Tidsskriftet Tidsskrift for Den norske legeforening

Mass casualty triage – the greatest good for the greatest number?

EDITORIAL

RUNE RIMSTAD

E-mail: rurimstad@mil.no

Rune Rimstad, senior consultant at the Department of Anaesthesiology and the Air Ambulance Department at Oslo University Hospital, senior consultant in disaster medicine in the Norwegian Armed Forces and consultant in the Department of Emergency Medicine and Preparedness, the Norwegian Directorate of Health. He has been in charge of the revision of the national mass casualty triage manual.

The author has completed the ICMJE form and declares no conflicts of interest.

Train accidents, major fires and terrorist attacks may result in a large number of injured patients simultaneously. Which patients should be treated first when resources are so scarce that we need to make choices?

In August 2020, the Directorate of Health issued the *Nasjonal veileder for masseskadetriage [National Mass Casualty Triage Manual]*, based on evidence prepared by the Norwegian National Advisory Unit on Prehospital Emergency Medicine (1, 2). The core of the system is a flowchart for examination of the patient's vital functions (airways, respiration, circulation and consciousness) and injuries. The findings lead to a categorisation of the degree of urgency, which serves as the basis for the prioritisation of treatment and evacuation. Bleeding control before alleviation of pain. Head injuries go to hospital before fractured ankles. The categorisation is insufficient to decide how the treatment capacity or evacuation resources should be distributed, because the flowchart does not take practical conditions into account, such as the total number of patients or the severity of the other patients' injuries. The assessment of degree of urgency is context *independent* and directed at the individual. The prioritisations in the further management of the incident are context *dependent* and need to take resource availability, transport distances, weather and the overall casualty load into account.

The triage must be undertaken quickly enough to prevent the process from leading to a poorer therapeutic outcome by causing the necessary interventions to be delayed. The manual cautions against making use of the system when there is no serious resource scarcity. For example, a bus accident may result in many casualties with only minor injuries and only a couple of seriously injured victims. If these can be easily identified, it will be better to help those who clearly have the most serious injuries instead of spending time on triage procedures. The ethical basis for the manual is utilitarianism, a consequentialist view which holds that actions are correct if they lead to the greatest good for all those involved in the accident, as a totality. The system should help us do 'the greatest good for the greatest number' (1). Furthermore, the manual specifies that the 'good' that should be measured is survival. To save lives, life-threatening injuries must be treated first. This basis may well appear intuitive and self-evident (3). However, in ethical terms, maximum total survival is not the entire story.

> ***«The greatest good for the greatest number does not imply only life-saving interventions»***

The greatest good for the greatest number does not imply only life-saving interventions. Those with more minor injuries should also be given a discretionary proportion of the treatment resources without having to wait until all the serious cases have been treated and evacuated. The same applies to patients whose lives cannot be saved.

The previous version of the triage system gave higher priority to children, particularly infants, than what their clinical condition would indicate. The new manual has abandoned this approach, but now the recommendation is that among patients with minor injuries, children and other vulnerable groups such as the elderly, pregnant women and people with disabilities should be prioritised for transport. Parents and children should stay together if possible. The manual does not discuss whether moral responsibility may affect prioritisation. Implicitly, this means that the perpetrator of a school shooting and the bus driver who fell asleep at the wheel should be triaged like everybody else.

The flowchart stipulates a high degree of urgency both for those who show signs that their vital functions are affected and those who have obviously sustained life-threatening injuries. In other words, the system considers the patient's current clinical condition as well as their expected or likely condition a little time ahead should no necessary treatment be given. In this respect, the time perspective is significantly shorter than in other situations where scarce goods such as donor organs are allocated, and the expected prognosis and benefit over many years need to be taken into account. Nor does the patient's usefulness to society have any relevance, in contrast to the allocation of coronavirus vaccines, where healthcare personnel are at the head of the queue.

> ***«Only very few of us will ever have to perform mass casualty triage, but all out-of-hours doctors and practitioners of pre-hospital emergency medicine may have to face this task during their next shift»***

Only very few of us will ever have to perform mass casualty triage, but all out-of-hours doctors and practitioners of pre-hospital emergency medicine may have to face this task during their next shift. It is stressful to be placed in a position of having to refrain from providing necessary help (4). Implementing mass casualty triage requires a mental reorientation. Knowledge and mental preparedness help protect against later psychological distress (4). Reading the manual and discussing it with colleagues could be a good place to start.

LITERATURE

1. Nasjonal veileder for masseskadetriage. IS-0380. Oslo: Helsedirektoratet, 2020. https://www.helsedirektoratet.no/veiledere/masseskadetriage Accessed 28.8.2020.

2. Masseskadetriage. En kartlegging av triagesystemer for håndtering av alvorlige hendelser og katastrofer. Oslo: Nasjonal kompetansetjeneste for prehospital akuttmedisin, 2019. https://www.nakos.no/mod/forum/discuss.php?d=4282 Accessed 28.8.2020.

3. Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. Lancet 2009; 373: 423–31. [PubMed][CrossRef]

4. Brooks SK, Dunn R, Amlôt R et al. Social and occupational factors associated with psychological distress and disorder among disaster responders: a systematic review. BMC Psychol 2016; 4: 18. [PubMed][CrossRef]

Publisert: 2. October 2020. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.20.0694