Author's response to reviews

Title: Emergency Department Triage: an Ethical Analysis

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Author's response to reviews: see over
Authors’ Revision Report
Title: In-Hospital Emergency Department Triage: an Ethical Analysis
Version 1
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Reviewer 1 – Lisa Anderson-Shaw

Review Comment 1
1. Does the debate present a novel argument, or a novel insight into existing work?

The concept of triage has been around for many years, with ethical analysis included in the recent past and present literature. I was not convinced that this article was analyzing emergency department triage, in general, or disaster emergency triage. Much of the article was focused on what appeared to be large scale disaster situations rather than the typical busy ED day to day operations. Much was discussed regarding the use of "scarce resources" but day to day operations are not so much an overuse of scarce resources as it is the inappropriate use of medical resources.

Answer from the Authors
Our efforts are to carry out an ethical analysis of routine triage in emergency department of the hospital. Triage is more discussed and practiced in disaster situation and we came across them during literature review. Thank you very much for pointing out the issue. We have deleted the descriptions on disaster triage including its references (previous references 4, 6, 11 and 33).

Regarding “scarce resources”, we want to emphasize that emergency departments across the globe have scarce resources even for regular services. Personal experiences in resource-poor countries like Nepal (i.e. Dr. Ramesh P Aacharya, Associate Professor at the Emergency Department of the Tribhuvan University Teaching Hospital in Kathmandu, Nepal) as well as studies [1,3,10,18] from developed countries highlight on the regular scenario of overcrowding in emergency department to justify triage. Overcrowding in many situations is the result of scarce resources – staff, physical infrastructure etc.

Review Comment 2
2. Does the debate address an important problem of interest to a broad biomedical audience?

This topic has appeal to a broad biomedical audience as most practitioners in the acute care setting interact with the ED with some frequency. The concept of a fair and ethical triage framework has merit, however, perhaps a bit more discussion on the topic of ED triage rather than disaster triage would be in order (unless the authors mean the text to address disaster triage?) This was not clear.

Answer from the Authors
As mentioned above the discussion on disaster triage has been removed.
Review Comment 3

3. Is the piece well argued and referenced? The piece concentrated heavily on the principles of ethics (Beauchamp & Childress). Principles are usually a wonderful place to begin an ethical analysis, but often leave one short when really trying to provide in-depth analysis and framework development. Near the end of the article, the authors speak to the “caring response”, which I found very interesting, but again, left the analysis short.

Answer from the Authors

Thank you very much for your comment. You have pointed correctly at a lack of clarification of the care ethics perspective. In fact, care ethics is a particular ethical perspective, which has been developed and specified during the last three decades. It originally evolved out of the Kohlberg-Gilligan-debate on moral psychology in the 1980’s and from the work done by social scientists such as Joan Tronto in the USA and Selma Sevenhuijsen in the Netherlands during the 1990’s. Since then, care ethics has become an influential theory in health care ethics, especially because it provides an important addition to the predominant Principles-based approach. As such, it has been applied in various aspects of health care ethics, such as nursing, care of elderly people, mental health care, prenatal diagnosis and abortion, care for persons with disabilities, etc. In our paper, we focus on Emergency Department Triage.

We fully agree with your comment that principles are a wonderful starting point for ethical analysis, but that they often leave one short when really trying to provide in-depth analysis and framework development. Hence, we opt for a comprehensive ethics perspective that incorporates both the principle-based approach and the care-oriented approach.

In response to your suggestion, we have added two explanatory paragraphs on the care ethics perspective. This paragraph should provide an overview for the reader, within which the care ethics approach is being presented. We thank you again for your suggestion, since it has improved the reader-friendliness of the paper to a significant extent.

On p. 6, you can find the first additional paragraph (in yellow highlighting):

Then, we will look at the ethical aspects of ED triage from the care ethics perspective, an influential ethical theory [39-42] that evolved out of the works of Carol Gilligan [43] and Joan Tronto [44].

On pp. 10-11, you can find the second additional paragraph (in yellow highlighting)

The results from this ethical analysis, based on the four principles of biomedical ethics, are interesting but insufficient since they do not offer a comprehensive ethical view for two reasons: (1) they only offer fragmented pieces of the triage puzzle; and (2) they do not provide a view on the dynamics of the care process. To address the ethical issues of ED triage as seen from a more comprehensive ethical view, the care ethics perspective might offer additional insights.

The Care Ethics Perspective

Care ethics is an ethical theory that evolved out of the Kohlberg-Gilligan debate on moral psychology and from the work done by social scientists, such as Joan Tronto in the USA and Selma Sevenhuijsen in the Netherlands [43,44,67]. According to this
theory, care has important ethical value, not only within our own particular daily lives, but also within the societal context of education and social policy. As for health care ethics, the care perspective has until now been primarily applied in the fields of nursing [68,69], care for elderly people [70], mental health care [71], prenatal diagnosis and abortion [72,73], care for people with disabilities [74,75] and care for people suffering from dementia [76]. As such, the care ethics perspective has become a very influential viewpoint within ethical theory [39].

In this paper, we will apply the care ethics perspective to the issue of ED triage because we are convinced that the care ethics perspective offers important ethical insights into the dynamic character of triage within the setting of emergency care. By focusing on the dynamic aspects of delivering acute medical care, it provides an important addition to the predominantly fragmented principle-based approach. Here, we opt for an ethical analysis according to the four dimensions of care, as developed by Joan Tronto [44].

Review Comment 4

p. 2: Perhaps a paragraph or two discussing the misuse of ED services for routine care that should be rendered in a physician’s office might be useful in this section. There are numerous articles and research on this topic.

Answer from the Authors

Thank you for this suggestion. A paragraph has been added discussing the misuse of ED services.

The inappropriate use and/or misuse of ED services is one of the common problems leading to overcrowding [4]. Sociodemographic characteristics are predictors of nonurgent use of emergency department [5]. Public orientation [4], strengthening and expanding primary care services can be a solution to the problem [6,7].

Review Comment 5

p. 3: The second full paragraph was a bit awkward and not clear as to intent and meaning. The ED usually is not hard pressed for "scarce" resources unless pressed with large numbers of patients such as with a disaster situation. Please clarify this.

Answer from the Authors

Generally, the resources in the emergency departments are scarce even for regular emergency services. Our attempt is to link triage with the issue of distributive justice and the fact that sometimes, difficult choices have to be made with regard to prioritizing cases in the ED. If you have to choose, which choices, then, are just?

Review Comment 6

p. 3: There are references that the authors may not be aware of, such as:


More research is needed as to the use of ethics consultation (proactive) in the ED and perhaps a mention of this would be useful.

**Answer from the Authors**

Thank you very much for these suggestions. A paragraph has been added as follows:

> Ethical issues are hardly considered in emergency department setting. A study by Anderson-Shaw et al has suggested that patients hospitalized through ED often present with ethical dilemmas significantly impacting their inpatient care and overall health outcomes [13]. There is need of more research regarding the proactive use of ethics consultation in ED.

The first reference has not been included as it is about disaster situations, the references to which we have removed from the text, according to comment 1.

**Review Comment 7**

p. 6: I think the concept of autonomy, especially in ED situations, is very difficult to assess, especially when urgent situations arise, as often is the case. Perhaps speak to this issue a bit more, that autonomy is not impeded but maybe implied in many ED situations.

**Answer from the Authors**

Thank you for your suggestion. You have pointed correctly at what we intended to say in these paragraphs. According to your suggestion, we have added/rephrased the following paragraphs:

On p. 6:
> While considering ED triage, autonomy is very difficult to assess especially when urgent situations arise. Here, it is important to find out who decides about the emergency of a situation in the first place.
> Let us first look at the viewpoint of the patient.

On p. 7
> When looking at the viewpoint of the care provider, we see that the decisions are being made by the triage officer or the concerned authority of the ED.

On p. 7
> Given the urgent character of emergency situations, respect for autonomy in the form of informed consent is often not the first ethical priority, which is perfectly normal
because the urgency of the situation does not provide room for it. In such situations, the necessary care should be provided instantly.

Nevertheless, the fact that informed consent cannot factually be realized in many ED situations does not mean that respect for autonomy cannot be taken into account at all here. Davis et al reported that even acutely ill emergency patients preferred respect for autonomy in medical decision making and increasing acuity of illness at presentation does not predict a decreased desire for autonomy [49].

An important way of respecting autonomy as much as possible here is by focusing on good and clear ED communication.

Review Comment 8
p. 7: The last paragraph mentions the U.S. health system. "emergency services are the only health care services provided irrespective of the ability to pay(7) and can thus be regarded as a safety net.". This was not clear to me what was meant by 'safety net'. There are situations where care is not rendered in the ED situation and is deflected to a 'fast tract' clinic within the institution. Please clarify meaning.

Answer from the Authors
This paragraph was our misunderstandings about the health care system in USA. As it is not correct, we have deleted the paragraph.

Review Comment 9
p. 11: The institutional framework is interesting, but not enough was said on this. It might be that there are 2 separate papers in this one paper - one that looks at the philosophy / contextual features of ethical ED triage, and another one that speaks to policy issues once a just ED triage system is in place. Please clarify.

Answer from the Authors
Thank you for your comment, which refers to an important characteristic of the care ethics approach, which indeed deserves additional clarification in the text. In response to your important comment, we have added on pp. 12-13:

The crux of the matter is that the care ethics perspective looks at care in ethical terms; at the ethical meaning of care. If we want to do this properly, we always also have to look at the specific institutional context within which care is actually being provided. This context (for instance the specific hospital culture, and its ways of dealing (or not dealing) with ethical issues regarding care) can be obstructive or supportive to the kind of care that can be given. Without sufficient attention for these contextual determinants of care, the care ethics perspective can only provide ethical analyses of care that seem very guilt-inducing for the particular care providers.

Review Comment 10
On page 12 under 'Implications” the authors list steps for a "care-oriented approach" and what is listed was not previously described nor discussed in the text. Where did these statements
I would have been very interested in the discussion within the text that produced the approach statements listed.

**Answer from the Authors**

These implications in fact follow directly from the ethical analysis as a whole. Your comment has pointed out to us that we have not paid sufficient attention to making this clear. Hence, we added the following clarifications in the text:

**Implication 1:**

> From the complementary dialogue between the principle-based approach and the care-oriented approach, we can conclude that…

**Implication 2:**

> Based on the essential importance of a supportive institutional framework, it is essential to opt for a hospital-wide strategy of triage planning with a broad involvement of relevant people.

**Implication 3:**

> … according to its compliance with the comprehensive ethics perspective that incorporates both the above-described principles and care-oriented approach.

**Implication 4:**

> A good and supportive hospital culture is a crucial determinant for this. As such, the various ethical aspects that are intrinsically related to ED triage, and which we have identified by our ethical analysis, can help to create a supportive clinical-ethical framework for ED triage.

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**Reviewer 2 – Dan Hanfling**

**Review Comment 1**

I applaud the efforts of the authors to conduct an ethical analysis of emergency department (ED) triage efforts, however I take exception to portions of the argument of causation that suggests that triage mechanisms employed in the ED are implemented in order to manage the vexing issue of ED overcrowding. There is no question that ED overcrowding results in the need to prioritize access to resources. However, the implementation of triage decisions has more to do with identifying patients requiring prioritized care, based upon acuity of medical presentation, than it does in helping to resolve overcrowding issues. Much of what the authors discuss in this paper may be more applicable to triage decision-making efforts undertaken in a disaster event, in which demand for resources outstrips available supply, which is known to be limited.

I believe the authors have selected a topic of considerable interest to the broad audience, and present some interesting insights related to existing work in this arena. There are a few relevant citations that have not been noted and should be considered. There are also some
terminology issues and definitions that, if altered, might make the paper a bit stronger in substance and applicability.

I believe the paper should undergo Major Compulsory Revisions, prior to its being accepted for publication.

Answer from the Authors

We highly appreciate your efforts in reviewing the manuscript and providing insights to the issues. We are sure they will assist us to upgrade the quality of this paper. We will try our best to incorporate the revisions. Details will follow in the specific comments in next pages.

Review Comment 2

The title of the paper refers to ‘In Hospital’ Emergency Department Triage. By specifically noting this to be focused on “in hospital” issues, the authors imply that this is to be distinguished from “out of hospital” triage, which is more conventionally thought of as those triage decisions being taken by emergency medical service (ambulance) providers.

If the authors simply intend to focus on triage decisions taken to prioritize time and level of service provided to all who present to the ED for care, than this should simply be referred to as Emergency Department Triage. However, it may be that the authors were attempting to focus on the secondary and tertiary triage decisions that must be taken when a full emergency department has to prioritize services to an already stratified patient population. For example, which patient gets the next available CT slot? Or which patient gets the next available in patient bed? I believe this needs additional explanation and clarification.

I believe the authors would benefit the readership by explaining concepts related to primary, secondary and tertiary triage, in which patients are continuously triaged and re-triaged following their initial evaluation and stabilization. For example, the referral of patients to ‘tertiary’ care centers, for trauma evaluation for example, is part of this process (and in the legal climate of medical care delivery in the United States, may in fact contribute to ED overcrowding, where patients are not evaluated for trauma in non-trauma centers for liability concerns).

Answer from the Authors

Our intention is to focus on Emergency Department (ED) triage in the hospital. As the ED is obviously part of the hospital, we have deleted the term “In-hospital”. We believe, in this way the readers will understand better.

Out of hospital triage and triaging for further care inside the hospital are excluded. Thus, it included triaging in the emergency room before examination by a medical doctor. So the issues of re-triaging are rarely mentioned and not discussed in details.

In addition, in many underdeveloped countries so called ‘tertiary hospital’ mean big general hospital only. There are no specialized centers like trauma centre.

Review Comment 3
P. 3, 2nd paragraph: The authors description of the “fundamental point of triage” is certainly true when there is a limitation of resources. However, in daily operations of most EDs, where it is presumed that there is no scarcity in the system, triage is primarily employed to prioritize access to care. All who present for care will receive care, albeit not necessarily on a first come, first served basis.

At the end of the same paragraph, the authors introduce the concept of “statistical” and “identifiable” lives. These concepts are not necessarily intuitive to the reader, and deserve further definition and description.

Later in the paper, they allude to the need to shift from individual outcomes to population based outcomes. Maybe this should be described a bit earlier in the paper.

**Answer from the Authors**

Regarding “scarce resources”: emergency departments across the globe have scarce resources even for regular services. Personal experiences in resource poor countries like Nepal and extended literature (references 1, 2, 7, 15) even from developed countries highlight on the regular scenario of overcrowding in emergency department to justify triage. We do agree with the reviewer that even when the scarcity does not exist, triage is employed to prioritize access to care. However, overcrowding in many ED situations is the result of scarce resources.

Regarding your suggestion concerning the concepts of “statistical” and “identifiable” lives, we have added the following lines on p. 3:

> The general utilitarian concerns of the system, which in the context of scarcity comes down to calculating and choosing between patients on the basis of abstract reasoning (focused on “statistical lives”, realizing the best results out of an abstract cost-benefit analysis applied to patients as abstract cases), seems to collide with the Hippocratic duty of doing as much as you can for the patients who need care (focused on “identifiable lives”, that is, on the patients as particular persons with whom one stands in a face-to-face care relationship) [12].

We hope that this addition also provides an answer to your suggestion to describe the shift from individual outcomes to population based outcomes a bit earlier in the paper. In order to make the matter extra clear, we have also added the following lines on p. 4:

> In such public health emergencies, the managerial emphasis shifts from the individual to the population, from “individual” to “statistical” lives, trying to realize a maximal outcome out of the available resources [24]. Nevertheless, emergency staff continues to be confronted, on a face-to-face level, with the care for individual patients in need, whom they might not be able to help.

**Review Comment 4**

P. 4, Triage in Healthcare: The list at the beginning of the section is a bit confusing. The authors cite the use of ‘telephone triage’ as a major example of pre-hospital care triage, and only later describe use of triage by emergency medical service provider agencies. Language in this section requires a few minor revisions – ‘entered the scene’ would be better as ‘entered
the discussion’. SARS was not conventionally referred to as a pandemic event. It was more of an emerging infectious disease event.

**Answer from the Authors**

Thank you for your comments. The paragraph has been revised as per suggestions.

**Review Comment 5**

P. 4, Again, some language changes (replace “scene” with “literature”). The authors note the use of START, which is primarily a pre-hospital triage system. The authors suggest, by including this with the other triage schema, that it is used in the ED.

**Answer from the Authors**

Thank you. The paragraph has been revised as per suggestions for the language changes. We have also removed the reference to START.

**Review Comment 6**

P. 5: 2nd Paragraph: The so-called “labeling” of patients tends to be more of a prehospital process than one conducted in the hospital setting. Later in the paper, the authors refer to the need to “re-label” patients. This would be more appropriately referred to as “re-triage”. (p. 10)

**Answer from the Authors**

Thank you for your comments. Labeling is prehospital process but prehospital service is not available in many situations. Labeling with colored tags is also part of triaging in the ED. We have replaced ‘re-label’ by ‘re-triage’.

**Review Comment 7**

P5, 3rd paragraph: The authors should consider evaluation and discussion of more recent triage efforts published in the literature including a schema for trauma (E. Brooke Lerner, et al, SALT triage schema) and for pandemic influenza (A. Kellerman, et al, SORT triage).

**Answer from the Authors**

Thank you very much for these suggestions. They offer important improvements to our paper. The references have been added and the paragraph has been revised as follows:

The Canadian Triage and Acuity Scale (CTAS) consist of separate guidelines for adult [30] and child [31] patients. In The Manchester Triage Score [17], the level of consciousness in adult and children is considered separately. A guideline, entitled SALT (sort, assess, life-saving interventions, treatment and/or transport) triage, was developed in 2008; which incorporates aspects from all of the existing triage systems to create a single overarching guide for unifying the mass casualty triage process across the United States [35]. More importantly, separate guidelines have been developed for potential pandemics like influenza [22,23] and special situations like the use of weapons of mass destruction and bioterrorism [36]. During sudden emergence
of ‘2009 H1N1 influenza’, web-based self-triage named Strategy for Off-Site Rapid Triage (SORT) was disseminated by H1N1 Response Centre to reduce a potential surge of health system utilization without denying needed care [37].

The Sacco Triage Method (initially known as resource-constrained triage method) is an evidence based outcome driven triage which considers the resources to maximize the expected survivors. Triage decisions are based on a simple age adjusted physiological score (i.e. respiratory rate, pulse rate and best motor response) that is computed routinely on every trauma patient and are correlated to survival probability [38].

Review Comment 8
P. 6, 3rd paragraph: The authors suggest that ethical issues are raised when emergency services are “denied”. Why would service be denied? Under almost all circumstances, it may be delayed as a result of prioritization (based on acuity), but it is not denied. This is an important distinction. Refusal to provide care is a very sensitive issue, appropriate for ethical discussion. In the United States, there is enacted legislation, The Emergency Treatment and Labor Act (EMTALA) which clearly obligates the healthcare provider to provide at least a medical screening examination, and makes illegal the denial of care.

Answer from the Authors
‘Denying further care following triage’ is linked with the literature (reference 46) published back in 1994. Obviously, it contradicts with Emergency Treatment and Labor Act (EMTALA) mentioned by the reviewer. Triage is not equivalent to medical screening examination.

Review Comment 9
P. 6, 4th paragraph: ‘Patients can’t decide …. because of swiftness of triage process and poor communication’. This is gross over simplification and generalization of a number of issues, and mistakenly confused for ethical lapses. In fact, given that ED care is available 24 hours a day, each day of the year means that EDs actually emphasize the importance of providing unimpeded access to care. This actually enhances patient autonomy. The trade-off may be waiting to receive such care which is being provided in accordance with the patient’s selection of the time and place to seek care (a matter of convenience provided to the patient).

Answer from the Authors
This paragraph has been deleted. Thank you very much for your analysis and suggestion.

Review Comment 10
P. 6, 5th paragraph: The authors imply that informed consent should be a required part of triage. However, triage is simply the initial step in the evaluation of a patient’s complaint(s). As such, there is usually no treatment being rendered and therefore no indication for informed consent. The patient presents autonomously and willingly to seek care. Furthermore, the
statement regarding waiver of informed consent for research is incorrect. Only in cases in which patients are incapable of providing informed consent is this substituted for a community informed consent process that must provide for description of the costs/benefits of the research being conducted, and create a process for opting out of such treatments if the patient does not want to participate. A good example of this is the community informed consent process that was implemented as a part of the study of blood substitute products in the pre-hospital environment.

**Answer from the Authors**

The sentence regarding informed consent has been revised as follows:

_Triage is the initial step in the evaluation of a patient’s complaint(s) before initiating medical evaluation and management and generally, informed consent is not considered as a part of triage process [17]._

Regarding waiver of informed consent in emergency research, in a thought provoking article entitled “The battering of informed consent”, Prof. M Kottow mentions about waiving of consent altogether when research is done in emergency settings.

Community consent may not be appropriate to apply to individual emergency care.

**Review Comment 11**

P. 7, 1st paragraph: The authors may not be aware that in the US, there is a growing trend for hospitals to publicize ED waiting times. This is done in recognition of the fact that a large percentage of ED volume is episodic and not immediately life threatening, and so the patients can “choose” when, and where, to be seen.

**Answer from the Authors**

We could not find any literature on ‘publicizing ED waiting time’. We are grateful to the reviewers for noting this trend to us.

**Review Comment 12**

P.7 Non maleficence: Here the authors may benefit by reviewing B Altevogt, et al, Institute of Medicine, Establishing Standards of Care in Disaster Situations (2009) for an excellent discussion on the ethical issues related to scarce resource allocation, as well as the importance of including palliative care into the spectrum of care offered. The authors seem to imply that patient abandonment is a result of triage decision making. This is also where the authors make the link to the overcrowding issue. This discussion may be enhanced by including some of the literature that looks at the effects of overcrowding, patient boarding in the the ED, and the resultant quality outcome measures.

**Answer from the Authors**

The suggestions from the reviewer are appreciated and are taken care by revising the paragraph (Including references) as follows:
The principle of nonmaleficence can be described as “do no harm”. The Hippocratic Oath mentions this obligation as “I will use treatment to help the sick according to my ability and judgment, but I will never use it to injure or wrong them” [12]. One ought not to inflict evil or harm. Harm is not directly inflicted by triage except when hopelessly injured patients are considered in the dead category. Even during disasters, under given circumstances; health care professionals are always obligated to provide the reasonably best care. The aim is to secure fair and equitable resources and protections for vulnerable groups [54].

Waiting long for a consultation can increase pain and suffering and, at times, worsen the outcome and thus, result in indirect harm. Psychosocial harm includes stress, fear, feeling neglected or not being taken care of. Triage guidelines aim to avoid harm to the patient by sorting the patients as quickly and efficiently as possible. However, in emergency care, especially in situations of overcrowding, treating one patient might threaten the welfare of another patient by not being able to take care of both. Studies in different centres have found an association between overcrowding and reduced access to care, decreased quality measures, and poor outcomes [55].

Review Comment 13
P. 7, last paragraph; The authors suggest that ED services are the only place for healthcare services for the poor. Actually, many public health departments operate Federally Qualified Health Centers (http://bphc.hrsa.gov/about/) which provide care to medically underserved populations.

Answer from the Authors
This paragraph was our misunderstandings about the health care system in USA nad has been deleted.

Review Comment 14
P. 8 Beneficence: The authors might choose to describe the notion of “overtriage” here, specifically in light of the intent to “err on the side of caution” when making urgent triage decisions. There is much written about this issue, particularly in the trauma literature.

Answer from the Authors
Thank you very much for the suggestions. We have added a paragraph as follows:

In triage, tendency of overtriage particularly in patients with trauma may be a tendency for beneficence. However, it is an “err on the side of caution”. Overtriage not only increases the cost of medical care [60] but also may result in worse outcome [61,62].

Review Comment 15
P. 9, 1st paragraph: “treatment of some patients may be delayed or denied”. Again, this is not really relevant to the ED setting. The authors should specify that this is more likely to be the case in decision-making related to scarce resource allocation, such as in the case with organ procurement. This is not implicit in the delivery of daily emergency medical care. The exception to this may be in the case of a catastrophic disaster event.

Answer from the Authors

Treatment denial in emergency is a rare event and we agree with the reviewers that it may happen in the events of catastrophic disasters. Denial has been deleted from the manuscript. However, treatment delay is still possible in resource poor settings in poor countries like Nepal and we see the relevance of the answers given to comment 3.

Review Comment 16

15) P.9 The Care Ethics Perspective, last paragraph: The conclusion that is drawn here by the authors, like previous discussion regarding lack of informed consent, appears to be an oversimplification of the triage process. Also, the authors cite the “wrongful refusal” of patients. This is cited by one study.

Answer from the Authors

Thank you for your comment, which is important because it made clear that we had oversimplified the matter in ways that were not contributive to the ethical discussion. Consequently (and in accordance with our answer to comment 7 from reviewer 1) we have replaced the existing paragraph by the following one:

(1) The principle of respect for autonomy, especially in ED situations, is very difficult to assess, most particularly when urgent situations arise, as often is the case. Special attention is needed for particular ways of respecting autonomy as much as possible, for instance by appropriate and adequate communication during the triage process.

Review Comment 17

P. 10, first paragraph: The authors imply that triage causes physical and psychological harm. Triage doesn’t “cause” such harm – these harms are the result of the underlying pathological conditions. In the next paragraph, number 3, the language is not clear. “Violence is the result…. Of what?” Which people.. are responsible for making decisions? In number 4, the last sentence does not make any sense to me.

Answer from the Authors

Thank you very much for these comments. We have added the following lines, referring more explicitly to the previously made analysis based on the four principles of biomedical ethics. We hope that these provide clarification to the matter:

From the four principles of biomedical ethics (autonomy, nonmaleficence, beneficence, and justice), we can derive the following areas of special attention:
In point (2):

The principle of non-maleficence is under pressure since triage can reinforce the physical (long waiting times, increasing pain and suffering, deteriorating condition) and psychological harms (stress, fear, feeling neglected) that come with the underlying pathological conditions.

In point (3):

Aggression and violence are common phenomena in the ED.

In point (4):

With regard to the principle of justice, it is finally a continuous assignment.

Review Comment 18

P. 11: the final section on the dimensions of care is not very clearly written, and it is not clear to the reader how this section contributes to the discussion. It could be shortened and made more concise, focusing on the dynamic aspects related to the delivery of acute medical care. The authors might attempt to describe process issues and their related challenges.

Answer from the Authors

Thank you for your comment, which is almost identical to comment 3 from reviewer 1. In order to make the essential contribution of the care ethics perspective for our discussion more clear, we have added several paragraphs, which you can find in our elaborate answer to comment 3 from reviewer 1 (cfr. supra).

Review Comment 19

P. 12, 1st paragraph: Here is where the authors make the conclusion that ED triage is needed to “fix” ED overcrowding. This conclusion does not follow from the issues as they are described in the paper. The authors don’t really make the case that there is causation. Indeed, many in the ED literature tend to point towards hospital overcrowding as the root cause for ED overcrowding (i.e. a system that back up into the emergency department).

Answer from the Authors

Regarding “scarce resources” leading to overcrowding, we want to emphasize that emergency departments across the globe have scarce resources even for regular services. Personal experiences in resource-poor countries like Nepal (i.e. Dr. Ramesh P Aacharya, Associate Professor at the Emergency Department of the Tribhuvan University Teaching Hospital in Kathmandu, Nepal) as well as studies from (references 1, 2, 7, 15) from developed countries highlight on the regular scenario of overcrowding in emergency department to justify triage. We do agree with the reviewer that the situation varies between countries and their healthcare system.

Review Comment 20
Implications for clinical practice: In this conclusion, the authors call for an “integrated clinically and ethically based form of triage”. It is unclear to me that the authors convincingly make the case that ED triage is unethical, yet that is what is implied by this recommendation.

**Answer from the Authors**

Thank you for your comment, which is important since we never intended to show that ED triage is unethical. On the contrary, we intended to point at the various ethical aspects that are closely related to ED triage, thus trying to create a supportive clinical-ethical framework for ED triage. However, your comment here is very similar to comment 10 made by reviewer 1. In reply to this, we have added several important clarifications in the text, which you can find in our answer to this (cfr. supra).

For additional clarification, we have added the final paragraph:

> As such, the various ethical aspects that are intrinsically related to ED triage, and which we have identified by our ethical analysis, can help to create a supportive clinical-ethical framework for ED triage.

**Review Comment 21**

20) P. 17, TABLE: Shouldn’t the Table include the salient features of the ESI? In addition, the authors may want to discuss pre-hospital triage systems under a separate section, or at least place in a separate TABLE. In addition to the SORT and SALT methodologies, the authors also may wish to explore the SACCO Triage Method (STM).

**Answer from the Authors**

ESI and SALT triage algorithm have been included after the table.

SORT, SALT and STM have been included in the background part of the paper. (Please refer to answer to comment 7).