Critical care triage during the COVID-19 pandemic in South Africa: A constitutional imperative!

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IN PRACTICE

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Clinical considerations

The CCSSA COVID-19 triage document follows what has been described as a ‘soft utilitarian approach,’ where the main criteria for admission relate to function and comorbid conditions, and where priority is given to patients with the best chance of survival with acceptable quality of life and the most quality-adjusted life-years.\textsuperscript{[14,16]} Chronological age is a factor considered during triage decision-making, because advancing age (independent of the level of frailty) predisposes people to many life-limiting and life-threatening conditions and, significantly, is associated with an increased risk of poor ICU outcome, including mortality.\textsuperscript{[17]} Furthermore, elderly patients exhibit a weakened immune response to infections due to immunosenescence (an age-related decline in innate and adaptive immune response). This is likely to contribute to the significantly higher COVID-19-related mortality observed in elderly people.\textsuperscript{[18,19]} However, chronological age should not be the sole criterion for determining ICU admission, and this is certainly not advocated by the CCSSA.\textsuperscript{[14]} Bioethicists have argued that poor prognosis based on current and underlying disease should be the main allocation criterion for treatment during a crisis and, if advanced age correlates with this criterion, to use it as a prioritising factor should not be regarded as unfairly discriminatory.\textsuperscript{[20]}

Under the guidance provided by the CCSSA COVID-19 triage document\textsuperscript{[14]} and other COVID-19 triage recommendations,\textsuperscript{[21]} specific age criteria would only be applied where it is necessary to decide between people with equal (non-age-specific) ICU priority scores. For example, ICU admission of an elderly patient triaged to ‘red’ (highest priority) would take precedence over a younger patient triaged as ‘orange’ (intermediate priority). Age is never a comment on any individual’s inherent worth or social value. but may serve as a measure of incremental ICU benefit by saving the most life-years.\textsuperscript{[21]}

Erasmus\textsuperscript{[6]} asserts that, if clinical assessment scores are used during prioritisation processes, the lungs ought to be excluded under COVID-19 triage conditions. Her rationale here is unclear. The triage guidelines presented in the CCSSA COVID-19 triage document\textsuperscript{[14]} are not specific to patients infected with SARS-CoV-2, but apply equally to all patients presenting with critical illness during the pandemic crisis, consistent with international standards.\textsuperscript{[22]} Secondly, even if the document were only concerned with patients with COVID-19 disease, limiting triage criteria by excluding or targeting a specific organ system would not be appropriate, since COVID-19 is recognised as a multisystem disease.\textsuperscript{[23,24]} The Sequential Organ Failure Assessment (SOFA) score is simple, objective, uses routinely obtained measurements, and is considered to be an important adjunctive tool in the critical care domain. Furthermore, SOFA has repeatedly been demonstrated to be reliable and accurate in the ICU context as an indicator of disease severity and is a significant predictor of ICU mortality and other adverse outcomes.\textsuperscript{[15,25,26]}

The other clinical assessment score recommended in the CCSSA COVID-19 triage document's prioritisation process\textsuperscript{[4]} is the Clinical Frailty Scale (CFS). Frailty is defined as a multidimensional syndrome characterised by a decline in physiological and cognitive reserve, which increases susceptibility to adverse events and poor outcome.\textsuperscript{[27]} There is currently no gold standard for diagnosing frailty.\textsuperscript{[28]} Although the term ‘frailty’ is most commonly associated with age, this syndrome has also been described in younger cohorts of patients admitted to ICUs.\textsuperscript{[29]} Increased frailty markers have been shown to be highly predictive of poor ICU outcome, including longer duration of ICU and hospital stay, increased post-discharge disability, and increased short- and longer-term mortality.\textsuperscript{[17,26,28,30,31]}
The CFS was designed to holistically assess the presence and severity of frailty according to levels of physical activity, functional status, chronic illness burden and cognition. As such, disability (excluding long-term stable disabilities) and comorbidity, not age, are the explicit defining elements of frailty on the CFS. CFS scores between 1 and 3 are generally considered ‘non-frail’; a score of 4 indicates a vulnerable or prefrail state; 5 is mildly frail; scores of 6 - 8 correspond with moderate to severe frailty; and a score of 9 indicates terminal illness. Erasmus is mistaken when she states that ‘mildly frail’ individuals would be denied an ICU bed using the CCSSA COVID-19 triage document – the guidelines are explicit in stating that all individuals with a CFS <6 should move further in the priority-setting process. Furthermore, and perhaps missed by Erasmus, explicit guidance recommends that individuals who do not meet ICU admission priority owing to frailty should be offered an appropriate healthcare management plan outside the ICU, including palliative care where this is indicated. They are therefore not being denied access to healthcare, emergency or otherwise. Care is always afforded to patients.

The CFS is a well-established, robust and valid judgement-based assessment tool, frequently used in the ICU, based on information provided by the patient, family or medical records. We acknowledge that the CFS has not been locally validated and that the graphics used in the tool might be negatively slanted against the elderly. We therefore recommend that the CFS should be formally adapted and validated for use in the SA context, with appropriate public stakeholder input, to become more socially and culturally acceptable.

Legal considerations

SA has one of the most progressive constitutions in the world, in which human dignity and the right to life are non-derogable, even during a declared State of Emergency. The Constitution of the Republic of South Africa (1996)(2) (in chapter 2 section 27(3)) states that one may not ‘unfairly’ (our emphasis) discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth. Section 27(5) states: ‘Discrimination on one or more grounds … is unfair unless it is established that the discrimination is fair.’ Erasmus asserts that the CCSSA triage documents are unfairly discriminatory against the elderly and therefore unconstitutional and unlawful. We strongly assert that the ICU triage guidelines are fair, rational, and both ethically and legally sound.

The landmark case to which Erasmus refers, Soobramoney v Minister of Health, KwaZulu-Natal, provides implicit and explicit support for essential triage practice as a form of ‘fair discrimination’. The appellant (Soobramoney) suffered from chronic renal failure and other significant comorbidities and was denied repeated access to a public hospital’s dialysis programme, based on the hospital’s written triage policy. The appellant sought an order for access to dialysis treatment, based on his constitutional rights. The Court asserted that for use of scarce resources, the state must ‘apply a holistic approach to the larger needs of society rather than to focus on specific needs of particular individuals within society’ (paragraph 31). The judgment further explains that obligations imposed on the state regarding access to healthcare are dependent on available resources, and that corresponding rights may be limited by reason of lack of resources. The Court declared that it could not and would not interfere with decisions taken in good faith by medical authorities as to how to allocate budgets and decide on priorities. This was the first case in SA in which the Constitutional Court was asked to decide on the constitutional right to healthcare for everybody in the light of scarce resources in the healthcare system. The Court accepted that rationing of resources is integral to fair and reasonable health service delivery.

Erasmus seems to interpret Soobramoney as asserting that emergency care at any level cannot ever be denied. This does not appear to be accurate, since the Constitutional Court held that the right to emergency medical treatment means that a person who suffers a sudden event that requires immediate medical attention should not be denied an ambulance or other available emergency services. We strongly support the view that all individuals should have access to emergency healthcare; this is not questioned in the CCSSA COVID-19 triage document. However, neither Soobramoney nor the Constitution indicates the level of medical care mandated by ‘emergency care’. SECTION27, a public interest law centre that seeks to achieve equality and social justice in SA, states, ‘The right to health care does not mean that any person can demand and receive whatever type of health care they want.’ The Bill of Rights is not absolute, and the Constitution does not afford everyone the right to intensive and critical care in an ICU. The CCSSA COVID-19 triage document requires all patients to receive healthcare, at an appropriate level, including regular reassessment of their ICU triage status if indicated. Therefore, this document upholds individual rights to healthcare; it also ensures that decisions are made impartially and, furthermore, that decisions taken are subject to revision if the individual’s condition and/or ICU resource availability changes. Importantly, the scarcity of regional ICU resources determines which priority scores would qualify for ICU admission, and these are subject to change as demand and consumption increase or decrease.

The Constitutional Court suggested there may be grounds for challenging rationing policies if they were unreasonable or if they were not applied fairly and reasonably. Justice Sachs stated that ‘the rationing of access to life-prolonging resources is regarded as integral to, rather than incompatible with, a human rights approach to health care.’ He went on to state, ‘while each claimant seeking access to public medical resources is entitled to individualized consideration, the lack of principled criteria for regulating such access could be more open to challenge than the existence and application of such criteria.’ To this end, publishing clear, simple and unambiguous triage guidelines, based on sound scientific and ethical principles, allows fair and consistent application of ICU triage across the country, provides decisional support in a time of crisis to improve performance and reduce moral distress, and prevents personal judgements based on the biases and prejudices of individual clinicians, as may occur when using the ‘professional judgement’ or gut instinct approach recommended by Erasmus. The use of appropriate, validated scoring systems further ensures consistency and fairness of application. Therefore, contrary to Erasmus’s assertion that triage committees are akin to ‘death panels’ and are designed to distance individual clinicians from the moral choices they are required to make, it is our assertion that clear guidelines, such as those produced by the CCSSA, along with accountability to a decision-making group, serve to protect the population from indiscriminate, potentially unsound, decision-making practice by healthcare providers. Another important point is that it should not be assumed that a patient not admitted to an ICU will certainly die. Triage committees are not choosing between a patient’s life and death; they are assessing the probability of death v. survival (and quality
of life across a range of treatment options, which may or may not include critical care services. Erasmus's assertion of political and social prejudice in healthcare, with 'selective care' ... proportionate majority of critical care in this country is still provided in private medical facilities, which are inaccessible to most of the SA population. This undoubtedly requires urgent redress.

The late Justice Madala stated, 'Some rights in the Constitution are the ideal and something to be strived for. They amount to a promise, the current reality is different. SA does not have enough ICU beds, trained staff or equipment to meet the needs of our population. It is our sincere hope that the state fulfills its mandate to 'take reasonable measures' within its available resources, to achieve the progressive realization of each of these rights. Until that realization occurs, intensive care physicians must continue to use fair and consistent criteria to make difficult decisions about 'who gets the bed.'

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Conflict of interest. BMM, PDG, FP and IJ are sitting Council members of the CCSSA. None of the authors have conflicts of interest to declare in respect of this submission.

1. Ndou K, Singh J, Gallou I. A critical analysis of ICU/HD beds in South Africa 2008 - 2009. S Afr Med J 2011;103(10):754-753. https://doi.org/10.7196/SAMJ.16415

2. Bhagwanjee S, Serhan E. National audit of critical care resources in South Africa – unit and bed distribution. S Afr Med J 2007;97(12 Pt 3):1311-1314.

3. Basson A. Coronavirus: SA needs many more ICU beds to be ready for Covid-19 peaks, says Ramaphosa. 31 May 2020. News24, 31 May 2020. https://www.news24.com/news24/southafrica/news/coronavirus-sa-needs-many-more-icu-beds-to-be-ready-for-covid-19-peaks-says-ramaphosa-20200531

4. Basson A. Coronavirus: SA needs many more ICU beds to be ready for Covid-19 peaks, says Ramaphosa. 31 May 2020. News24, 31 May 2020. https://www.news24.com/news24/southafrica/news/coronavirus-sa-needs-many-more-icu-beds-to-be-ready-for-covid-19-peaks-says-ramaphosa-20200531

5. Christian MD. Triage. Crit Care Clin 2019;35(4):575-589.

6. Zhang Y, Wang C, Wang X, et al. Feasibility and reliability of the simplified triage and intervention management system in COVID-19 patients. J Crit Care 2020;58:96-97. https://doi.org/10.1016/j.jcrc.2020.04.012

7. Zampieri FG, Iwashyna TJ, Viglianti EM, et al. Association of frailty with short-term outcomes, organ failure, and mortality in critically ill patients. Crit Care Med 2016;20(1):175. https://doi.org/10.1093/gerona/l59.3.m255

8. De Grooth JL, Guenon IL, Gibbes AR, et al. SOFA and mortality endpoints in randomized controlled trials. A systematic review and meta-regression analysis. Crit Care 2017;21(1):23. https://doi.org/10.1186/s13054-016-1308-1

9. Joynt GM, Gomersall CD, Tan P, Lee A, Cheng CA, Wong EL. Prospective evaluation of patients refused treatment with systemic corticosteroids in an ICU triage system. Crit Care 2017;21(1):23. https://doi.org/10.1186/s13054-016-1308-1

10. Zampieri FG, Iwashyna TJ, Viglianti EM, et al. Association of frailty with short-term outcomes, organ failure, and mortality in critically ill patients. Crit Care Med 2016;20(1):175. https://doi.org/10.1093/gerona/l59.3.m255

11. Spring CI, Joynt GM, Christian MD, et al. Adult ICU triage during the coronavirus disease 2019 pandemic: Who will live and who will die? Recommendations to improve survival. Crit Care Med 2020;48(3):1190-1202. https://doi.org/10.1097/CCM.0000000000004410

12. Hoghøj S, Bilker-Andersen N. Ethics guidelines on COVID-19 triage – an emerging international consensus. Crit Care 2020;24(1):201. https://doi.org/10.1186/s13054-020-0327-4

13. Zheng KJ, Feng G, Liu WY, et al. Extrapolation complications of COVID-19: A multistem disease? J Med Virol 2020 (April 10 July 2020). https://doi.org/10.1002/jmv.26294

14. Garcia LF. Immune response, inflammation, and the clinical spectrum of COVID-19. Front Immunol 2020;11:1441. https://doi.org/10.3389/fimmu.2020.01441

15. Bhagwanjee S, Scribante J. National audit of critical care resources in South Africa – unit and bed distribution. S Afr Med J 2013;103(10):751-753.

16. Bhagwanjee S, Scribante J. National audit of critical care resources in South Africa – unit and bed distribution. S Afr Med J 2013;103(10):751-753.

17. Bhagwanjee S, Scribante J. National audit of critical care resources in South Africa – unit and bed distribution. S Afr Med J 2013;103(10):751-753.