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TRIAGE IN THE CONTEXT OF COVID-19 PANDEMIC: CONFLICT OF LAW AND ETHICS

Роман Марусенко. ТРІАЖ У РОЗРІЗІ ПАНДЕМІЇ COVID-19: КОНФЛІКТ ПРАВА ТА ЕТИКИ. Життя і здоров'я людини є найвищими соціальними цінностями, держава покликана забезпечувати їх збереження і охорону, зокрема за допомогою системи охорони здоров'я. У разі виникнення непередбачуваних ситуацій з великою кількістю постраждалих, система охорони здоров'я може потребувати запровадження механізмів для встановлення пріоритету надання допомоги. Можливість системи залишатись найбільш ефективною за наявних обмежених ресурсів забезпечує медичне сортування. На жаль, Україна на даний момент стикнулась із ситуацією, коли може бути необхідним тріаж пацієнтів, а рекомендацій, які б враховували специфіку пандемії інфекційного захворювання, немає.

У статті автор досліджує особливості наявних у світі моделей тріажу. Аналізуються принципи та критерії, які можуть бути покладені в основу розробки таких рекомендацій в Україні.

Робиться висновок, що до критеріїв медичного сортування у його первинному розумінні, які забезпечують надання ефективної медичної допомоги найбільшій кількості осіб у ситуації обмежених ресурсів, не належать соціальні критерії. Аналізується етична проблема перерозподілу обмежених людських ресурсів та устаткування, зменшення обсягу та припинення надання спеціалізованої допомоги. Робляться висновки щодо принципів правового захисту медичних працівників у разі прийняття рішення щодо тріажу. Обов'язковою складовою психологічного добробуту медичного персоналу та пацієнтів вбачається розподіл обов'язків щодо тріажу пацієнтів та їх лікування, а також надання пацієнтам психологічної, консультативної, паліативної допомоги.

Пропонуються рекомендації щодо правил тріажу на випадок епідемії. Констатується, що правила тріажу мають бути розроблені якнайскоріше, мають бути публічно доступними, основні засади мають бути зрозумілими потенційним пацієнтам та їхнім близьким. Такі правила повинні захищати лікаря при прийнятті рішення, з одного боку, і надмірно не зарегульовувати процедуру тріажу постраждалих – з іншого.

Ключові слова: *медичне сортування, тріаж, медична етика, пандемія, COVID-19, обмеженість медичних ресурсів.*

Relevance of the study. Medical sorting of casualties has been used since the time of Napoleon Bonaparte in both military and civilian medicine. Despite the use of this concept by the medical staff, the average citizen finds this procedure ambiguous. In the case of medical sorting (triage), the state, which must guarantee the constitutional right to life and health as the highest social value under Article 3 and Article 49 of the Constitution of Ukraine [1], faces an ethical and legal dilemma of prioritizing medical care. The problem is exacerbated by the actual lack of resources in the health care system as a whole. This brings triage from situational, local to national level. This is exactly what happened at a certain phase of the COVID-19 pandemic. The Minister of Health of Ukraine said: «[…] no matter how hard we try to increase the number of beds, there is still a limit, if the occupancy reaches 100%, we will have to activate the medical sorting protocol [...] This will be the indication that our medical system does not withstand» [2]. Peculiarities of triage in the country raise moral, ethical and legal issues both

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for doctors [3] and lawyers [4], and for ordinary citizens [5].

Recent publications review. In the national studies the topic of triage is not covered in great detail. The issue of the lack of domestic studies of sufficient depth on the triage nature and procedures and the need to further address the main moral and legal problems of medical choice was raised by R. Y. Grevtsova [6]. Some studies address medical sorting in relation to a specific range of injuries, such as fractures [7], which are difficult to extrapolate to a wider range of triage situations.

From a worldwide perspective, the triage issue has now received much more attention. Ethical issues of providing medical help in an epidemic having scarce resources are disclosed in the study of A. K. Hakan, C. O. Karadag [8]. The authors come to the conclusion that it is necessary to take into account a large number of factors both at the state and local levels to minimize the consequences of this dilemma. At the same time, the current situation requires adjustment of the triage peculiarities post-factum, taking into account exhaustion of medical resources that earlier were considered sufficient. The authors K. Mebuke, S. Moore [9] analyzed some national triage guidelines and argued that the provision of medical help in conditions of lack of resources should not depend on the victim status as a person with disabilities or with previous medical conditions.

A systematic review of the rules of medical equipment (ventilators) allocation in half of the Amrican states in the event of a ventilator shortage is provided in the works of G. M. Piscitello et al. [10], A. H. M. Antommaria and others [11]. It is argued that such regional rules differ and can sometimes provoke an unfair distribution of this resource in the event of a shortage.

A systematic comparison of triage recommendations during the COVID-19 pandemic of different states was conducted by S. Jöbges and others [12]. The paper systematically reveals the differences and features of triage recommendations on the example of different countries, which can be a qualitative basis for further analysis of such features in our domestic situation.

Despite the existing positions, the issue remains controversial both among experts and officials that elaborate and evaluate decisions in the field. In Ukraine, it has not been systematically studied.

The article's objective is to analyze the existing approaches and principles to patients triage through the prism of legal, ethical challenges, taking into account the real purpose of this concept and to formulate conclusions and recommendations that may be useful for developing such recommendations at the national level in Ukraine.

Discussion. Triage emerged as a result of the medical challenges of Napoleon Bonaparte's army in the late 18th century – beginning of the 19th century. The specificity of the wars, other military operations at that time was that a large number of wounded and wounded infantry, unlike the cavalry, were not evacuated from the battlefield. The soldiers died. The system that was used at that time provided medical help depending on the status of the victims. Medical help to the officer was a priority, even if the need for assistance was not urgent. Instead, the corps of soldiers were replenished through new recruitment among the poor local population.

It is believed that the triage model was offered by military surgeon Dominique Jean Larrey. As a surgeon, he was anxious to restore the soldiers' health. Thinking of the principles of providing help with the greatest possible benefit, he noted: «[…] dangerously wounded must be attended first entirely without regard to rank or distinction and those less severely wounded must wait until the gravely hurt have been operated and addressed. The slightly wounded can go to the hospital in the first and second line, especially officers because the officers have horses» [13, p. 1396]. Thus, he introduced the priority rules to provide medical help to those who needed it the most at that time and would most likely benefit from it. Another invention was «flying ambulances», which quickly evacuated wounded to the place of care and complement the model of timely medical help to as many casualties as possible. Some researchers argue that the authorship of the concept of triage probably belongs to Pierre - François Percy and emphasize the need to distinguish between Napoleonic triage, disaster triage and medical triage [14, p. 4].

The need for triage arises when providing help in a resource-constrained environment [15, p. 11]. There is a qualitative difference between triage in military conditions, triage in determining the priority of providing help to several casualties at the scene or in the emergency department, triage in disasters, epidemics, etc. when simultaneous help to all victims is objectively impossible. Triage in the modern sense pursues the goal of obtaining the best effect/result for the largest number of casualties who have a chance of survival. A prerequisite

for triage is the lack of resources for the simultaneous provision of help (which requires priority establishing). The need for triage is determined by the limitations of different kinds: human resources (medical staff), time for effective medical intervention given the condition of the victims, lack of medical equipment/drugs. The chances of survival are a reasonable assumption that taking into account the condition of the patient and the available opportunities for medical help to improve it.

Triage is a zero-sum game [16], because medical help to one patient simultaneously excludes help to another patient. Triage is a medical sorting of patients and is based on the correlation of the individual interest of the sufferer with the common good – providing effective assistance to as many patients as possible. The emphasis of care shifts from the individual to a large group of people as a whole. The individual interest of a particular person may indeed suffer. We remember that the need for triage arises in a situation where it is impossible to provide help to all people who need it at once for one reason or another. That is, objectively, there will be victims who will not receive help in the first place. The question is: who will be that person. For all the harshness of this statement, it is a reflection of objective reality, an attempt to balance individual and group interests. Triage does not avoid the situation of choice, but makes it open, fair and predictable. Thus, in prehospital care, triage is used in two contexts: a) prioritizing assistance or evacuation while having sufficient resources and b) ensuring the survival of the largest number of victims – with insufficient resources [17, p. 131].

Ukrainian legislation mentions the rules of triage in the Orders of the Ministry of Health [18; 19]. In the author's opinion, who dealt with both instructor work and pre-hospital triage in tactical situations [20], in terms of triage, these documents correctly reflect the main purpose and objectives of triage at least at the prehospital stage. The criteria for sorting are the medical characteristics of the victim, not, for example, age, previous medical conditions or the presence of a specific diagnosis, which will be discussed below. However, the scope of these documents does not cover all situations where triage is required.

From a legal point of view, the consequences of triage (giving priority of help to one person instead of another) may come into conflict with Art. 24 and Art. 49 of the Constitution of Ukraine [1], because all patients are equal in their rights. Assigning a person to the group to whom assistance will be provided last may provoke at least a lawsuit for moral and health damage. In a situation where the number of victims is high and medical aid to all of them is not possible, that cause damage to health or death, the likelihood of litigation increases as well as a risk of criminal prosecution under Art. 139 of the Criminal Code of Ukraine [21]. From the criminal law perspective, the life of all patients is equally valuable, which complicates the situation with triage in the absence of transparent rules for its performance. Countries with a more efficient court systems have already faced hundreds of lawsuits against government agencies based on deficiencies and delays in providing medical help to patients in the situation of shortage of medical resources during the COVID-19 pandemic.

It is important to understand that medical personnel is responsible for the proper triage of patients under established norms/recommendations, i.e. for the absence of undertriage or overtriage. However, he cannot be responsible for the final result – the survival/non-survival of the patient, if the medical treatment was provided appropriately and within the available resources.

The ethical principles of care during epidemics and pandemics determine that decisions about prioritizing patients and allocating limited medical resources can be difficult, but must be fair. Depending on the complexity of the situation, not only selective (minimum necessary) medical interventions are considered acceptable. Sometimes the provision of emergency care can be objectively limited, and in this case it is also acceptable [23, p. 16]. It is important that decisions, whatever they are, are made in advance and communicated openly with stakeholders. This will allow both doctors and patients to accept equal and fair rules and know what to expect.

In a tactical situation or a catastrophe, relatives and friends of the victims usually hear about the consequences a bit after triage at the scene takes place. Therefore, the explanation that everything possible was done to save a person is taken for granted. Instead, during a pandemic in peacetime, the victim is constantly in sight and in contact with relatives, family. In this case, the fact that at a particular point in time the doctor is caring for someone else is perceived negatively «here and now» as a lack of care to the patient who is waiting for it.

In this situation, in our opinion, it is extremely important to provide patients with other non-specialized medical, as well as psychological and palliative care within the available re-

sources. This helps to relieve stress as well as clarify the objective nature of the triage situation.

It is also important that the healthcare professional who conducts triage decision making is legally protected against the possible consequences of his or her objectively determined choice. Relatives and friends of the patient in the search for the causes of deterioration of health or death of this patient may associate these negative consequences with the conscious decision of the doctor on triage, as well as influence to him emotionally in the process of making such decisions. The approach described in some recommendations for creating a group of specialists who will make such decisions collectively and on a professional basis seems rational. This will unify approaches to the triage of patients, help to understand clearly who is competent to make such a decision, and help to get rid of pressure from family and friends on a particular doctor who treats the patient. Ideally, such a group of specialist should be able to sort patients imperatively and not perform other roles in the hospital at the same time [24, p. 276].

Triage rules define a set of decision parameters, which, however, are not always able to take into account all the variety of situations. With this in mind, there will be cases when decisions in situations that look similar to a bystander, but situations will differ: «[…] what is most just in a particular situation may depend upon the availability of resources and the fairest and beneficial way of using and distributing those resources in that specific case» [17, p. 43].

From a legal perspective, the protection of medical personnel involves clear, transparent, publicly available and publicly known triage rules, which will ensure it. World practice shows that even imperfect rules remove the burden of responsibility from the physician and allow to avoid major disputes. Many states already have appropriate recommendations for the triage in the COVID-19 pandemic, as they took into account the experience of the SARS epidemic. Other countries have developed them in a short time. For example, the U.S. plan for pandemic influenza, which has been improving since 2005 [25], has taken into account both A (H1N1) and SARS epidemics and certainly at the time of the pandemic helped the state to be a few steps ahead. Numerous specialized national and regional recommendations were developed in parallel [26]. Unfortunately, Ukraine is not on the list of such countries. Indeed, a procedure for medical sorting of patients with A (H1N1) was approved by the order of the Ministry of Health of Ukraine dated 13.11.2009 №830. However, it regulates only the distribution of patients according to the peculiarities of the necessary care.

The lack of clear rules of the game can provoke lawsuits. For example, in the United States, lawsuits regarding the use of ventilators, which in the event of a shortage may be forcibly redistributed in favor of certain patients [27] were brought. Many consider the existing rules, which set different priorities in different states, discriminatory against certain groups [10, p. 9]. Another example is the effective claims for unpreparedness to respond to critical situations [28]. These and many other examples raise questions about the effectiveness of the response of the domestic health care system. While many countries are implementing new and adjusting existing triage algorithms, no changes have been made to existing rules in Ukraine throughout the pandemic year (relating to a specific category of cases), and no new triage-specific rules have been adopted. Both the practice and the opinions of experts in other countries indicate that triage procedures for a specific category of similar cases, such as pandemics, chemical accidents and others require specific recommendations [29, p. 1378].

When developing triage rules, it is important to understand what criteria will be chosen to prioritize care. Recently, in addition to medical criteria, such rules have included other criteria. For example, some US recommendations regulate triage rules in case of shortage of specialized equipment (ventilators), and provide assignment of the patient to a certain group based on concomitant conditions such as dementia, intellectual disabilities, complex neurological problems and more. They are reasonably being criticized [9]. Another example of triage recommendations reveals the assignment of a patient to a specific group on a non-disease-related basis (age, previous health status). Experts logically point out the inconsistency of such provisions with anti-discrimination and legislation in the field of civil rights protection [30]. Another example is the recommendations of Italian triage experts: «[…] it may become necessary to establish an age limit for access to intensive care» [31]. Thus, an age requirement had to be introduced. Such examples illustrate a not-so-successful approach to avoiding discrimination.

Another important factor is the need to unify the rules at the state level, because regional differences (as the case of the US) can lead to a situation where different rules will give a patient in one region more opportunities to receive higher priority care than the same patient will receive in another region.

In the case of a large-scale pandemic, the probability of a situation in which the doctor

will have a large number of victims and will decide whom to care for increases. Patients will not have an obvious difference in their condition, and triage rules will force to include such patients into one group. In this case, a full-fledged moral problem of choice will emerge: a young patient or an elderly patient, a man or a woman, a child or a pregnant woman, etc. The mechanism of such a moral choice can hardly be normalized.

For example, in Maryland state, priority is given by age, in five U.S. states priority is determined by the principle of first-come, first-served [10, pp. 3-4]. Experts state that without transparent rules, the system will always be skewed in favor of the wealthy or, for example, those who have links [16]. While an age limit criteria borders on discrimination in triage procedure, the principle of first-come, first-served actually means the absence of any triage. If a patient whose life is in danger waits for help until it is given to those who might wait, such a patient may be permanently harmed. A patient who could be saved will die only because he is «last in line.» We believe that the introduction of such a principle in conditions of limited medical resources is very dangerous.

Sometimes triage protocols take into account long-term consequences, such as the life expectancy of the patient after a successful intervention. In such protocols, the indicator of «expected» death within 5 years or «expected» life for more than 5 years will affect the order of medical treatment based on the results of triage [32, p. 6]. The introduction of this criterion is like a kind of artificial selection – the stronger one will always have more chances. This is a form of discrimination prohibited by Ukrainian law, which does not comply with the principle of providing help to those who need it most.

In some cases, experts suggest using the principle of the lottery, which they suggest should help distribute the insufficient medical resources, drugs among a large group of victims [33]. For example, this idea is the basis of a draft protocol currently being developed in the UK in connection with a new wave of the disease: «[…] or patients with a similar prognosis, who cannot be separated in other ways (e.g. by all four parts of the assessment), a random allocation, such as a lottery, may be used» [34]. Note that such a mechanism, although it provides a selection procedure and is used in some recommendations [11, p. 4], but has nothing to do with triage in its original meaning. Random selection of patients for care removes the medical criterion from the medical care procedure. The patient, who could normally have a better chance of surviving, may be unjustifiably removed from the line and die.

Some recommendations do not preclude the establishment of privileges for groups of patients based on economic criteria, which, in our opinion, again raises the question of ethics. Priority for young people, preference for patients who have past merits of a certain grade or belong to a certain professional community, etc. are also applied. Evidently, these ideas have little to do with the model of medical triage of casualties. Rather, they reflect a desire to resolve ethical conflict and meet the current needs of a particular society at the same time – for example, to save the lives of doctors, to preserve the health of young and productive citizens, to spend resources on the healthy instead of the chronically ill, etc. This is an attempt to introduce a kind of «priority» in favor of patients of one quality compared to all others.

From a psychological point of view, lobbying the approach of the need to prioritize age, profession, previous merits, and so on is a desire to satisfy one's interest. Often it is caring for loved ones belonging to the particular group. On the other hand, it can be caring for society as a whole, for example by giving priority to treatment to doctors. They, in turn, are a resource that will help society to cope with the influx of patients. This is a kind of system of «privileged» access to a limited medical resource based on various considerations. Such non-medical criteria provide that the priority is not to provide help to more people but to help those identified by society and those who are «more useful» to that society.

Practice shows that there is no unity in the choice of such «additional criteria». In every society they will be different. According to a classic experiment on such moral choices in a global sample of more than 40 million respondents, the moral choices of different cultures and countries as to who will live and who will have to sacrifice differ [35]. In our opinion, this denies the possibility of direct copying of foreign experience on additional selection criteria when sorting patients by medical staff.

Some researchers indicate that the distribution of patients is impossible without such additional criteria and solely on medical facts because we need solutions that take into account ethical and value components [36, p. 1]. At the same time, a detailed analysis of such criteria shows that they alone create a de facto discriminatory system, and attempts to balance them complicate the triage system. Also, this makes it difficult to reach a public agreement on a par-

ticular system. The World Medical Association points out that in conditions of insufficient medical resources «[…] choice must be based on medical criteria and made without discrimination» [37, sec. 1], «[…] the physician should consider only their medical status and predicted response to the treatment, and should exclude any other consideration based on non-medical criteria» [38, sec. 8.3.1].

When creating triage rules, it is also important not to cross the line when the bureaucratization of the process becomes detrimental to decision-making flexibility. Experts note that the criterion for assigning a patient to a certain group (for example, expectant) in different conditions that lead to the triage (lack of equipment, medication, doctors, etc.) may differ [24, p. 276]: «[…] triage protocols cannot account for every unique situation encountered. Therefore, a basic understanding of the principle of justice can be helpful for situations in which «in the moment» triage decisions need to be made» [17, p. 47].

Another important issue is the possibility to suspend specific care due to reassessment of patient/patients and to redistribution of medical equipment. For the relatives and friends of the patient, this may mean the termination of care, and therefore will be an important ethical and legal issue «that is probably the most horrible of all decisions for a doctor or nurse», – experts say [39]. The doctor must be protected in case of such a decision because it inevitably leads to deterioration of the patient's condition. On the other hand, the rejection of such a decision also inevitably leads to similar consequences, but for another patient. In the eyes of the relatives of one of the patients, such a doctor will be the savior. For the relatives of another patient to react to the situation with understanding (as far as possible), it is essential to have transparent and publicly available rules of triage, as well as deliver psychological support for such patients.

Sometimes the question arises as to the correlation between the well-being of one patient and the well-being of several. Is it «the greatest good for many» to stop helping one patient if this can save several? The question is complex, at first glance the answer may be «yes». Experts give a hypothetical example: the removal of many organs of a healthy person, which will cause his death, to help several patients [40, p. 285]. Whether this can be considered an acceptable sacrifice by one patient for the sake of many is a rhetorical question. The answer becomes not so simple.

The situation is complicated by the fact that the pandemic of the disease, which cannot be controlled, does not allow to unambiguously predict the effectiveness of treatment. It may happen that a patient whose state worsened will survive without a ventilator, or the condition of someone who has allegedly started to recover will deteriorate irreversibly. Many triage recommendations contain provisions on the need for palliative care, as they provide that the patient may initially get into the group that will receive care the last, or his condition may deteriorate in the absence of resources and a decision to reallocate medical resources to benefit of other patients will be made [12]. Besides, recommendations often explicitly indicate that the decision to reallocate resources is not equivalent to killing the patient, and therefore is ethical [41, p. 2053]. The World Medical Association also notes: «[…] despite triage often leads to some of the most seriously injured receiving only symptom control such as analgesia, such systems are ethical provided and they adhere to normative standards. Demonstrating care and compassion despite the need to allocate limited resources is an essential aspect of triage» [38, sec. 8.1].

As shown above, the basic tenets of fair medical triage based on medical indicators have long been developed. Triage based on evidence-based medicine [42] answers is the best both for the legal issues that will inevitably arise and for the ethical challenges. Of course, triage is a psychologically difficult mechanism to perceive. It is a rigid, sometimes brutal, efficiency-oriented system. That is why in part ideas about its «rethinking» in favor of a particular group of people evolve. In our opinion, the system of psychological support, counseling and palliative care should help to make and perceive psychologically complex decisions. These types of care usually require specialists of another category, freeing up the time of medical staff, as well as the limited resource of medical equipment.

As we suggest, the only correct solution to triage patients does not exist, which is demonstrated by the worldwide practice. At the same time, a sufficient and necessary solution to the problem is the harmonization of rules that will be public, clear, understandable and will contain at least main tenets. And, of course, for this purpose formalized rules of triage should be developed in due time since lack of triage rules in the situation of limited medical resources in Ukraine does not promote the fair and efficient decision of the considered ethical and legal

questions.

Conclusions. We can summarize the above statements as follows.

1. Triage in its primary sense can include rules for providing medical care to as many casualties/patients as possible with greater predictable benefits. Other seemingly similar models that take into account social factors or the choice of patients based on the lottery in the presence of a social contract can be used as additional criteria to pursue a goal pre-agreed by this society. But they hardly can substitute a triage or be considered as medical sorting.

2. The development of triage rules should take place as soon as possible after the relevant need arises. Unfortunately, such documents are missing in Ukraine a year after the beginning of the pandemic. Given the experience of other states, to avoid the potential situation of inequality of patients' rights, triage rules should be created. This should be done at the national rather than the local level.

3. The principles and values on which the medical triage system should be based, in particular, are: maximizing benefits for the largest number of patients, equity, equality, non-discrimination, including patients with diseases other than COVID-19.

4. The rules of triage should be transparent and «pervasive» concerning victims of different population groups and with different diseases. The treatment of one disease should not be prioritized over other conditions/diseases that are equally or more life-threatening or health-threatening.

5. Triage rules should be clear and unambiguous for their understanding and interpretation by medical staff, lawyers, relatives and friends of the patients.

6. The protection of medical personnel from stressful situations and the legal consequences of decisions made under the triage recommendations should take place by distinguishing the roles of triage providers and medical professionals, as well as by transparent and unambiguous description of criteria for triage decisions.

7. The rules of triage should contain criteria, the procedures of redistribution of limited human and material resources in case of reassessment of the condition of patients, termination of providing the patient with specialized medical care.

8. The triage procedures should be supported by psychological, counseling, palliative care because the choice between the lives of two patients will always generate complex reactions. Psychological protection and support should be provided for both medical staff and patients, their loved ones.

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Abstract

In the article the author explores the features of the world's existing triage models. The principles and criteria that can be used as a basis for the development of such recommendations in Ukraine are analyzed. It is concluded that the criteria of triage in its primary sense, which ensure the provision of effective medical care to the largest number of people in a situation of limited resources, do not include social criteria. The ethical problem of redistribution of limited human resources and equipment, reduction of volume of medical care and termination of specialized assistance is analyzed. Conclusions are made on the principles of legal protection of medical staff in the case of a decision on triage. Author substantiates, that a mandatory component of the psychological well-being of medical staff and patients is the division of responsibilities for patient triage and treatment, as well as the provision of psychological, counseling, palliative care to patients.

Keywords: *medical sorting, triage, medical ethics, pandemic, COVID-19, limited medical resources.*