GUIDANCE DOCUMENT

Patients Who Decline Blood Products

NOTE:

The progression of care from observation/fluid replacement to mechanical hemostasis (e.g., intrauterine compression balloon) to hysterectomy must occur faster in patients who decline blood products than in those who can be transfused.

Since blood replacement is not possible, achieving hemostasis in the most efficient and rapid manner is absolutely critical.

- In cases of significant ongoing bleeding, consider involving a 2nd MD.
- In cases of suspected intra-abdominal bleeding, include imaging studies as part of the initial (immediate) evaluation. Return the patient to the OR without delay if these studies suggest intra-abdominal bleeding.
- Do not delay definitive surgical intervention pending correction of coagulopathy or hemodynamic parameters (e.g., BP, pulse, urine output)

A. IN THE OFFICE

Antepartum Discussions and Documentation:

1) Screen all patients regarding potential to refuse some/all blood products
2) Discuss and document the risks of hemorrhage and the increased risk of death and morbidity
3) Discuss possibility of additional surgery, including hysterectomy, in the event of a PPH
4) Privately discuss patient's refusal of blood products (without family members) to understand patient's autonomous decisions in the event of a PPH
5) Present and complete the blood product form/list (see list at end of this document)
6) Complete a health care proxy form. This should be completed with a health care agent designated, clarifying the agent's ability to make decisions regarding blood products if the patient's capacity is lost due to anesthesia or hypotension/shock.
7) Send the documents and documented discussions to the delivering hospital

Antepartum preparation:

1) Maximize Hb/Hct
   a) Iron, folic acid
   b) For low Hb/Hct consider hematology consult and/or:
   Erythropoietin (40,000u/wk, increases seen >3-4wks or 20,000u/day for faster response)
2) Obtain further consultations (as appropriate):
   a) MFM
   b) Anesthesia
3) Identify hemorrhage risk factors and consider delivery at hospital with higher level of surgical/intensive care based on risks of severe hemorrhage

B. IN THE HOSPITAL

Labor & Delivery Admission (refer to the antepartum discussion for details)**:**

1) On admission, identify all patients who refuse blood products

2) If blood product form is not available, complete this form now

3) Alert rest of the team (OB attending, anesthesia)

4) Identify risk factors for hemorrhage. Should the patient have significant risks, consider:

a) Alerting the hemorrhage team (outlined in SMI hemorrhage slide deck)

b) Prophylactic administration of tranexamic acid (1g/10min) immediately prior to delivery

c) Normovolemic hemodilution (if acceptable to patient, consider closed systems)

d) Transferring to a facility with a higher level of surgical/intensive care

EXAMPLE

BLOOD PRODUCT ACCEPTANCE LIST

PATIENT ID: _____

My signature below indicates that I request no blood derivatives other than the ones which I have designated in this consent to be administered to me during my hospitalization.

My attending physician, _____ MD has reviewed and fully explained to me the risks and benefits of the following blood products and methods for alternative non-blood medical management and blood conservation available to me.

My attending physician, _____ MD has also fully explained to me the potential risk associated with not authorizing blood or non-blood management during my hospitalization.

	WILL ACCEPT	WILL NOT ACCEPT	MAY ACCEPT UNDER CERTAIN CIRCUMSTANCES
Category I			
Red Blood Cells			
Fresh Frozen Plasma			
Platelets			
Autologous Banked Blood			
Cryoprecipitate			
Category II (Contains human plasma)			
Albumin			
Fibrin Glue			
Fibrinogen Concentrate (RiaSTAP)			
RhoGAM			
Plasma Protein Fractions/Plasmanate			
Human Immunoglobulin			
Factor 8/vWF Concentrate (Humate-P and Wilate)			
Prothrombin Complex Concentrate			
Bebulin (3 Factors)			
Kcentra (4 Factors)			
Category II (Does not contain human plasma)			
Factor 7A (Novo 7)			
Factor 8 Recombinant			
Factor 9 Recombinant			
Factor 13 Recombinant (Tretten)			
Category III (No blood component)			
Tranexamic Acid			
Amicar			
DDAVP			
Erythropoietin — recombinant			
Hetastarch			
Balanced Salt Solutions			
Category IV			
Isovolemic Hemodilution			
Hypervolemic Hemodilution			
Cell Saver			

Signature: _____ Date: _____ Time: _____

EXAMPLE

BLOOD PRODUCT EDUCATION FORM

WHERE TO ORDER	COMPONENT	CONTENT	EXPECTED EFFECT
Blood Bank	Packed Red Blood Cells	Contains red blood cells and a small amount of plasma	250 ml: Increases hematocrit by 3-4% and hemoglobin by 1 g/dl
Blood Bank	Fresh Frozen Plasma (FFP)	Plasma which contains clotting factors, albumin and immunoglobulins	250 ml: Increases fibrinogen, normalization of PT, PTT
Blood Bank	Platelets	Platelets and plasma	250 ml: Increases platelets
Blood Bank	Autologous Blood	Donated by patient for self-use	Need a high/normal hematocrit and usually is not used in emergencies
	Minor Blood Fractions		
Blood Bank	Albumin	A protein in human serum, highly processed/treated plasma derivative	Reverse hypovolemia (draws interstitial fluid into circulation)
Blood Bank	Factor VII NovoSeven	Concentrated preparation of clotting factor VII	Initiates thrombosis by activating platelets and the clotting cascade improving coagulation. Only effective after major sources of bleeding have been repaired.
OR	Fibrin Glue	Fibrinogen and thrombin	Create a fibrin clot to achieve hemostasis
Pharmacy	Erythropoietin	A hormone produced in the kidney; may contain albumin.	Controls RBC production
Blood Bank	RhoGAM	Medicine containing antibodies	Removes fetal cells that entered maternal circulation to prevent sensitization
Blood Bank	Human Immunoglobulin	Human protein antibodies	Immune antibodies to protect from infection
Blood Bank	Cryoprecipitate	Fibrinogen, Factors VIII, vWF, XIII, Fibronectin	Increases fibrinogen
Blood Bank	Humate-P (VWF/F VIII)	Protein factors; vWF, Factor VIII — human derived	May stop excessive bleeding, plays a role in clotting
Blood Bank	Prothrombin Complex Concentrate	Blood clotting factors II, VII, IX, X, and protein C and S; human derived	Reverses anticoagulation therapy, accelerates coagulation
	No Blood Component		
Pharmacy	Tranexamic Acid	Antifibrinolytic	Potentially decreases amount and duration of blood loss by preventing breakdown of fibrin, preserving clots. May reduce progression to a more severe bleed. 1 gram 8 hours later.
Pharmacy	Amicar	Derivative amino acid lysine; antifibrinolytic	Aides in fibrinolysis
Pharmacy	Hetastarch	Non-ionic starch derivative	Volume expander (Hespan) prevents shock
	Category IV		
Anesthesiology	Isovolemic Hemodilution	Autologous blood removed from patient	Limits the use of banked blood
	Hypervolemic Hemodilution	Administering a large volume of fluid before surgery so that when you lose volume during surgery you lose fewer RBCs	
	Cell Saver – closed circuit	Autologus blood – Blood lost during procedure	Can return up to 250 ml IV in 3 minutes, devoid of plasma and platelets