

CRISIS CARE AND SCARCE RESOURCE DECISION- MAKING

Introduction

A key goal of surge capacity is to have plans and resources to enable the hospital to “stretch” to accommodate an influx of disaster patients. The more surge capacity, the greater the ability to provide both current and disaster patients the necessary resources for good outcomes. But what if a key medication is in short supply? Or there are not enough critical care beds? What if multiple resources are strained by a disaster? At what point does the care provided start to place patients at risk, and what should be done at that point?

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The quality of care that hospitals can provide, given the severity of the resource shortage at any given time, is described as falling into one of three categories: conventional, contingency, and crisis.

1. Conventional: Usual quality of care can still be provided by maximizing existing beds, staffing, and resources.
2. Contingency: Care must be significantly adapted from usual practices to expand capacity (e.g., boarding critical care patients in post-anesthesia care areas), but the aim remains to provide functionally equivalent quality of care to all patients.
3. Crisis: Inadequate resources are available to provide the usual quality of care for all patients and care quality must be degraded in proportion to the resource gap, with significant increased risk of morbidity and mortality for some or all patients, though risks can be minimized by implementing consistent, proactive resource use strategies.

“Crisis standards of care” (CSC) is the term used to describe the state where the care that is able to be delivered, though it is the best possible under the circumstances, may place the patient at substantial risk of a poor outcome. At this point, resource allocation decisions must consider the needs of all patients, not just the needs of each individual patient (i.e., rationing).

Whenever a hospital is in a crisis situation, it should seek support from other hospitals in the region/healthcare coalition and from the state. Ideally, the state would provide support to hospitals in crisis, including additional supplies, guidance on how to manage scarce resources, and legal and regulatory support for the necessary adaptations. However, hospitals may be faced with difficult choices with little or no official support.¹

Related Resources

ASPR TRACIE has numerous related materials on the [Crisis Standards of Care Resources Page](#), including the [Crisis Standards of Care Topic Collection](#).

In some states, planning for CSC situations and decision-making has been discouraged, as it has become associated with ventilator triage and other extreme situations that are exceptionally challenging to navigate. However, recent incidents (natural disasters, mass casualty incidents, and public health emergencies—sometimes simultaneous) reinforced the need for healthcare facilities and agencies to be ready to address crisis situations across a broad range of supplies and services.² Multiple resources can go into varying degrees of shortage for varying lengths of time, so it is critical to think broadly about facility, system, state, and regional plans and processes for surge and shortage conditions (including CSC conditions). States should be planning for how they can best support hospital and system plans for managing shortages. Whether supported by the state or not, when circumstances force hospitals to make difficult allocation decisions, advance planning can help ensure a coordinated strategy that delivers fair, proportional, and accountable care. Hospital leaders should have a plan and educational framework to make crisis care decisions with or without official or formal policies or declarations when necessary.

Planning for shortage situations is important for two main reasons. First, good plans can prevent triage decisions from being made ad hoc at the bedside, which can contribute to poorly informed decisions, suboptimal patient outcomes, and provider distress. Second, proper planning enhances coordination internally and externally and minimizes the impact of the crisis. Maximal efficient use of facility and regional resources results in the best possible outcomes during times of contingency and crisis.

Essentially, the hospital has only three options when faced with a resource shortfall:

- Move patients out (e.g., to home, other hospitals, or other facilities).
- Bring resources in (e.g., staff or supplies).
- Allocate available resources.

From the Field

Application of crisis plans during the COVID-19 pandemic included use guidelines for respirators, vaccine allocation guidelines, regional guidelines and structures for allocating monoclonal antibodies, and having regional plans and mechanisms to manage transfers and “load-balance” an overwhelmed hospital by moving some patients to other hospitals that had more capacity.

¹ ASPR TRACIE. (2022). [Crisis Standards of Care during COVID-19: Summary of State Actions](#).

² Hick, J., Hanfling, D., Wynia, M., and Toner, E. (2021). [Crisis Standards of Care and COVID-19: What Did We Learn? How Do We Ensure Equity? What Should We Do?](#) NAM Perspectives. National Academy of Medicine.

In most cases, all three options should be pursued at the same time. These options require coordination with and assistance and guidance from external partners including other hospitals/health systems, suppliers, and, potentially, the local or state jurisdiction.

Even a single medication or blood product in shortage may cause limited crisis conditions if there is no reasonable substitute and the product is necessary to sustain life. Alternatively, an entire facility or region may experience a crisis when, for example, a natural disaster such as a tornado strikes the hospital or the hospital faces cascading failures of utilities.

Related Resources

The [Medical Product Shortages and Scarce Resources Page](#) has multiple ASPR TRACIE-developed resources to help address shortage situations.

Note that hospitals do not choose to operate under crisis conditions; these conditions are forced upon hospitals by, for example, an extreme influx of patients, damage to the campus, key supply shortages, or other incidents. The key is to have plans to address these situations and use incident management to navigate back to contingency and then conventional conditions as soon as possible, often with external assistance.

As the hospital emergency manager and the emergency management committee develop plans to address CSC and scarce resources, they should consider the following four aspects:

1. Concept of operations: How will the hospital adapt services and what will be the process for decision-making? Who is authorized to make what decisions and how?
2. Criteria: What are the indicators of contingency and crisis conditions, triggers for adopting specific additional resource allocation strategies, and any clinical criteria used to make allocation determinations? Each of these may be specified prior to an incident, but they may also evolve based on demand and resources.
3. Coordination: How does the hospital coordinate both internally and externally to ensure that it has all available resources and is using them in a way that is consistent with other hospitals in the area?
4. Consequence: How does the hospital minimize risk during crisis situations, ensure legal protection for itself and its providers for decisions made, and determine regulatory relief to accomplish aspects 1-3?

Concept of Operations

The concept of operations for hospital crisis planning spans four key areas:

- Surge planning for space and staff expansion under crisis conditions.
- Plans for adapting services to crisis conditions.
- Processes for developing best practice guidance during crisis conditions.
- Processes for making non-beneficial care or re-allocation decisions.

Education and exercising hospital crisis plans are key to helping providers understand general strategies, their roles and responsibilities, and the resources available. Providers should find

comfort knowing they will have clinical consultation and hospital Incident Command support for their decisions. Having clear guidance, resources, and an accountability system can ensure that provider decisions that are made consistent with hospital plans are supported by the hospital and the provider is not bearing sole moral, legal, and/or clinical responsibility for rationing scarce resources.

The hospital emergency manager should plan for space and staff expansion across conventional, contingency, and crisis levels of demand. This includes areas in the emergency department (ED), inpatient floor(s) (including where alternate care areas could be established), intensive care (if applicable to the hospital), surgical capacity, and imaging capability. The Surge Capacity Concepts chapter of this guidebook provides more information on surge capacity planning. Once space and intensive care expansion are defined, the hospital should examine how staff may be redeployed to support the surge needs. In the short term, large expansions of critical care are possible including bringing in staff from an unaffected area to support expanded hospital care (e.g., interstate or federal staffing support for an overwhelming local incident). This strategy may not be sustainable across a long-term incident like a pandemic or other public health emergency.

Integrated with planning for space and staff during a crisis is determining which services the hospital will curtail based on the situation and how staff will be reassigned to support the response. These are key aspects of crisis planning. Incident Command is expected to calibrate care expansion to the needs of the incident and be accountable for understanding the current conditions, challenges, and any resource shortfalls (anticipated or actual). Services provided may be dynamic over time, particularly during a longer-term incident. In particular, there should be a graded/tiered approach to curtailing non-emergency procedures relative to the risk of delay.

Related Resource

ASPR TRACIE has [templates](#) that can assist with phased expansion plans.

Another responsibility of Incident Command is to ensure a proactive approach to triage decision-making is taken whenever possible. The difference between reactive and proactive is important. In the early stages of an incident, the hospital will not know the impact nor have a good understanding of the resources that may be available. This early in a reactive approach, clinicians may have to make the best decisions they can based on an evolving situation, with little potential for standardization. If rationing or de-escalation of care is occurring that is unusual and driven by resource shortages, another provider should be involved in making these decisions, if possible.

In a proactive approach, a good Incident Command response will attain situational awareness to understand the demands of the incident and what resources can be obtained or are on the way. This approach allows providers to coordinate care decisions and, ideally, make those decisions based on common guidance. If best practice guidance is available for a specific shortage from external sources or prior practices, it can be adapted to the specifics of the facility.



Frequent communication from Incident Command to the hospital staff during a crisis should summarize the current resource situation, describe strategies being implemented, and address rumors. These situations are stressful and dynamic, and providers will want to understand what the hospital is doing, what is expected of providers, how Incident Command is taking responsibility, and what to anticipate.

The importance of inclusion of clinical experts from affected service lines (e.g., critical care, nephrology, or infectious disease, depending on the specifics of the shortages) into Incident Command cannot be overstated. Both the Incident Commander and the Planning Section should incorporate this expertise into decisions about service provision as well as to develop policy and guidance.

In some cases, there is no initial reactive phase because the incident is forecast, and coordination can occur prior to patient care impact. This can happen when an epidemiological curve forecasts a surge in cases or more regularly—on a non-emergency basis—when a key drug shortage requires rationing. Ideally, the latter is based on existing state/regional guidance, but sometimes the facility might need to rapidly develop strategies without state guidance or support.

Another key goal of planning to address resource scarcity is to develop clinical guidance that is adaptable to varying degrees of shortage, reserving more aggressive (and thus riskier) strategies for more severe levels of shortage. The following strategies may be helpful to frame development of clinical guidance:

- Substitution: The use of a similar resource to meet the need (e.g., class substitution of one drug for another).
- Conservation: Restricting the use of a resource for those who can most benefit. Conservation strategies are often tiered, with more aggressive restrictions necessary as the shortage worsens.
- Adaptation: Changing how a therapy is delivered to broaden the benefit or reduce the amount of resources required. For example, shortening dialysis runs, using non-invasive ventilation machines as ventilators, or changing intravenous drip medications to subcutaneous.³
- Re-use: Identifying single-use items (such as disposable respiratory supplies) that can be disinfected and re-used.
- Re-allocation: In unusual situations, a resource may have to be removed from a patient so that another can use it. This usually occurs when a patient is receiving care that is inappropriate for the situation and there are no alternatives available.

Related Resource

ASPR TRACIE offers a [hospital crisis resource allocation template](#) that can facilitate writing a concept of operations that addresses these issues.

³ Dichter, J., Devereaux, A., Sprung, C., et al. (2022). [Mass Critical Care Surge Response During COVID-19: Implementation of Contingency Strategies - A Preliminary Report of Findings from the Task Force for Mass Critical Care](#). *Chest*. 161(2):429-447.

Experience has shown that triage decisions should not be made alone and should not be made without expert opinion. As soon as possible, Incident Command must ensure that providers making triage decisions to discontinue or not offer critical care due to a resource shortage do so in consultation with a subject matter expert. In some cases, this may be onsite (e.g., in the operating room) and in others it may be remote. Engaging clinical experts through Incident Command to develop guidance after most consultations will allow a more proactive approach for recurring situations. As the complexity and consequence of the decisions increase, additional subject matter experts should be involved.

Each hospital should have an existing process for determining non-beneficial care/futile care. During conventional conditions, these processes can take weeks, a timeframe that is not reasonable during a crisis. The hospital ethics committee should determine how their usual processes can be fairly instituted over a shorter timeframe to prevent non-beneficial care during a crisis when others can benefit from scarce resources.

Related Resource
ASPR TRACIE developed considerations for [non-beneficial care](#).

The hospital should also define a process based on their non-beneficial care guidelines for determining *inappropriate* care relative to available resources. In the past, there has been significant emphasis on scoring systems for resource triage with a focus on ventilators, but one lesson learned from the COVID-19 pandemic was that scoring systems should *not* be a major focus of hospital plans for crisis care. They have not been validated for this purpose and, when tested, these scoring systems failed to predict mortality with sufficient accuracy to be the basis for triage decisions and often discriminated against specific groups (e.g., higher baseline markers for kidney function [due to chronic disease] at time of admission result in worse scores, though they may not contribute to worse outcomes).⁴ Instead, an individual assessment of the patient and their short-term prognosis based on their current illness should occur consistent with expectations from the U.S. Department of Health and Human Services Office of Human Rights.⁵

Related Resource
The ASPR TRACIE [CSC Topic Collection](#) includes additional information about this type of resource triage.

Decisions about withdrawal of care deemed inappropriate should involve input from multiple experts in medical ethics and law. They should also be supported by state legal and other protections. Making resource decisions based on an appropriateness standard without immunity can introduce legal risk, even if such decisions are reasonable given the situation.

One caution about developing allocation guidelines and making triage decisions is that at-risk populations usually suffer disproportionately during crisis situations. Incident Command should

⁴Ashana, D., Anesi, G., Liu, V., et al. (2021). [Equitably Allocating Resources during Crises: Racial Differences in Mortality Prediction Models](#). American Journal of Respiratory and Critical Care Medicine. 204(2):178-186.

⁵US Department of Health and Human Services. (2022). [FAQs for Healthcare Providers during the COVID-19 Public Health Emergency: Federal Civil Rights Protections for Individuals with Disabilities under Section 504 and Section 1557](#).

overtly include a technical expert to ensure that existing disparities are not exacerbated by decisions about the services that will be offered and how resources will be allocated. Concerns should also be brought upstream to ensure that public health, emergency management, and healthcare are aligned to offer prevention, information, testing, and early treatment to at-risk populations to reduce their need for hospitalization.

Criteria

Often referred to as indicators (which warn of a potential or evolving crisis) and triggers (points at which actions are automatically taken),⁶ the criteria to initiate internal and external responses to anticipated or occurring crisis situations are important as they illustrate thresholds at which specific actions will be taken at the hospital level.

For example, rationing strategies should be set to address pharmaceutical shortages that:

- Are expected to last for weeks to months.
- Involve a medication that is essential for treatment or is lifesaving/sustaining.
- Involve a medication for which there are no reasonable substitutes.

Recent examples of shortages where a systematic approach has been needed to preserve resources for the most critical use include chemotherapy agents, contrast agents for radiological studies, intravenous fluids, blood products, and RhoGAM. The hospital plan should document the conditions under which formal rationing strategies will be implemented, how the hospital will incorporate external guidelines, and what interfaces occur with regional and state activities.

Ideally, indicators for surge situations (or strain conditions when patient volumes are not higher but staff or resource shortages impede usual care) should be monitored at the hospital and regional level and may include the number of used and available beds, patient acuity, number of ED patients waiting for inpatient beds (i.e., boarding), and other elements of information.⁷ Notification of medications being placed on allocation by regional suppliers may also be an indicator. Clinical feedback to leadership that current conditions are placing patients at risk should also trigger specific actions at the facility level to investigate and mitigate the situation and seek regional situational awareness and assistance if the issue cannot be addressed by the facility.

Regional triggers are ideal for situations in which other hospitals and agencies should be engaged to prevent or mitigate local crisis conditions and coordinate ongoing regional response. Example triggers might

Related Resource

The ASPR TRACIE [CSC Topic Collection](#) includes additional information about resource triage.

⁶ Institute of Medicine. (2013). [Crisis Standards of Care: A Toolkit for Indicators and Triggers](#). The National Academies Press.

⁷ Hick, J., Toner, E., Hanfling D., et al. (2024). [Data and Disasters: Essential Information Needed for All Healthcare Threats](#). Health Security. 22(1):3-10.

include facilities using non-traditional staff (e.g., anesthesiology) to care for inpatients, staff-to-patient ratios in excess of a certain number or percentage, or using care staff with lower training than usual on a unit. Less trained staff typically have a higher trained staff member leading them (e.g., non-intensive care unit [ICU] nurses providing care in the ICU with an ICU nurse leading them). Regions might consider boarding patients occupying more than a certain percentage of ED beds as another trigger. In the absence of regional definitions, hospitals may use these and other triggers to ensure specific facility actions, such as:

Related Resource

ASPR TRACIE developed a brief on [support for clinical allocation decisions](#).

- Initiating Incident Command.
- Expanding capacity onsite (including use of contingency and crisis spaces).
- Expanding emergency and other services.
- Requesting regional assistance.
- Calling back additional staff.
- Limiting non-emergency services and procedures.

Clear understanding of what hospital and regional responses will occur in a given situation is important for consistency and helps generate trust between providers and the facility as well as between hospitals. This also helps the state clearly understand the regulatory and legal protections that may need to be instituted.

Not all situations can be anticipated. Indicators and triggers are very helpful to drive effective response, but incident-specific information may require action to prevent or mitigate crisis situations. Feedback from bedside providers is the *single most important source* of information relative to the risks of the care currently being provided and should be integrated into Incident Command and shared regionally.

Coordination

Maintaining consistency of care during crisis conditions can involve coordination from the bedside provider up to the national level. The Medical Surge Capacity and Capability Handbook⁸ describes how unmet needs at the lowest level of the system rise to involve the next level of resources. This progression is usually from healthcare facility to a healthcare coalition/local or regional jurisdictional level, then to the state, and finally to the national level. Hospital personnel will interact most with their providers and with their parent healthcare system, spilling over to the healthcare coalition/local jurisdiction when there are resource or policy needs that cannot be met, but may provide and receive state and national level input (e.g., guidelines for care).

Within the hospital, there should be multiple mechanisms to ensure that providers have situational awareness of the resources available and are provided guidance on allocation. The Incident Commander and Operations and Planning Section Chiefs have an obligation to monitor

⁸ [Medical Surge Capacity and Capabilities \(MSCC\) Handbook](#)

the clinical situation and develop changes to guidance or the services delivered with input from clinical experts and the chief medical officer/designee.

Clinicians should understand how to access the command team if they need further clinical, resource, or policy support. When a hospital is part of a larger health system, coordination with system-level command/emergency operations is critical to maintain consistency. The health system can be a valuable source of resources and guidance, though this can be more difficult if the health system spans multiple states where allocation guidelines or resource availability may differ substantially.

Related Resource

Additional information is available in ASPR TRACIE's [MOCC Brief](#).

Healthcare coalitions are designed to encourage multidisciplinary planning and response by bringing together healthcare, public health, emergency management, and emergency medical services (EMS) to work together in a given region. Coalitions may also maintain caches of materials (e.g., personal protective equipment). Perhaps the single most valuable asset of coalitions is their ability to bring together partners during an incident to share and coordinate information and best practices, including those for allocating scarce resources. It is important to understand what functions the coalition has during response versus those of jurisdictional emergency management.

During a disaster or specific resource shortage (e.g., drug shortage), there should be a jurisdictional or regional entity responsible for resource monitoring and management, coordination of resource requests to the state, and information/policy issues. The roles and responsibilities of each entity should be understood and practiced prior to an incident so it is clear who the hospital and health system reach out to under what circumstances (e.g., a jurisdictional emergency operations center [EOC] will not be operational during a drug shortage) and what assistance will be provided.

Key information and clinical guidance may also originate from the state, depending on the state response structure. The state may also maintain caches of equipment and materials. Multiple states have clinical advisory teams (sometimes referred to as State Disaster Medical Advisory Committees) that inform state actions and often provide guidance to clinicians to help adapt care to surge or strain conditions. The hospital should be aware of their state assets relative to resources, information, and clinical guidance.

Recently, Medical Operations Coordination Centers (MOCCs)⁹ have been recognized as a key mechanism for maintaining equitable access to regional healthcare resources when a surge in demand arises and to monitor for hospitals that are disproportionately affected by an incident. A MOCC can help backstop usual referral mechanisms during a surge by

From the Field

Minnesota has a Science Advisory Team that provides recommendations to the Commissioner of the Minnesota Department of Health during drug shortages and disaster situations but also maintains a proactive [cardset](#) offering clinical guidance for scarce resource situations.

⁹ ASPR TRACIE. (2024). [Medical Operations Coordination Centers Toolkit](#).

coordinating transfers into specialty facilities, from overloaded facilities to ones with more capacity (particularly from tertiary care centers to community hospitals), and to facilitate care-in-place when transfers are not possible by connecting the hospital with specialty providers (e.g., critical care, burn, pediatrics). MOCCs may be operated by the state, healthcare coalitions, EMS agencies, or health systems that integrate data from all hospitals, not just those in their system. MOCCs can be a critical tool to prevent or mitigate crisis situations by ensuring that all patients receive the best care possible during surge conditions, but they must have the data and granted authorities to function effectively. In some cases, MOCCs may offer coordination or resource distribution services in addition to their flow management responsibilities.

Consequence

Legal protections for providers vary markedly between states. In general, any clinical decision is subject to a “reasonable provider” standard that asks what is reasonable given the specifics of the situation. Thus, *if a provider is making decisions that are consistent with a circulated guideline, particularly if the hospital issued or approved the guideline, this will reduce the legal liability on the provider.* The inverse is that if a provider or facility does *not* follow its policy or guidelines, liability exposure may increase in the absence of good documentation about the reasons for exceptions.

Related Resource

ASPR TRACIE identified additional [legal/regulatory considerations](#).

Hospitals and providers should be familiar with their state liability protections, including decisions made in the absence of an emergency or disaster declaration. Though legal protection for providers is a key issue, the facility may also need protection against legal action during withdrawal of non-beneficial treatment to fairly use its resources.

Additionally, the hospital should be cognizant of civil rights issues and regulatory/licensure issues when rationing decisions must be made. In all cases, accountability, proportionality, and good documentation about the resource situation and the guidance used to make clinical decisions is important to defend the actions necessary to ensure scarce resources are used fairly. State statutes, emergency declarations, governors’ emergency/executive orders, and other mechanisms to protect providers and hospitals should be understood and applied as required (and available) during a crisis.

From the Field

During the COVID-19 pandemic, a [judge issued a restraining order](#) preventing a hospital from taking a patient who was receiving futile care off a ventilator, precluding the use of those critical care resources for other patients.

The state also has a key role in supporting hospital surge and rationing strategies by providing public information about shortages and providing regulatory and legal support for the hospitals. For example, depending on the situation, certain pharmacy rules on compounding could be relaxed or waivers (such as [1135 waivers](#) from the Centers for Medicare and Medicaid Services) could be sought. A solid concept of operations and planning and exercising process can help



ensure providers are familiar with state legal protections and their role in protecting their patients, their careers, and their healthcare facilities.

Conclusion

Though this may seem daunting, the starting point to crisis care and scarce resource decision making is making sure hospital emergency management is coordinating with physicians, advanced practice providers, nursing, and administration. This can help ensure that crisis situations are addressed within the surge capacity plans for space and staffing, and that a resource allocation plan details the authorities and process when rationing or adapted care during crisis conditions is required. Both surge plans and resource allocation/rationing plans should be annexes to the hospital emergency operations plan to ensure integration with all-hazards response. When crisis conditions or shortages exist that present a substantial risk of harm to patients, the emergency manager must understand how efforts are coordinated between hospitals in the area and with the state and region both in terms of guidance as well as resource movement and patient transfer management. Optimizing movement of resources and patients will mitigate crisis conditions and thus should limit the scope and duration of rationing decisions.