

Triage during the COVID-19 epidemic in Spain: better and worse ethical arguments

Benjamin Herreros,^{1,2} Pablo Gella,² Diego Real de Asua ^{3,4}

¹Internal Medicine, Hospital Universitario Fundación Alcorcón Servicio de Medicina Interna, Alcorcón, Comunidad de Madrid, Spain

²Instituto de Ética Clínica Francisco Vallés, Universidad Europea de Madrid Campus de Villaviciosa de Odón, Villaviciosa de Odón, Madrid, Spain

³Department of Internal Medicine, Hospital Universitario de la Princesa, Madrid, Spain

⁴Division of Medical Ethics, Cornell University Joan and Sanford I Weill Medical College, New York, New York, USA

Correspondence to

Dr Benjamin Herreros, Internal Medicine, Hospital Universitario Fundación Alcorcón Servicio de Medicina Interna, Alcorcón 28922, Comunidad de Madrid, Spain; benjaminherreros@gmail.com

Received 27 April 2020

Revised 5 May 2020

Accepted 11 May 2020

ABSTRACT

The COVID-19 pandemic has generated an imbalance between the clinical needs of the population and the effective availability of advanced life support (ALS) resources. Triage protocols have thus become necessary. Triage decisions in situations of scarce resources were not extraordinary in the pre-COVID-19 era; these protocols abounded in the context of organ transplantation. However, this prior experience was not considered during the COVID-19 outbreak in Spain. Lacking national guidance or public coordination, each hospital has been forced to put forth independent and autonomous triage protocols, most of which were, nonetheless, based on common ethical principles and clinical criteria. However, controversial, non-clinical criteria have also been defended by Spanish scientific societies and public institutions, including setting an age cut-off value for unilaterally withholding ALS, using 'social utility' criteria, prioritising healthcare professionals or using 'first come, first served' policies. This paper describes the most common triage criteria used in the Spanish context during the COVID-19 epidemic. We will highlight our missed opportunities by comparing these criteria to those used in organ transplantation protocols. The problems posed by subjective, non-clinical criteria will also be discussed. We hope that this critical review might be of use to countries at earlier stages of the epidemic while we learn from our mistakes.

INTRODUCTION

The vast number of cases of patients affected by coronavirus disease 2019 (COVID-19) in Spain has resulted in a massive burden to our healthcare system, causing an imbalance between the clinical needs of the population and the effective availability of advanced life support (ALS). Triage protocols prioritising which patients are the best candidates for ALS have become necessary.

We never thought this could happen: neither suffering an epidemic of these gigantic proportions, nor needing to select which patients should receive ALS. However, triage in situations of scarcity was not extraordinary in pre-COVID-19 clinical practice. All organ transplantation programmes coordinated by the National Transplant Organization (ONT, in Spanish) had public, transparent protocols with broad social acceptance.¹ Three general characteristics underlie the success of the ONT's triage protocols: (1) their exclusive use of clinical criteria; (2) the case assessment and candidate's evaluation by committees or working groups detached from the patient–primary care team dyad; and (3) a nationwide collaboration and coordination between healthcare centres.² Transparent clinical selection criteria and working methods guarantee equity in

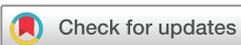
access and a fair distribution of organs, promoting user confidence in the system itself.³

Despite this broad previous experience, we have not been able to put it into practice during the COVID-19 epidemic. On the contrary, each healthcare institution has had to establish its own triage protocols, occasionally leading to the use of random, unethical criteria. This paper describes the most common triage criteria used in the Spanish context during the COVID-19 epidemic. We will highlight our missed opportunities by comparing these criteria to those used in organ transplantation protocols. Finally, we will discuss the problems posed by some non-clinical criteria proposed by some Spanish public institutions and national scientific societies.

HOW HAVE TRIAGE DECISIONS BEEN MANAGED IN SPAIN? THE EXAMPLE OF THE AUTONOMOUS COMMUNITY OF MADRID (CAM)

The CAM (in Spanish) has been the region with the highest number of COVID-19 cases (over 47 000 at the beginning of April 2020, accounting for close to 28% of all Spanish cases).⁴ It has also been the unfortunate first region where hospitals, and specifically their intensive care units (ICUs), were saturated. On 10 March 2020, the Department of Clinical Bioethics of the University Hospital Infanta Elena, Valdemoro (Madrid) already identified the magnitude of the problem and the need to establish common criteria for triage. They prepared a document entitled '*Ethical considerations regarding the management of patients who may require care in intensive care units*'. The document stated that local and national administrations should provide resources based on distributive justice criteria and specifically called for a collaboration between public and private health institutions at a national level.⁵

This call for action went unanswered. Most hospitals and primary care systems have had to organise triage independently. It was not until the third week of March when scientific societies began to publish their general recommendations,⁶ the Spanish National Bioethics Committee (Comité de Bioética de España) did so at the end of that month⁷ and the official position paper from the Ministry of Health had to wait until the beginning of April.⁸ By then, all of Madrid's ICUs had surrendered to the surge of COVID-19, and each centre had managed its triage protocols as best as it could. Indeed, lacking any supra-institutional guidance, many centres were triaging 'on the go', without any structured protocol at all. If this delay were not enough, many of the aforementioned guidelines



© Author(s) (or their employer(s)) 2020. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Herreros B, Gella P, Real de Asua D. *J Med Ethics* Epub ahead of print: [please include Day Month Year]. doi:10.1136/medethics-2020-106352

were eminently theoretical, lacking usefulness for clinicians who had to make clear, rapid decisions in their clinical practice. Triage systems were carried out—and still are—according to local idiosyncrasies.

The COVID-19 crisis has exposed the fragile fragmentation of the Spanish healthcare system into its 17 Autonomous Communities or regions. In fact, every international guidelines insists that, before triage protocols are applied, an attempt should be made to increase the availability of ALS resources. This might be achieved by increasing the number of beds at the ICUs, according to each institution's possibilities and, much more importantly, by ensuring interinstitutional and regional patient mobility. Unfortunately, we have seen neither patient transfers between communities nor transfer of ALS resources from the least affected to the most affected regions. Each region has independently managed their ICU beds and triage protocols. With the notable exception of the transfer of patients in the Madrid region to the large, improvised field hospital established in IFEMA Convention Center,⁹ interinstitutional transfers have been exceptional. Moreover, though the guiding triage principles were commonly shared, specific criteria and triage protocols could differ among institutions. The application of diverging criteria might have led individual patients to be admitted to the ICU at a particular hospital, while at another nearby institution their admission to the ICU could have been denied. This is a serious attack on equity by the Spanish health system. Fractionation has undoubtedly been detrimental to many patients.

PRINCIPLES AND CRITERIA FOR TRIAGE

As participants in the task force for the elaboration of general guidelines for hospital triage in the Madrid region, we have had the opportunity to review many national protocols and proposals on triage. Lacking explicit recommendations from national or regional public institutions, healthcare professionals themselves have drafted most of these protocols, which are surprisingly homogeneous and based mainly on the same ethical principles and clinical criteria¹⁰⁻¹² (table 1).

Table 1 General ethical principles governing advanced life support triage processes

Principle	Definition
Exceptionality	Triage decisions occur in exceptional situations, justified by the current epidemiological context.
Transparency and publicity	Criteria for triage should be transparent, public and as commonly shared as possible. The process of triage is responsibility of society as a whole.
Trust	Transparency and rationality favour trust among healthcare professionals, those affected by triage decisions (patients and relatives) and society as a whole.
Equity	Triage decisions during the epidemic should be applicable to all patients who may require intensive care, not only to patients with COVID-19.
Greatest good for the greatest number	The greatest possible number of patients should benefit from triage measures. It is necessary to identify which patients combine the most favourable prognosis with ALS and in whom recovery is achievable in the shortest period of time, so that future patients may also benefit from ALS.
Flexibility and temporality	The proposed rules must be interpreted in every specific clinical situation and should be subject to revision as the epidemic evolves.

ALS, advanced life support.

Box 1 Example of triage protocol by clinical criteria for decisions regarding the use of ALS

Baseline clinical situation

- ▶ Ten-year life expectancy, based on age and comorbidities: there are several scales and indexes that evaluate the presence and specific weight of comorbidities, such as the modified Charlson Comorbidity Index. Age is directly related to potential life expectancy and should be incorporated as yet another variable in the decision-making process. It is a weighty criterion, but it should not be considered sufficient to make decisions.
- ▶ Baseline functional and cognitive status: the patient's baseline situation can be assessed through a functional and cognitive assessment of the patients (the most used in our context are the Barthel Index and Pfeiffer test, respectively).

Current clinical situation

- ▶ Illness severity: measured through validated scores such as APACHE II or SOFAⁱ, this criterion measures the chances of survival to the current situation depending on the patient's clinical status at the time of the evaluation.
- ▶ Expected duration of treatment with ALS.
- ▶ Reversibility and recovery potential: predicted recovery and potential negative repercussions that may affect quality of life according to the patient's perspective.

ⁱAPACHE II (Acute Physiology and Chronic Health disease Classification System II). SOFA (Sequential Organ Failure Assessment Score).

WHICH CRITERIA SHOULD BE CONSIDERED APPROPRIATE?

In order to guarantee that the ethical principles of equity and greatest good for the greatest number of patients are upheld, triage criteria should be as objective as possible.¹³ As in transplantation protocol, the only way to achieve this goal is to use essentially, if not only, criteria based on clinical parameters that allow for an homogeneous evaluation of potential candidates for ALS.

Hence, if triage criteria should be clinical, the fundamental question is which criteria to consider and how to evaluate them. The first step in most protocols, both national and international,¹⁴ is to rule out which patients should not be ICU candidates, regardless of the contingency of the current epidemic. The goal is to identify which patients are poor candidates for ICU admission given their clinical characteristics (*see clinical criteria below*). This first step should also consider those individuals who, after being properly informed in a shared decision-making process, voluntarily refuse admission to an ICU, either expressly or through advance directives. For patients not meeting these exclusion criteria, the next decision is to assess who is better suited to be eligible to receive ALS. Clinical criteria try to establish which patients combine a more favourable prognosis (greater chances of survival and benefit derived from treatment) and an *a priori* shorter length of expected ICU admission (**box 1**).

The next step is possibly the most daunting: deciding, based on daily available ALS resources, which ALS candidates will be admitted to intensive care and which will not. Once all candidates have been evaluated, a priority order should be established, placing the patient who would clinically benefit the most from ALS first. Following White *et al's*¹⁵ recommendations, some institutions use a colour code to clarify this priority. This

should be considered a temporary decision. A patient who is not admitted to the ICU at a certain time point could be reassessed and admitted later if resources become available.

To facilitate triage decision making, some protocols incorporate the establishment of decision committees (triage committees) whose goals are to carry out this comprehensive assessment of patients and also to help relieve primary care teams of the moral and emotional burden of these decisions.¹⁶ In a similar vein to transplant committees, it might be advisable that each centre establish a triage committee compounded of specialists in intensive care medicine, other healthcare professionals with experience in treating patients with COVID-19 and members of the institutional Healthcare Ethics Committee. All of the members should have a good understanding of the principles that guide triage and the clinical criteria on which the decision-making process is based.

WHAT WE MEAN BY BAD CRITERIA FOR TRIAGE DECISIONS

The aforementioned criteria attempt to balance the duty to care for each individual patient with the moral obligation to respect the interests of society as a whole, promoting fairness among patients and equity in the distribution of health resources. However, some institutional recommendations in Spain have incorporated other less objective, ethically problematic criteria.¹⁵ Some examples are the use of a specific age cut-off point for access to ALS, proposing 'social value' criteria, prioritising healthcare professionals' access to ALS and suggesting triage based on a 'first come, first served' basis.

Age

Some institutions in Madrid established tentative, revisable age limits in their initial protocols, proposing a limit of 80 years to unilaterally withhold ALS. This criterion was also defended by the Spanish Society of Critical Intensive Care Medicine and Coronary Units (SEMICYUC, in Spanish) who, in its general guidelines, recommended that patients over 80 years of age and those between 70 and 80 years of age with moderate to severe comorbidities should preferably receive non-invasive mechanical ventilation modalities instead of standard ALS. While it is important to admit that the consequences of prolonged artificial ventilation in cases of severe viral pneumonia are difficult to overcome for clinically frail patients, it is ethically conflicting, and legally unsustainable, to establish a sufficient age-based cut-off criterion for unilaterally withholding cardiopulmonary resuscitation or ALS decisions. Even though ALS in very elderly or frail patients may lead to protracted clinical courses, aggravated by the loss of opportunity to use these resources for patients with greater chances of survival, age should not be taken as a sufficient, isolated criterion, but rather as a relevant clinical detail part of the overall assessment of the patient.

Social value

Among the general recommendations for resource allocation, the SEMICYUC proposed factors such as considering the presence of progeny or dependents of the patient or even 'the social value of the patient' (PONER CITA). Indeed, in interviews to national press, some of the members of this committee explained how 'a parent of four children should be prioritised over a single patient'.¹⁷ However, social criteria judge the value of human life according to assumptions that are difficult to agree on and easily lead to random decisions and significant discrimination against many collectives. The social value of any act or person depends on a myriad of factors, many of which are difficult to

measure. Even if this putative social value could be measured, healthcare professionals are neither trained nor fit to make this assessment. In fact, if the purpose of triage is to promote as objective as possible criteria, social value fails heavily on this account. Furthermore, establishing this value as a criterion in a list drawn up by healthcare professionals could undermine social trust in the profession.

Priority to healthcare providers as patients

Another controversial criterion is whether healthcare providers should be prioritised to receiving ALS. This is a particularly relevant question, given that the number of providers affected by COVID-19 in Spain is close to 20% of all infected patients, and many of them might require ALS.⁴ Although the Spanish Bioethics Committee rejected the 'social value' criterion put forth by the SEMICYUC, at the same time, paradoxically, they defended the prioritisation of healthcare professionals, specifically those involved in direct patient care.⁷

To justify this inconsistency, the committee appealed to arguments of reciprocity and promotion of public health. In their view, the best way to protect the health of all was to protect the health of healthcare professionals, although clarification of why this may be so or how prioritisation of healthcare professionals might achieve this goal is lacking in the report. Nonetheless, this criterion is also beset with challenges, the first of which is its lack of specificity. How do we know which professionals protect public health the most? Frontline clinicians might definitely be included in this category, but what about physicians in the departments of microbiology or radiology? Or the engineers who work to provide institutions with respirators, those who transport and restock the needed PPEs, management directors, researchers, security forces and army, who ensure the compliance with confinement measures and build massive field hospitals? The list is endless.

Additionally, the National Bioethics Committee insisted that those who most intensely exposed their health in favour of society during the pandemic should benefit, in accordance with the ethical principle of reciprocity. However, we must remember that the health professionals who treat patients have freely chosen their profession, and society does not owe them a debt in terms of priority medical care, just as it does not owe it to the firefighters who put out fires at the risk of their lives or rescue people in the mountains.

Order of arrival ('first come, first served')

The Spanish Ministry of Health's report on the ethical aspects facing the COVID-19 pandemic is a theoretical and legal document that sets out five criteria and general principles for triage decisions (CITA). The first four are commonly used and uncontroversial, but triaging based on 'order of entry' into the healthcare system was also included in these guidelines. Although the criterion is used in some transplant allocation protocols, this is only so because patients can actually survive for long periods of time without that specific organ, such as kidneys, a circumstance that cannot be translated to the current epidemic, in which the need for treatment is urgent. In fact, establishing yet another parallel with organ transplantation, in the case of irreplaceable organs, urgency and severity prime over the first come, first served criterion. Granted, the Ministry's guideline specifies that this criterion should never be placed before the others, but the simple fact of listing it as a criterion to be considered is an attack on clinical and ethical rationality. Giving priority to patients who arrive first at the hospital or to those who occupy the first hospital beds might lead to the prioritisation of patients who are

less ill or have a worse vital prognosis. As Emanuel *et al*¹⁸ recently stated, a first-come, first-served approach 'would unfairly benefit patients living nearer to health facilities' and discriminate against those who 'happen to get sick later on, perhaps because of their strict adherence to recommended public health measures' thus actually worsening outcomes without improving fairness.

CONCLUSIONS

Unfortunately, our experience with organ transplantation has not been used during the current COVID-19 crisis in Spain to encourage public administrations to develop clinical, objective, nationally applicable triage criteria. Protocols have been managed locally and, in many occasions where these were absent, the best opinion of the doctors involved in the cases was the only clinical criterion. Although most protocols are based on clinical objective criteria, subjective criteria have also been put forth with little or no solid clinical or ethical basis. Clarifying arguments and criteria may contribute to the genesis of solidly founded triage protocols, especially in cases where general recommendations of national institutions or scientific societies are difficult to be applied, because of their generic language or lack of operational impact in the clinic. This reflection may serve as a starting point for institutions and countries that are still in preliminary or initial stages of the epidemic. It is finally also our hope that this critical review will serve to learn from our mistakes.

Contributors Bibliography review. Preparation and writing of the article. Final revision of the manuscript.

Funding DRdA is partially supported by the Fondo de Investigaciones Sanitarias (FIS grant PI19/00634, European Fund for Regional Development).

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

Data availability statement There are no data in this work.

This article is made freely available for use in accordance with BMJ's website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

ORCID iD

Diego Real de Asua <http://orcid.org/0000-0002-1445-5597>

REFERENCES

- Cuende N, Cañón JF, Alonso M, *et al*. [Results of the period 1998-2001 of the ONT quality control programme]. *Nefrología* 2003;23 Suppl 5(Suppl 5):68–72.
- Matesanz R. *El modelo español de Coordinación Y Trasplantes*. Madrid: Grupo Aula Médica, 2008. <http://www.ont.es/publicaciones/Documents/modeloespanol.pdf>
- Martín-Delgado MC, Martínez-Soba F, Masnou N, *et al*. Summary of Spanish recommendations on intensive care to facilitate organ donation. *Am J Transplant* 2019;19(6):1782–91.
- Red Nacional de Vigilancia Epidemiológica. Informe num. 22. Situación de COVID-19 en España a 13 de abril de 2020, 2020. Available: <https://www.isciii.es/QueHacemos/Servicios/VigilanciaSaludPublicaRENAVE/EnfermedadesTransmisibles/Documents/INFORMES/Informes%20COVID-19/Informe%20n%20n%20C2%BA%2022.%20Situaci%C3%B3n%20de%20COVID-19%20en%20Espa%C3%B1a%20a%2013%20de%20abril%20de%202020.pdf> [Accessed 6 Apr 2020].
- Departamento de Bioética Clínica Hospital Universitario Infanta Elena. *Consideraciones éticas del Departamento de Bioética Clínica del Hospital Universitario Infanta Elena acerca del manejo de pacientes que puedan precisar asistencia en unidades de cuidados intensivos*, 2020.
- Grupo de Trabajo de Bioética de la SEMICYUC (Rubio Sanchíz O, Coordinadora). Recomendaciones éticas para La toma de decisiones en La situación excepcional de crisis POR pandemia covid-19 en Las unidades de cuidados intensivos. Sociedad Española de medicina Intensiva, Crítica y Unidades Coronarias (SEMICYUC); 18/03/2020. Available: https://semicyuc.org/wp-content/uploads/2020/03/C3%89tica_SEMICYUC-COVID-19.pdf [Accessed 6 Apr 2020].
- Bioethics Committee of Spain. Informe del Comité de Bioética de España sobre Los aspectos bioéticos de la priorización de recursos sanitarios en El contexto de la crisis del coronavirus25/03/2020. Available at. Available: <http://assets.comitedebioetica.es/files/documentacion/Informe%20CBE-%20Priorizacion%20de%20recursos%20sanitarios-coronavirus%20CBE.pdf> [Accessed 6 Apr 2020].
- Informe del Ministerio de Sanidad sobre Los aspectos éticos en situaciones de pandemia: El SARS-CoV-2. Romeo Casabona C (Coordinador). Ministerio de Sanidad, Consumo Y Bienestar social de España. Available: https://www.msbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/AspectosEticos_en_situaciones_de_pandemia.pdf [Accessed 6 Apr 2020].
- IFEMA is the acronym for 'Institución Ferial de Madrid' (Madrid Fair Institution), a consortium that organizes fairs, shows and congresses at its fairgrounds in Madrid, Spain.
- Okorie N, Partiality ON. Partiality, impartiality and the ethics of triage. *Dev World Bioeth* 2019;19(2):76–85.
- Baker R, Strosberg M. Triage and equality: an historical reassessment of utilitarian analyses of triage. *Kennedy Inst Ethics J* 1992;2(2):103–23.
- Emanuel EJ, Persad G, Upshur R, *et al*. Fair allocation of scarce medical resources in the time of Covid-19. *N Engl J Med* 2020. doi:10.1056/NEJMs2005114. [Epub ahead of print: 23 Mar 2020].
- Iserson KV, Moskop JC. Triage in medicine, part I: concept, history, and types. *Ann Emerg Med* 2007;49(3):275–81.
- Societ Italiana di Anestesia Analgesia Rianimazione e Terapia Intensiva (SIAARTI). Raccomandazioni di etica clinica per l'ammissione a trattamenti e per la loro sospensione, in condizioni eccezionali di squilibrio tra necessit e risorse disponibili, 2020. Available: <http://www.siaarti.it/SiteAssets/News/COVID19%20-%20documenti%20SIAARTI/SIAARTI%20-%20Covid19%20-%20Raccomandazioni%20di%20etica%20clinica.pdf> [Accessed 6 Apr 2020].
- White DB, Katz MH, Luce JM, *et al*. Who should receive life support during a public health emergency? using ethical principles to improve allocation decisions. *Ann Intern Med* 2009;150(2):132–8.
- Truog RD, Mitchell C, Daley GQ. The Toughest Triage - Allocating Ventilators in a Pandemic. *N Engl J Med* 2020. doi:10.1056/NEJMp2005689. [Epub ahead of print: 23 Mar 2020].
- Entrevista PA, Cabré L. médico experto en bioética: "Para entrar en la UCI la edad no es el único parámetro ni el definitivo". *eldiario.es*, 2020. Available: https://www.eldiario.es/catalunya/politica/LLuisCabre-bioetica-prioridad-probabilidad-sobrevivir_0_1008949938.html [Accessed 6 Apr 2020].
- Emanuel EJ, Persad G, Upshur R, *et al*. Fair allocation of scarce medical resources in the time of COVID-19. *N Engl J Med* 2020. doi:10.1056/NEJMs2005114. [Epub ahead of print: 23 Mar 2020].