



# **CRISIS STANDARDS OF CARE TOOLKIT**

Guidance for Developing Healthcare Plans

04/01/2023

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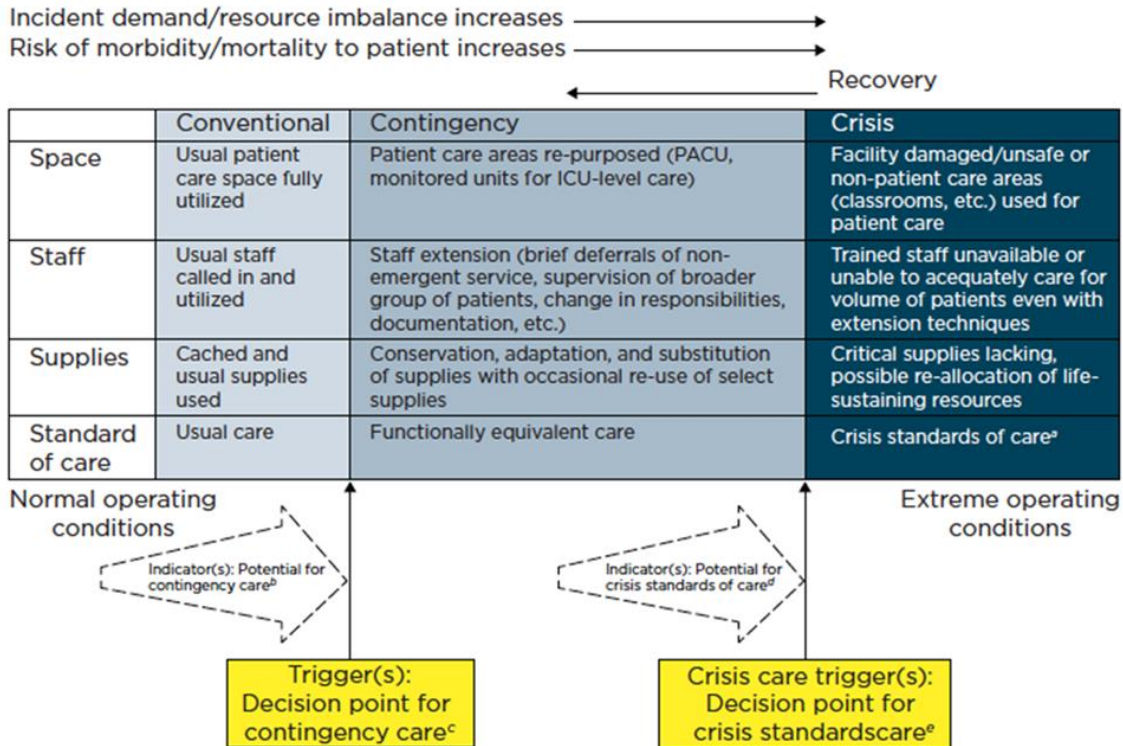
## **Executive Summary**

When preparing for an emergency or a disaster, emergency planners have an ethical responsibility to provide guidance related to the ethical allocation of scarce medical resources and services. The “Guidelines for Implementation of Crisis Standards of Care and Ethical Allocation of Scarce Medical Resources and Services During Public Health Emergencies in Michigan” were created to offer guidance to health care and public health decision makers in Michigan. When medical resources become scarce during an emergency or disaster, the Michigan Guidelines outline three goals: to minimize morbidity, mortality, and suffering; to sustain a functional society; and to ensure equity for citizens in Michigan.

When planning for the implementation of crisis standards of care, it is important to recognize that as incident demand and resource shortages increase, the risk of morbidity and mortality to patients also increases. As a result, when a hospital reached contingency or crisis status (see table below), it is important to employ the use of indicators and triggers to help hospitals plan for the shortages in staff, space and supplies that may occur. Indicators are measurements or predictors of change in demand for health care service delivery or availability of resources. Triggers are decision points based on changes in the availability of resources, requiring adaptations to the delivery of health care resources and services along the care continuum.

Health care organizations and facilities are encouraged to determine their individual indicators and triggers based on size, capacity and capabilities. Indicators and triggers may be used to outline factors and scenarios that can determine whether a health care facility is in conventional, contingency, or crisis capacity. For health care organizations, indicators and triggers may be used to outline factors and scenarios that determine contingency or crisis standards of care, provide possible methods to mitigate or avoid scarcity of resources, address slow-onset and no-notice emergencies, and address multiple categories of scarcity. The Michigan Guidelines take a broad approach to addressing various resource shortages during an emergency or disaster by outlining the differences between conventional, contingency, and crisis standards of care by doing the following:

- Supporting decision-making in a manner that is fair and consistent.
- Providing practical guidance to decision-makers.
- Providing basic framework for health care providers, community leaders, and state and local governments.
- Giving a framework for allocating scarce resources during an emergency or disaster.



This tool kit contains guidance including resources to help with creating a Scarce Resource Allocation Committee (SRAC) for your organization, as well as staffing, equipment and patient care resources to consider. Each section is set up to provide essential elements to consider related to:

- Scarce Resource Allocation Committee Membership
- Policies
- Staffing Considerations
- Supply/Equipment Considerations
- Patient Care Considerations
- Pediatric Considerations

This tool kit was developed to provide condensed, easy to use information on building an organizational scarce resources plan. It is designed to help administrators and staff with their roles in building a program that helps to ensure patient care is managed in a way that delivers quality care. Facilities can also refer to the “Guidelines for Implementation of Crisis Standards of Care and Ethical Allocation of Scarce Medical Resources and Services During Public Health Emergencies in Michigan”: [MDHHS Ethical Guidelines \(michigan.gov\)](https://www.michigan.gov/mdhhs/0,4570,7-253_17317_17318_17319_17320_17321_17322_17323_17324_17325_17326_17327_17328_17329_17330_17331_17332_17333_17334_17335_17336_17337_17338_17339_17340_17341_17342_17343_17344_17345_17346_17347_17348_17349_17350_17351_17352_17353_17354_17355_17356_17357_17358_17359_17360_17361_17362_17363_17364_17365_17366_17367_17368_17369_17370_17371_17372_17373_17374_17375_17376_17377_17378_17379_17380_17381_17382_17383_17384_17385_17386_17387_17388_17389_17390_17391_17392_17393_17394_17395_17396_17397_17398_17399_17400_17401_17402_17403_17404_17405_17406_17407_17408_17409_17410_17411_17412_17413_17414_17415_17416_17417_17418_17419_17420_17421_17422_17423_17424_17425_17426_17427_17428_17429_17430_17431_17432_17433_17434_17435_17436_17437_17438_17439_17440_17441_17442_17443_17444_17445_17446_17447_17448_17449_17450_17451_17452_17453_17454_17455_17456_17457_17458_17459_17460_17461_17462_17463_17464_17465_17466_17467_17468_17469_17470_17471_17472_17473_17474_17475_17476_17477_17478_17479_17480_17481_17482_17483_17484_17485_17486_17487_17488_17489_17490_17491_17492_17493_17494_17495_17496_17497_17498_17499_17500_17501_17502_17503_17504_17505_17506_17507_17508_17509_17510_17511_17512_17513_17514_17515_17516_17517_17518_17519_17520_17521_17522_17523_17524_17525_17526_17527_17528_17529_17530_17531_17532_17533_17534_17535_17536_17537_17538_17539_17540_17541_17542_17543_17544_17545_17546_17547_17548_17549_17550_17551_17552_17553_17554_17555_17556_17557_17558_17559_17560_17561_17562_17563_17564_17565_17566_17567_17568_17569_17570_17571_17572_17573_17574_17575_17576_17577_17578_17579_17580_17581_17582_17583_17584_17585_17586_17587_17588_17589_17590_17591_17592_17593_17594_17595_17596_17597_17598_17599_17600_17601_17602_17603_17604_17605_17606_17607_17608_17609_17610_17611_17612_17613_17614_17615_17616_17617_17618_17619_17620_17621_17622_17623_17624_17625_17626_17627_17628_17629_17630_17631_17632_17633_17634_17635_17636_17637_17638_17639_17640_17641_17642_17643_17644_17645_17646_17647_17648_17649_17650_17651_17652_17653_17654_17655_17656_17657_17658_17659_17660_17661_17662_17663_17664_17665_17666_17667_17668_17669_17670_17671_17672_17673_17674_17675_17676_17677_17678_17679_17680_17681_17682_17683_17684_17685_17686_17687_17688_17689_17690_17691_17692_17693_17694_17695_17696_17697_17698_17699_17700_17701_17702_17703_17704_17705_17706_17707_17708_17709_17710_17711_17712_17713_17714_17715_17716_17717_17718_17719_17720_17721_17722_17723_17724_17725_17726_17727_17728_17729_17730_17731_17732_17733_17734_17735_17736_17737_17738_17739_17740_17741_17742_17743_17744_17745_17746_17747_17748_17749_17750_17751_17752_17753_17754_17755_17756_17757_17758_17759_17760_17761_17762_17763_17764_17765_17766_17767_17768_17769_17770_17771_17772_17773_17774_17775_17776_17777_17778_17779_17780_17781_17782_17783_17784_17785_17786_17787_17788_17789_17790_17791_17792_17793_17794_17795_17796_17797_17798_17799_17800_17801_17802_17803_17804_17805_17806_17807_17808_17809_17810_17811_17812_17813_17814_17815_17816_17817_17818_17819_17820_17821_17822_17823_17824_17825_17826_17827_17828_17829_17830_17831_17832_17833_17834_17835_17836_17837_17838_17839_17840_17841_17842_17843_17844_17845_17846_17847_17848_17849_17850_17851_17852_17853_17854_17855_17856_17857_17858_17859_17860_17861_17862_17863_17864_17865_17866_17867_17868_17869_17870_17871_17872_17873_17874_17875_17876_17877_17878_17879_17880_17881_17882_17883_17884_17885_17886_17887_17888_17889_17890_17891_17892_17893_17894_17895_17896_17897_17898_17899_17900_17901_17902_17903_17904_17905_17906_17907_17908_17909_17910_17911_17912_17913_17914_17915_17916_17917_17918_17919_17920_17921_17922_17923_17924_17925_17926_17927_17928_17929_17930_17931_17932_17933_17934_17935_17936_17937_17938_17939_17940_17941_17942_17943_17944_17945_17946_17947_17948_17949_17950_17951_17952_17953_17954_17955_17956_17957_17958_17959_17960_17961_17962_17963_17964_17965_17966_17967_17968_17969_17970_17971_17972_17973_17974_17975_17976_17977_17978_17979_17980_17981_17982_17983_17984_17985_17986_17987_17988_17989_17990_17991_17992_17993_17994_17995_17996_17997_17998_17999_18000)

Additional information can be found in the documents below:

- [Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response - PubMed \(nih.gov\)](https://pubmed.ncbi.nlm.nih.gov/26111111/)
- [Indicators and Triggers - Crisis Standards of Care - NCBI Bookshelf \(nih.gov\)](https://bookshelf.ncbi.nlm.nih.gov/books/NBK55444/)

## **Scarce Resource Allocation Committee (SRAC)**

**Recognizing that each hospital organization is unique and planning for the allocation of resources should be proactive, the composition of these three institutional structures/positions is recommended:**

- Scarce Resource Allocation Committee (SRAC)
- Triage Officers Corps for hospital floors or units
- Clinical Review Committee (CRC) which serves as a decision-making body and an appeals forum.

Caregivers, physicians, and administrators will need clear guidance regarding how to distribute resources, and family members will need to know that a just, thoughtful, and consistent process is in place.

### **Trigger Points**

When a public health emergency is imminent, the Incident Management System, will direct the relevant emergency planning committees to:

- Identify resources which are likely to become scarce
- Develop a method (or implement a previously developed method) for tracking such resources
- Establish trigger points which indicate when conservation of a particular resource(s) is necessary

### **Scarce Resource Allocation Committee (SRAC)**

The SRAC is a multidisciplinary committee who should have the full authority to make necessary allocation decisions to assign or conserve resources for patient care. In the event of a shortage of services, supplies, or staffing, the SRAC should determine when and how these resources should be allocated or conserved. In addition, the SRAC will have responsibility for determining when Triage Protocols will be activated and deactivated. In the event of a surge of patients in a facility due to illness or injury and/or the establishment of the Incident Management System (IMS), the SRAC structure should be consistent with this system. At this point, the Incident Commander (or designee) will chair the SRAC. The SRAC composition should include appropriate adult and pediatric representation from each of the following groups:

- Medical Care Director, e.g. Chief of Staff or designee
- Nursing Care Director, e.g. Director of Nursing or designee
- Ambulatory Care Medical Director or designee
- ICU Medical Director(s) or designees, e.g. Critical Care Committee Chairs
- Respiratory Therapy Medical Director and Technical Director or designees
- Emergency Medicine Medical Director or designee
- Admissions/Bed Capacity Manager or designee
- Ethicist
- Pharmacist

Each position on the SRAC should be filled by 3 people who will rotate shifts on the committee. Those members who are off shift should be available to rotate on an appeals committee (see below) if needed.

These groups have been recommended because they represent the leadership in clinical care:

- Chief of Staff
- Nursing Director

The leadership in areas most likely to be faced with scarce resources:

- ICU Directors
- Respiratory Care
- Emergency Medicine
- Admissions/Bed Coordination Center
- Ambulatory Care Directors
- Experts in the ethics of health care delivery (ethicists)

This is one proposed structure for a SRAC but recognizing that some organizations would not have access to an ethicist, intensive care or ambulatory care leaders (because they do not normally deliver intensive care or ambulatory clinic services), such organizations should consider appropriate equivalent committee members.

### **Triage Officers**

During an event that leads to multiple scarce resources, a Triage Officer should be assigned to oversee a patient care area, such as an inpatient floor or unit. Triage Officers will be selected from available personnel who normally care for patients on that unit, such as:

- Adult and/or Pediatric Hospitalists
- ICU specialists
- Emergency Medicine physicians
- Anesthesiologists
- Others as assigned by the Medical Care Director

Triage Officers will be selected by SRAC in consultation with the Chairs and/or Service Chiefs. Potential Triage Officers will be identified by the hospital leadership based on the individual's leadership capabilities and clinical skills to meet the needs of the role. Pre-identification of Triage Officers is recommended. Selected Triage Officers will be responsible for thoroughly understanding their institution's allocation processes and triage protocols.

The Triage Officer will have the responsibility to assure:

- Clinicians caring for the patient perform an assessment, for triage purposes, at 48 and 120 hours (or a time deemed appropriate by leadership) and attests that the assessments are accurate
- Triage Protocols for use in such scenarios should be in place and well known to the Triage Officers and other clinicians to ensure transparency and facilitate rapid implementation.
- Day-to-day clinical care decisions for individual patients will continue to be made by the primary clinician caring for the patient with the supervision of the Triage Officer.
- If Triage Protocols need to be implemented to manage a scarce resource (i.e. ICU care or ventilators), the Triage Officer will notify the clinicians within their assigned units to communicate regarding Triage Protocols and collect data about patient assessments as often as needed, but at least daily.
- The Triage Officers should communicate frequently with the SRAC, and the Clinical Review Committee when appropriate, to assess the needs of all patients within the institution.

### **Clinical Review Committee**

While decisions to discontinue life sustaining interventions will be made in conjunction with the Triage Officers, in consultation with the primary clinician caring for the patient, any patient, family member or clinician (including the Triage Officer) can request consultation with the Clinical Review Committee (CRC)

The makeup and purpose of the CRC is to act as an advisory body for requested consults from the Triage Officer and act as a final decision-making body for all appealed Triage Officer decisions. The CRC will consist of appropriate adult and pediatric providers including the following:

- Medical Care Director, e.g. Chief of Staff or designee
- Triage Officer for that unit (non-voting)
- Adult Triage Officer from another unit
- Pediatric Triage Officer from another unit
- Respiratory Therapy Medical Director or designee
- Emergency Medicine Medical Director or designee
- Nursing Director or designee (non-voting)
- Social Work Director or designee (non-voting)
- Ethicist, ad hoc advisor (non-voting)
- Office of the General Counsel, ad hoc advisor (non-voting)

The CRC will:

- Serve as a consultative body that will advise clinicians regarding clinical decision-making in complex patient care situations and identify principles that will serve as guidelines for triage officers.
- Be involved in all decisions to discontinue a life-saving therapy. The CRC will have real-time information on all currently available life-saving scarce resources available to the hospital system. The CRC will also have a list of all patients who, based on objective clinical parameters, have the lowest chance of survival.
- Be the final decision-making body for the appeal of Triage Officer clinical decisions. Decisions made by the CRC will be final and will be determined based on a review of available medical information. Some institutions may feel it is appropriate to have an appeal process even after CRC has considered the case, but should consider whether, in an MME incident, they will have the depth of expertise to staff multiple committees.

These groups have been recommended because they represent those with expertise in relevant areas of medical care delivery and best equipped to make final clinical resource decisions. Some hospital organizations may not have staff who carry titles exactly the same as the proposed member titles in this guideline but should make appropriate substitutions.



## Scarce Resource Allocation Committee (SRAC)

Smaller hospitals, especially those in rural areas, are faced with limited resources and support from other agencies, potentially smaller, more distant local public health departments, limited technology, a greater reliance on volunteers, limited medical transport units, and greater distances from potential lifesaving or supportive resources. Advance planning may take a more critical role for medical surge and allocation of scarce resources within this setting. Furthermore, these facilities should recognize their role to also plan to care for populations they might not normally treat, such as pediatrics, obstetrics, or critical care patients.

The members of the hospital's Emergency Management Planning Committee may also be called upon to be a part of a Scarce Resource Allocation Committee (SRAC). The SRAC should have the full authority to make necessary allocation decisions to assign or conserve resources for patient care in the event of a shortage of services, supplies, or staffing. The SRAC should be responsible for determining when and how these resources should be allocated or conserved.

### Scarce Resource Allocation Committee (SRAC) Description

This is one proposed structure for a SRAC, recognizing that some organizations do not have access to an ethicist, intensive care or ambulatory care leaders (because they do not normally deliver these services), such organizations should consider appropriate equivalent committee members, such as consulting specialty physicians.

SRAC should have the full authority to make necessary allocation decisions to assign or conserve resources for patient care within the institution. In the event of a shortage of services, supplies, or staffing, the SRAC should determine when and how these resources should be allocated or conserved. In addition, the SRAC will have responsibility for determining when Triage Protocols will be activated and deactivated. In the event of a disaster declaration and/or the establishment of the Incident Management System (IMS), the SRAC structure should be consistent with this system. The SRAC composition should include available patient group representation from each of the following groups:

- Medical Care Director, e.g. Chief of Staff or designee
- Nursing Care Director, e.g. Director of Nursing or designee
- Ambulatory Care Medical Director or designee
- ICU/Internal Medicine Director(s) or designees
- Respiratory Therapy Medical Director or designee
- Emergency Medicine Medical Director or designee
- Admissions/Bed Capacity Manager or designee
- Ethicist or Pastoral Care Representative
- Pharmacist

These particular groups have been recommended because they represent the leadership in clinical care:

- Chief of Staff
- Nursing Director

Leadership in areas most likely to be faced with scarce resources:

- ICU Directors
- Respiratory Care
- Emergency Medicine
- Admissions/Bed Coordination Center
- Ambulatory Care Directors
- Experts in the ethics of health care delivery (ethicists)

**Key issue planners should anticipate, to the degree possible, the types of health care needs and resource shortfalls that will occur and identify policy and operational adjustments that will be needed in response.**

- Assess surge capacity (beds, ventilators, etc.) to meet expected increased needs.
- Develop plan to expand staff capacity. Determine how the hospital will meet staffing needs.
- Develop contingency plans for staff absences, particularly ED staff.
- Create procedures and policies for use of supplemental providers.
- Initiate discussions of allocation of hospital resources; hospital administrators meet with hospital ethics committee early in planning process.

### **Triage Officers**

During an event that leads to multiple scarce resources, a Triage Officer should be assigned to oversee a patient care area, such as an inpatient floor or unit. Triage Officers will be selected from available personnel who normally care for patients on that unit, such as:

- Adult and/or Pediatric Hospitalists
- ICU specialists
- Emergency Medicine physicians
- Anesthesiologists
- Others as assigned by the Medical Care Director

Triage Officers will be selected by SRAC in consultation with the Chairs and/or Service Chiefs. Potential Triage Officers will be identified by the hospital leadership based on the individual's leadership capabilities and clinical skills to meet the needs of the role. Pre-identification of Triage Officers is recommended. Selected Triage Officers will be responsible for thoroughly understanding their institution's allocation processes and triage protocols.

The Triage Officer will have the responsibility to assure:

- Clinicians caring for the patient perform an assessment, for triage purposes, at 48 and 120 hours (or a time deemed appropriate by leadership) and attests that the assessments are accurate
- Triage Protocols for use in such scenarios should be in place and well known to the Triage Officers and other clinicians to ensure transparency and facilitate rapid implementation.
- Day-to-day clinical care decisions for individual patients will continue to be made by the primary clinician caring for the patient with the supervision of the Triage Officer.
- If Triage Protocols need to be implemented to manage a scarce resource (i.e. ICU care or ventilators), the Triage Officer will notify the clinicians within their assigned units to communicate regarding Triage Protocols and collect data about patient assessments as often as needed, but at least daily.
- The Triage Officers should communicate frequently with the SRAC to assess the needs of all patients within the institution.

## Staffing Considerations

### Staff and Staff Related Supplies Planning

- Have processes and policies for disaster credentialing and privileges – include supervision plan, clinical scope of practice, orientation, medical record access, and verification of credentials.
- Encourage employee personal preparedness planning including family and pets.
- Cache adequate personal protective equipment (PPE) and supporting supplies.
- Educate and exercise staff on institutional disaster response.
- Educate appropriate staff on community, regional, and state disaster plans and resources.
- Develop facility plans for shelter-in-place needs including family and pets.
- Have a communications plan for all employees and patients / residents, including when operating under contingency or crisis standards.
- Have a plan to address social factors that might prevent staff from reporting to work (transportation and housing).
- Consider potential mental health needs of staff and have a plan to provide additional support.

### Maximize Staff Time

Only hold critical meetings and reduce administrative responsibilities not related to incident.

Implement efficient and effective medical documentation methods appropriate to the incident.

- Cohort patients with like conditions to conserve PPE, reduce donning and doffing time and frequency, or travel time between patients.

### Find Supplemental Staff

- Bring equivalently trained staff for response type from health system (including administrative positions), other health systems, Disaster Medical Assistance Team (DMAT), or other approved organizations; Be aware of state-specific emergency waivers.
- Report needs for staffing resource specifics to local Emergency Management and the Regional Healthcare Coalition Medical Coordination Center.
- Adjust work schedule (longer but less frequent shifts, etc.) if this will not result in skill/PPE compliance deterioration.
- Use family members/lay volunteers to provide basic patient hygiene and feeding.

### **Focus on Core Clinical Needs**

- Have trained staff concentrate on specific critical skills (ventilator, burn, etc.); specify job duties that can be safely performed by other medical professionals.
- Have specialty staff oversee larger numbers of less-specialized staff and patients. Consider including Emergency Medical Technicians or new residents in planning.
- Limit use of laboratory, radiographic, and other studies, to allow staff reassignment and resource conservation.
- Reduce documentation requirements to minimum amount needed.
- Cancel all non-essential procedures and visits.
- Have a process to request waivers or protocol changes with the proper authorities.

### **Use Alternative Personnel**

- Use less trained personnel with appropriate supervision and just-in-time education (nursing students, Medical Reserve Corps, MI Volunteer Registry) if authorized.
- Programs may now request emergency categorization for then use of medical students and residents [Frequently Asked Questions \(acgme.org\)](https://www.acgme.org/faq)
- Activate facility disaster plan to optimize availability of all essential personnel including housekeeping, food service, laundry, maintenance, engineering, information technology, etc.
- Use less trained personnel to take over portions of skilled staff workload for which they have been trained.
- Provide just-in-time training for specific skills.
- Cancel non-urgent appointments and divert staff to emergency duties related to the incident and provide appropriate orientation and training.

## Patient Care Resources

### Mechanical Ventilation

#### **Increase Hospital Stocks of Ventilators and Ventilator Circuits, ECMO or bypass circuits**

Ensure your facility has a repository of ventilators and ventilator supplies.

#### **Access Alternative Sources for Ventilators/specialized equipment**

- Obtain specialized equipment from vendors, health care partners, regional, state, or Federal stockpiles via usual emergency management processes and provide just-in-time training and quick reference materials for obtained equipment.

#### **Decrease Demand for Ventilators**

Develop plans to address the processes needed to address times when the demand for ventilators could exceed the supply. This plan may include creating guidance for:

- Increasing threshold for intubation/ventilation.
- Decreasing elective procedures that require post-operative intubation or anesthesia machines.
- Using non-invasive ventilatory support when possible.
- Attempting earlier weaning from ventilators.

#### **Re-use Ventilator Circuits**

- Appropriate cleaning must precede sterilization.
- If using gas (ethylene oxide) sterilization, allow full 12-hour aeration cycle to avoid accumulation of toxic byproducts on surface.
- Use irradiation or other techniques as appropriate.

#### **Use Alternative Respiratory Support Technologies**

- Use transport ventilators with appropriate alarms, especially for stable patients without complex ventilation requirements.
- Use anesthesia machines for mechanical ventilation as appropriate/capable.
- Use bi-level (BiPAP) equipment to provide mechanical ventilation.
- Consider bag-valve ventilation as temporary measure while awaiting definitive solution/equipment (as appropriate to situation – extremely labor intensive and may consume large amounts of oxygen).
- Consider splitting ventilators based on IC/RTT suggestions.
- Consider proning as appropriate.

**Space/Infrastructure**

When health care organizations are unable to meet demands with traditional bed capacity with all surge strategies implemented, they may need to recognition of the need to open alternate care sites for screening clinics/early treatment. This may be accomplished by:

- Health care organizations implementing medical surge strategies.
- Local and state public health-initiated strategies to authorize alternate care site initiation; this includes assurances related to governmental waivers.
- Working with LARA and local Fire Marshall's office for permissions to utilize additional needed space for patient care.
- Local public health departments working with their local health care organizations and regional health care coalitions to ensure that inpatient sites, including skilled nursing facilities, are prioritized for support.
- Health care organizations narrowing admission criteria to maximize available resources.
- Local and state public health utilizing planning strategies for crisis standards of care (CSC) if anticipated event expansion.

**Supplies**

When local and state monitoring of supplies and inventory data indicate shortage/potential shortage and there is anticipated challenges with medical supply chain based on expanding incident, healthcare organizations should:

- Prioritize resource allocation by urgency of need and risk.
- Determine time frame and availability from other vendors/sources.
- Review and update risk communication strategies specific to users of critical resources and community.

## Pediatric Considerations

### Planning and response considerations:

Tertiary centers with inpatient pediatric, trauma/burn and PICU capability can provide consultation and transfer support based on patient needs. The following centers can provide real-time consultation in support of pediatric critical care when transfer is difficult or not possible or when highly specialized services (e.g., ECMO) are anticipated to be needed.

Pediatric patients will have to be stabilized (and in some cases treated, for 24 to 48 hours) at initial receiving hospital in major incident – all facilities must be prepared for pediatric cases. Preparedness for receiving children in the emergency department has been a focus of readiness initiatives, such as the Emergency Medical Service for Children National Pediatric Readiness Project, for many years. Readiness tools are available at the site below, including a checklists and toolkits.

[National Pediatric Readiness Project • EIRC \(emscimprovement.center\)](#)

### Space/Infrastructure

Once pediatric bed availability begins to decrease, the facility should consider how to conserve bed space and adapt any available space to accommodate pediatric overflow patients. This can be accomplished by:

- Maximize use of beds on pediatric unit and at pediatric centers noted above; review and prepare to stand up facility surge plans for pediatric patients (see state pediatric surge annex).
- Prioritize transfer of children < 8 years of age and those with highly specialized needs to pediatric specialty centers.
- Surge to non-pediatric, age-appropriate units within hospitals if possible.
- Distribute non-critical and older pediatric patients from overwhelmed pediatric centers to other accepting facilities.
- Expand acute outpatient care for the minimally injured/ill.

### Supplies

The American Academy of Pediatrics developed [Joint Policy Statement—Guidelines for Care of Children in the Emergency Department | Pediatrics | American Academy of Pediatrics \(aap.org\)](#) This guidance includes a list of equipment facilities should have in their emergency departments to care for children. During times of scarce resources, facilities should consider:

### Outpatient Supply Planning:

- Wound Care (consider topical anesthetics for smaller children).
- Splinting/strapping materials.
- Oral Medications (supply liquid pain medicines) and consider nasal pain (fentanyl) and anxiolytic (midazolam) medications
- Vaccines (especially age-appropriate tetanus).



**Inpatient Supply Planning:**

- Airway equipment sufficient for number and age of victims, including rescue airway (example laryngeal mask airways).
- Vascular access equipment, including adequate quantity of intravenous cannulas and intraosseous needles.
- References, charts, or other systems for size/weight-based equipment and drug dosing (reference book, wall charts, Broselow tape, or similar).
- External warming devices.
- Intravenous fluids, medications, and blood supply.

**Pediatric Specific Staffing**

- Pre-incident pediatric medical/trauma critical care training should be conducted for physician and nursing staff expected to provide emergency care. Consider courses such as Advanced Pediatric Life Support, Pediatric Advanced Life Support.
- Just-in-time training may be required in certain situations for non-pediatric nursing and physician staff reinforcing key points of pediatric or incident-specific patient care (including pediatric assessment, triage, importance of fluid management, urine output parameters, principles of analgesia, etc.).
- In a major incident, adjust pediatric physician and nurse staffing patterns as needed to provide supervision of other providers and staff to increase workforce. Pediatric critical care and pediatric hospitalists could supervise care at a higher level, delegating many bedside duties to other providers. Preparation of the emergency department along National Pediatric Readiness Program Guidance will allow pediatric patients to be stabilized, transported to a higher level of care if available, or shelter in place if appropriate.

Consider planning for specific staffing needs during a pediatric surge event such as:

- Reunification planning, including tracking of children (especially unaccompanied minors).
- Social work/ family support.
- Discharge support and planning, particularly for rehabilitation and other specialty follow-up.
- Family/caregiver accommodations.
- Psychological support for children, their families, and staff (do not under-estimate the increased stress and psychological impact of a pediatric incident, particularly a mass casualty incident, on health care providers).