Ethical and Legal Aspects in the Implementation of the Triage System in Extraordinary Events and Outbreaks after Covid-19 in Indonesia

Antonius Kuncup Wisnu Baroto Sutrisno Putro*, Slamet Suhartono, Yovita Arie Mangesti Erny Herlin Setyorini*****

*Faculty of Law, Universitas 17 Agustus 1945, Jalan Semolowaru No.45,
Surabaya, East Java, Indonesia
Email: akwisnubarotosp@gmail.com

Naskah diterima: 10 Februari 2025
Naskah direvisi: 5 Mei 2025
Naskah diterbitkan: 30 Juni 2025

Abstract

The Intensive Care Unit triage system is an option in disaster management efforts amidst limited human health resources. This study aims to analyze the ethical and legal aspects of implementing the triage system in a disease outbreak disaster. The method in this study is normative juridical. The study's results indicate that although triage aims to save as many lives as possible, its practice often causes ethical problems, especially when choosing the most important patients. The technical guidelines for triage have been legally regulated, but legal protection for health workers is still limited, and the objective criteria for the triage process are unclear. This study found that strengthening ethical elements and legal protection in the triage system is very important so that its implementation does not cause injustice or violation of patient rights. Therefore, current regulations should be supplemented with more in-depth ethical guidelines and clear mechanisms for determining who is responsible for carrying out triage. The study recommends ethical training, regulatory alignment with bioethics standards, and integration of ethical reviews to enhance future triage system resilience.

Keywords: *ethics; health human resources; legal; triage*

Abstrak

Sistem triase *Intensive Care Unit* menjadi pilihan dalam upaya penanggulangan bencana di tengah keterbatasan sumber daya manusia kesehatan. Tujuan penelitian ini untuk menganalisis aspek etis dan legal penerapan sistem triase pada kondisi bencana wabah penyakit. Metode dalam penelitian ini adalah yuridis normatif. Hasil penelitian menunjukkan bahwa meskipun triase bertujuan untuk menyelamatkan sebanyak mungkin nyawa, praktiknya sering kali menyebabkan masalah etis, terutama ketika memilih pasien mana yang paling penting. Pedoman teknis triase telah diatur secara hukum, tetapi pelindungan hukum tenaga kesehatan masih terbatas dan kriteria objektif proses triase belum jelas.

Studi ini menemukan bahwa penguatan elemen etis dan pelindungan hukum dalam sistem triase sangat penting agar pelaksanaannya tidak menyebabkan ketidakadilan atau pelanggaran hak pasien. Oleh karena itu, peraturan saat ini harus dilengkapi dengan pedoman etis yang lebih mendalam dan mekanisme yang jelas untuk menentukan siapa yang bertanggung jawab atas pelaksanaan triase. Studi ini merekomendasikan pelatihan etika, penyelarasan peraturan dengan standar bioetika, dan integrasi tinjauan etika untuk meningkatkan ketahanan sistem triase di masa mendatang.

Kata kunci: etika; hukum; sumber daya manusia kesehatan; triase

I. Introduction

The triage system is a principle that has been endorsed and adopted globally, especially in emergency and disaster management. Triage systems in a number of countries have been developed toward the aim of achieving maximum benefits from limited healthcare resources in crisis situations. Patients are classified according to their medical needs, which depend on the urgency of their medical intervention, the severity of their conditions, and the chances that they would survive. Ethical principles of beneficence, nonmaleficence, and justice are balanced within the legal framework to ensure fairness and the protection of healthcare workers in their actions. In Indonesia, this widely accepted triage standard is given formal structure via laws and regulations such as the Minister of Health Decree No. HK.01.07/MENKES/1588/2024 on Technical Guidelines for the Integrated Emergency Response System, dated October 4, 2024.[1]

The triage systems themselves must be understood in their ethical and legal foundations, especially in such circumstances as outbreaks in which a sudden high influx of patients, compounded by scarcity of resources, presents a serious challenge to the practice of healthcare providers. In practical usage, the triage system operates in three basic steps: (1) Triage nurses first assess the condition of the patient; (2) the triage nurse assigns the patient to a triage category based on the degree of urgency and severity of the condition; and (3) the patient is then directed to the appropriate treatment area as indicated by the triage category assigned. The standardized triage systems provide the necessary guarantees to ensure that there is a systematic and accountable methodology to prioritize patients in emergency situations.[2]

The standard methods for triage normally categorize patients by the colors red, yellow, green, and black. Red is for those needing immediate, life-saving interventions, yellow for patients who need urgent care but can wait for treatment, green for those who have minor injuries and can be delayed, and black for patients who have died or whose injuries are too severe to survive with any type of medical intervention. The standardized systems could also categorize the urgency of clinical treatment into five levels: immediate, level 1; emergency, which could become life-threatening, level 2; urgent, not life-threatening, level 3; semi-urgent, not life-threatening, le-vel 4; and non-urgent, treatment can wait, level 5.

1 Dawn Peta et al., "Triage: A Global Perspective," *Journal of Emergency Nursing* 49, No. 6 (November 2023): 814. https://doi.org/10.1016/j.jen.2023.08.004

2 *Ibid.*

That is a clear indication that, while the triage system could ensure that patients are treated according to their needs in a sequentially prioritized manner without putting them in harm's way, it also would ensure that patients receive a timely intervention with respect to their current condition by way of implementing this classification.[3]

From this operational framework, it is evident that ethical and legal problems arise not from the triage system itself but from the personnel who manage and implement it, particularly in the face of pressure during extraordinary circumstances, such as large-scale viral outbreaks like Covid-19. One of the roadblocks to going down the ethical path is when one starts compromising on such principles to arrive at an ethical decision that requires solid, ethical-proof training, allowing for very clear regulations and legal protection for any healthcare provi-der if something goes amiss. Additionally, with the official announcement that Covid-19 is no longer a global pandemic by the Presidential Decree No. 48 of 2023, dated August 4, 2023, the paper will now be an interesting example drawn from the pandemic experience. The lessons learned from Covid-19 management may inform future ethical and legal framework development for improving preparedness towards dealing with outbreaks of infectious diseases.[4]

The World Health Organization (WHO) declared a public health emergency on January 30, 2020, in response to the recent epidemic of SARS-CoV-2, the most recent strain of the virus that causes coronavirus illness 2019 (Covid-19). Soon after, restrictions were put in place to limit people's freedom of movement, gatherings, religious activities, education, corporate operations, parliamentary meetings, and tribunals due to the rapidly increasing global infection rate. It was considered by many to be one of the most restrictive human activities in modern history. However, the proof of a country's preparedness to face the outcome of a pandemic, particularly one that surpasses the scale and magnitude of all kinds of natural disasters the world has known, continues to spur lively debates. The Covid-19 pandemic has given it the first health emergency of the world and Indonesia. Millions of people got this disease very quickly, and this was not something that Indonesia had faced before. Citing data from the Crisis Centre of the Indonesian Ministry of Health until Monday, June 21, 2023, at 16:00, the number of confirmed cases of the coronavirus globally was 676,681,574 people, while in Indonesia it had reached 6,811,444 people. Then, those who died due to COVID-19 were 161,853 people, and 6,640,216 people were declared cured.[5]

The growing number of daily cases was beginning to overwhelm health staff. As a result, the number of victims kept rising while health care quality declined. The Health Human Resources Development and Empowerment Agency (BPPSDMK) of the Ministry of Health, in its report dated August 17, 2021, stated that 1,891 health workers had died during the Covid-19 pandemic, with the following details: 640 doctors, 98 dentists, 637 paramedics, 377 midwives, 34 nutritionists, and 33 health analysts and 13 community health experts.[6]

---

3 Jafar Bazyar et al., "The Principles of Triage in Emergencies and Disasters: A Systematic Review," *Prehospital and Disaster Medicine 35*, No. 3 (June 2020): 305. https://doi.org/10.1017/S1049023X20000291

4 Kevin Louis Bardosh et al., "Integrating the Social Sciences in Epidemic Preparedness and Response: A Strategic Framework to Strengthen Capacities and Improve Global Health Security," *Globalization and Health 16*, No. 1 (December 2020): 120, https://doi.org/10.1186/s12992-020-00652-6

5 Pusat Krisis Kementerian Kesehatan RI. "Pemantauan Kasus COVID-19 Indonesia." Jakarta, 2023. https://pusatkrisis.kemkes.go.id/covid-19-id

6 Sephin Fitriah and Rio Christiawan, "Jaminan Pemerintah untuk Tenaga Kesehatan yang Terlibat dalam Penanganan Covid-19," *Jurnal Hukum Staatrechts* 6, No. 1 (August 2023): 83. https://doi.org/10.52447/sr.v6i1.7042

The high death rate among both the public and health workers was a burden on the national health service system. This was strongly suspected due to the minimal availability of health facilities and infrastructure, indicated by the lack of Intensive Care Unit (ICU) capacity and ventilators for Covid-19 patients.[7] The demand for medical services in the ICU was very high everywhere during the Covid-19 pandemic. Many countries faced a severe shortage of health workers in the ICU, beds, and ventilators. The worst-case situation, in which patients must be denied admittance to the intensive care unit due to a shortage of beds, had happened.[8] Due to the sharp increase in Covid-19 cases in Indonesia, many medical facilities were already full and could not take on further patients. To address this crisis, an ICU triage system was implemented to prioritize patients based on their likelihood of survival.[9]

Implementing the ICU triage system is an unavoidable need in such conditions.[10] Only patients who are predicted to have a greater chance of survival will receive intensive care in the ICU and ventilators if needed. While this approach is necessary, it raises ethical concerns about equity and access, particularly in low- and middle-income countries like Indonesia, where healthcare resources are already limited.[11] Under the Presidential Decree No. 17 of 2023, Joko Widodo declared that Covid-19 had just ended on June 21, 2023. Its status had also changed to an endemic disease in Indonesia. Determining the state of community health emergency and non-natural disaster due to the transmission of the Covid-19 virus as a national disaster had also been officially revoked. However, the potential for the spread of other diseases is increasing, and the risk of other outbreaks developing into epidemics or pandemics will remain a threat due to various factors, namely human mobilization, urbanization, climate change, increased human and animal contact, and lack of health workers.[12] For example, the threat of a pandemic due to antibiotic resistance is estimated to trigger the deaths of 10–39 million people by 2050.

To ensure the novelty of this article, it is important first to outline several previous studies on the ethical and legal dimensions of triage systems during public health emergencies. A study by Emanuel et al. (2020)[13] titled "Fair Allocation of Scarce Medical Resources in the Time of Covid-19" focuses on the ethical principles guiding ICU triage during the pandemic, particularly in high-income country contexts such as the United States. Their work emphasizes utilitarian approaches to maximize survival but does not specifically analyze legal frameworks or contextual challenges in low- and middle-income countries like Indonesia. In contrast to that prior work, this article provides a comprehensive normative analysis

---

7 Winda Ningsih, "Kesiapan Rumah Sakit dalam Pencegahan Penularan Covid-19 pada Tenaga Kesehatan di Rumah Sakit X Purwodadi," *JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama 10*, No. 1 (August 2022): 110, https://doi.org/10.31596/jkm.v10i1.1033

8 Inger L. Abma et al., "Putting ICU Triage Guidelines into Practice: A Simulation Study Using Observations and Interviews," *PLOS ONE 18*, No. 8 (August 2023): 2. https://doi.org/10.1371/journal.pone.0286978

9 Xiya Ma and Dominique Vervoort, "Critical Care Capacity during the COVID-19 Pandemic: Global Availability of Intensive Care Beds," *Journal Critical Care 58* (August 2020): 96. https://doi.org/10.1016/j.jcrc.2020.04.012

10 *Ibid.*

11 Susilo, Astrid Pratidina; Dewi, Ervin Dyah Ayu Masita. "Dilema Etik di Rumah Sakit saat Keterbatasan Sumber Daya dalam Pandemi Covid-19," KELUWIH : *Jurnal Sosial dan Humaniora 2*, No.2 (October 2021): 96. https://doi.org/10.24123/soshum.v2i2.4647

12 Abraham Haileamlak, "Pandemics Wil be More Frequent," *Ethiopian Journal of Health Sciences 32*, no. 2 (March 2022) 228, http://dx.doi.org/10.4314/ejhs.v32i2.1

13 Ezekiel J. Emanuel et al., "Fair Allocation of Scarce Medical Resources in the Time of Covid-19," *New England Journal of Medicine 382*, No. 21 (May 2020): 2049–2051. https://doi.org/10.1056/NEJMsb2005114

of the ICU triage system from ethical and legal perspectives in Indonesia. It focuses on the most recent regulation, the Minister of Health Decree No. HK.01.07/MENKES/1588/2024, which has not been previously examined in academic records. The paper's novelty lies in incorporating legal theory with ethical principles and regulatory evaluation to adjudicate the legitimacy, fairness, and applicability aspects of triage systems during public health crises. Hence, this study advocates for a legal foundation for emergency healthcare responses in Indonesia and contributes to policy recommendations commensurately under future preparedness in similar outbreaks.

These gaps must be filled, particularly as Indonesia moves from a pandemic phase to an endemic position in accordance with Presidential Decree No. 17 of 2023. By examining the efficacy, equality, and ethical issues of Indonesia's ICU triage procedures during the Covid-19 epidemic and investigating methods to improve healthcare system readiness for upcoming emergencies, this study seeks to close these research gaps. Studies on emergencies are very important for Indonesia because it often experiences conflicts, disasters, and pandemics, and ensures legal certainty and order in emergencies. Emergency policies will always have the potential to result in human rights violations, neglect of citizen rights, and uncontrolled loss of resources. One of the policies in disaster management is the implementation of a triage system that is full of ethical and legal problems. Based on this, this study aims to analyze the moral and legal aspects of implementing a triage system in a disease outbreak disaster.

This study's core lies in the legal and ethical dilemma of implementing an ICU triage system during infectious disease disasters. The main problem examined is how ethical and legal frameworks guide the allocation of limited critical care resources and ensure fairness, accountability, and respect for human rights during emergencies. This article analyzes the ethical and legal dimensions of ICU triage implementation under Indonesian law, particularly as regulated in the recent Minister of Health Decree No. HK.01.07/MENKES/1588/2024, and to evaluate the relevance and effectiveness of these frameworks based on lessons learned from the Covid-19 pandemic. The novelty of this study lies in its normative assessment of Indonesia's latest legal instrument on emergency health responses, which has yet to be comprehensively studied in academic legal literature. By integrating legal theory, ethical principles, and regulatory analysis, this article contributes to the development of a more robust legal foundation for future disaster preparedness and public health emergency management in low- and middle-income countries.

II. Methods

A normative and doctrinal legal research method is employed in this study, focusing on examining legal norms and doctrines on triage systems during outbreaks of disease, specifically in the context of Indonesia's experience with the Covid-19 pandemic. The research uses three types of legal materials: primary legal materials, including key regulations such as Law No. 17 of 2023 on Health, Law No. 24 of 2007 on Disaster Management, Government Regulation No. 28 of 2024 on the Implementation of Law No. 17/2023, Minister of Health Decree No. HK.01.07/MENKES/1588/2024 on Technical Guidelines for the Integrated Emergency Response System, and several Minister of Health Regulations relating to emergency services and health crisis management. Secondary legal materials include academic sources such as textbooks, journal articles, and legal commentaries relevant to triage systems, disaster law, and health law. Tertiary legal materials consist of dictionaries, encyclopedias of law, and other interpretative references.

The research uses both a statute approach, which examines applicable laws and regulations, and a comparative approach, which explores how triage-related legal and ethical frameworks are applied in other jurisdictions. Data are collected through library research, document analysis, and expert interviews with legal scholars and healthcare professionals to gain practical insight into the implementation and interpretation of legal norms. To ensure the credibility of the findings, verification techniques, triangulation

(by cross-verifying literature and interviews), and consistency checks are applied. The data analysis employs an ex-ante and ex-post regulatory assessment to evaluate the effectiveness of Covid-19-related health regulations and identify gaps or redundancies. The discussion is framed through a legal-institutional perspective, assessing the alignment between Indonesia's regulatory framework and established legal-ethical principles in health emergency management. The expected outcome of this study is to uncover the underlying ethical and legal values of current regulations and offer normative recommendations to improve future regulatory responses to health crises in Indonesia.

III. Ethical Considerations

Several countries, such as Argentina[14] and Colombia have adopted legal frameworks for triage prior to the Covid-19 pandemic, providing lessons on how clearly defined institutional responsibilities and professional qualifications can support ethical and legal clarity in emergency healthcare.[15]

Disaster triage systems must be created to distribute limited medical resources during disease outbreaks. However, these systems' guiding moral and legal precepts may clash with socioeconomic standing, perceived social worth, or merit-based assessments. In light of this, this study examines the legal underpinnings and ethical frameworks, including bioethical principles, that govern the equitable application of triage systems in public health emergencies. The first of those considerations would be to include certain bioethical principles within the action into the application of triage in disease outbreaks: (1) beneficence: doing actions for the sake of patient benefit; (2) non-maleficence: avoiding actions that cause unnecessary damage or suffering; (3) autonomy: respecting a patient's right to decide on their care, although this principle may be limited because of emergencies; and (4) justice: fair and non-discriminatory distribution of resources based on medical need.

A triage application can make things even worse in that it could indeed lead to lawsuits against medical personnel. Hence, legal protection is necessary to guarantee that medical personnel are not punished for triage decisions taken in emergencies and to avoid criminalizing the practice of medical personnel who work in their capacity for the public interest. In addition to this notion, patients have rights within such triage systems. The first one is the right to fair medical attention against discrimination on the grounds of race, age, socioeconomic status, or other social conditions. Second is the entitlement to the knowledge of the triage decision. Thus, transparency in the triage system is needed to foster public confidence. The third action is the complaining mechanism whereby patients and their families are afforded legal avenues to challenge triage decisions if their rights are said to have been violated.

Indonesia is one of the world's most disaster-prone countries, affected by natural and human-induced hazards. These vulnerabilities highlight the urgent need for a robust and integrated disaster management system to mitigate the secondary effects of disasters such as disease outbreaks.[16] Disease outbreaks are disasters that bring moral issues among several dilemmas. Often applied in disaster management efforts,

14 Eleni (Elena) Douvika, "Comparative Approach of Triage's Legal Regulation," *Bioethica 8*, no. 2 (November 2022): 68. https://doi.org/10.12681/bioeth.31781.

15 George P. Smith, "Crisis Standards of Care and Triage: Medico-Legal Conundrums," *SSRN Electronic Journal*, (June 2024): 751. https://doi.org/10.2139/ssrn.4849110.

16 R Sjamsuhidajat, Putri Dianita Ika Meilia, and Itsna Arifatuz Zulfiyah, "Etika Kedokteran dalam Kegiatan Tanggap Darurat Bencana," *Jurnal Etika Kedokteran Indonesia 4*, No. 1 (February 2020): 1.https://www.academia.edu/107588471/Etika_Kedokteran_dalam_Kegiatan_Tanggap_Darurat_Bencana

the ICU triage system for disease outbreaks is also fraught with various ethical problems. These problems arise due to limited resources (health workers, ICU beds, and availability of ventilators) on the one hand and, on the other hand, the overwhelming number of patients who need these resources.

A reasonable number of patients and sufficient ICU resources make triage of patients in the ICU based on the best interests of the individual patient under normal conditions. The arrangement can be based on first-come, first-served patients, or the priority to be helped is the worst-case patients with little hope of being saved. The ethical issues under normal conditions regarding the implementation of ICU triage are not as significant as when an overwhelming number of patients accompany a disease outbreak. Healthcare professionals must make tough choices for the community's good while honoring individuals' rights when demand exceeds capacity, as occurs during an infectious disease outbreak.[17]

There are two ethical approaches to triage in disease outbreak disasters- egalitarianism and utilitarianism. Though both parameters are quite different, both throw light on these parameters. It comes to approaches in which equal access to care means a person has an equal right to access health care as others, irrespective of their status. On the other hand, utilitarian health care emphasizes that health care will be directed to those whose treatment would have the greatest cumulative benefit for all other individuals.[18]

Egalitarianism only uses considerations of needs. It rejects considerations of the probability of survival of patients. When faced with the decision to save five patients or one patient, doctors and nurses should flip a coin because that would give each patient an equal chance of getting what is most important to them: ICU care and a ventilator. When it is impossible to save all patients, egalitarianism requires a lottery or other procedure to allocate resources fairly. The downside of egalitarianism is that by using a lottery to decide on resource allocation, there is a risk that patients with a higher probability of survival may not get the care they need, which could be considered a harmful action.

Utilitarianism, founded by Bentham (1983),[19] or consequentialism, implies that all human actions are right or wrong, depending on whether the balance of their consequences is good or bad. According to the utilitarian approach to maximizing benefits, priority for ICU care and getting a ventilator should be given to patients with the highest chance of recovery. Therefore, health services in the triage model should not be provided based on the first-come-first-served model or the worst-case patients with low life expectancy, but by properly considering the patient's risks, benefits, and life expectancy. A triage plan is required to provide the most benefit to the greatest number of people and minimize the number of patients who cannot access essential care resources.[20] According to Savulescu, the utilitarian approach offers a rational first consideration to direct triage in a disease outbreak crisis.[21] Triage has been practiced in hospitals worldwide and has proven helpful in identifying and

17 B M Morrow et al., "Critical Care Triage during the COVID-19 Pandemic in South Africa: A Constitutional Imperative!," *South African Medical Journal 110*, No. 12 (November 2020): 1176. https://scielo.org.za/pdf/samj/v110n12/16.pdf

18 Julian Savulescu, Ingmar Persson, and Dominic Wilkinson, "Utilitarianism and the Pandemic," *Bioethics 34*, No. 6 (July 2020): 623. https://doi.org/10.1111/bioe.12771

19 Jeremy Bentham, *Deontology; Together with a Table of Springs of Action; and The Article on Utilitarianism (England:* Oxford University Press, 1983): 202.

20 Ryan C. Maves et al., "Triage of Scarce Critical Care Resources in COVID-19 An Implementation Guide for Regional Allocation," *Chest 158*, No. 1 (July 2020): 213. https://doi.org/10.1016/j.chest.2020.03.063

21 Julian Savulescu, James Cameron, and Dominic Wilkinson, "Equality or Utility? Ethics and Law of Rationing Ventilators," *British Journal of Anaesthesia 125*, No. 1 (July 2020): 12. https://doi.org/10.1016/j.bja.2020.04.011

prioritizing sick patients for emergency resuscitation, especially in resource-limited settings.[22] One of the triage frameworks proposed by Emmanuel is to maximize the benefits obtained from scarce resources.[23] This action will help achieve the best possible outcome in a crisis scenario, aiming to save as many lives as possible and minimize overall suffering. This approach seeks to make rational, evidence-based decisions to allocate resources fairly and effectively, creating the most significant benefit for the most significant number of people under challenging conditions.

Ethical issues related to the triage of infectious disease outbreaks amidst limited resources can also be analyzed from the perspective of four ethical principles: beneficence, nonmaleficence, justice, and autonomy.[24] When there is a disease outbreak and more patients need intensive care than ICUs and ventilators are available, the beneficence principle presents unique difficulties. It needs to be applied carefully and critically. To treat the illness, triage decisions must be made with the maximum number of patients in mind. This means that some patients may not receive the level of intervention that would be considered "best" individually under normal circumstances. Beneficence must be administered collectively under these circumstances, not only to the patient but also to the entire patient group. This will necessitate striking a balance between the interests of each patient and the group of patients. Fairness, openness, and public involvement must be carefully considered while making these difficult and frequently contentious decisions. In practice, beneficence often has to be balanced with the principle of nonmaleficence, especially in public health crises.

Nonmaleficence, often considered equivalent to the well-known ethical *maxim primum non nocere* or do not harm, is the only one of the four principles that encourages physicians to do nothing that causes harm.[25] Specific norms of the principle of nonmaleficence include, for example, "do not kill," "do not cause pain or suffering," "do not cripple," "do not offend," or "do not take away the right to life".[26] The principle of nonmaleficence will be particularly pertinent and difficult to implement in the case of a disease outbreak due to the limited resources and extreme strain on the health system. The principle of nonmaleficence requires doctors and nurses to make decisions that offer limited potential harm to the patients. This means in terms of triage, prioritizing those who would most likely survive the intervention while also looking into well-meant strategies to avoid or minimize harm to other patients who cannot get it. It also considers how to avoid needless medical procedures that can worsen the patient's prognosis or result in further agony. In an emergency, for instance, it might be wasteful of resources to put a ventilator on a patient with a very poor survival probability. However, it may also cause additional suffering to the patient.

Ethical theory states that justice is the goal of law.[27] The content of the law is entirely determined by

---

22 George, Aaron Samuel; Ganesan, Priya; Christopher, Jeyalinda; Paul, Sheeba, "A review of triage practices and evolution of christian medical college, Vellore triage system (CMCTS) during the COVID-19 pandemic," *Current Medical Issues 19*, no. 4 (October 2021): 292, https://doi.org/http://dx.doi.org/10.4103/cmi.cmi_77_21

23 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," *New England Journal of Medicine, 382* No.21, (2020 May): 2049. http://doi.org/10.1056/NEJMsb2005114

24 Basil Varkey, "Principles of Clinical Ethics and Their Application to Practice," *Medical Principles and Practice 30*, No. 1 (June 2020): 17. https://doi.org/10.1159/000509119

25 Vittorio Bufacchi, "Justice as Non-Maleficence," *Theoria 67*, No. 162 (March 2020): 1. https://doi.org/10.3167/th.2020.6716201

26 Yoann Della Croce, "Epistemic Injustice and Nonmaleficence," *Journal of Bioethical Inquiry 20,* No. 3 (September 2023): 449. https://doi.org/10.1007/s11673-023-10273-4

27 Van Apeldorn, *Pengantar Ilmu Hukum, Terjemahan dari Inleiding Tot De Studie Het Nederlandse Recht oleh Oetarid Sadino*, (Jakarta: Pradya Pramita, 1990), 16.

the understanding of what is considered fair and unfair, so it tends to ignore real situations. The law is a general guideline on what should be done and guides individual behavior in social life. This theory is considered unbalanced because it emphasizes the aspect of justice too much, but ignores actual conditions. The principle of justice, which emphasizes equal and fair treatment for each individual, tries to be balanced with the principle of benefit, which focuses on maximizing benefits for as many people as possible, creating a dilemma. In the event of a disease outbreak with a large number of patients, the dilemma will be apparent when doctors and nurses must decide between allocating limited resources to save the lives that are most likely to be saved or sharing them evenly, even though it means the overall outcome may be less than optimal, likewise, with the considerations used by doctors and nurses to save lives in the triage process, such as age, health condition, or potential socio-economic contribution of a patient. This process will undoubtedly raise various ethical questions because every human has an equal right to receive health care.

All patients with the same caseload who require ICU care and ventilation should be carefully assessed equally and according to standard criteria for their likelihood of survival to hospital discharge before triage decisions are made.[28] Distributive justice should ensure that triage decisions are made based on objective, transparent, and ethical criteria to maximize overall benefits and minimize harm, considering factors such as chances of survival, urgent medical needs, and potential for recovery. Prioritizing patients based on chances of survival is a pragmatic measure in emergencies. Discussions around this topic are complex and controversial, with no single best answer. However, it also raises questions about the value of life, equity, and how society determines who 'deserves' a chance to live when resources are limited. Health systems need to design transparent, fair, and consistent triage protocols that respect the principles of distributive justice and ensure that decisions are made ethically and fairly. Moral sensitivity, bioethical reasoning, and scientific knowledge should always accompany decisions about distributive justice related to respect for the dignity and rights of patients to health and a decent death.[29]

Patient autonomy is a key element in protecting human dignity and in its interaction with the law in the medical field, where the right to autonomy reflects the freedom to deal with the patient's illness. In general, there are several methods to apply the principle of autonomy in medical practice, one of which is by conveying accurate information (telling the truth), respecting the privacy of others, protecting confidential information, obtaining consent for interventions with patients, and helping others make important decisions when asked (when asked, help others make important decisions).[30] By implementing these principles, doctors can ensure that patients' rights to autonomy are respected, which ultimately helps maintain patients' dignity and freedom in dealing with their health conditions. Like the other four ethical principles, autonomy must be considered with other moral principles and may sometimes need to be ignored. For example, in a disaster emergency such as the Covid-19 pandemic, the ethical principle of autonomy may be limited because the steps taken need to consider the interests of society as a whole. Restrictions on autonomy can also come from the patient's request if the patient's autonomous

28 Kathrin Knochel et al., "Translating Theories of Justice into a Practice Model for Triage of Scarce Intensive Care Resources during a Pandemic," *Bioethics 38*, No. 3 (March 2024): 228. https://doi.org/10.1111/bioe.13198

29 Rubén Darío Camargo Rubio, "Los Aspectos Morales Bioéticos y Científicos Guían Las Decisiones En El Contexto de Recursos Escasos Durante La Pandemia Por COVID-19," *Acta Colombiana de Cuidado Intensivo 21*, No. 3 (July 2021): 212. https://doi.org/10.1016/j.acci.2020.10.005

30 Sofia J.A, "Kajian Penerapan Etika Dokter pada Pemberian Pelayanan Kesehatan di Era Pandemi Covid-19." *Jurnal Hukum dan Pembangunan Ekonomi 9*, No. 1 (July 2021): 16. https://doi.org/10.20961/hpe.v9i1.52592

actions have the potential to endanger others, in cases of infectious diseases, when people do not have the capacity or competence to take autonomous action (such as infants, children, or people with mental disorders). Some legal provisions or regulations regulate this (for example, in Article 276 letter d of Law No. 17 of 2023 on Health).

Restrictions on patient autonomy during an infectious disease outbreak are based more on efforts to better assist in allocating limited resources more appropriately and fairly. Efficiency means using these resources to maximize their benefits, while justice means distributing limited resources as evenly and fairly as possible among patients. Thus, it is hoped that more people will receive the care they need and, ultimately, save more lives. All of these actions aim to achieve the welfare and safety of society as a whole. The study by Purwacaraka et al. (2024)[31] showed that of the 52 respondents, 73.1% carried out triage correctly, and 80.8% managed emergencies. The study's results also revealed a relationship between the accuracy of triage and the success of emergency nursing care in the ICU or emergency room at the Tulungagung Regional Hospital. The accuracy of triage by nurses has a direct impact on the effectiveness of emergency management.

IV. Legal Considerations

Natural, non-natural, and social disasters are the three categories into which the Law No. 24 of 2007 on Disaster Management divides them. Non-natural disasters are events or a set of non-natural occurrences, such as failure to achieve technological progress, failure of the modernization process, epidemics, and the spread of disease outbreaks. Non-natural catastrophes are special because they provide a persistent risk to public health, particularly during epidemics or outbreaks. An increase in the number of victims and/or fatalities of infectious diseases that spread quickly over a wide range of regions defines an epidemic, according to Article 1, paragraph (3) of Law No. 17 of 2023 on Health. It spreads over a wide geographic area, including continents and nations, whereby the outbreak of the Covid-19 pandemic is the most recent example of diseases that qualify as a non-natural disaster. In contrast to natural disasters, which are typically far more unpredictable and uncontrollable, non-natural disasters involve elements under human control or regulation.

The Spanish flu, measles, polio, SARS, and Covid-19 epidemics are examples of non-natural disasters that can be learned from, as they may recur.[32] Pandemics and other non-natural disasters will persist as a threat in the future and pose significant difficulties for the healthcare system. In accordance with Article 173 paragraph (2) and Article 189 paragraph (1) letter f of Law No. 17 of 2023 on Health, hospitals and other healthcare facilities will treat pandemic victims as part of the consolidation management program. During a pandemic disaster, most hospitals and other healthcare facilities have thronged with individuals seeking medical care. A significant increase in the number of patients who are victims of pandemic disasters can be caused by the rapid transmission of germs, intensive mobility and social interaction, and a lack of population immunity. There will also be a significant increase in patients in critical condition who require special treatment in the ICU, which has minimal capacity. Doctors must make "tragic choices" and triage patients with such diseases.[33]

---

31 Manggar Purwacaraka et al., "Hubungan Ketepatan Triase dengan Keberhasilan Penatalaksanaan Tindakan Keperawatan Kegawatdaruratan Ruang IGD di Rumah Sakit Daerah Tulungagung," *Professional Health Journal 5*, No. 2 (January 2024): 597. https://doi.org/10.54832/phj.v5i2.681.

32 Santy Widi Pratiwi, "Analisis Kelembagaan Bencana: Studi Kasus Penanggulangan Bencana Non Alam Covid-19 Di Kota Salatiga," JIIP: *Jurnal Ilmiah Ilmu Pemerintahan* 6, No. 2 (September 2021): 244. https://doi.org/10.14710/jiip.v6i2.11193

33 Eliana Close et al., "Legal Challenges to ICU Triage Decisions in the COVID-19 Pandemic: How Effectively Does the Law Regulate Bedside Rationing Decisions in Australia?," *University of New South Wales Law Journal 44*, No. 1 (April 2021): 11. https://doi.org/10.53637/FSJG1698

The Regulation of the Head of the National Disaster Management Agency No. 13 of 2010 contains disaster search, rescue, and evacuation guidelines. This explains triage as prioritizing the handling of disaster victims based on the patient's "ill" condition. This triage aims to maximize the number of lives that can be saved with limited resources. The implementation of this triage system is implicitly reflected in Article 189, paragraph (1), letter c of Law No. 17 of 2023 on Health, which states that hospitals must carry out emergency services according to their service capacity.

Triage prioritizes limited medical resources in a conflict, natural disaster, or other societal calamity. The Covid-19 outbreak has put a great deal of burden on health care access in many communities. It had been tragic when vital resources like ventilators and intensive care units became scarce and limited.[34] The triage role requires a thorough clinical assessment and a relevant knowledge base to identify non-urgent complaints and symptoms of life-threatening conditions. The goal is to get the right person to the right place, at the right time, for the proper consideration, and within the context of available resources.[35] Priority setting in a triage system is often a challenging and emotional decision that must be made quickly by doctors and nurses. Priority setting is carried out based on Article 7, paragraph (3) of the Regulation of the Minister of Health No. 4 of 2018 on Hospital Obligations and Patient Obligations, which emphasizes that triage is a rapid screening to determine treatment priorities. Disaster triage will then use a marking system intended to group priorities: (1) those who are likely to die even if treated, (2) those who are likely to live even if not treated, and (3) those who are likely to live if treated, but will die if not. Those in the third category will be given priority, especially if their medical condition is urgent and the procedures required to stabilize the patient are relatively simple.

Patients with the best chance of survival and an acceptable quality of life will be prioritized.[36] The patient's chronological age is usually the most common factor considered during triage decisions to avoid ICU care. This is often based on the reasoning that increasing age makes people susceptible to many life-limiting and life-threatening conditions and significantly increases the risk of poor and failed ICU outcomes resulting in death. In addition, elderly patients show a weakened immune response to infection due to aging. This likely contributes to the high mortality rates associated with disease outbreaks observed in the elderly. Chronological age should not be the sole criterion for ICU admission.[37] The approach to determining who should receive ICU access should be based on various objective and ethical criteria. These criteria may include predicting the patient's poor progression based on their current and underlying illnesses to survive and recover from a critical illness. This will require a comprehensive evaluation of the patient's overall condition. Thus, it is not that patients are denied ICU care solely because of their age, but rather that a comprehensive evaluation of their medical condition and the potential outcomes of their care suggests that limited ICU resources may be of more significant life-saving benefit if allocated to other patients with a higher chance of recovery.

---

34 Andreas Tutie, Ivar Krumpal, and Friederike Haiser, "Triage in Times of COVID-19: A Moral Dilemma," *Journal of Health and Social Behavior 63*, No. 4 (December 2022): 560. https://doi.org/10.1177/00221465221080958

35 Peta, Dawn, Walter Sergio Lugari, and Nurul'Ain Ahayalimudin. "Triage : A Global Perspective." *Journal of Emergency Nursing 49*, no. 6 (November 2023): 814. https://doi.org/10.1016/j.jen.2023.08.004

36 R. Jaziri and S. Alnahdi, "*Choosing Which COVID-19 Patient to Save? The Ethical Triage and Rationing Dilemma," Ethics, Medicine and Public Health 15 (October-December 2020)*: 7. https://doi.org/10.1016/j.jemep.2020.100570

37 G M Joynt et al., "The Critical Care Society of Southern Africa Consensus Statement on ICU Triage and Rationing (ConICTri)," *South African Medical Journal 109*, No. 8b (August 2019): 36. https://pmc.ncbi.nlm.nih.gov/articles/PMC10503494/

Triage carried out during a disease outbreak disaster is one of the important steps in disaster management efforts. Article 394 of Law No. 17 of 2023 on Health requires each individual to comply with all extraordinary event and outbreak management activities the central and regional governments carry out. Compliance with decisions made in the triage process is part of compliance with overall disease outbreak management efforts. Article 400 of the same law explicitly states that everyone is prohibited from obstructing the implementation of response efforts, which implicitly includes compliance with triage procedures. Based on the explanation of Article 400, obstructing the implementation of efforts to control a disease outbreak can be actions that do not comply with the provisions set, such as physically obstructing doctors and nurses on duty, or spreading false information. In the context of triage, this can mean refusing to accept triage decisions or taking actions that interfere with the implementation of triage policies, such as demanding treatment that does not match the established priorities.

The principle of triage must reflect an efficient, fair, and ethical approach to allocating limited resources during a public health crisis. This hospital obligation is regulated in Article 7, paragraph (1) of the Regulation of the Minister of Health No. 4 of 2018, which requires hospitals to provide emergency services according to their capacity, including through the implementation of the triage process. The goal is to optimize the use of limited ICU resources by prioritizing those with the highest chance of survival. However, this must not be treated as an unjust discrimination against patients based on their ages or health conditions, and, instead, as a measure to make tough calls where those needing the ICU cannot all be accommodated.

There is no place for arbitrary or unfair discrimination. The patient should not face any overt or covert differential treatment concerning race, ethnicity, gender, marital status, tribal or national origin, social status, skin color, sexual orientation, religion, beliefs, culture, language, and birthplace. Discrimination on account of race or ethnic group goes against the 1945 Constitution of the Republic of Indonesia, especially Article 27 paragraph (1), Article 28B paragraph (1), Article 28D paragraph (1), and Article 28I paragraphs (1) and (2). In addition, acts of racial and ethnic discrimination would also constitute breaches against Law No. 29 of 1999 on the Ratification of the International Convention on the Elimination of All Forms of Racial Discrimination, as well as Law No. 39 of 1999 on Human Rights. KODEKI of Indonesia Medical Code of Ethics (2012) article 10 also emphasizes that medical personnel must treat patients without discrimina- ting against them based on race, religion, ethnicity, social status, physical condition, or financial ability.

Not all patients may be able to receive assistance if there are more patients in need of ventilators and access to the intensive care unit than me- dical resources available. When doctors and nurses decide who should be prioritized for ICU health services with limited resources, this condition acts as a coercive force. Because the disease outbreak affects people's rights to life and protection, it is crucial to remember that the decision addresses an emergency rather than disregarding people's fundamental rights. According to J. E. Jonkers, coercive force (overmatch) includes absolute, relative, and forced circumstances or an emergency (noodtoestand). An emergency can be a legitimate reason, namely when someone faces a dilemma to choose between committing an unlawful act or sacrificing a greater interest. In such a situation, the law justifies unlawful acts if the purpose is to protect a more significant interest.

Law No. 1 of 2023 on the Criminal Code in Article 33 has expressly regulated that actions that should be prohibited can be excluded if carried out in an emergency that needs to be appreciated. This article aligns with the criminal law principle of necessitas facit licitum quod (a forced situation allows what was previously not permitted by law). This principle is fundamental because it can be used as a legal aspect of doctors' dives into image implementation when triaging systems for pandemic disasters. As long as doctors carrying out their professional duties are in line with legal regulations, then in

the criminal regulations in Indonesia, they should be guaranteed and protected by law by the state.

Legal protection for doctors, which is expressly stated, is critical, especially in crises such as disease outbreaks or disasters. Article 275, paragraph (2) of Law No. 17 of 2023 on Health exempts doctors and nurses who provide health services in disaster situations from compensation claims. Likewise, Article 393 paragraph (1) of the same law confirms the rights of doctors and nurses to legal protection, security, and health insurance in carrying out their duties during a disaster. The existence of these two articles will reduce the fear of doctors and nurses about lawsuits so that they can be more focused and calm in their efforts to save lives based on medical standards and professional ethics.

Prioritization in triage aims to maximize the overall benefit to society by saving as many lives as possible within limited resources. This does not mean sacrificing individuals for no reason, but making difficult decisions for the greater good. The issuance of regulations as a legal basis for transparent triage in disasters will clearly and firmly guide doctors and nurses, or all components of society, in managing disease outbreaks transparently and fairly. Thus, the target of legal benefits in the form of achieving bonum commune, namely, general welfare, will be realized in its efforts to benefit humanity.[38]

An essential ethical and legal aspect that must be incorporated in the triage system is found in the provisions of the Minister of Health Decree No. HK.01.07/MENKES/1588/2024 on the Technical Guidelines for Integrated Emergency Management. The regulation, therefore, requires integrating the triage system, which also calls for a common and across-sector approach in building the medical-ethical components of health facilities. Most particularly, when public health emergencies or disasters occur, the triage process serves under the principles of beneficence and distributive justice, where objective assessments of patients' conditions will result in prioritizing those who are more likely to benefit from critical care interventions. This is established in Law No. 17 of 2023 on Health and its implementing regulation, Government Regulation No. 28 of 2024. It sets the normative framework for the equitable provision of emergency healthcare services and legal protection for healthcare professionals working in extreme conditions. In addition, Law No. 24 of 2007 on Disaster Management emphasizes that the state will ensure a safe and legally protected environment for medical personnel during disaster response operations. Healthcare workers shall not be subject to any legal proceedings or liabilities for acts taken in accordance with accepted medical standards under crisis conditions. Complementing provisions include Government Regulation No. 47 of 2016 on the Health Facilities and some ministerial regulations: Minister of Health Regulation No. 19 of 2016 on the Integrated Emergency Management System, No. 47 of 2018 on Emergency Services, and No. 75 of 2019 on Health Crisis Management. These all create a legal edifice that supports and promotes efficient and fair triage implementation. Ethically, these rules are aligned with the principles of nonmaleficence, justice, accountability, and transparency that operate under limited resources and ensure legal protection of the healthcare workers. Thus, as these legal instruments provide, the integrated triage system will be seen as the state's effort to realize bonum commune through ensuring just and lawful medical decision-making during health emergencies.

Law No. 17 of 2023 is one of the backbone laws that hold the legal grounds of healthcare services in the Republic of Indonesia: a sweeping health law that replaces the preceding health law. Unlike the previous law, this law emphasizes principles of equity and non-discrimination and the state's obligation to ensure the presence of health services, even in emergencies. Some specific provisions in this law stipulate that health facilities must continue to provide services even in situations of limited resources—a fundamental

38 Yovita Arie and Slamet Suhartono Mengesti, *Ilmu Hukum Kontemporer : Menembus Batas Kekakuan Hukum Normatif.* (Malang: Setara Press, 2020), 12.

legal basis for the implementation of triage during disasters or outbreaks.

At the level of technical regulation, the Minister of Health Decree No. HK.01.07/MEN KES/1588/2024 on Technical Guidelines for the Integrated Emergency Response System offers detailed guidelines for all emergency response activities. It lays down the framework of all medical emergency response procedures, including what category should be applied to which patient as judged by objective medical criteria and under crisis conditions by healthcare personnel. It also emphasizes coordination and efficient use of resources, along with equal distribution among facilities.

These provisions articulate with principles of administrative law, which require state officials—including, thus, healthcare personnel within the public service delivery—to conduct their affairs in terms of the law in keeping with human rights, among them the right to health. In this, the triage system acts not only as a medical tool but also as a legal one aimed at ensuring disaster governance in an impartial and accountable fashion. Such legal instruments are thus regarded as primary references on all triage forms, especially under resource-scarce situations brought on by a disaster or pandemic. Without adequate awareness and implementation of relevant positive laws, policies for triage will be susceptible to breaches on ethical grounds; they may turn contrary to legal standards regarding patients' rights and legal protections accorded to healthcare workers.

VI. Closing

A. Conclusion

This study has critically examined the ethical and legal ramifications of the ICU triage system in Indonesia during outbreaks of infectious diseases, with particular emphasis on how the national regulations stand vis-à-vis international bioethical standards. In many ways, responding to non-natural calamities such as the pandemic raises pressing moral and legal concerns in the face of an evolving collective health care system in Indonesia. The ethical issues then raise consideration of the scarcity of resources to choose which patients receive life-saving intervention by way of ICU beds and ventilators. In applying beneficence, nonmaleficence, justice, and personal autonomy, great caution must be exercised in deciding triage. Utilitarianism and egalitarianism provide some rudimentary moral grounds but must be constrained by the principle of epieikeia during unusual occurrences. Legally, the present underpinning is represented by existing regulations such as Law No. 17 of 2023 on Health and the Minister of Health Decree No. HK.01.07/MENKES/1588/2024, defining a ground to ensure the just implementation of triage systems concerning healthcare providers. With these tools in place, it means ensuring the integrity of healthcare in performing its services amidst public health emergencies while still respecting ethical values.

B. Recommendations

To further strengthen the triage system in future public health emergencies, the following are hereby recommended by this study: (1) uninterrupted provision of ethics and legal training for healthcare workers; (2) incorporation of ethical review mechanisms into emergency response protocols; and (3) adjustment of each national regulation under the standards of modern bioethics, public health ethics, and human rights. These measures are imperative to guarantee public welfare and preserve the integrity of triage decisions in terms of fairness, transparency, and resilience during crises.

References

Abma, Inger L., Gert J. Olthuis, Irma T. H. M. Maassen, Marjan L. Knippenberg, Miriam Moviat, Annie J. Hasker, A. G. Buenen, Bernard G. Fikkers, and Anke J. M. Oerlemans. "Putting ICU Triage Guidelines into Practice: A Simulation Study Using Observations and Interviews." *PLOS ONE 18*, No. 8 (August 2023): 1–20. https://doi.org/10.1371/journal.pone.0286978

Abraham Haileamlak. "Pandemics Wil be More Frequent." *Ethiopian Journal of Health Sciences 32*, No. 2 (March 2022): 228. https://doi.org/10.4314/ejhs.v32i2.1

Apeldorn, Van. *Pengantar Ilmu Hukum, Terjemahan dari Inleiding Tot De Studie Het Nederlandse Recht oleh Oetarid Sadino.* Jakarta: Pradya Pramita, 1990.

Arie, Yovita and Slamet Suhartono Mengesti. *Ilmu Hukum Kontemporer: Menembus Batas Kekakuan Hukum Normatif.* Malang: Setara Press, 2020.

Bardosh, Kevin Louis, Daniel H. de Vries, Sharon Abramowitz, Adama Thorlie, Lianne Cremers, John Kinsman, and Darryl Stellmach. "Integrating the Social Sciences in Epidemic Preparedness and Response: A Strategic Framework to Strengthen Capacities and Improve Global Health Security." *Globalization and Health 16*, No. 1 (December 2020): 1–18. https://doi.org/10.1186/s12992-020-00652-6

Bazyar, Jafar, Mehrdad Farrokhi, Amir Salari, and Hamid Reza Khankeh. "The Principles of Triage in Emergencies and Disasters: A Systematic Review." P*lobalization and Health 16*, No. 3 (June 2020): 305–313. https://doi.org/10.1017/S1049023X20000291

Bentham, Jeremy. *Deontology ; Together with a Table of Springs of Action; and the Article on Utilitarianism.* England: Oxford University Press, 1983.

Bufacchi, Vittorio. "Justice as Non-Maleficence." *Theoria* 67, No. 162 (March 2020): 1–27. https://doi.org/10.3167/th.2020.6716201

Close, Eliana, Simon Young, Tina Cockburn, Lindy Willmott, and Ben P White. "Legal Challenges to ICU Triage Decisions in the COVID-19 Pandemic: How Effectively Does the Law Regulate Bedside Rationing Decisions in Australia?" *University of New South Wales Law Journal 44*, No. 1 (April 2021): 9–59. https://doi.org/10.53637/FSJG1698

Croce, Yoann Della. "Epistemic Injustice and Nonmaleficence." *Journal of Bioethical Inquiry 20*, No. 3 (September 2023): 447–456. https://doi.org/10.1007/s11673-023-10273-4

Darmawati, Noviani and Iman Rozani. "Pengaruh Alokasi Bantuan Pengendalian Penyakit Avian Influenza (Flu Burung) Selama Kurun Waktu 2013-2016." *Jurnal Ekonomi Pertanian dan Agribisnis 5*, No. 1 (January 2021): 156–167. https://doi.org/10.21776/ub.jepa.2021.005.01.15

Eleni (Elena) Douvika, "Comparative Approach of Triage's Legal Regulation," *Bioethica 8*, no. 2 (November 2022): 65–84. https://doi.org/10.12681/bioeth.31781

Emanuel, Ezekiel J., Govind Persad, Ross Upshur, Beatriz Thome, Michael Parker, Aaron Glickman, Cathy Zhang, Connor Boyle, Maxwell Smith, and James P. Phillips. "Fair Allocation of Scarce Medical Resources in the Time of Covid-19." *New England Journal of Medicine 382*, No. 21 (May 2020): 2049–2055. https://doi.org/10.1056/NEJMsb2005114

Fitriah, Sephin and Rio Christiawan. "Jaminan Pemerintah untuk Tenaga Kesehatan yang Terlibat dalam Penanganan Covid-19." *Jurnal Hukum Staatrechts 6*, No. 1 (August 2, 2023): 80–96. https://doi.org/10.52447/sr.v6i1.7042

George, Aaron Samuel; Ganesan, Priya; Christopher, Jeyalinda; Paul, Sheeba, "A review of triage practices and evolution of christian medical college, Vellore triage system (CMCTS) during the COVID-19 pandemic," *Current Medical Issues 19*, no. 4 (October 2021): 292–299, https://doi.org/http://dx.doi.org/10.4103/cmi.cmi_77_21

J. A., Sofia. "Kajian Penerapan Etika Dokter pada Pemberian Pelayanan Kesehatan di Era Pandemi Covid-19." *Jurnal Hukum dan Pembangunan Ekonomi 9*, No. 1 (July 2021): 16–25. https://doi.org/10.20961/hpe.v9i1.52592

Jaziri, R., and S. Alnahdi. "Choosing Which COVID-19 Patient to Save? The Ethical Triage and Rationing Dilemma." *Ethics, Medicine and Public Health 15* (October 2020): 1–12. https://doi.org/10.1016/j.jemep.2020.100570

Joynt, G M, D P Gopalan, A A Argent, S Chetty, R Wise, V K W Lai, E Hodgson, et al. "The Critical Care Society of Southern Africa Consensus Statement on ICU Triage and Rationing (ConICTri)." *South African Medical Journal 109*, No. 8b (August 2019): 36–52. https://pmc.ncbi.nlm.nih.gov/articles/PMC10503494/

Knochel, Kathrin, Eva Maria Schmolke, Lukas Meier, and Alena Buyx. "Translating Theories of Justice into a Practice Model for Triage of Scarce Intensive Care Resources during a Pandemic." *Bioethics 38*, No. 3 (March 2024): 223–332. https://doi.org/10.1111/bioe.13198

Maves, Ryan C., James Downar, Jeffrey R. Dichter, John L. Hick, Asha Devereaux, James A. Geiling, Niranjan Kissoon, et al. "Triage of Scarce Critical Care Resources in COVID-19 An Implementation Guide for Regional Allocation." *Chest 158*, No. 1 (July 2020): 212–225. https://doi.org/10.1016/j.chest.2020.03.063

Morrow, B M, P D Gopalan, I Joubert, F Paruk, and A Pope. "Critical Care Triage during the COVID-19 Pandemic in South Africa: A Constitutional Imperative!" *South African Medical Journal 110*, No. 12 (November 2020): 1176–1179. https://scielo.org.za/pdf/samj/v110n12/16.pdf

Ningsih, Winda. "Kesiapan Rumah Sakit dalam Pencegahan Penularan Covid-19 pada Tenaga Kesehatan di Rumah Sakit X Purwodadi." *JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama 10*, No. 1 (August 2022): 110–127. https://doi.org/10.31596/jkm.v10i1.1033

Peta, Dawn, Alison Day, Walter Sergio Lugari, Vanessa Gorman, Nurul'Ain Ahayalimudin, and Vientiane Melchizedek T. Pajo. "Triage: A Global Perspective." *Journal of Emergency Nursing 49*, No. 6 (November 2023): 814–825. https://doi.org/10.1016/j.jen.2023.08.004

Pratiwi, Santy Widi. "Analisis Kelembagaan Bencana: Studi Kasus Penanggulangan Bencana Non Alam Covid-19 di Kota Salatiga." *JIIP: Jurnal Ilmiah Ilmu Pemerintahan 6*, No. 2 (September 2021): 234–251. https://doi.org/10.14710/jiip.v6i2.11193

Purwacaraka, Manggar, Rio Ady Erwansyah, Shulhan Arief Hidayat, and Farida Farida. "Hubungan Ketepatan Triase dengan Keberhasilan Penatalaksanaan Tindakan Keperawatan Kegawatdaruratan Ruang IGD di Rumah Sakit Daerah Tulungagung." *Professional Health Journal 5*, No. 2 (January 2024): 597–605. https://doi.org/10.54832/phj.v5i2.681

Pusat Krisis Kementerian Kesehatan RI. "Pemantauan Kasus Covid-19 Indonesia." Jakarta,2023. https://pusatkrisis.kemkes.go.id/covid-19-id/.

Rubio, Rubén Darío Camargo. "Los Aspectos Morales Bioéticos y Científicos Guían Las Decisiones En El Contexto de Recursos Escasos Durante La Pandemia Por COVID-19." *Acta Colombiana de Cuidado Intensivo 21*, No. 3 (July 2021): 212–220. https://doi.org/10.1016/j.acci.2020.10.005

Savulescu, Julian, Ingmar Persson, and Dominic Wilkinson. "Utilitarianism and the Pandemic." *Bioethics 34*, No. 6 (July 2020): 620–632. https://doi.org/10.1111/bioe.12771

Savulescu, Julian, James Cameron, and Dominic Wilkinson. "Equality or Utility? Ethics and Law of Rationing Ventilators." *British Journal of Anaesthesia 125*, No. 1 (July 2020): 10–15. https://doi.org/10.1016/j.bja.2020.04.011

Sjamsuhidajat, R, Putri Dianita Ika Meilia, and Itsna Arifatuz Zulfiyah. "Etika Kedokteran dalam Kegiatan Tanggap Darurat Bencana." *Jurnal Etika Kedokteran Indonesia 4*, No. 1 (February 2020): 1–8. https://www.academia.edu/107588471/Etika_Kedokteran_dalam_Kegiatan_Tanggap_Darurat_Bencana

Smith, George P. "Crisis Standards of Care and Triage: Medico-Legal Conundrums." *SSRN Electronic Journal*, (June 2024): 751–777. https://doi.org/10.2139/ssrn.4849110

Susilo, Astrid Pratidina; Dewi, Ervin Dyah Ayu Masita. "Dilema Etik di Rumah Sakit saat Keterbatasan Sumber Daya dalam Pandemi Covid-19," *KELUWIH: Jurnal Sosial dan Humaniora 2*, No.2 (October 2021): 96–100. https://doi.org/10.24123/soshum.v2i2.4647

Tuti, Andreas, Ivar Krumpal, and Friederike Haiser. "Triage in Times of COVID-19: A Moral Dilemma." *Journal of Health and Social Behavior 63*, No. 4 (December 2022): 560–576. https://doi.org/10.1177/00221465221080958

Varkey, Basil. "Principles of Clinical Ethics and Their Application to Practice." *Medical Principles and Practice 30*, No. 1 (June 2020): 17–28. https://doi.org/10.1159/000509119

Xiya Ma and Dominique Vervoort, "Critical Care Capacity during the COVID-19 Pandemic: Global Availability of Intensive Care Beds," *Journal Critical Care 58* (August 2020): 96–97. https://doi.org/10.1016/j.jcrc.2020.04.012