



CRISIS STANDARDS OF CARE

COVID-19
Issue Summary

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At the start of the COVID-19 epidemic, crisis standards of care (CSC) plans were reviewed and updated across the United States in anticipation of the potential need to ration ventilators and other critical equipment. As the epidemic has gone on, we have had the opportunity to learn from experiences both domestic and international. The below highlights some key updates and changes to the implementation of CSC as summarized by John L. Hick, MD, editor of the Technical Resources, Assistance Center, and Information Exchange (TRACIE) of the Office of the Assistant Secretary for Preparedness and Response.

CSC doesn't need a state declaration. Although some states have "declared" CSC, CSC conditions may occur wherever demand exceeds resources. The crisis care techniques that health care facilities must implement will not wait for state actions. Hospitals and systems must have plans in place to ensure that crisis conditions are mitigated through movement of patients and resources to minimize the time spent in crisis.

Transfer to distribute loads. Medical Operations Coordination Cells (MOCC) are critical to the "load-balancing" between hospitals that can help to equitably distribute patients across facilities in the area. In many areas, hospitals have been disproportionately burdened—particularly those in highly impacted border areas and those that serve at-risk communities—often inner-city trauma centers. One issue that has arisen with MOCC operations is the relatively frequent need for clinical providers to work with transferring and receiving hospitals to ensure that the patient is appropriate for the recommended transfer and advise on care-in-place until the transfer can be accomplished, as EMS resources are often taxed and transfers often delayed.

Stay out of CSC. A key goal should be to avoid CSC entirely and get back to contingency (functionally equivalent) care as soon as possible. Unfortunately, sometimes, rather than look outside the facility or system for supplementary resources, providers have made choices they didn't have to make—restricting services and adversely impacting the care of individual patients. Planning for a step-wise degradation of services that is aligned with other hospitals in the area is key to equitable care.

Use a clinical consultant rather than a "triage team." Traditional wisdom advocates the use of triage teams when allocation of fixed resources like ventilators was required. More often, critical clinical consultation is needed to help bedside providers navigate complex decisions. This also helps hospitals track recurrent or systems issues, reduce provider moral injury in decision making, and ensure consistency. Further, the availability of expert consultants reduces "freelancing" triage decisions that some providers might be apt to make and enhances reasoned decision-making.

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Don't use scoring systems or triage "to" or "away" from critical care. Use of scoring systems has been proposed for triage of ventilators and other life-saving therapies, including the use of SOFA (Sequential Organ Failure Assessment) scores. Ventilator stockpiles at the state and federal level are much more robust than in early 2020, and use of mechanical ventilation has been reduced, limiting the potential that we will need to triage these therapies. Unfortunately, SOFA has not performed well in respiratory failure patients. Aside from advanced age, there are few good predictors of mortality in COVID-19, although some calculators are showing promise. However, there is NOT justification for using these calculators to deny critical care to individuals based on a score.

Extracorporeal membrane oxygenation (ECMO). There are few providers of ECMO services, which are highly resource-intensive. Regional coordination and prioritization of indications for ECMO should be established. At a certain point, available staffing may not permit continued ECMO services, but this is a decision that should be made cooperatively if there are several providers in the area.

Staffing and CSC. Staff, particularly nursing and respiratory therapy, have been the key limiting factor in critical care expansion during COVID-19. Staff are more elastic than resources such as ventilators. Staff should "step up" to providing somewhat higher levels of care than usual and "step over" to apply knowledge and skills in a different environment (e.g., moving from the OR/PACU to the ICU). Increased staff:patient ratios and changing to a tiered system in which lesser trained providers are supervised by those who usually practice in that setting are the most commonly applied strategies. In no case should patients be denied critical care on the basis of limited critical care staffing—staffing should be extended and ICUs expanded to meet needs as well as possible given the demand.

Treatments. Remdesivir, monoclonal antibodies, and other therapies have and will be in short supply initially. Some jurisdictions have determined that specific risk groups will receive preferential allocation (e.g., long-term care residents); some have included reciprocity for essential workers in their calculations /allocation plans; and some have included geographic factors such as the Area Deprivation Index (ADI) into allocation formulas to provide additional resources to at-risk areas. It is important to have a consistent regional or statewide policy and process that is ethically defensible, fair, and transparent. Because of the difficulty meeting demand, some variation on random number generators and other allocation methods have been used.

Vaccine. Ensuring that tiers are established within priority groups to allocate limited amounts of vaccine to those that most need protection according to their work setting, responsibilities, and personal risks promotes equity and efficacy of allocation. Planning for community/essential worker access to vaccine, particularly for those in at-risk communities, should be a priority, as being eligible for and being able to easily access vaccine is not the same thing.

This document draws on evidence-based reports from the Institute of Medicine (now National Academy of Medicine). To learn more, visit [NAM.edu/CSC](https://nam.edu/CSC)