Resource Allocation: Practice Materials for Medical Trainees and Professionals in Implementation of Crisis Standards of Care. A Collection of Training Cases from the SARS-CoV-2 Pandemic

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Abstract

The SARS-CoV-2 pandemic brought unprecedented challenges to healthcare, including prolonged threat of resource scarcity and concerns that lifesaving resources like ventilators would be exhausted. Outside the federal response, many states wrote potential Crisis Standards of Care (CSC) algorithms to provide consistency, fairness, and transparency in case resources would need to be triaged. While healthcare trainees receive training in ethical decision making, the ability to morally implement and apply policies such as resource allocation and reallocation is a critical yet absent component of training [1-4]. A collection of simulated cases on resource allocation and reallocation were created to train and prepare potential triage team members in case Colorado CSC guidelines were activated during the COVID-19 pandemic.

Objectives

These training exercise materials and follow-up survey of participants were created to:

1. Prepare individuals for direct application of Colorado CSC guidelines by practicing implementation on hypothetical cases.
2. Prepare future trainees to consider ethical values in patient care if CSC guidelines are enacted.
3. Increase awareness and familiarity with issues of resource allocation in healthcare.
4. Assess effectiveness of this training for education on issues of resource allocation.

Methods

Hypothetical cases were created and developed by the authors for training resource allocation triage teams. These cases were designed to assess team member knowledge and application of the resource allocation algorithm dictated by Colorado CSC guidelines in April 2020. Colorado utilized a tiered system for determination of resource allocation and resource re-allocation as well as the use of a set score to determine resource eligibility. At two Colorado hospitals, one county and one regional hospital, designated triage teams were presented with cases prior to a group session where they discussed decisions, addressed concerns, and posed questions in a facilitator-guided discussion. An anonymous survey to assess the efficacy of training was sent to team members following the group session for completion.

Results

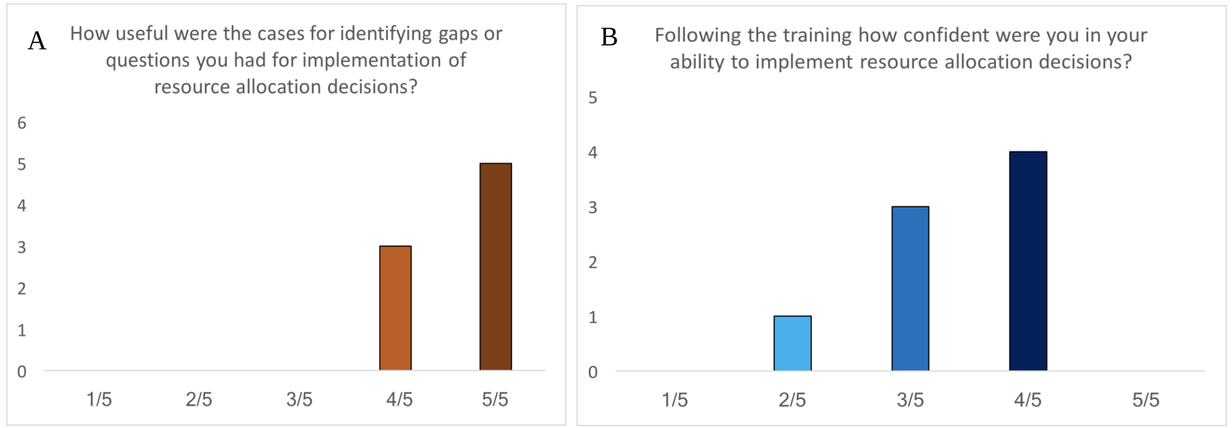

Figure 1. Participant responses to a 5-point Likert scale survey questionnaire on the A) usefulness of the exercise in preparing for utilization of CSC and B) confidence in utilization of the CSC following the exercise. 37.5% of respondents (3/8) rated the exercise a 4/5 and 62.5% (5/8) rated the exercise 5/5 for usefulness. 12.5% (1/8) respondents rated their confidence as 2/5, 37.5% (3/8) rated their confidence as 3/5 and 50% (4/8) rated their confidence as 4/5.

Figure 3. Qualitative responses to questions regarding the participants execution of resource allocation duties. When asked how the cases prepared the participants for executing resource allocation and how the exercise could be improved, four themes emerged from the responses: Reality of the situation, Solidification of Knowledge, Logistical Hurdles, and Team Building/Emotional Stressors.

Figure 2. 3/8 (37.5%) of respondents had prior experience with resource allocation training and the remaining 5/8 (62.5%) of respondents stated they had not previously received training in resource allocation.

Conclusion

Survey results from the 8 respondents suggest there is a need for increased exposure to training in resource allocation in healthcare and that a case-based approach is useful for preparation. The perceived usefulness and areas of continued need highlighted by the triage team members who used the cases for training demonstrates that this type of ethical exercise is both critical and lacking in healthcare arenas. Themes from comments on the usefulness of these cases included: 1) increased understanding of tools and algorithms for decision making, 2) identification of logistical hurdles to implementation, 3) development of a team-based approach with ability to share emotional distress, and 4) deeper realization of the situation at hand. Experience in designing as well as in implementing ethical policies is a critical component of ethics training. These cases can be used to reflect on the ethical values and priorities introduced by this specific implementation of the CSC guidelines and simulate the moral toll on triage teams.

Further Directions

Although originally created for triage teams during an impending ventilator shortage for COVID-19 patients, these cases can be adapted for ethical training of healthcare trainees and ethicists in the case of another resource scarcity event such as a disaster or pandemic. The reflection provided by the respondents can inform future iterations of CSC guidelines. Future directions include updating cases to incorporate the newest guidelines to support current triage teams and adapting cases for educational settings to introduce ethical decision making earlier in the education of healthcare professionals.

References

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