Ethical principles and guidance with regard to ethical decisions in pre-hospital and emergency medicine in Belgium during the COVID-19 pandemic. A joint statement of the Belgian Society of Emergency and Disaster Medicine and the Belgian Resuscitation Council (22 March 2020).

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The Belgian Society of Intensive Care Medicine has proposed ethical principles concerning proportionate care during the 2020 COVID-19 pandemic and advise individual hospitals to draft their own guideline. The Belgian Society of Emergency and Disaster Medicine (BESEDIM) and the Belgian Resuscitation Council (BRC) acknowledge the importance of ethical guidance to assist clinicians. With the spread of the COVID-19 pandemic, healthcare providers working in the emergency department (ED) or prehospital will often have to make ethical decisions, which will be challenging especially during resuscitation.

Ethical supporting principles to guide clinical decision making

1/ The general principles of ethics in emergencies and resuscitation remain equally valid during the COVID-19 pandemic (European Resuscitation Council guidelines 2015): Cardiopulmonary Resuscitation (CPR) should be considered a 'conditional' treatment and healthcare systems should implement criteria for decision-making regarding resuscitation.

- Resuscitation should not be started or continued in cases where the safety of the provider cannot be sufficiently assured, when there is obvious mortal injury or irreversible death or when a valid and relevant advance directive becomes available.
- The 'best interest' of the patient should always be considered. Withdrawal of CPR might also be considered when there is strong evidence that further CPR would be against patient's values and preferences or is considered 'futile' or in cases of asystole despite 20 minutes of ongoing Advanced Life Support, in the absence of a reversible cause.
- Advance care planning should be offered in due time to all patients with an existing increased risk of cardiac arrest or worsened outcome due to cardiac arrest when happening.

2/ Based on the principles of justice, fairness and equity, each individual patient should have access to the current standard of care. However, the ethical considerations regarding CPR and end-of-life decisions include achieving the best results and the overall harm-benefit balance for the individual patient, and also for society as a whole by appropriate allocation of available resources. This might

also mean ‘the best possible spread of medical support to the maximum amount of people’ (distributive justice).

3/ Ethical decision making in disasters needs a specific approach, given the inherent imbalance between resource availability and resource needs. In such a situation, healthcare providers will have to make (informed) decisions about which resources will be used for which patients. Typically, such decisions are based upon contextual parameters (safety, accessibility, resource needs), as well as the expected outcome for the individual patient.

Ethical decisions in pre-hospital and ED emergencies during the COVID-19 pandemic in Belgium

1/ General practitioners should discuss (and document) advance care planning with all patients (and relatives) who have an increased risk of cardiac arrest or worsened outcome due to cardiac arrest, as well as patients for whom either advanced resuscitation technologies, mechanical ventilation or admission to intensive care would be considered ‘disproportionate’.

2/ Given the likelihood of major hospital and intensive care capacity problems due to COVID-19 in the coming weeks, and regardless of the standard ethical framework for emergency medicine, healthcare providers should carefully consider whom to give which level of treatment. They should avoid providing disproportionate care to patients with a low likelihood of ‘good functional outcome’ if that decision would lead to the inability to treat patients with good a priori chances. Emergency care providers should be aware that soon the amount of critical care beds will likely become the bottleneck for the healthcare system.

- To assess the likelihood of good functional outcome, specifically for elderly people, we advise the use of the Clinical Frailty Scale (appendix 1), rather than age as such.
    - In patients with only mild frailty, intensive care and resuscitation is generally advised. In (elderly) patients with moderate frailty (6: needing help with all outside activities … and with e.g. bathing, doing stairs) hospital admission might still be of value but intensive care likely is not.
    - In patients with severe or very severe frailty (7: completely dependent for personal care; 8: approaching end of life) we strongly question the added value of hospital admission and would rather consider this harm (dysthanasia), by among others limiting the potential for proper comfort care in one’s own environment.
- In addition, although no single factor (other than those described above) unequivocally predicts outcome, providers should try to identify situations where the risk of harm presumably outweighs the risk of benefit e.g. absence of return of spontaneous circulation

during resuscitation, severe chronic co-morbidity, very low chronic quality of life…). This is especially applicable to unwitnessed cardiac arrest with a non-shockable initial rhythm.

3/ The above criteria are equally valid for COVID-19 patients as they are for any other patient, and this equally for children as for adults. For what concerns decision making during disasters and pandemics, the following apply:

- Any decision about withholding or withdrawing treatment ideally should be taken by a team, containing at least one senior experienced physician. As far as feasible, two or three senior physicians of different background (intensive care, emergency care, organ specialist, geriatrician) should be involved in the final decision-making process. Ideally, at least one of them does not have any direct treatment relation with the patient.
- There is no ethical difference between withholding (e.g. not intubating) and withdrawing care (e.g. extubating). Active life-ending procedures (different from treatment limitation or appropriate end-of-life comfort care) are not ethically permissible, even during disasters or pandemics. Any decision with regard to treatment limitation at any moment in the care trajectory should be communicated (respectful and empathic but fully transparent and directive) with the patient and/or their next of kin.

4/ Specifically with regard to COVID-19 patients:

- In patients with a non-shockable Out-of-Hospital Cardiac Arrest (OHCA) as a result of hypoxia due to proven severe COVID-19 the risk of harm presumably outweighs the anticipated benefit of resuscitation, and this should be considered a reason for termination of resuscitation. Systems should consider making standing orders to allow for this.
- In all other patients in cardiac arrest with possible or proven COVID-19 (which may mean most people with OHCA as the prevalence of COVID-19 in the population is rising), CPR should be started, taking into account the above described general ethical criteria. Providers should first take care to have adequate personal protection in place before starting CPR. Although we respect the individual decision of trained lay rescuers to deliver rescue breaths in e.g. family members, the standard advise for providers is to provide compression-only CPR during Basic Life Support. Professional rescuers should only provide ventilation during CPR via a bag-mask, a supraglottic airway or endotracheal tube.

5/ All patients should receive proper standards of care as long as reasonably possible. In the specific situation where teams are confronted with a lack of (intensive care) resources due to increasing numbers of SARS-COV-2 (but only then and not pre-emptive), more thorough prioritisation will

become inevitable. The ethical decision-making in these situations is complex but should be based on the same principles as described above. Eventually, priorities should be decided based upon expected outcomes and resource needs for individual patients, equally for COVID-19 positive or negative ones. What limited evidence there is from literature should be considered, rather than just expert opinion. The Charlson Comorbidity Index might be informative (appendix 2). When cases are truly comparable, the "first come first serve" principle remains fair. There is no ethical ground to specifically favour specific groups because of e.g. profession, rank or status… …. Neither can personal characteristics of people such as lifestyle or merits to society be counted as ethical criteria in prioritizing. At all times, clinical decisions should be well documented (ideally also in a registry) to allow for transparency and future audit. Clinicians involved in such decisions should be offered debriefing and (prolonged) psychological support. Providers who are unable to accept this ethical framework should preferably take up non-clinical support roles.

References

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Appendix

1: Clinical Frailty Scale: https://www.bgs.org.uk/sites/default/files/content/attachment/2018-07-05/rockwood_cfs.pdf

2: Charlson Comorbidity Index: https://www.mdcalc.com/charlson-comorbidity-index-cci#use-cases

For more updates on ethical background in disaster settings, see: https://disasterbioethics.com/covid-19/