Resource Allocation: Training Cases from the SARS-CoV-2 Pandemic for Implementation of Crisis Standards of Care.

Taylor Soderborg, PhD*, Amelia Davis, Michael Levy, Zainab Zullali, Philip Fung, MD, Jeremy Cooke, Barbara Statland, MD

Introduction: This collection of simulated cases on resource allocation and reallocation was created to train healthcare providers and community stakeholders in implementation of the Colorado Crisis Standards of Care (CSC) during the SARS-CoV-2 pandemic. At this time the healthcare field was facing potential resource scarcities, including ventilator shortages. 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. These training materials intend to: 1) prepare involved individuals for direct application of Colorado CSC guidelines by practicing implementation using hypothetical cases, 2) to prepare future trainees to consider ethical values in patient care if CSC guidelines are enacted, and 3) increase awareness and familiarity with issues of resource allocation in healthcare.

Methods: These cases were developed for training of resource allocation triage teams. These cases were designed to assess team member knowledge and application of the resource allocation algorithm dictated by the CSC guidelines at the time of the case creation in April 2020. The cases utilize a tiered system for determination of resource allocation, re-allocation resources, and 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 and then were brought together to discuss decisions and address concerns and questions in facilitator-guided discussion. An anonymous survey to assess the efficacy of training was sent to team members following the group session for completion.

Results: The training was completed by 43 team members. 8 participants completed the follow up survey for a response of 18.6%. 5/8 found the cases extremely useful on a 5 point scale (5/5) for identifying gaps or questions they had in implementing the CSC guidelines for resource allocation, with the remaining survey responders ranking the cases as useful (4/5). Only 3/8 responders had previous experience with resource allocation. Narrative themes demonstrating the impact of the cases were: 1) understanding the tools and algorithms required for decision making, 2) identifying logistical hurdles to implementation, and 3) developing a team-based approach.

Discussion: Survey results suggest that there is a need for increased exposure to training in resource allocation in healthcare and that this case-based approach is a useful method for preparation. Although originally created for use by triage teams during an impending ventilator shortage for COVID-19 patients, these training cases can be adapted for ethical training of healthcare trainees and ethicists in the event of another

resource scarcity event such as a disaster or pandemic. Experience not only in designing but also 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. Our results are limited by the low response rate. It was incredibly busy and we made multiple outreach attempts to the triage members. Future directions include updating the cases to incorporate the newest guidelines to better support current triage teams and adapting them for educational settings.