

**HOSPITAL RESOURCE AND CLINICAL MANAGEMENT GUIDELINES  
FOR HOSPITAL HEALTHCARE PROVIDERS WHEN ROUTINE  
CRITICAL CARE RESOURCES ARE NOT AVAILABLE**

**Perspective**

1. These guidelines are triggered when hospital efforts to preserve and augment bed capacity (e.g., adding on-site surge beds, canceling elective surgeries, opening alternate care sites, augmenting staffing) are maximized and critical care supplies and equipment are exhausted.
2. These Guidelines are limited by the capability of the critical care supplies and equipment to accommodate the physiologic requirements of patients' of various ages.
3. The Guidelines are designed to accommodate the variability of patient volume, patient acuity and resource availability. Thus over time, a more stringent tiered approach to clinical management will evolve.
4. These Guidelines are intended for use by hospital-based healthcare providers and do not address all of the accompanying hospital administrator-6(e)3(ng)-11( hos0y <</MCID 27 >>)3(ng)-11( h( an

This multi-principle allocation system includes:

x ***Doing the greatest good for the greatest number***

Decision making during extreme conditions assumes a shift to a utilitarian framework in which the clinical goal is the greatest good for the greatest number of individuals. In this framework, one may receive the services that may be available at other times

Consumable resources (e.g., medications, dialysate, blood) and non-consumable resources

## Hospital Resource Management Guidelines Operational Framework

1. Hospitals will implement equipment and supply conservation strategies. It is a basic principle of disaster preparedness that conservation begins immediately at the beginning of an incident. As soon as the hospital recognizes that it may be faced with a sustained disaster that may deplete both human and material resources, the hospital should implement its conservation strategies. (Wisconsin Guidelines for the Allocation of Scarce Resources during Pandemic Influenza, Draft September 2009)
2. Resource allocation decisions will be made within an established Incident Command System (ICS) structure. The bedside clinical care provider should be isolated from resource allocation decisions.
3. Patients' informed request to not receive critical care resources will be honored. These resources will be reallocated to the next eligible patient. Patients cannot self-direct resources they decline.
4. In order for patients to receive critical care resources they must meet eligibility criteria listed in Table 1 - Individual Patient Decision Process, Section 4 (page 9). Grounds for the decision to limit or remove critical care resources will be provided to the family and the clinical care provider.
5. In anticipation of trigger conditions being met within 48 hours, patients requiring limited resources should be evaluated for eligibility for these resources and be subjected to the Multi-principled Critical Care Resource Allocation System (MCCRAS) decision algorithm. The first 48 hour operational period generates a buffer for resource allocation and MCCRAS eligibility and reassessment timing.
6. When these Guidelines are activated, all patients needing consumable resources (e.g., intravenous fluids, medications) will be scored and resources will be allocated based on rank order. Some of these patients may not meet initial eligibility criteria and thus not receive resources.
7. When these Guidelines are activated, all available needed non-consumable (e.g., ventilators, monitors) resources will be assigned to patients. Although some of these patients may not meet initial eligibility criteria, they should be provided the resource with the understanding that the resources will be withdrawn if an eligible patient requires the same resource.
8. Allocation of the needed resource is dependent upon the availability of the specific resource. For example, if the patient requires ventilatory support and antibiotics, based on their rank order and availability of the needed resources they may receive a ventilator without antibiotics, antibiotics without a ventilator, both a ventilator and antibiotics or neither.

However, if the specific limited resources are interdependent for survival, the lowest rank will be used to determine the patient's rank order for all resources. For example, if the patient requires ventilatory support and a blood transfusion and is ranked 3 for a ventilator and 12 for a blood transfusion, their lower rank of 12 should be used for determining allocation of both resources.



## **Hospital Resource Management Decision Algorithm**

<b>Table 1 – Clinical Management Decision Process for the Individual Patient</b>		
<b>ACTION</b>		<b>ADDITIONAL INFORMATION</b>
	Perform appropriate medical screening exam	
	Provide initial treatment and stabilization	

**Criteria for Ventilatory Support**

- x Respiratory Failure - Refractory hypoxemia (SpO<sub>2</sub> less than 90% on non-rebreather mask or FIO<sub>2</sub> greater than 0.85), respiratory acidosis (pH less than 7.2), clinical evidence of impending respiratory failure, inability to protect or maintain airway.
- x Hypoxia - ABG PO<sub>2</sub> less than or equal to 55 mm Hg or SpO<sub>2</sub> is less than or equal to 88%, awake and at rest on room air.

Determine need for critical care resources

(ventilatory and/or circulatory support)

**Criteria for Circulatory Support**

- x Shock - Systolic blood pressure less than 90 mm Hg or relative hypotension with clinical evidence of shock

**Table 1 – Clinical Management Decision Process for the Individual Patient**

<b>ACTION</b>	<b>ADDITIONAL INFORMATION</b>
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Defer patient from receiving critical care resources if he/she has any of the following conditions:

Evaluate for critical care resource eligibility



Sequential Organ Failure Assessment (SOFA) Score						
VARIABLE	POTENTIAL SCORE					ROW SCORE
	0	1	2	3	4	
<b>Glasgow Coma Score</b> Use actual or if sedated, assumed score	15	13-14	10-12	6-9	5 or less	_____
<b>Hypotension</b> Adrenergic agents administered for at least 1 hour J N J P L	Ns					

**Multi-principled Critical Care Resource Allocation Score (MCCRAS)**

**PRINCIPLE | RA**

**Comorbidities that may impact long term survival include:**

1. Known severe dementia medically treated and requiring assistance with activities of daily living
2. Advanced untreatable neuromuscular disease (such as ALS, end-stage MS, or SMA) requiring assistance with activities of daily living or requiring chronic ventilatory support
3. Incurable metastatic malignant disease
4. Individuals whose weight exceeds 3 times their ideal body weight (BMI greater than 60 kg/m<sup>2</sup>)
5. Second and third trimester pregnancy
6. New York Heart Association (NYHA) Functional Classification System for Congestive Heart Failure Class III or IV (moderate or severe)
7. End stage liver disease with a Child-Pugh score greater than 7
8. End stage pulmonary disease meeting the following criteria:
  - a. Chronic Obstructive Pulmonary Disease (COPD) with Forced Expiratory Volume in one

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<b>New York Heart Association (NYHA) Functional Classification System For Congestive Heart Failure</b>	
<b>Class</b>	<b>Patient Symptoms</b>
I (Mild)	Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea or anginal pain.
II (Mild)	Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea or anginal pain
III (Moderate)	Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary activity causes fatigue, palpitation, dyspnea or anginal pain.
IV (Severe)	Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of heart failure or the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort increases.

<b>Child-Pugh Score</b>
<input style="width: 150px; height: 20px;" type="text"/>

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