

## Futile treatment in the time of pandemics

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**ABSTRACT:** Health care delivery is traditionally based on three basic ideas: i) it is better to provide more care than less; ii) once a patient is granted a medical resource, it cannot be taken from him/her unless it becomes unnecessary; iii) medical resources are distributed in accordance with priority on arrival. Sometimes, these principles lack proper legal/ethical ground, but in practice there are frequently followed criteria in many hospitals. Under normal circumstances, and assuming that there are enough healthcare resources available for everyone, this *modus operandi* works with few issues in light of ethics and public health considerations. However, the COVID-19 pandemic has led to an entirely new scenario, with new methods required for patient triage and new strategies needed to avoid medical futility. This paper will sustain that the main criterion to allocate resources and triage patient of scarce health resources – such as in this pandemic – is the efficiency of the treatment. Furthermore, it underlines that fighting against medical futility becomes essential in these times.

**KEYWORDS:** COVID-19; ethics; futility; pandemics; public health; triage

**SUMMARY:** 1. Introduction – 2. A different approach to the allocation of scarce resources – 3. The concept of futility – 4. Futility in clinical practise: The reasons it is difficult to avoid – 5. Avoiding futility during a pandemic – 6. Conclusion.

### 1. Introduction

The arrival of COVID-19 has caused social commotion in many Western countries, leading to complicated scenarios such as the confinement of the population and the suspension of many nonessential work activities. However, the most devastating effect has been the deaths of thousands of people, caused not only by the incidence of the pathology but also by the extreme saturation of health services in many countries. In Spain and Italy, for example, the lack of intensive care unit (ICU) capacity and shortages of healthcare devices necessary to facilitate patient survival (mainly ventilators) led to the adoption of triage mechanisms to determine who receives access to scarce resources such as ICU beds and ventilators.<sup>1</sup> The characteristics of these scarce resources are of enormous importance. First, they must be administered on a continuous basis, which has important legal connotations, as we show in this article. Second, they satisfy a vital need: if they

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<sup>1</sup> M. NACOTI, A. CIOCCA, A. GIUPPONI, P. BRAMBILLASCA, F. LUSSANA, M. PISAN M, et al., *At the epicenter of the Covid-19 pandemic and humanitarian crises in Italy: Changing perspectives on preparation and mitigation*, in *NEJM Catalyst*, 1, 2, 2020, Doi: 10.1056/CAT.20.0080.

are not provided, not only will the health of patients' suffer, but in the most extreme cases a patient may die.

In practise, hospital triage is commonly ruled by two basic principles:

- i) It is better to provide more care than less. Doctors are condemned for providing insufficient care, not for providing excessive care. As a consequence, many of those cases involve futile treatments, eventually leading to more harm than benefit;<sup>2</sup>
- ii) The reallocation of healthcare resources is therefore a problematic practice, because doctors fear being accused of depriving patients of medical assistance or preferring one patient over another.<sup>3</sup> So, as long as the medical resource has some utility for the original patient, subsequent patients who may need it more have to wait,
- iii) As a consequence, the first-come, first-served principle rules in practise, that is, priority on arrival establishes who receives a medical resource<sup>4</sup>. Doctors tend to believe that this is the safest practice in terms of medical liability and, eventually, also the fairest one.<sup>5</sup>

Despite the various legal and ethical issues that such principles convey, they are still systematically used in hospitals around the world. However, they do not comply with the best standard of care and they are clearly inadequate for a health crisis such as COVID-19. This article is aimed at exploring the concept of futility and the reasons why this practise remains in health care. Furthermore, we expose the circumstances that make these practises particularly harmful during pandemics and the factors that contribute to hinder any possible change. Finally, we propose some measures to improve the current situation.

## 2. A different approach to the allocation of scarce resources

If we have learned one lesson from what has happened thus far, it is that it is challenging to quickly develop triage protocols to deal with the lack of such resources. Some existing protocols are in direct violation of obvious principles, as their protocols discriminate on the basis of age or disability.<sup>6</sup> These

<sup>2</sup> V.L. RAPOSO, *Defensive medicine and the imposition of a more demanding standard of care*, in *Journal of Legal Medicine*, 39, 4, 2019, 401-416, Doi: 10.1080/01947648.2019.1677273.

<sup>3</sup> "Physicians' primary ethical obligation is to promote the well-being of their patients. Policies for allocating scarce health care resources can impede their ability to fulfil that obligation, whether those policies address situations of chronically limited resources, such as ICU (intensive care unit) beds, medications, or solid organs for transplantation, or 'triage' situations in times of scarcity, such as access to ventilators during an influenza pandemic" (American Medical Association, *Code of Medical Ethics Opinion 11.1.3 - Allocating Limited Health Care Resources*, 2020, at <https://www.ama-assn.org/delivering-care/ethics/allocating-limited-health-care-resources> (last visited 4 June 2021).

<sup>4</sup> L. FLECK, T. MURPHY, *First come, first served in the intensive care unit: Always?*, in *Cambridge Quarterly of Healthcare Ethics*, 27, 1, 2018, 52-61; Doi:10.1017/S0963180117000391; S.A HAN, V.G. KOCH, *Physicians should not be forced to determine resource allocation: Triage committees may reduce physician trauma*, in *Health Affairs Blog*, May 8, 2020, 10.1377/hblog20200507.584159

<sup>5</sup> E.J. EMANUEL, G. PERSAD, R. UPSHUR, B. THOME, M. PARKER, A. GLICKMAN, et al, *Fair allocation of scarce medical resources in the time of Covid-19*, in *New England Journal of Medicine*, 382, 2020, 2049-2055, Doi: 10.1056/NEJMs2005114.

<sup>6</sup> Italian Society of Anesthesia, Analgesia, Resuscitation and Intensive Care (Società Italiana di Anestesia Analgesia Rianimazione e Terapia Intensiva [SIAARTI]), in *Clinical Ethics Recommendations for the Allocation of*

principles are present both in many national constitutions and in important international conventions, such as the International Convention on the Rights of Persons with Disabilities, which was signed (but not ratified) even by the USA, or Article 21 of the Charter of Fundamental Rights of the European Union. Furthermore, even those who have developed more sophisticated protocols to maximise the number of lives saved – which is the criterion to be followed according to the WHO<sup>7</sup> – collide with legal systems that do not allow this objective to be achieved efficiently.<sup>8</sup> Almost all of our rules are designed on the basis of advocacy for certain patients who already have access to scarce resources, not of advocacy for the entire patient community, the prospective users of those resources. This has led to very damaging results in some cases.

To understand why, we must first recognise that efficient triage must follow two basic rules: one, a scarce resource must not remain unassigned to a patient who needs it,<sup>9</sup> and second, if we want to optimise its use, it will sometimes be necessary to reassign it – that is, to remove the resource from a patient who is using it and give it to another patient who also needs it and has an objectively higher probability of surviving. The first condition is highly dependent on the second: health care givers will not have idle resources if they know they can adjust their initial allocation if it proves to be non-optimal. Thus, the second condition has enormous importance for the final assignation of the resources. If it is not possible to reallocate them, more people will die because some resources may be used inefficiently: those responsible for them are likely to reserve some resources for patients who would receive preferential care (such as children, affected colleagues or simply patients with a much higher chance of survival). In the words of Wreen<sup>10</sup>

a patient whose chances for survival are very slim if treated but none if not, might be justifiably denied treatment in favour of those whose chances are better. Other things being equal, both justice and utility point to such a conclusion.

There is no justice in choosing who lives or dies, but if we are forced to do so – and during the peak of the pandemic that choice was unavoidable – the “chance of survival” criterion is the one that

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Intensive Care Treatments in Exceptional, Resource-Limited Circumstances, 2020; Grupo de Trabajo de Bioética de la Sociedad Española de Medicina Intensiva, Crítica y Unidades Coronarias, Recomendaciones Éticas para la Toma de Decisiones en la Situación Excepcional de Crisis por Pandemia Covid-19 en las Unidades de Cuidados Intensivos, 2020, at [https://semicyuc.org/wp-content/uploads/2020/03/%C3%89tica\\_SEMICYUC-COVID-19.pdf](https://semicyuc.org/wp-content/uploads/2020/03/%C3%89tica_SEMICYUC-COVID-19.pdf) (last visited 28 May 2021).

See, for instance, the criteria of the complete lives system, “which prioritises younger people who have not yet lived a complete life, and also incorporates prognosis, save the most lives, lottery, and instrumental value principles” (G. PERSAD, A. WERTHEIMER, E.J. EMANUEL, *Principles for Allocation of Scarce Medical Interventions*, at *The Lancet*, 373, 9661, 2009, 423–431).

<sup>7</sup> World Health Association, *Addressing Ethical Issues in Pandemic Influenza Planning Discussion Papers*, 2008, at [https://www.who.int/csr/resources/publications/cds\\_flu\\_ethics\\_5web.pdf](https://www.who.int/csr/resources/publications/cds_flu_ethics_5web.pdf) (last visited 5 May 2021).

<sup>8</sup> Comité de Bioética de España, Informe del Comité de Bioética de España sobre los Aspectos Bioéticos de la Priorización de Recursos Sanitarios en el Contexto de la Crisis del Coronavirus, 2020, at <https://bit.ly/3offy5V> (last visited 15 April 2021).

<sup>9</sup> M.D. CHRISTIAN, C.L., SPRUNG, M.A. KING, J.R. DICHTER, N. KISSOON, A.V. DEVEREAUX, et al., *Triage: care of the critically ill and injured during pandemics and disasters: CHEST consensus statement*, in *Chest* 146(4 Suppl), 2014, e61S-74S. Doi: 10.1378/chest.14-0736.

<sup>10</sup> M. WREEN, *Medical Futility and Physician Discretion*, in *Journal of Medical Ethics*, 30, 2004, 275.

should be adopted.<sup>11</sup> It is the most objective (as it does not depend on personal preferences), non-discriminatory (people are not being treated in a certain way due to an intrinsic feature) and fair (because it makes good use of the few available medical resources).

These are core triage criteria in any situation, but they become particularly relevant during public health crisis, where health resources (ventilators, drugs, doctors, even beds) are not enough for all the patients in need. For instance, these criteria were applied at Memorial Hospital in New Orleans after Hurricane Katrina in 2006, both for the evacuation of the hospital and for the redistribution of respirators to patients with better chances of survival.<sup>12</sup> This is also our current scenario, as it has been widely reported by the media (Dettmer, 2020; Yan, Maxouris and McPhillips, 2020).<sup>13</sup>

Unfortunately, however, the reallocation of resources is difficult to implement because it clashes with some of our shared ethical beliefs and with the law in most advanced countries. Some authors consider it unethical to deprive a person of a vital resource who is already using it, even if this would mean denying another person who also needs that resource to stay alive.<sup>14</sup> It is a fact that the doctor would directly cause the death of a patient in such a case, although it might be also argued that what actually causes death is not the withdrawal of treatment but the underlying pathology.

Likewise, in light of criminal law, the doctor who considers withdrawing a treatment already in place to reassign it to another patient would suffer from conflict of duties. Given two patients, one already in treatment and the other waiting to receive treatment, the doctor experiences a conflict between a duty of omission (although physically an action, treatment withdrawal is considered an omission to provide treatment according to criminal law)<sup>15</sup> and a duty of action (to provide treatment). In this scenario, the duty of omission prevails. As explained by Michalowski<sup>16</sup>

<sup>11</sup> Age can also be used as an indicator of the chance of survival. Nonetheless, it is a factor to consider among others. Suppose a case with two patients: a 20 year old patient, heavy smoker since a young age, and therefore with serious heart and lung problems that decrease his chance of survival and a 40 year old patient who does not smoke and practices sport. A joined appraisal of all different factors will probably lead to conclude that the latter has higher chance of surviving the infection, but the sole consideration of the age criterion would provide treatment to the first patient. Even though in many cases both criteria - age and chances of survival - lead to the same result, it is more accurate to make a global assessment of all elements able to indicate the chance of recovery of a given patient, instead of focusing only in one of them (age for instance). The same reasoning is valid for disability: a disabled person might have lower chances of survival, but not necessarily so, thus, the sole consideration of the existence of a disability would provide an accurate and fair decision.

<sup>12</sup> P. DE LORA, *¿No es Respirador Para Viejos? Sobre la “Ética del Bote Salvavidas” y la COVID-19*, in *Letras Libres*, 2020, at <https://www.letraslibres.com/espana-mexico/politica/no-es-respirador-viejos-sobre-la-etica-del-bote-salvavidas-y-la-covid-19> (last visited 02/06/2021).

<sup>13</sup> J. DETTMER, *Europe’s Hospitals near COVID-19 Capacity*, in *Voanews*, November 13, 2020, at <https://www.voanews.com/covid-19-pandemic/europes-hospitals-near-covid-19-capacity> (last visited 20/05/2021); H. YAN, C. MAXOURIS, D. MCPHILLIPS, *200 Hospitals Have Been at Full Capacity, and 1/3 of all US Hospitals Are almost out of ICU Space*, in *CNN*, December 11, 2020, at <https://edition.cnn.com/2020/12/10/health/us-coronavirus-thursday/index.html> (last visited 12/06/2021).

<sup>14</sup> T. BEAUCHAMP, J. CHILDRESS, *Principles of Biomedical Ethics*, 2001.

<sup>15</sup> G. JAKOBS, *Tötung auf Verlangen, Euthanasie und Strafrechtssystem*, Bayerische Akademie der Wissenschaften, 1998.

<sup>16</sup> S. MICHALOWSKI, *Sanctity of Life—Are Some Lives More Sacred than Others?*, in *Legal Studies*, 22, 3, 2002, 377, 394

[a] violation of the duty to act only affects the interests of the individual in whose interests this duty exists, while a violation of the duty not to act leads to an unlawful active interference with the rights of an innocent third party in order to protect someone else's interests.

However, this conclusion (as recognised by the author) is only valid when the interests at stake are equal in weight. The solution would be different when one of the interests has predominance over the other, such as when the duty of action involves a medical treatment that can save the patient's life and the duty of omission involves a futile treatment for the patient.

Within this legal framework, facing pandemics with scarce resources seems a heroic task: we will have to learn to save as many lives as possible without reallocating resources that can be useful to other patients. "Doctors should be prepared to withdraw treatment from poor prognosis patients in order to enable the treatment of better prognosis patients if they arrive later".<sup>17</sup> However, to prevent the situation from becoming worse, we can at least try to limit the incidence of futile treatments.<sup>18</sup> Indeed, the avoidance of medical futility should be the criteria to triage patients in every situation,<sup>19</sup> and become particularly stringent when medical resources are not enough and we have to rationalize scarce recourses.<sup>20</sup>

Understanding why this simple approach could save many lives requires an understanding of how we should classify a treatment as futile in the context of a pandemic and what dynamics the existence of futile treatments introduces into both routine clinical practice and the current circumstances. The next section focuses on these issues.

### 3. The concept of futility

The notion of futile treatment is extremely complex.<sup>21</sup> It is a poorly defined concept even though it is often present in bioethical discussions, at least since the case of Karen Quinlan in the 1970s. Callahan called it "the problem without a name",<sup>22</sup> as everyone knows what it refers to but no one is able to define it. However, it is an extremely important issue in health care, as it is estimated that around 30% of all medical care is futile.<sup>23</sup>

It is not possible to identify medical futility in the abstract, disconnected from particular situations.<sup>24</sup> Each case depends on the patient's personal conditions (general state of health, age), the types and

<sup>17</sup> J. SAVULESCU, I. PERSSON, D. WILKINSON, *Utilitarianism and the Pandemic*, in *Bioethics*, 34, 2020, 620, 625, <https://doi.org/10.1111/bioe.12771>.

<sup>18</sup> EMANUEL, et al., *Fair Allocation*, cit.

<sup>19</sup> K. SPECTOR-BAGDADY, N. LAVENTHAL, M. APPLEWHITE, J. I. FIRN, N. D. HOGIKYAN, R. JAGSI, et al. *Flattening the Rationing Curve: The Need for Explicit Guidelines for Implicit Rationing During the COVID-19 Pandemic*, in *The American Journal of Bioethics*, 20,7, 2020, 77-80, Doi: 10.1080/15265161.2020.1779409.

<sup>20</sup> *Ibid*

<sup>21</sup> R.A GATTER JR., J. C. MOSKOP, *From Futility to Triage*, in *The Journal of Medicine and Philosophy*, 20, 2, 1995, 191-205, <https://doi.org/10.1093/jmp/20.2.191>.

<sup>22</sup> D. CALLAHAN, *Medical Futility, Medical Necessity. The Problem-Without-A-Name*, in *Hastings Center Report*, 21, 4, 1991 30.

<sup>23</sup> R. REDBERG, *More Treatment - Better Care?*, 2011, at <https://psnet.ahrq.gov/webmm/case/258/more-treatmentbetter-care> (last visited 21/04/2021).

<sup>24</sup> V.L. RAPOSO, *Defensive Medicine*, cit.

number of available resources, the patient's wishes, and other factors. Thus, a general definition of medical futility is hard to reach. The Council on Ethical and Judicial Affairs of the American Medical Association considered this concept "unattainable".<sup>25</sup> In principle, one could assume that medical futility is simply useless treatment.<sup>26</sup> However, this does not make things much clearer, because the very idea of usefulness has many nuances.

It is not appropriate to limit the idea of futility exclusively to the arena of clinical care. We must consider both factors that refer strictly to medical parameters and those related to patient participation in decision making and even clearly social factors. Moreover, assessing futility depends on the specific moment at which the case is evaluated. As the WHO<sup>27</sup> recognises, given a severe scarcity of resources,

exclusion criteria will be much more restrictive than standards of medical futility and will also exclude patients for whom treatment is still considered necessary and useful.

In a pandemic situation, not only must the well-being of an isolated patient be considered, but the health of all patients (potentially, the entire community) as a whole. An allocation of resources may be necessary to save a patient's life, but such an allocation may not maximise the number of lives saved if that patient consumes a very high number of units of the scarce resource.

Some label this approach as utilitarian,<sup>28</sup> eventually in a pejorative sense (which in fact is a misrepresentation of the very roots of utilitarianism).<sup>29</sup> We do not agree with this point of view: unless we consider that the whole point of triage (to act in a way that maximizes the number of lives saved) is a utilitarian postulate, an allocation of resources that is aimed at this goal without using a human being as a mere means can hardly be considered utilitarian. However, we concede that a deeper analysis of what futility means must be made.<sup>30</sup>

The concept of medical futility should be built on three main bases. The first is the patient's benefit. Science, no matter how developed, cannot be used to save everyone. Therapeutic insistence, often called dysthanasia<sup>31</sup> is a form of medical malpractice because it involves measures that in no way benefit the patient,<sup>32</sup> but merely drag his/her life out, sometimes at the cost of intense suffering.<sup>33</sup> As referred by Jecker and Schneiderman, the profession of medicine was never intended to practice nonbeneficial medical care and doctors should not be asked to violate the basic principles of their

<sup>25</sup> M. KWIECINSKI, *To Be or not To Be, Should Doctors Decide? Ethical and Legal Aspects of Medical Futility Policies*, in *Marquette Elder's Advisor*, 7, 2, 2006, 313, 325.

<sup>26</sup> B. LO, R. L. STEINBROOK, *Deciding Whether to Resuscitate*, in *Arch Intern Med* 143, 1983, 1561-1563.

<sup>27</sup> WHO, *Addressing Ethical Issues*, cit.

<sup>28</sup> W. BUCKWALTER, A. PETERSON, *Public Attitudes Toward Allocating Scarce Resources in the COVID-19 Pandemic*, in *PLoS ONE* 15, 11, 2020, e0240651, <https://doi.org/10.1371/journal.pone.0240651>

<sup>29</sup> J. SAVULESCU, I. PERSSON, D. WILKINSON, *Utilitarianism and the Pandemic*, cit.

<sup>30</sup> G. MENDOZA DEL SOLAR, *El Concepto de Futilidad en la Práctica Médica*, in *Rev Soc Peru Med Interna*, 21, 1, 2008, 26-35.

<sup>31</sup> C. ESPÍRITO SANTO, C. M. LIMA, L. A. DA SILVA, R. F. DA COSTA, et al, *Produção Científica de Enfermagem Acerca da Eutanásia: Revisão Integrativa da Literatura*, in *J Res: Fundam Care Online*, 6, 3, 2013, 1231-1242.

<sup>32</sup> V.L. RAPOSO, *Doctor's Criminal Liability and Medically Assisted Death – The Portuguese Case*, in *European Journal of Health Law*, 26, 3, 2019, 240-254, [Doi.org/10.1163/15718093-12264430](https://doi.org/10.1163/15718093-12264430).

<sup>33</sup> V.L. RAPOSO, *Defensive Medicine*, cit.

profession.<sup>34</sup> The second issue is medical efficiency (which is directly linked to the idea of social factors as introduced previously).<sup>35</sup> This is a key variable during pandemics: doctors should refrain from using scarce medical resources for hopeless cases, as doing so will prevent their use for other patients who could gain greater benefit.<sup>36</sup> Burrows and Hodgson<sup>37</sup> state that providing medical assistance to those most likely to survive (assuming that it cannot be provided to everyone in need) is a matter of social justice. The third issue is the patient's wishes: patients might refuse a treatment even though it could serve them well to recover from a disease if, for instance, they consider that someone else might profit better from this resource (a kind of heroic act). In such cases, it is essential to comply with the patient's informed consent – or dissent in this case. In the strictest sense, this is a case of unwanted treatment, not futile treatment. However, it can be considered a very specific type of futility: if the patient refuses the treatment and disregarding the fact that it improves his/her medical condition, it is, in a sense, useless, for that patient. Indeed, the American Thoracic Society, for example, recommends the use of the term “futile” when a treatment cannot possibly attain a desired physiological goal.<sup>38</sup>

Medical efficiency repudiates medical futility for several reasons. First, it often causes harm to patients (this is particularly clear when a concrete treatment delays the introduction of palliative care). Second, it deprives other patients of scarce resources. Third, the provision of a futile treatment for a particular patient might undermine the likelihood of success of that same treatment in other people. This collateral harm is very clear in the case of antibiotics, as their frequent (and futile) use can lead to antibiotic resistance.<sup>39</sup> In sum, the reasons to combat medical futility are related not only to a particular patient, but to the whole community (all members of which are prospective patients). It is therefore a matter of both individual health and public health.

#### 4. Futility in clinical practise: The reasons why it is difficult to avoid

No matter how we define futility, it is clear is that it presents doctors with a complex dilemma. They may fall into futility if they overestimate a patient's ability to recover and apply measures that only prolong their suffering. This would be a clear example of medical malpractice,<sup>40</sup> as such conduct would violate both the principle of non-maleficence (the doctor would cause harm to the patient)

<sup>34</sup> N. JECKER, L. SCHNEIDERMAN, *Medical Futility: The Duty not to Treat*, in *Cambridge Quarterly of Healthcare Ethics*, 2, 2, 1993, 151-159, Doi:10.1017/S0963180100000852.

<sup>35</sup> J. CYLUS, I. PAPANICOLAS, P. C. SMITH, *A Framework for Thinking about Health System Efficiency*, in J. CYLUS, I. PAPANICOLAS, P. C. SMITH (eds.), *Health System Efficiency*, WHO Regional Office for Europe, 2016, 1-20.

<sup>36</sup> Burrows and Hodgson (R.C. BURROW, R.E. HODGSON, *De Facto Gatekeeping and Informed Consent in Intensive Care*, in *Med Law* 16, 1, 1997, 17-27) state that providing medical assistance to those most likely to survive (assuming that it cannot be provided to everyone in need) is a matter of social justice.

<sup>37</sup> *Ibid.*

<sup>38</sup> G.T. BOSSLET, T.M. POPE, G.D. RUBENFELD, et al, *An Official ATS/AACN/ACCP/ESICM/SCCM Policy Statement: Responding to Requests for Potentially Inappropriate Treatments in Intensive Care Units*, in *Am J Respir Crit Care Med*, 191, 11, 2015, 1318–1330.

<sup>39</sup> M.S. NIEDERMAN, J.T. BERGER, *The Delivery of Futile Care Is Harmful to Other Patients*, in *Critical Care Medicine*, 38, 19, 2019, S518-22, Doi: 10.1097/CCM.0b013e3181f1cba5.

<sup>40</sup> V.L. RAPOSO, *Defensive Medicine*, cit.

and the principle of beneficence (the doctor would prevent the patient from accessing the most appropriate treatment for his/her condition, which would ultimately be palliative care). Moreover, in a pandemic scenario, a doctor would also be violating the principle of justice by allocating scarce resources in a clearly inefficient manner, which would lead to an increase in the number of deaths. Obstinacy in maintaining futile treatment would not only fail to prevent the death of the treated patient but also result in the deaths of patients who could not make use of the resource.

However, it is not so easy to put an end to futile treatment and its prevalence in day-to-day medicine. There are some strong reasons that contribute to perpetuate it. Imagine that a physician is tempted to declare too quickly that a treatment is futile in order to provide the resource to a patient who he/she considers having a much higher probability of surviving the pathology, or to one who has the same likelihood of survival but who will use the resource for less time. Such action may indeed improve the final result – that is, reduce the number of total deaths – but surely this physician would have violated the principle of non-maleficence by causing the death of a patient. Such a doctor might even face criminal charges for depriving the patient of the necessary means for recovery, which – let us not forget – was not impossible.

In short, we are faced with two forms of medical malpractice to avoid: neither too much medicine nor too little medicine. The essential point is that the first is worse than the second because it negatively affects not only the patient that receives the futile treatment (eventually causing him discomfort and even pain, with no gain at all, because his/her situation might be irretrievable), but also other patients who have higher chances of recovery but are deprived of the same treatment.

Nonetheless, there are practical reasons that will surely lead to many more cases of the former practice than of the latter. First, physicians often overtreat because they fear litigation, and so they use defensive medicine to protect against lawsuits.<sup>41</sup> To the best of our knowledge, research on overtreatment that causes unnecessary suffering to the patient is rare, and there are no penalties for such,<sup>42</sup> whereas causing the death of a patient by withdrawing a treatment that was keeping him/her alive is a clear breach of multiple professional and criminal responsibilities.

There is an additional reason for futile treatment: put simply, futility is quite common in medical practice. The scientific literature has shown on many occasions that in intensive care, overtreatment is more the rule than the exception<sup>43</sup> especially because doctors – apparently regardless of specialty<sup>44</sup> – are often too optimistic about the efficiency of their clinical choices.<sup>45</sup> Hence, medical profes-

<sup>41</sup> A.B. JENA, L. SCHOEMAKER, J. BHATTACHARYA, S. SEABURY, *Physician Spending and Subsequent Risk of Malpractice Claims: Observational Study*, in *Brit. Med. J.*, 351, 2015, h5516.

<sup>42</sup> V.L. RAPOSO, *Defensive Medicine*, cit.

<sup>43</sup> W. DRUML, C. DRUML, *Übertherapie in der Intensivmedizin*, in *Med Klin Intensivmed Notfmed*, 114, 2019, 194-201, [Doi.org/10.1007/s00063-019-0548-9](https://doi.org/10.1007/s00063-019-0548-9).

<sup>44</sup> N. WHITE, F. REID, A. HARRIA, et al, *A Systematic Review of Predictions of Survival in Palliative Care: How Accurate Are Clinicians and Who Are the Experts?*, in *PLoS ONE*, 11, 8, 2016, e0161407, [Doi: 10.1371/journal.pone.0161407](https://doi.org/10.1371/journal.pone.0161407).

<sup>45</sup> D. SELBY, A. CHAKRABORTY, T. LILIEN, et al, *Clinician Accuracy When Estimating Survival Duration: The Role of the Patient's Performance Status and Time-Based Prognostic Categories*, in *J Pain Symptom Manag*, 42, 4, 2011, 578, [Doi: 10.1016/j.jpainsymman.2011.01.012](https://doi.org/10.1016/j.jpainsymman.2011.01.012); P. GLARE, C. SINCLAIR, M. DOWNING, et al, *Predicting Survival in Patients With Advanced Disease*, in *Eur J Cancer*, 44, 8, 2008, 1146-1156.



signals are likely to perpetuate inappropriate behaviours simply because those are the dynamics they are accustomed to following.

This factor plays a key role since medical subjectivity is an important part of decision making with respect to patients. Even though efforts have been made to objectify medical practice in intensive care through the introduction of measures such as the APACHE-III Score<sup>46</sup> and the Simplified Acute Physiological Score, SAPS II<sup>47</sup>, studies show that there is still an enormous degree of subjectivity in decision-making processes.<sup>48</sup> Of course, this might have to do with the fact that the accuracy of such models has not been clearly assessed, but physicians' judgement remains a key factor in the decisions made.

## 5. Avoiding futility during a pandemic

Our proposal to avoid futile treatments, especially during a pandemic, involves two main tools: the elaboration of guidelines that include objective criteria for triage, and the implementation of collective decision-making processes that prevent a single isolated physician from making decisions.<sup>49</sup>

The revision of guidelines with common criteria for triage is an urgent necessity. However, these guidelines must be flexible because the available resources might change quite rapidly. Moreover, triage varies according to each specific scenario, as the consideration of a treatment as futile depends on the patient's situation.

Decisions on such matters cannot be made by a single type of healthcare worker, let alone an isolated physician; rather, all those who understand the impact of the various scarce resources on the patient's situation should be involved. We therefore advocate an organisational structure based on collegiate and multidisciplinary decision-making, i.e., flexible committees that can monitor decisions about the futility of treatment at a particular centre.<sup>50</sup> Such committees would not only reduce the psychological pressure on health professionals who are already too overburdened with responsibility, but from a purely scientific point of view, they would reduce the likelihood of "overtreatment bias", which is common in clinical practice, and also reduce the incidence of defensive medicine.

## 6. Conclusion

The emergence of a public health crisis of the magnitude of COVID-19 has highlighted the problems in our legal framework of implementing the necessary methods to optimise the use of scarce health

<sup>46</sup> W. A. KNAUS, D. P. WAGNER, E. A. DRAPER, et al, *The APACHE III Prognostic System. Risk Prediction of Hospital Mortality for Critically Ill Hospitalized Adults*, in *Chest*, 100, 6, 1991, 1619-1636. Doi: 10.1378/chest.100.6.1619.

<sup>47</sup> J.-R. LE GALL, S. LEMESHOW, F. SAULNIER, *A New Simplified Acute Physiology Score (SAPS II) Based on a European/North American Multicenter Study*, in *J Am Med Assoc*, 12, 24, 1993, 2957-1963.

<sup>48</sup> S. OREDSSON, H. JONSSON, J. ROGNES, et al., *A Systematic Review of Triage-Related Interventions to Improve Patient Flow in Emergency Departments*, in *Scand J Trauma Resusc Emerg Med* 19, 2011, 43, Doi:10.1186/1757-7241-19-43.

<sup>49</sup> About the power to decide when a treatment is futile, and the potential recognition of the provider's autonomy in this domain, J. K. DAVIS, *Futility, Conscientious Refusal, and Who Gets to Decide*, in *The Journal of Medicine and Philosophy*, 33, 4, 2008, 356-373, <https://doi.org/10.1093/jmp/jhn019>.

<sup>50</sup> R. D. TRUOG, C. MITCHELL, G.Q. DALEY, *The Toughest Triage – Allocating Ventilators in a Pandemic*, in *N Engl J Med*, 2020, Doi: <http://dx.doi.org/10.1056/NEJMp2005689>.

resources. Currently, the system works primarily with priority on arrival for non-urgent care (for urgent care the criterion is the degree of urgency). This criterion is not problematic as long as there are resources for everyone and not just the first to arrive. However, with scarce resources, the criteria must be changed to prioritise those with higher chances of survival. This can only be done if we can reallocate resources or at least avoid futile treatment.<sup>51</sup>

However, there are many reasons that make it complex to prevent futile treatment. Firstly, futility is a very fuzzy concept, and it is difficult to identify when it happens. Second, the current medical culture reinforces the application of futile treatments: defensive medicine considerations predispose physicians to overtreat if there is the slightest doubt about the utility of a concrete treatment, and so regular medical practice tends to systematically overtreat patients, creating a difficult dynamic.

In this scenario, efficient measures must be taken to improve the situation. In the short term, it will be necessary to create guidelines that highlight the importance of restricting futile treatment and the need to make decisions through collective bodies to avoid both common overtreatment practices and decisions based on defensive medicine considerations. In the medium and long term, we will have to rethink the entire legal framework to cope with potentially overwhelming health care crisis situations. If we are not willing to consider that necessity applies to cases in which reallocating resources is the only way to maximise the number of lives saved, we will have to work on a wider interpretation of the concept of futility that serves the same purpose.

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<sup>51</sup> GATTER JR, MOSKOP, *From Futility to Triage*, cit.