

**Emergency framework for rationing of blood for
massively bleeding patients during a red phase of a
blood shortage**

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Transfusion Committee Forum

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Figure 1: Page 1

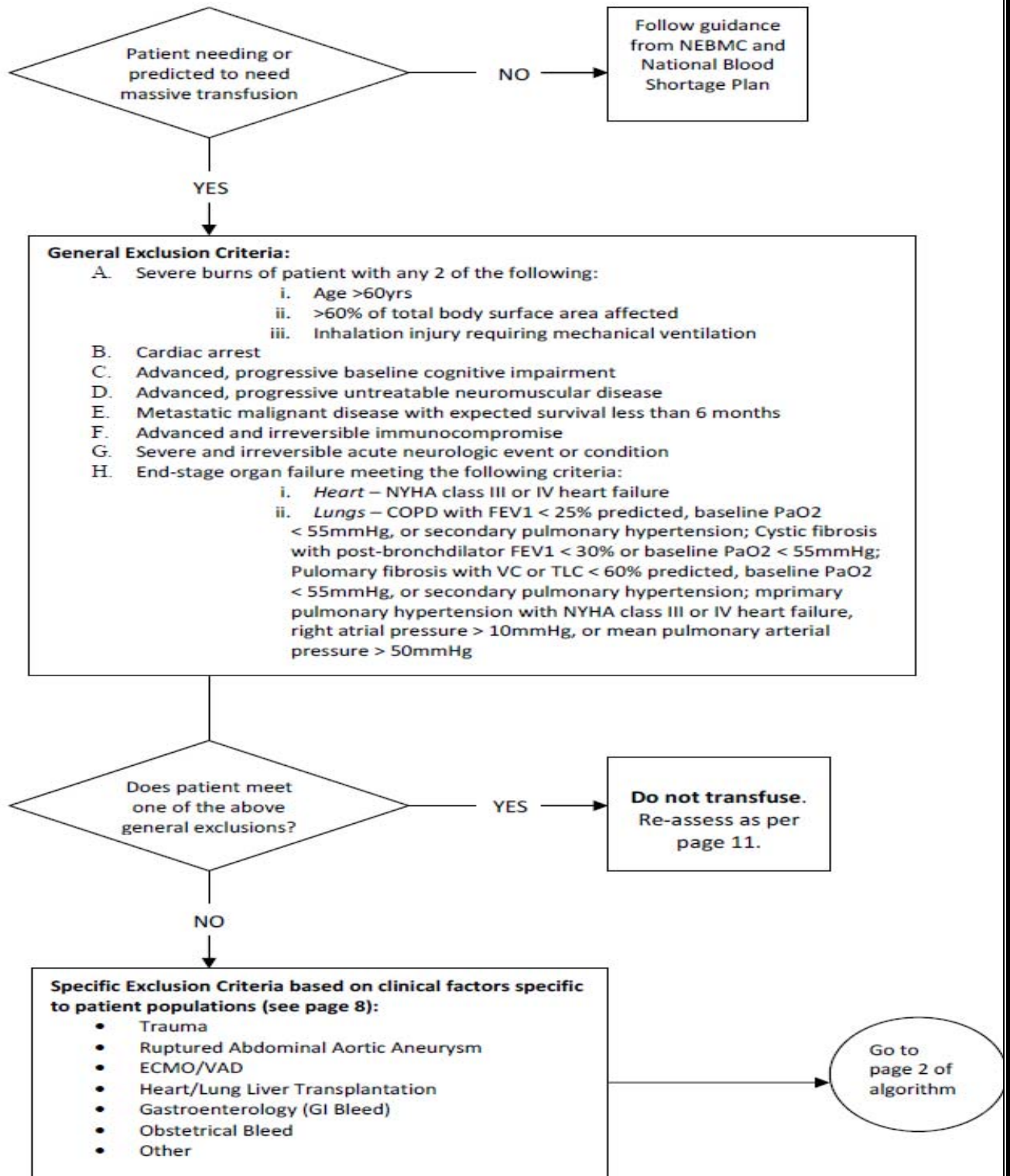
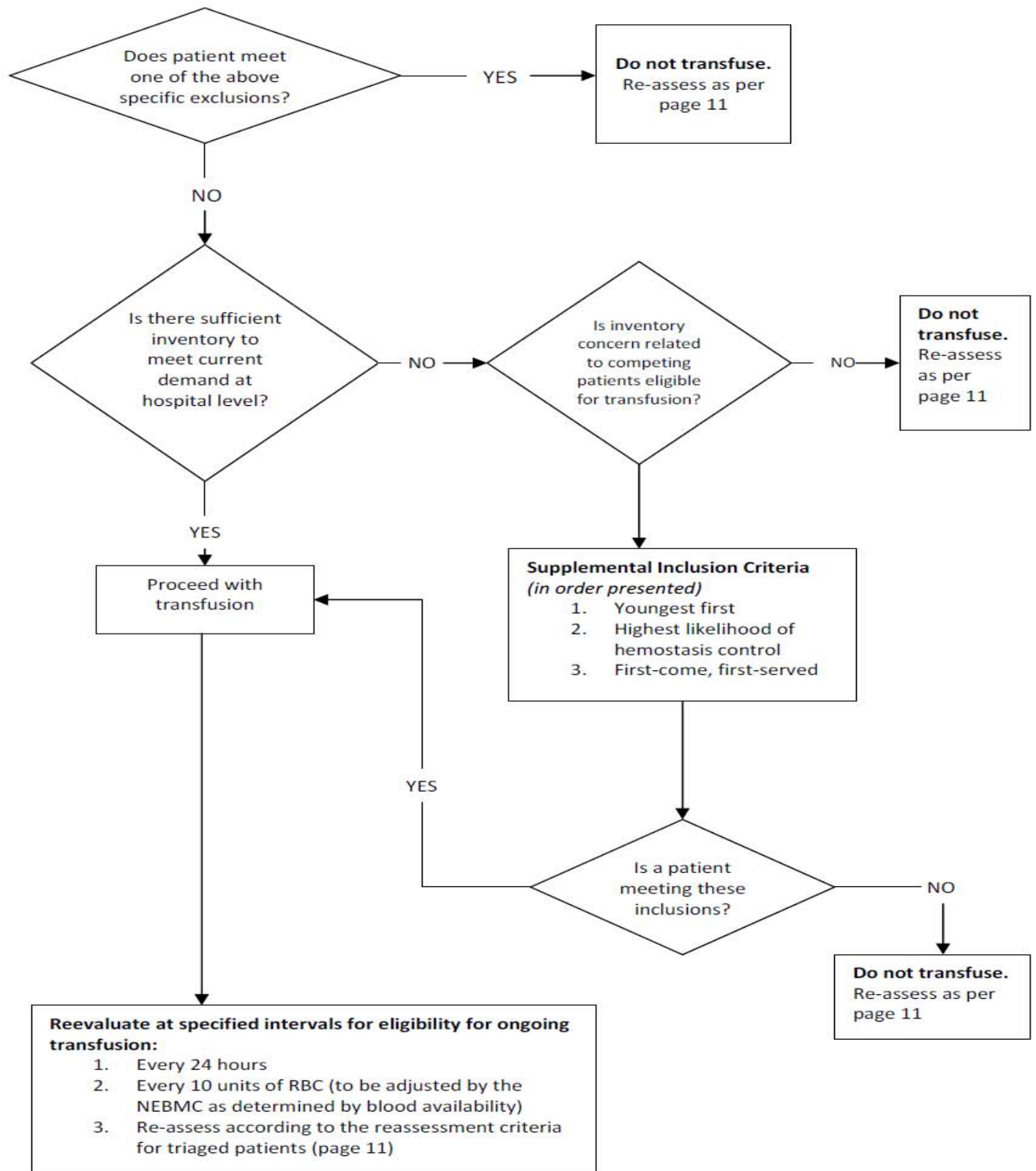


Figure 1: Page 2



Specific Exclusion Criteria for Massively Bleeding Patients

Trauma

- 1. During a red phase, do not administer transfusions to children or adults with non survivable brain injury.**
Level of evidence: III
Grade of recommendation: A
Clinical Consideration: CT scanning should be done as soon as possible to confirm the diagnosis of a non survivable brain injury.
- 2. During a red phase, do not administer transfusion to children or adults with a Glasgow Coma Scale =3 who have hypotension not attributable to reversible factors and who have fixed and dilated pupils.**
Level of evidence: III
Grade of recommendation: A
- 3. During a red phase, do not transfuse patients after the declaration of brain death for the purpose of deceased organ donation.**
Level of evidence: III
Grade of recommendation: A
- 4. During a red phase, do not administer transfusions to adults or children with penetrating cranial trauma and a Glasgow coma scale =3 that is not attributable to reversible factors.**
Level of evidence: III
Grade of recommendation: B
- 5. During a red phase, do not administer transfusions to adults or children with penetrating cranial trauma, a Glasgow coma scale <8 that is not attributable to reversible factors, hypotension and severe thoracoabdominal trauma.**
Level of evidence: III
Grade of recommendation: B
- 6. During a red phase, do not administer transfusions to adults or children with blunt trauma, and a Glasgow Coma Scale =3 that is not attributable to reversible factors.**
Level of evidence: III
Grade of recommendation: B
- 7. During a red phase, do not administer transfusions to adults or children with blunt trauma who have lost vital signs pre-hospitalization.**
Level of evidence: III
Grade of recommendation: A
- 8. During a red phase, do not administer transfusions to patients with transcranial gunshot injuries.**
Level of evidence: III
Grade of recommendation: A
- 9. During a red phase, do not administer transfusions to patients >65 years with severe brain injury and profound shock and severe thoracic or abdominal trauma.**

Level of evidence: III
Grade of recommendation: B

- 10. During a red phase, do not administer transfusions to patients >75 years with moderate brain injury, a Glasgow Coma scale of <12, who are in profound shock and who have thoracoabdominal injury.**

Level of evidence: III
Grade of recommendation: B

Ruptured Abdominal Aortic Aneurysm

- 1. During a critical blood shortage, do not transfuse patients who have a cardiac arrest preoperatively.**

Level of evidence: III
Grade of recommendation: B

- 2. During a critical blood shortage, do not transfuse patients with a systolic blood pressure less than 70mmHg who are unresponsive to fluid resuscitation and have lost consciousness.**

Level of evidence: III
Grade of recommendation: B

- 3. During a critical blood shortage, do not transfuse patients with RAAA that do not meet criteria for emergent vascular repair.**

Level of evidence: III
Grade of recommendation: I

ECMO/VAD

- 1. During a red phase, do not transfuse patients who require ECMO/VAD and who have multi-organ (> 1 organ) failure.**

Level of evidence: III
Grade of recommendation: B

- 2. During a red phase, inform patients/families that patients receiving ECMO/VAD support who have multi-organ failure may not receive transfusion support if massively bleeding.**

Level of evidence: III
Grade of recommendation: B

Heart, Lung, Liver Transplantation

- 1. Deceased Donor Organ Recovery - During a red phase, deceased donor organ recovery for transplantation should proceed, with the understanding that the deceased donor will not be transfused in the process of deceased donor stabilization.**

Level of evidence: III
Grade of recommendation: B

- 2. Deceased Donor Transplantation - During a red phase, deceased donor solid organ transplants may proceed with informed consent regarding increased risk from restriction of blood transfusion, and with the understanding (among patient and all involved physicians) that blood may not be available for transfusion.**

Level of evidence: III

Grade of recommendation: B

- 3. Living Donor Transplantation – During a red phase, living donor transplantation should be deferred.**

Level of evidence: III

Grade of recommendation: B

Gastroenterology (refer to Section 8 of the expanded emergency framework for further information)

- 1. During a red phase do not administer transfusions to patients with gastrointestinal bleeding and a Rockall score >8.**

Level of evidence: III

Grade of recommendation: B

- 2. During a red phase do not administer transfusion to patients with liver cirrhosis and gastrointestinal (i.e. variceal) bleeding who have a Child Pugh score more than 10 (MELD score of more than 18) and who are not on the list for transplantation.**

Level of evidence: III

Grade of recommendation: B

- 3. During a red phase, triage patients with gastrointestinal bleeding to centers with endoscopy to minimize the use of blood products.**

Level of evidence: III

Grade of recommendation: B

Obstetrics

- 1. In a red phase, red cell transfusion should not be withheld from the bleeding obstetrical patient.**

Level of evidence: II-2-III

Grade of recommendation: B

Other massively bleeding situations not listed above

- 1. In a red phase, for patients massively bleeding for reasons not listed above, do not transfuse patients for whom the triage team believes the mortality rate exceeds 80%**

Patient Tracking Number	Hospital	
Reason for Massive hemorrhage	Date of Triage	Time of Triage
Predicted to need >10 units in the next 24 hours <input type="checkbox"/> Yes <input type="checkbox"/> No(if no refer to standard tracking tool) Has patient received product in the previous 24 h? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list products:	Age Hemoglobin Platelet INR PTT Fibrinogen	Blood Group pH Lactate Temp
Meets any exclusion criteria <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, which one(s)?	Product Required	Units of ABO compatible product available
Meets any specific exclusion criteria <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, which one(s)?	Date/Time of assessment	SOFA score
Decision made to administer blood? <input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time	Number of units Transfused
Patient outcome at 24 hours	Date/Time	Re-assessment Decision
Comments by Triage Team	Comments regarding patient and family concerns	
Triage Documentation completed by	Signature	
Triage Officer Name	Signature	
Follow-up		
Patient Outcome at Discharge	Patient Outcome at 6 months	