



# Allocation of Scarce Resources Lead to Developing a Crisis Standard of Care

By Michael Cocchi, MD, Jaime Levash, and Deborah Stepanian  
Beth Israel Deaconess Medical Center

## Introduction/Problem

COVID-19 was spreading rapidly across the country. The number of patients coming to hospitals was increasing at an alarming rate. Does BIDMC have enough life saving equipment? What are we going to do if we run out of ventilators? BIDMC laid out an approach following Massachusetts Department of Public Health (DPH) Crisis Standards of Care (CSOC) guidelines. The goal of the CSOC is to maximize benefit to populations of patients, often expressed as doing the greatest good for the greatest number.

## Aim/Goal

The goal was to develop and operationalizing a fair assessment tool and efficient process for each patient to be consistently and frequently evaluated and scored in alignment with Massachusetts DPH CSOC guidelines.

## The Team

- Michael Cocchi, MD
- Nicole Johnson, RN
- Kimberly Voto, RN
- Mary Beth Cotter, RN
- Jaime Levash
- Mary Ward, RN
- Michelle Doherty, RN
- Deborah Stepanian

## The Interventions

- Developed a guideline and scoring tool in alignment with state guidelines using the Sequential Organ Failure Assessment (SOFA) in combination with patient comorbidity status.
- Rolled out education on the scoring process and tool to staff conducting the assessments
- Created tracking tools and reporting systems to follow patients daily to multiple times a day
- Reviewed scores to determine if SOFA assessment was capturing the patient correctly
- In alignment with and due to scoring methodology updates to the MA DPH CSOC, implemented different scoring tools mid-process, shifting from evaluation/scoring related to patient comorbidity status to a life expectancy score.

## Model/Indication for CSOC

As described by the National Academies, the need for healthcare surge capacity in a disaster occurs along a continuum based on demand for health care services and available resources.

Incident demand/resource imbalance increases →  
Risk of morbidity/mortality to patient increases →

← Recovery

	Conventional	Contingency	Crisis
Space	Usual patient care space fully utilized	Patient care areas repurposed (PACU, monitored units for ICU-level care)	Facility non-patient care areas (classrooms, etc.) used for patient care; Physical space no longer available for clinical care
Staff	Usual staff called in and utilized	Staff extension (brief deferrals of non-emergent service, supervision of broader group of patients, change in responsibilities, documentation, etc.)	Trained staff unavailable or unable to adequately care for volume of patients even with extension techniques
Supplies	Cached and usual supplies used	Conservation, adaptation, and substitution of supplies with occasional reuse of select supplies	Critical supplies lacking, possible reallocation of life-sustaining resources
Standard of Care	Usual care	Functionally equivalent care	Crisis standards of care

Normal operating conditions    ↑ Indicator: potential for crisis standards    ↑ Trigger for Crisis Standards of Care    ↑    Extreme operating conditions

Along the continuum of care, strategies to maximize healthcare resources include Substitution, Adaptation, Conservation, ReUse and Optimize Allocation.

OPTIMIZE ALLOCATION: Allocate resources to patients whose need is greater or who are more likely to survive the immediate crisis.

*Source: Massachusetts Department of Public Health Crisis Standards of Care Planning Guidance for the COVID-19 Pandemic*

## Lessons Learned

- It is important to create a multidisciplinary team with strong collaboration and rapid responsiveness.
- Continuous awareness of critical care resources available in a rapidly changing environment is essential .
- With the introduction of daily scoring needs expected by a provider, clear communication to providers explaining the expectations in advance is needed and embedding within their existing workflow is optimal.
- Testing of the tool/process important both for feasibility but also to evaluate for risk of inequity
- It is important to have a tracking tool where multiple people can be accessing and recording data simultaneously.

## Next Steps

Through monitoring of COVID-19 patient volume and availability of critical care resources, once it became evident that supply would meet demand, the Massachusetts Crisis Standards of Care (CSOC) was deactivated to the relief of many.

**For more information, contact:  
Jaime Levash, Senior Project Manager Health Care Quality**