics for Estonian hospitals for distribution of limited health care resources during the COVID-19 pandemic | Beneficence, patients' autonomy (including informed consent) and the principle of human dignity continue to be in effect | | Equal treatment. The medicine system treats all patients equally regardless whether they have COVID-19 infection or some other severe illness. Earlier arriving for treatment does not give any patient any advantage compared to those who come later | | Respecting the intrinsic value of human beings—no discrimination (equality) |
| EGE | Statement on European Solidarity and the Protection of Fundamental Rights in the COVID-19 Pandemic | The protection of human health is accorded a much higher priority in the system of values of the European Union than economic interests. EU member states should jointly pursue the protection of health of EU citizens | | | | Protection of Human health and human rights |
| France | COVID-19 Contribution from the French national Consultative Ethics Committee: Ethical issues in the face of a pandemic | A person's dignity does not depend on his or her usefulness. Thus, in a situation of scarcity of resources, medical choices, always difficult, have to be guided by ethical reflection that takes into account respect for the dignity of persons and the principle of fairness | | | | Differentiate resources among people with different needs (equity) |
| Country | Guidelines’ title                                                                 | Mention of dignity                                                                 | Appropriateness and proportionality                                                              | Equality                                                                                           | Equity                                                                 | Emerging meaning of dignity                                                                 |
|---------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Germany | Solidarity and Responsibility during the Coronavirus Crisis                        | The guaranteeing of human dignity necessitates egalitarian equality and thus provides for corresponding basic protection for all against discrimination |                                                                                                  |                                                                                                  | Respecting the intrinsic value of human beings—no discrimination (equality) | While differentiate resources among people with different needs (equity)                   |
| Ireland | Ethical Framework for Decision-Making in a Pandemic                               | The principle of fairness means that everyone matters equally, and under normal circumstances all individuals have an equal claim to healthcare |                                                                                                  |                                                                                                  | Respecting the intrinsic value of human beings—no discrimination (equality) |                                                                                             |
| Italy   | Clinical ethics recommendations for admission to intensive care and for withdrawing treatment in exceptional conditions of imbalance between needs and available resources | All access to intensive care must be considered and communicated as an “ICU trial” only and therefore undergo daily reassessment of its appropriateness, based on goals of care and proportionality of care |                                                                                                  | It may be necessary to establish an age limit for admission to the ICU. It is not a question of making choices merely according to worth, but to reserve resources that could become extremely scarce to those who, in the first instance, have a greater likelihood of surviving and who, secondarily, will have more years of life saved, with a view to maximizing the benefits for the greatest number of people | Differentiate resources among people with different needs—vulnerable people (equity) |                                                                                             |
| Country                  | Guidelines’ title                                                                 | Mention of dignity                                                                                                                                                                                                 | Appropriateness and proportionality                                                                 | Equality                                                                 | Equity | Emerging meaning of dignity                                                                                                                                 |
|-------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Republic of San Marino   | Statement on ethical issues regarding to the use of invasive assisted ventilation in patients all age with serious disabilities in relation to Covid-19 pandemic | Respect for human dignity is concretized allowing each person to experience a good death, through the precious tool of Palliative Care, which guarantee the control of pain and suffering, in the deep awareness that a person's life seriously ill and incurable, it never loses its intrinsic value nor the right to be supported and protected, therefore it reiterates that equal dignity must also be guaranteed to "non-treatable" victims, through taking charge and any sedation of pain | The founding principles of the Convention can be briefly indicated in equality and non discrimination and in the equality of opportunity (…) Equality of opportunity concerns the recognition of the right of access to goods and services, primarily health-related services | Repecting the intrinsic value of human beings—no discrimination (equality) |        | Respecting dignity means offer patients good death and no suffer                                                                                                                                                     |
| Portugal                | CNECV statement Covid-19 key consideration                                        | The protection of life, dignity and integrity of citizens is an ethical responsibility that involves political authorities at different levels, namely in the preparation of health and sanitary responses, while planning and organising access to healthcare |                                                                                                                                                    |                                                                                                                              |        | Respecting dignity as ethical responsibility to Respecting the intrinsic value of human beings—no discrimination (equality)                                                                                     |
| Country            | Guidelines' title                                                                 | Mention of dignity                                                                 | Appropriateness and proportionality                                                                 | Equality                                                                 | Equity                                                                 | Emerging meaning of dignity                                                                 |
|--------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|                    | Public health emergency situation due to the COVID-19 pandemic- Relevant ethical aspects | Duty to protect human health should be given precedence when confronted with possible economic interests | Care teams are responsible for assessing the clinical needs of each patient, namely their severity and urgency, and weighing the response according to the principle of equitable distribution of available resources, which, in a context of scarcity, is a highly demanding responsibility |                                                                                                                              |                                                                                                                                  |                                                                                           |
| Spain              | Report of the Ministry of Health on ethical aspects in pandemic situations: SARS-CoV-2 | The very foundations of our rule of law, in particular our recognition of the equal intrinsic dignity of every human being | Accepting discrimination of this kind would mean giving less value to certain human lives due to their life-cycle stage, contradicting the very foundations of our rule of law, in particular our recognition of the equal intrinsic dignity of every human being |                                                                                                                              |                                                                                                                                  |                                                                                           |
| Switzerland        | Pandemic Covid-19: triage of intensive care treatments in case of scarcity of resources Indications for the implementation of chapter 9.3 of the directives of the ASSM “Measures of intensive care” (2013), updated version of March 24, 2020 | Respecting the intrinsic value of human beings—no discrimination                             | Equity: Available resources are to be allocated without discrimination—i.e. without unjustified unequal treatment on grounds of age, sex, residence, nationality, religious affiliation, social or insurance status, or chronic disability |                                                                                                                              | Respecting the intrinsic value of human beings—no discrimination |                                                                                           |

Duty to protect human health should be given precedence when confronted with possible economic interests.
| Country                          | Guidelines’ title                                                                 | Mention of dignity                                                                 | Appropriateness and proportionality                                                                 | Equality                                                                 | Equity                                                                 | Emerging meaning of dignity                                               |
|---------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------|
| The Holy See                    | Pandemic and Universal Brotherhood                                                 | Decisions cannot be based on differences in the value of a human life and the dignity of every person, which are always equal and priceless | The decision concerns rather the use of treatments in the best possible way on the basis of the needs of the patient, that is, the severity of his or her disease and need for care, and the evaluation of the clinical benefits that treatment can produce, based on his or her prognosis. Age cannot be considered the only, and automatic, criterion governing choice. Doing so could lead to a discriminatory attitude toward the elderly and the very weak | Respecting the intrinsic value of human beings—no discrimination       |                                                                                       |                                                                            |
| UNESCO International Bioethics Committee (IBC) and the UNESCO World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) | Statement on COVID-19: Ethical considerations from a global perspective          | Procedures need to be transparent and should respect human dignity. Ethical principles enshrined in the human rights framework recognize the protection of health as a right of each human being |                                                                                       | Respecting the intrinsic value of human beings—no discrimination; human right to health care |                                                                                       |                                                                            |
| UK                              | Guidance: Responding to COVID-19: the ethical framework for adult social care      | Respect (Inclusiveness): consider any disproportionate impacts of a decision on particular people or groups | Inclusiveness This principle is defined as ensuring that people are given a fair opportunity to understand situations, be included in decisions that affect them, and offer their views and challenge. In turn, decisions and actions should aim to minimise inequalities as much as possible |                                                                                       | Dignity as respect of patient’s autonomy and patient’s choices and respecting the intrinsic value of human beings—no discrimination (equality) |                                                                            |
| Country | Guidelines title                                                                 | Mention of dignity                                                                 | Appropriateness and proportionality | Equality | Equity | Emerging meaning of dignity |
|---------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------|----------|--------|-----------------------------|
| People should be treated as moral equals, worthy of respect | Ethical considerations in responding to the COVID-19 pandemic                      | Equal respect everyone matters and everyone matters equally, but this does not mean that everyone will be treated the same | Fairness everyone matters equally. People with an equal chance of benefiting from a resource should have an equal chance of receiving it—although it is not unfair to ask people to wait if they could get the same benefit later | Respecting the intrinsic value of human beings—no discrimination | Respecting the intrinsic value of human beings—no discrimination (equality) while differentiate resources among people with different needs (equity) |
| Equal respect everyone matters equally, but this does not mean that everyone will be treated the same | COVID-19—ethical issues. A guidance note                                             |                                     |                                     |          |        |                             |
| Equal respect everyone matters equally, but this does not mean that everyone will be treated the same | Ethical dimension of COVID-19 for front-line staff                                 | Front-line staff, policymakers, management and government have a responsibility to patients to ensure that any system used to assess patients for escalation or de-escalation of care does not disadvantage any one group disproportionately. Treatment should be provided, irrespective of the individual's background (e.g. disability), where it is considered that it will help the patient survive and not harm their long-term health and wellbeing |                                     |          |        |                             |
| Equal respect everyone matters equally, but this does not mean that everyone will be treated the same | Ethical dimension of COVID-19 for front-line staff                                 | Front-line staff, policymakers, management and government have a responsibility to patients to ensure that any system used to assess patients for escalation or de-escalation of care does not disadvantage any one group disproportionately. Treatment should be provided, irrespective of the individual's background (e.g. disability), where it is considered that it will help the patient survive and not harm their long-term health and wellbeing |                                     |          |        |                             |
| Country | Guidelines’ title | Mention of dignity | Appropriateness and proportionality | Equality | Equity | Emerging meaning of dignity |
|---------|-------------------|-------------------|-------------------------------------|----------|-------|-----------------------------|
| Covid-19 Guidance: Ethical Advice and Support Framework | Respect All patients should be offered good quality and compassionate care | Minimising harm Where there is a decision that a treatment is not clinically appropriate there is not an obligation to provide it, but the reasons should be explained to the patient and other options explored | It is important that patients are treated independent of suspected or confirmed COVID-19 status, and that any clinical decision guidance applies equally to all patients. The interests of each person are the concern of all of us, and of society. The harm that might be suffered by every person matters, and so minimising the harm that a pandemic might cause is a central concern | Respecting the intrinsic value of human beings—no discrimination (equality) while differentiate resources among people with different needs (equity) |
| Coronavirus: Your frequently asked questions | If a decision is taken not to start or to withdraw some forms of treatment from a patient, doctors should still take all possible steps to alleviate the patient’s symptoms and distress and respect their dignity. The patient’s wishes, preferences and fears in relation to their future treatment and care should be explored as far as possible | Decisions are based on clinical need and the likely effectiveness of treatments, and don’t unfairly discriminate against particular groups | Respecting dignity means to offer patients good death and no suffer. Dignity as respect of patient’s autonomy |
of the health care team about the decision-making process and the criteria for establishing priorities in individual cases [34].

**Decision making and quality of care**

The decision-making process for allocation of resources is a frequent element of all guidelines. It is also built on ethical principles and represents an important aspect to ensure high-quality care and to strengthen the health care relationship, even in the urgency context. The institution of ethics support and ethics committee (or any other form of support for health care professionals) are also frequently required.

**Ethical aspects of communication and triage management**

Transparency, reasonableness, inclusiveness, openness and the uniform application of triage criteria at the different levels of care are important reference principles to ensure the non-arbitrariness of the final decision [11, 22, 25, 26, 37]. Procedures for decision making should respect human dignity [11], and clinicians should act with honesty and integrity [38]. The involvement of health care professionals not directly involved in the provision of intensive care is also underlined to mitigate the negative effects of pressure on doctors and teams [25], and a collective decision made by an ad hoc medical committee is often required [34, 36, 39]. An on-going revision of the guidelines, triage criteria and decisions is also a reiterated aspect to ensure that the best possible treatments are always guaranteed to each patient [36, 37].

**Need of ethical support**

Since these are very difficult decisions, the presence of local ethics committees, ethicists, or any other form of support, including psychological, aimed at managing and reducing the moral distress of health care professionals [21, 25, 28–30, 32, 34, 36, 37], is considered as an important aid for distributing and strengthening their sense of responsibility, applying ethical guidelines in their daily practice and, finally, making difficult decisions and facing direct dilemmas, especially in those extremely complex situations where suspension of already initiated treatments is required. Ethical guidelines have also noted that the application of a structured decision-making process and the identification of the persons responsible for the decision are fundamental to guarantee the patient, his family members and the community itself the trust pact and alliance on which the relationship of care is based and that the current emergency could dramatically corrupt [21].

**Discussion**

The purpose of our study was to analyze how the European countries dealt with the allocation of scarce clinical resources at the beginning of the COVID-19 pandemic. We analyzed the ethical concepts and their practical consequences described in the ethical guidelines developed under COVID-19 by different institutional bodies (such as national ethics committees and health departments) among the European countries.

Our results are in line with similar articles comparing ethical guidelines developed under COVID-19 [43, 45, 46]. Differently from them, our analysis compared an higher number of guidelines and emphasized all the relevant ethical approaches, such as ethics of care and individualized patient care.

Each guideline analyzed recognizes respect for each human life’s intrinsic value and the value of health as a human right as milestones to implement respect for human dignity.

Specifically, the emerging meaning of dignity is the intrinsic value of all the individuals who share the essential properties of human beings (“intrinsic dignity”). In recognition of that value, the health care professionals have a moral duty towards those who are suffering from disease and injury [47]. According with Jobgsen et al., the reference to equality and equity principle represents an area of consensus among European guidelines, and consequently the respect for human dignity lies in the principle of equal worth of people [45].

Nevertheless, during a pandemic, also the value of maximizing benefit emerged as an area of consensus [45]. Our results highlighted an implicit tension between respect for the equal right to health and risk of taking triage decision, including potential discriminatory criteria (such as patient’s frailty, short-term prognosis and cognitive impairment, which are linked to age). Then, the risk of applying a strictly utilitarian approach emerged, even if it was not a predominant approach for allocating resources among European guidelines [43]. This utilitarian consideration is most important, according to other non-European ethical guidelines, and in particular with American [9, 13] and Australian [48] guidelines. As noted by Emanuel et al., priority for limited resources should aim “both at saving the most lives and at maximizing improvements in individuals’ post treatment length of life”, which is “consistent both with utilitarian ethical perspective, focused on population outcomes, and with non-utilitarian views which emphasize the paramount value of each human life” [9]. The patient’s benefit and post-treatment outcomes are frequently cited in the European guidelines. It is often supported [5, 49, 50] the duty to care as the responsibility to respect the rights of patients to autonomy, transparency, privacy, and confidentiality.
of personal informations. These guidelines also require that procedures for taking informed consent and advance directives shall be observed and, where appropriate, legally authorized substitute decision-makers shall be consulted. Different from our results, the last guideline provided by The Hastings Center [51] affirms that an ethical allocation resource strategy first requires the protection of health care workers delivering care in the midst of the crisis, for without them and their extraordinary efforts, the entire health system would collapse. Subsequently, decisions about who receives treatment must center on prevention of SARS-CoV-2 transmission (public health), protection of individuals at highest risk, meeting societal needs, and promoting social justice [51]. Consequently, groups at highest risk, such as older adults, people with compromised immune systems, and people with underlying conditions (such as heart or lung diseases or diabetes) are another priority, as they are most likely to become seriously ill and die. This is in line with the concept of taking care of vulnerable groups, which was also underlined in our results.

Previous studies [52, 53] related to end-of-life care practices in ICU, highlight that decisions on withholding and withdrawing intensive treatments are mostly affected by patient age, acute and chronic diagnosis, number of days in ICU and cultural and religious beliefs [53]. Only 4 [28, 29, 35, 36] guidelines on COVID-19 pandemic are in line with those results, while a high number of guidelines underlined the importance of the individualized approach. It is essential to mention the difference between an acute and chronic diagnosis and COVID-19 illness. While in the first case can be clear what is overtreatment and the meaning of deterioration, during COVID-19 rapid deterioration does not necessary correspond to end of life, and tracheostomy can save the patient’s life. Consequently, short terms survival should be considered cautiously because it is not yet well known in Covid-19 [45].

Our results emphasize the need to respect the patient’s choices and will through advanced discussion on the access to intensive care and open and transparent communication about triage criteria. This reflects the attempt of health care professionals in non-pandemic situations to take individualized decision on the access to ICU, accordingly with clinical judgment and patient’s goals of care [54]. The importance of patient’s advance directives and patient’s will and the explicit recommendation to offer palliative care to patients whose treatment is withdrawn or withheld represent a consensus area among European ethical guideline [43, 45].

Despite our results recognize the value of both personalized care and relationship of care, many concerns regarding the effective possibility to respect patient’s consent and will arise in clinical practice, above all in pandemic situations: as noted by Angelos P et al., as scarcities increase, clinicians will increasingly be in a position in which they cannot respect all of their patient’s wishes, leading them to assume a paternalistic approach [55].

According to this study, the discussion of prognosis is central to obtaining informed consent for intubation, but, as noted by Zareifopoulos et al., in the absence of definitive data, it is not clear exactly what this discussion should entail [56]. Moreover, one of our guidelines affirms that the clinician’s judgment of inappropriateness would be justified by the critical situation’s extraordinariness, which reflects a paternalistic approach. This is in line also with Emanuel et al., who confirm that in a critical situation “the decision to withdraw a scarce resource to save others is not an act of killing and does not require the patient’s consent” [9].

According with similar studies [43, 45], our results show that the European ethical guidelines are very sensitive to the risk of discrimination arising from strict triage criteria, and particularly regarding age and disability. The difficult choices regarding admission to ICU of patients with advanced disease or elderly patients with multiple comorbidities was considered a ‘grey zone’ also in non-pandemic situations [54]. Discrimination based on age correlates the maximum benefit obtainable with the prioritization of younger people over old people, who have less life expectancy (both in terms of quantity and quality) and have already lived much more than young people [57]. This is widely spread among the American and Mexican ethical guidelines [58]. Particularly, White and Lo, 2020 justify “ageism” on the number of year saved [59], while the American Society of Geriatrics (ASG) assesses that rationing strategies that are based in part on age cutoffs could lead to persistent beliefs that older adults’ lives are less valuable than others’ lives or are even expendable [23].

Fighting the ageist approach, Cesari and al. 2020 replaced the age criterion for the allocation of resources with a parameter more robust than age but equally easy to obtain and that can be used for critical and rapid decision-making, namely, the careful evaluation of the presence of comorbidity and functional status in addition to age. This is also marked by Auriemma et al. 2020 [59], who argue that an optimal policy for critical care resource allocation should not use categorial exclusions, in order to mitigate discrimination: ‘the feasibility virtues offered by such coarse systems are readily outweighed by their threats to justice, public trust, and clinician morale’. When the decision of using a ventilator for a person with respiratory distress is based on his/her birth date or other categorial exclusion criteria “we must realize that
modern medicine may be at risk of having lost the meaning and value of the human life” [60].

Compared to European concerns, in the United States, the discussion on resource allocation and triage criteria dealt more deeply with issues of potential unjust discrimination for specific citizen group (namely elderly and disables). It led to an open discussion and public engagement process to ensure equal access to health care that failed among European countries [46]. European ethical guidelines have been developed mainly by professionals societies or national bodies, resulting in a total lack of public involvement in identifying and discussing the principles that could guide scarce resources allocation.

Our results mention the importance of trust communication among health care professionals and patients and their familiar. The inclusion of a patient's representative in developing ethical guidelines could improve health care professionals to make well-founded decisions in the interest of their patients.

As noted by Mannelli, the novelty of the current emergency has to do with the extraordinarily high number of people who find themselves personally affected by the implications of scarce resources allocation and who suddenly realize that the principle of “equals should be treated equally” may no longer be applicable [2].

**Conclusion**

According to the ethical guidelines developed at the beginning of the COVID-19 pandemic, promoting how to figure out a way to personalize care during COVID-19 still represents a moral duty [5]. Being guided by the ethical reflection that considers respect for persons’ dignity and the principle of equity, the difficult choices regarding patient prioritization and allocation of scarce resources should avoid unfair discrimination. At the same time, this kind of ethical reflection guarantees a relational approach to ethics, which includes appropriate and proportionate care, transparency and trust communication and, mostly, considering interconnection, vulnerability and shared humanity [44]. Personalized care in such a critical situation develops concretely by (a) a multidisciplinary, multidimensional and individualized evaluation of each patient; (b) the contextualization of ethical guidelines, involving who is directly called to their application; (c) an effective palliative care approach; and (d) the implementation of clinical ethics support, which represents a very important resource to help health care professionals in making difficult decisions [61].

Further studies can investigate the practical consequences of the application of the guidelines described in terms of quality of care and health care professionals’ moral distress.

**Abbreviations**

SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2; COVID-19: Coronavirus Disease 2019; ICU: Intensive Care Unit; WHO: World Health Organization; QUAGOL: Qualitative Analysis Guide of Leuven; SIAARTI: Italian Society of Anesthesia Analgesia Resuscitation and Intensive Care; ASC: American Society of Geriatrics.

**Supplementary Information**

The online version contains supplementary material available at https://doi.org/10.1186/s12910-021-00869-9.

**Additional file 1: Appendix 1** European ethical guidelines developed at the beginning of Covid-19 pandemic.

**Additional file 2: Appendix 2** Conceptual scheme example.

**Acknowledgements**

Not applicable.

**Authors’ contributions**

MP: conceptualization, data curation, formal analysis, writing—original draft; LDP: conceptualization, methodology, supervision, writing—original draft; Both authors read and approved the final manuscript.

**Funding**

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Availability of data and materials**

All data generated or analysed during this study are included in this published article (and its supplementary information files).

**Declarations**

**Ethics approval and consent to participate**

Not applicable.

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare that they have no competing interests.

**Author details**

1 Bioethics Unit, Azienda USL-IRCCS di Reggio Emilia, Reggio Emilia, Italy.
2 PhD Program in Clinical and Experimental Medicine, University of Modena and Reggio Emilia, Modena, Italy.

**Received: 13 November 2020 Accepted: 22 March 2021**

**Published online: 31 March 2021**

**References**

1.  Mounk Y. The Extraordinary Decisions Facing Italian Doctors. The Atlantic. 2020.
2.  Mannelli C. Whose life to save? Scarce resources allocation in the COVID-19 outbreak. J Med Ethics. 2020;46:564–6.
3.  Rosenbaum L. Facing Covid-19 in Italy—ethics, logistics, and therapeutics on the epidemic’s front line. N Engl J Med. 2020;382:1873–5.
4.  Sprung CL, Danis M, Iapichino G, Artigas A, Keseckoglu J, Moreno R, et al. Triage of intensive care patients: identifying agreement and controversy. Intensive Care Med. 2013;39:1916–24.
5.  Beringer N, Wynia M, Powell T, Micah Hester D, Milliken A, Fabi R, et al. Ethical framework for health care institutions responding to novel coronavirus SARS-CoV-2 (COVID-19). Hast Cent. 2020.
6.  Dzeciatkowski T, Szarpak L, Filipiak KJ, Jaguszewski M, Ladny JR, Smereka J. COVID-19 challenge for modern medicine. Cardiol J. 2020.
7. Truog RD, Mitchell C, Daley GQ. The toughest triage—allocating ventilators in a pandemic. N Engl J Med. 2020.
8. Tanzi S, Alquati S, Martucci, De Panfilis L. Learning a palliative care approach during the COVID-19 pandemic: a case study in an Infectious Diseases Unit. Palliat Med. 2020.
9. Emanuel EJ, Persad G, Upshur R, Thome B, Parker M, Glickman A, Zhang C, Boyle C, Smith M, Phillips JP. Fair allocation of scarce medical resources in the time of Covid-19. N Engl J Med. 2020;382(21):2049–55.
10. Committee on Bioethics (DH-BIO). DH-BIO Statement on human rights considerations relevant to the COVID-19 pandemic [Internet]. 2020. https://rm.coe.int/2020-2-statement-covid-19-e/16809e2785 (first version 14.4.2020).
11. UNESCO International Bioethics Committee (IBC), UNESCO World Commission on the Ethics of Scientific Knowledge and Technology (COMEST). Statement on COVID-19: Ethical Considerations from a global perspective. [Internet]. 2020. https://unesdoc.unesco.org/ark:/48223/pf0000373115 (first version 6.4.2020).
12. Singer PA, Mapa J. Ethics of resource allocation: dimensions for healthcare executives. Hosp Q. 1998.
13. Matheny Antommaria AH, Gibb TS, McGuire AL, Wolpe PR, Wynia MK, Applewhite MK, et al. Ventilator Triage Principles During the COVID-19 Pandemic at U.S. Hospitals Associated With Members of the Association of Bioethics Program Directors. Ann Intern Med. 2020.
14. Daugherty Biddison EL, Faden R, Gwon HS, Mareiniss DP, Regenberg AC, Schoch-Spana M, et al. Too Many Patients…A Framework to Guide Statewide Allocation of Scarce Mechanical Ventilation During Disasters. Chest. 2019.
15. Solomon MZ, Wynia MK, Gostin LO. Covid-19 crisis triage—optimizing health outcomes and disability rights. N Engl J Med. 2020.
16. McDougall R. Systematic reviews in bioethics: Types, challenges, and value. Journal of Medicine and Philosophy (United Kingdom). 2014.
17. McCullah LB, Coverdale JH, Chervenak FA. Constructing a systematic review for argument-based ethical literature: The example of concealed medications. Journal of Medicine and Philosophy. 2007.
18. Gómez-Vírseca C, De Maeseneer Y, Giammarino C. Relational autonomy: What does it mean and how is it used in end-of-life care? A systematic review of argument-based ethics literature. BMC Medical Ethics. 2019.
19. Dierckx de Casterle B, Gamsens C, Bryon E, Denier Y. QUAGOL: a guide for qualitative data analysis. Int J Nurs Stud. 2012.
20. European Group on Ethics in Science and New Technologies (EGE). Statement on European Solidarity and the Protection of Fundamental Rights in the COVID-19 Pandemic [Internet]. 2020. p. 1–4. https://ec.europa.eu/info/publications/future-work-future (first version 2.4.2020).
21. Delmas-govor P, Hirsch E. COVID-19 CONTRIBUTION FROM THE FRENCH NATIONAL ETHICAL ISSUES IN THE FACE OF A PANDEMIC [Internet]. 2020. p. 1–11. https://www.cccne-ethique.fr/sites/default/files/publications/ccne_contribution_march_13_2020.pdf (first version 13.3.2020).
22. Deutscher Ethisrat. Solidarity and Responsibility during the Coronavirus Crisis [Internet]. 2020. p. 1–8. https://www.ethisrat.at/en/press-releases/2020/solidarity-and-responsibility-during-the-coronavirus-crisis/ (first version 27.3.2020).
23. Farrell TW, Francis L, Brown T, Ferrante LE, Widera E, Rhodes R, et al. Rationing Limited Health Care Resources in the COVID-19 Era and Beyond: Ethical Considerations Regarding Older Adults. J Am Geriatr Soc. 2020.
24. National Bioethics Committee - Repubblica di San Marino. Answer to the requested urgent opinion on ethical issues regarding to the use of invasive assisted ventilation in patients age with serious disabilities in relation to COVID-19 pandemic [Internet]. March 16, 2020. 2020. p. 1–5. http://edf-leph.org/covid19/humanrights (first version March 2020).
25. Conselho Nacional de Ética para as Ciências da Vida. THE PUBLIC HEALTH EMERGENCY COVID-19 PANDEMIC Statement by the National Council of Ethics for the Life Sciences, Portugal [Internet]. 2020. p. 1–6. https://www.who.int/ethics/topics/outbreaks-emergencies/Statement-CNECV-Covid 19_Key-Considerations.pdf?ua=1 (first version April 2020).
26. Pontificial Academy for Life. Global Pandemic and Universal Brotherhood. Note on the COVID-19 emergency. 2020. p. 1–7.
27. Nuffield Council on Bioethics. Rapid policy briefing—ethical considerations in responding to the COVID-19 pandemic [Internet]. 2020. p. 1–11. https://www.nuffieldbioethics.org/news/responding-to-the-covid-19-pandemic-ethical-considerations (first version 25.3.2020).
28. Bioethics Commission. Management of scarce resources in healthcare in the context of the COVID-19 pandemic. Austria. 2020. p. 15 (first version march 2020).
29. Belgian Society of Intensive Care. Ethical principles concerning proportionality of critical care during the COVID-19 pandemic. advice by the Belgian Society of IC medicine [Internet]. Belgium Society of Intensive Care. 2020. p. 1–4. https://www.hartcentrumhasselt.be/professioneel/nieuws-professioneel-ethical-principles-concerning-proportionality-of-critical-care-during-the-covid-19-pandemic-advice-by-the-belgian-society-of-intensive-care (first version 26.3.2020).
30. Ministero della Sanità, Governo di Spagna. Ministry of health report on ethical issues in pandemic situations [Internet]. 2020. https://rm.coe.int/2020-covid-19-spain-eng/16809e3a78 (first version 3.4.2020).
31. UK Department of health and Social Care; Guidance: Responding to COVID-19: the ethical framework for adult social care [Internet]. 2020. https://www.gov.uk/government/publications/covid-19-ethical-framework-for-adult-social-care (first version 19.3.2020).
32. Ammer V, Elmet K, Eriksen K, Ginter J, Jauk M, Kudevita M, et al. Recommendations on clinical ethics for Estonian hospitals for distribution of limited health care resources during the COVID-19 pandemic. 2020. p. 10–5. (first version 8.4.2020).
33. Swiss Academy of Medical Sciences. COVID-19 pandemic: triage for intensive care treatment in case of severe patient load [Internet]. Switzerland. 2020. p. 1–8. https://www.samw.ch/en/Ethics/Topics-A-to-Z/Intensive-care-medical.html (first version 7.4.2020).
34. General Medical Council. Coronavirus: Your frequently asked questions [Internet]. 2020. https://www.gmc-uk.org/ethical-guidance/ethical-hub/covid-19-questions-and-answers#Decision-making-and-consent (first version 24.4.2020).
35. Ireland Department of Health. Ethical Framework for Decision-Making in a Pandemic [Internet]. 2020. p. 1–19. https://www.gov.ie/en/publication/dbf3b-ethical-framework-for-decision-making-in-a-pandemic/ (first version 24.4.2020).
36. Vergano M, Bertolini G, Giannini A, Cristina G, Livigni S, Mistralla G, et al. Raccomandazioni di etica clinica per l’ammontarla a trattamenti intensivi e per la loro sospensione in condizioni eccezionali di equilibrio tra necessità e risorse disponibili [Internet]. 2020. http://www.siaarti.it/SiteAssets/ News/COVID19-documentiSIAARTI/SIAARTI-Covid19-Raccomandazioni dieteticcalinica.pdf (first version 6.3.2020).
37. British Medical Association. COVID-19—Ethical Issues. A guidance note [Internet]. 2020. p. 1–9. https://www.bma.org.uk/medmedia/2360/bma-covid-19-ethics-guidance-april-2020.pdf (first version April 2020).
38. Scottish Government. COVID-19 guidance—ethical advice and support framework [Internet]. 3 April, 2020. p. 1–15. https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2020/04/coronavirus-covid-19-ethical-advice-and-support-framework/documents/covid-19-cmo-ethical-advice-and-standards-3-april-2020/covid-19-cmo-ethical-advice-and-standards-3-april-2020.pdf (first version 3.4.2020).
39. Royal College of Physicians. Ethical dimensions of COVID-19 for front-line staff [Internet]. 31 March, 2020. p. 1–8. https://www.rcplp.org.uk/images/library/files/Clinicalexcellence/Ethical_guidance_for_publi cation_V1_final.pdf (first version 31.3.2020).
40. H. Justice and care: essential reading in feminist ethics. Oxford: Westview press, editor. Oxford. 1995.
41. Edwards SD. Three versions of an ethics of care. Nur Philos. 2009.
42. De Panfilis L, Di Leo S, Peruselli C, Ghirotto I, Tanzi S. “I go into crisis when …” ethics of care and moral dilemmas in palliative care. BMC Palliat Care. 2019.
43. Ehni HJ, Wiesing U, Ranisch R. Saving the most lives—A comparison of different ethical approaches to the COVID-19 pandemic. Hastings Cent Rep. 2021.
44. Jeffrey DI. Relational ethical approaches to the COVID-19 pandemic. J Med Ethics. 2020.
45. Jobges S, Vinay R, Luyckx VA, Biller-Andorno N. Recommendations on COVID-19 triage: international comparison and ethical analysis. Bioethics. 2020.
48. Gürbilek N. Australian health sector emergency response plan for novel coronavirus (COVID-19). J Chem Inf Model. 2013.
49. University of the Philippines Manila, Covid-19 Ethics Study Group. COVID-19. 2020.
50. National Bioethics Commission of Mexico. Recommendations regarding the COVID-19 pandemic, from a bioethical approach [Internet]. 2020. https://www.gob.mx/cms/uploads/attachment/file/544828/Recommendations_regarding_the_COVID-19_pandemic__from_a_bioethical_approach__.pdf.
51. Gostin LO, Friedman EA, Wetter SA. Responding to Covid-19: How to Navigate a Public Health Emergency Legally and Ethically. Hastings Cent Rep. 2020.
52. Curtis JR, Vincent JL. Ethics and end-of-life care for adults in the intensive care unit. The Lancet. 2010.
53. Sprung CL, Cohen SL, Sjokvist P, Baras M, Bulow HH, Hovilehto S, et al. End-of-Life Practices in European Intensive Care Units: The Ethicus Study. J Am Med Assoc. 2003.
54. Escher M, Cullati S, Hudelson P, Nendaz M, Ricou B, Perneger T, et al. Admission to intensive care: a qualitative study of triage and its determinants. Health Serv Res. 2019.
55. Angelos P. Surgeons, ethics, and COVID-19: early lessons learned. J Am Coll Surg. 2020.
56. Zareifopoulos N, Lagadinou M, Karela A, Karantzogiannis G, Velissaris D. Intubation and mechanical ventilation of patients with COVID-19: what should we tell them? Monaldi Arch Chest Dis. 2020.
57. Palazzani L. La pandemia CoViD-19 e il dilemma per l’etica quando le risorse sono limitate: chi curare? BiolawJournal-Rivista di Biodiritto. 2020;1:359–70. https://doi.org/10.15168/2284-4503-596.
58. Auriemma CL, Molinero AM, Houtrow AJ, Persad G, White DB, Halpern SD. Eliminating categorical exclusion criteria in crisis standards of care frameworks. Am J Bioeth. 2020.
59. White DB, Lo B. A framework for rationing ventilators and critical care beds during the COVID-19 pandemic. JAMA J Am Med Assoc. 2020.
60. Cesari M, Proietti M. COVID-19 in Italy: ageism and decision making in a pandemic. J Am Med Dir Assoc. 2020.
61. De Panfilis L, Tanzi S, Costantini M. Il processo decisionale per le cure intensive in situazioni di emergenza: l’etica medica e le cure palliative ai tempi del Covid-19. BiolawJournal-Rivista di Biodiritto. 2020;1:447–51.

Publisher’s Note
Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.