

# ADULT Critical Care Triage Algorithm

## Crisis Standards of Care

Updated Version: Mar 2020



This Algorithm is intended to be used alongside the attached Worksheet.  
Answering each question requires the supplemental information in the Worksheet.  
\*\*\*Please use them together\*\*\*

### Assumptions for use:

1. Health Officer has declared a crisis situation requiring scarce resource management and crisis standards of care, where crisis standards of care is defined as *“a substantial change in usual healthcare operations and the level of care it is possible to deliver which is made necessary by a pervasive or catastrophic disaster”*.<sup>1</sup>
2. Healthcare systems are overwhelmed despite maximizing all possible surge and mitigation strategies impacting the space and/or staff and/or supplies needed to deliver usual levels of care.

Washington State has adopted and will use the ethical framework developed by the National Academy of Medicine, which stresses the importance of an ethically grounded system to guide decision-making in a crisis standards of care situation. All decisions and communications will be based on the ethical principles below. The National Academy of Medicine defines these ethical principles as:

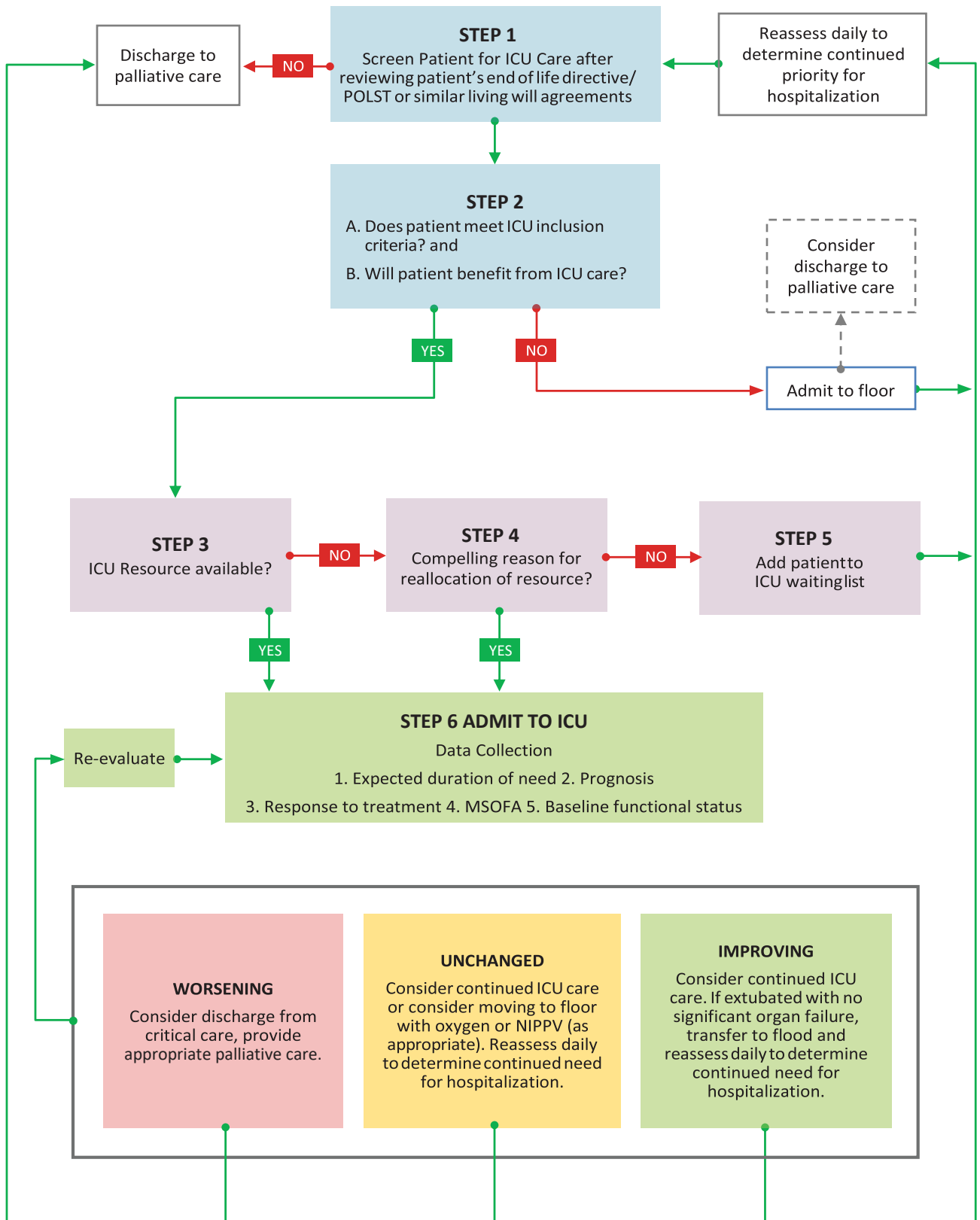
- **Fairness** – Standards that are, to the highest degree possible, recognized as fair by those affected by them – including the members of affected communities, practitioners, and provider organizations, evidence based and responsive to specific needs of individuals and the population.
- **Duty to care** – Standards are focused on the duty of healthcare professionals to care for patients in need of medical care.
- **Duty to steward resources** – healthcare institutions and public health officials have a duty to steward scarce resources, reflecting the utilitarian goal of saving the greatest possible number of lives.
- **Transparency** – in design decision making, and information sharing.
- **Consistency** – in application across populations and among individuals regardless of their human condition (e.g. race, age disability, ethnicity, ability to pay, socioeconomic status, preexisting health conditions, social worth, perceived obstacles to treatment, past use of resources).
- **Proportionality** – public and individual requirements must be commensurate with the scale of the emergency and degree of scarce resources.
- **Accountability** – of individual decisions and implementation standards, and of governments for ensuring appropriate protections and just allocation of available resources.<sup>2</sup>

1. IOM (Institute of Medicine) 2009. Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations: A Letter Report. Washington, DC: National Academies Press.

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Updated Version: Mar 2020



This Worksheet, along with the corresponding Adult Critical Care Algorithm, are to be used by “Triage Teams” during a declared emergency event whereby an appropriate healthcare official has implemented crisis standards of care. It is recommended that a “Triage Team” be comprised of senior medical personnel, preferably not those primarily taking care of the individual patient under consideration. Please see “Scarce Resource Triage Team Guidelines” for further information.

## STEP 1: Screen adult patients for ICU care during scarce resources

Proceed to following after reviewing patient’s end of life directives/POLST or similar living will documents. For the following conditions consider available staffing and resources. If resources are inadequate, **consider** transferring the following patients to out-patient or palliative care with appropriate resources and support as can be provided.

- 1. Pre-existing or Persistent coma or vegetative state
- 2. Severe acute trauma (e.g. non-survivable head injury)
- 3. Severe burns with Low Survival burn scores based on the Triage Decision for Burn Victims table (See Table A below). See Burn Scarce Resource Card for management of critical burn patient outside of a Burn Center.
- 4. Significant underlying disease process that predict poor short term survival\*  
*\*Examples of underlying diseases that predict poor short-term survival, despite standard treatment, include but are not limited to:*
  - Severe congestive heart failure
  - Severe chronic lung disease
  - Central nervous system, solid organ or hematopoietic malignancy with poor prognosis for recovery
  - Severe cirrhotic liver disease with multi-organ dysfunction
- 5. Baseline functional status (consider loss of reserves in energy, physical ability, cognition and general health)

## STEP 2: Determine if patient meets ICU Inclusion Criteria

### 2A: Patients must have at least one of the following INCLUSION CRITERIA:

- 1. Requires ventilatory support, either invasive or non-invasive
  - Clinical evidence of impending respiratory failure
    - Refractory hypoxemia ( $SpO_2 < 90\%$  on  $FIO_2 > 0.85$ )
    - Respiratory acidosis ( $pH < 7.2$ )
  - Inability to protect or maintain airway
- 2. Hypotension ( $SBP < 90$ ) secondary to either an acute medical or trauma condition, with clinical evidence of shock (altered level of consciousness, decreased urine output, or other evidence of end stage organ failure) refractory to volume resuscitation that cannot be managed in a non-ICU setting.

### 2B: To determine critical care resource allocation the following should be considered:

- Expected duration of need of critical care resource
- Prognosis with consideration to both current epidemiology and underlying illness\*
- Response to current treatment
- Degree of Organ Dysfunction as measured by the MSOFA (Modified Sequential Organ Failure Assessment Score) - Please see Step 6 regarding use of scoring system
- Baseline functional status (consider loss of reserves in energy, physical ability, cognition and general health)

*\*Examples of underlying diseases that predict poor short-term survival, despite standard treatment, include but are not limited to:*

- Severe congestive heart failure
- Severe chronic lung disease
- Central nervous system, solid organ or hematopoietic malignancy with poor prognosis for recovery
- Severe cirrhotic liver disease with multi-organ dysfunction

## STEP 4: Assess for re-allocation of Critical Care Resource

### To determine critical care resource allocation the following should be considered:

- Expected duration of need of critical care resource
- Prognosis with consideration to both current epidemiology and underlying illness\*
- Response to current treatment
- Degree of Organ Dysfunction as measured by the MSOFA (Modified Sequential Organ Failure Assessment Score) – Please see Step 6 regarding use of scoring systems
- Baseline functional status (consider loss of reserves in energy, physical ability, cognition and general health)

*\*Examples of underlying diseases that predict poor short-term survival, despite standard treatment, include but are not limited to:*

- Severe congestive heart failure
- Severe chronic lung disease
- Central nervous system, solid organ or hematopoietic malignancy with poor prognosis for recovery
- Severe cirrhotic liver disease with multi-organ dysfunction

## STEP 5: Critical care waiting list

If a patient meets ICU inclusion criteria and resources are not available, patient will be placed on an ICU waiting list. As resources become available their clinical situation will be re-assessed and they will be re-triaged based on criteria outlined in Step 6. If a clear distinction cannot be made between patients of similar triage priority, the resource will be allocated to the patient who has been waiting the longest.

## STEP 6: Admit to ICU

Patient data collection outlined on Step 6 of the Algorithm will be continuous and ongoing. It is recommended that every 24 hours of a patient's ICU stay, their clinical condition will be reviewed and they will be determined to be "Improving", "Unchanged" or "Worsening". This determination must not only take into account data points as outlined in Step 6 but must also include updated epidemiology, critical care resource availability and census demands.

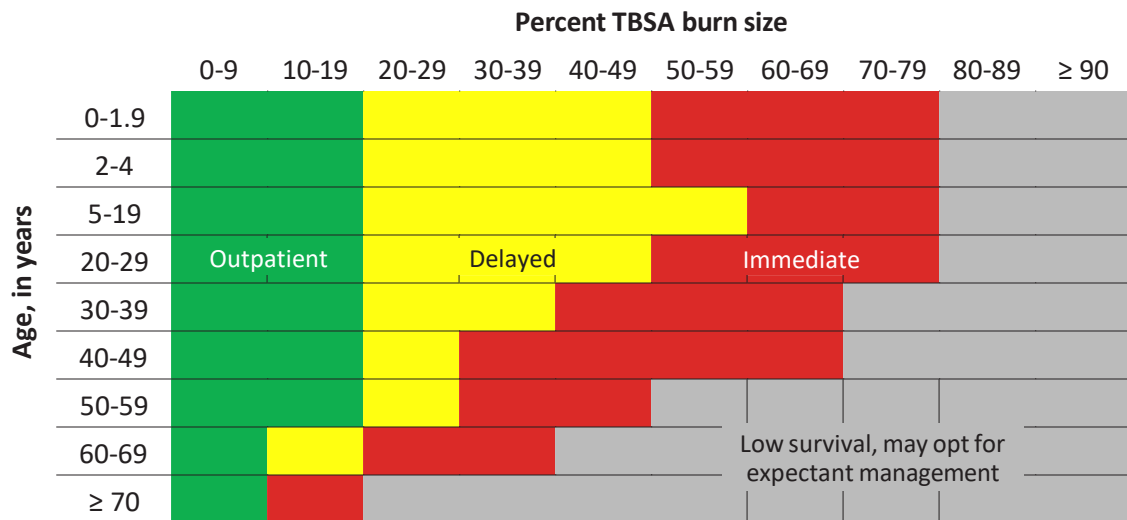
Previously, recommendations had been made to use MSOFA score alone to determine triage categories. However, based on more recent data<sup>2,3</sup> it is current consensus that a specific SOFA or MSOFA score cannot accurately define clinical categories alone, and therefore all criteria outlined in Step 6 including current epidemiology must be taken into account when deciding if patients are "Improving," "Unchanged," or "Worsening".

## Other Adult Considerations

All patients receiving critical care **before the onset** of crisis standards will be re-assessed based on the same criteria as all incoming critical care patients. The same Data as outlined in Step 6 should be obtained and resources re-allocated if needed dependent on the Triage Team assessment and decisions.

The use of ECMO should be decided on an individual basis by the ICU attending, nursing supervisor and ECMO representative based on prognosis, suspected duration of ECMO, availability of staff and other resources.

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1. Crisis Capacity: Adaptive spaces, staff and supplies are not consistent with usual standards of care, but provide sufficiency of care in the setting of a catastrophic disaster (i.e. provide the best possible care to patients given the circumstances and resources available). Crisis capacity activation constitutes a significant adjustment to standards of care. (Hick et al, 2009, IOM)
  2. Grissom, Colin K, Disaster Med Public Health Preparedness 4(4):277-284, 2011
  3. Shahpori, R; Crit Care Med 39(4):827-832, 2011



**Table A**

Saffle, JR, et al. Defining the ratio of outcomes to resources for triage of burn patients in mass casualties. J burn Care Rehabil 2005 26(6):478