A Case-Based Approach Developed in COVID-19 for Training in Implementation of Crisis Standards of Care for Hospital Resource Allocation

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Introduction

- One of the many challenges in the initial stages of the SARS-CoV-2 pandemic was the threat of resource scarcity.
- Crisis Standards of Care (CSC) were written in many states to provide consistency, fairness, and transparency to prepare for scenarios in which scarce resources would need to be triaged.
- Hypothetical cases were created for hospital triage teams to practice implementation of the Colorado CSC, especially resource allocation and reallocation, in the event that the CSC would be activated.
- Furthermore, in considering the training of healthcare professionals in ethics, the ability to morally implement and apply policies such as resource allocation and reallocation is a critical yet absent component of training[1-4]. These cases have potential to be integrated into healthcare professional training.
- **Problem Statement:** Though healthcare professionals receive some training in ethical decision-making, the ability to morally implement and apply hospital policies around issues such as scarce resource allocation, especially in the context of the COVID-19 pandemic, is a critical yet absent component of medical training.

Objectives

- Utilize hypothetical cases to prepare individuals (both current healthcare professionals and future trainees) to comprehend and apply CSC algorithms for scarce resource allocation and re-allocation.
- Recognize the ethical concepts and increase awareness and familiarity of resource allocation in healthcare.
- Identify challenges to resource allocation, including logistical hurdles, biases within policies, determination of stakeholders and moral distress associated with this work.
- Assess effectiveness of these training cases for education on issues of resource allocation.

Setting and Participants

- The cases were used in training sessions at two Colorado Hospitals: a county hospital in the Denver metro area, and a regional hospital serving the Western Slope of Colorado.
- The triage teams were composed of diverse professionals including hospitalists, intensivists and palliative care physicians, nurses, psychologists, hospital administrators and community stakeholders including ethicists and clergy.

Methods

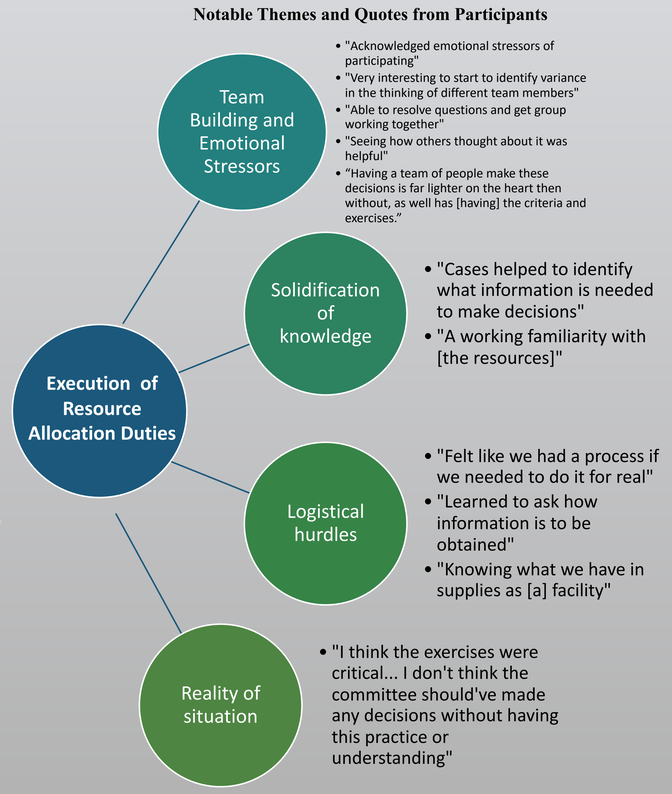
- After reviewing the Colorado Crisis Standards of Care, which included algorithms to determine resource eligibility, the authors created and developed hypothetical cases to train triage teams in resource allocation in accordance with the Colorado Crisis Standards of Care guidelines in April 2020.
- At two Colorado hospitals, designated triage teams reviewed the hypothetical cases prior to a group session where all triage teams shared their experiences, addressed concerns, and posed questions in a facilitator-guided discussion.
- An anonymous survey was sent to team members following the group session to assess the efficacy of the training and hypothetical cases.
- General themes emerged from the qualitative responses in the survey.

Results

- Survey participants (n=12) responded to a 5-point Likert scale survey questionnaire on A) usefulness of the exercise in preparing for utilization of CSC and B) confidence in utilization of the CSC following the exercise.
- 5/12 (41.6%) of respondents had prior experience with resource allocation training and the remaining 7/12 (58.3%) of respondents stated they had not previously received training in resource allocation.

Rating by Participants of Usefulness of Case Training and Confidence Following Training

Notable Themes and Quotes from Participants



Conclusions

- Results suggest a need for increased exposure to training in resource allocation in healthcare and that a case-based approach is useful for preparation.
- Themes 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.
- Areas of improvement for the case-based training fell into the following categories: 1) Increased practice 2) additional resources 3) increased team discussions and 4) logistical issues.
- Better preparedness for these morally challenging situations could help to improve consistency between institutions and thus promote equity among the individuals who are being allocated these resources.
- When these cases are used in an educational context, there should be an emphasis on discussion relating to ethical topics, including: 1) What ethical concepts are being used in these algorithms for resource allocation? 2) What biases are ingrained in the provided approach? 3) What criteria should and should not be utilized to make decisions (age, disability, social utility, willingness to follow public health measures)?
- As existing resource allocation policies created during the COVID-19 pandemic are reviewed, it becomes increasingly clear that there is significant risk of resource allocation policy implementation that perpetuate societal inequities and systemic racism[5,6] and are already magnified by the disproportionate rates of infection and death from COVID-19 in Black/African American populations.[7]
- The question of how to address issues of indirect discrimination in triage policies remains unanswered[8] and is critical to address.

Future Directions

- Reflections provided by the respondents can inform future iterations of CSC guidelines.
- Cases should be updated to incorporate the newest guidelines to support current triage teams.
- The cases can be adapted for educational settings to introduce ethical decision making earlier in the education and ethics curricula of healthcare professionals in the event of another disaster or pandemic that causes resource scarcity.

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