

Adult Blood Component Order Screening - Clinical Decision Algorithm

Purpose

This document provides a diagrammatic depiction for screening red blood cell, platelet, plasma and cryoprecipitate orders for adults (Inpatient and/or Outpatient) by the staff in the technologists in the Transfusion Medicine Laboratory for alignment with the transfusion best practice recommendations¹²³⁴⁵⁶.

Policy

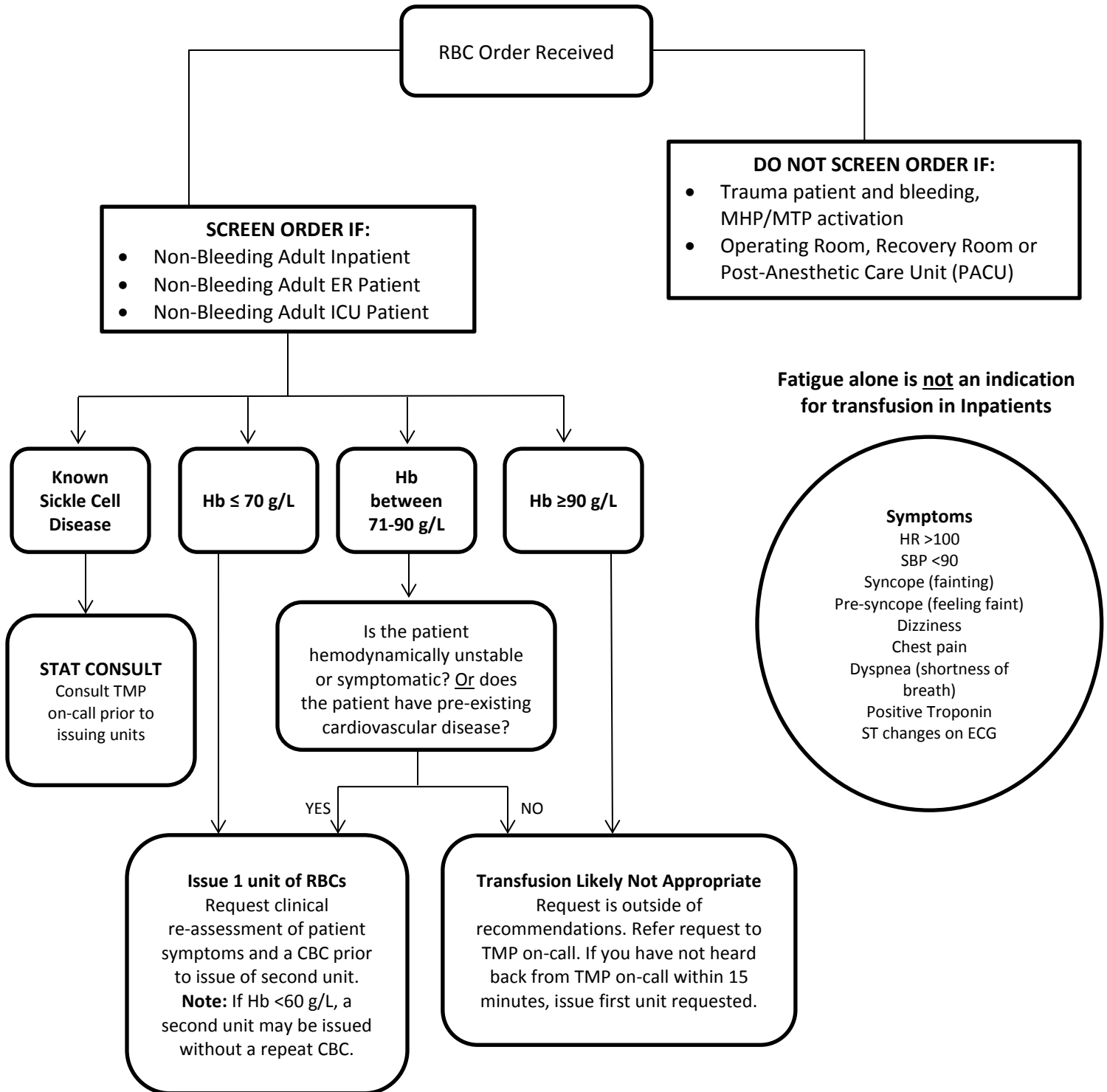
- Orders that are in alignment with the transfusion best practice recommendations shall be filled without question.
- If information is necessary to determine alignment, laboratory staff shall contact the care unit involved to clarify pertinent patient details.
- Orders that are outside of the recommendations shall be cleared with the Transfusion Medicine Physician on call.

Definitions

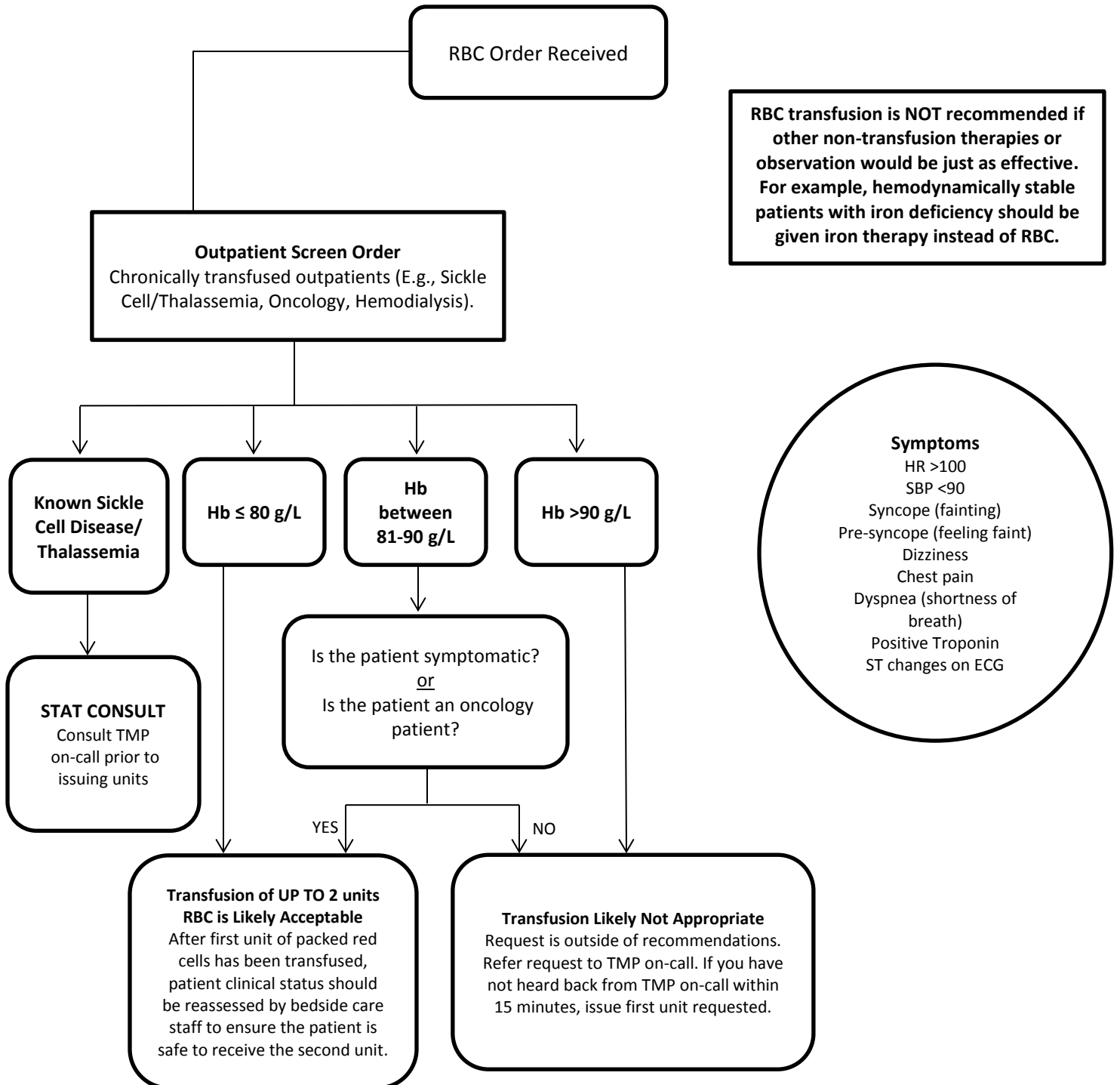
For the purposes of this document, the following definitions apply:

Term, abbreviation, acronym, etc.	Definition
Decision Algorithm	A visual tool outlining the steps involved in an 'if/then' decision process
ER	Emergency Room
Hb	Hemoglobin
HR	Heart Rate
MHP/MTP	Massive Hemorrhage Protocol/Massive Transfusion Protocol
OR	Operating Room
PLT	Platelet
Process Flow	A method of visually documenting the stages involved in performing a certain procedure. Examples include decision algorithm, value stream map, process flow chart or table.
Process Flow Chart or Table	A visual representation of the steps in a process. In a chart, standard symbols with defined actions are used.
RBC	Red Blood Cells.
Shall	Indicates the action is mandatory.
SBP	Systolic Blood Pressure.
TEG	Thromboelastography. A point-of-care test performed by Clinical Perfusion to assess coagulation on patient whole blood.
TMP	Transfusion Medicine Physician
TTP	Thrombotic Thrombocytopenic Purpura

A - Adult Inpatient Red Blood Cell Transfusion Decision Algorithm



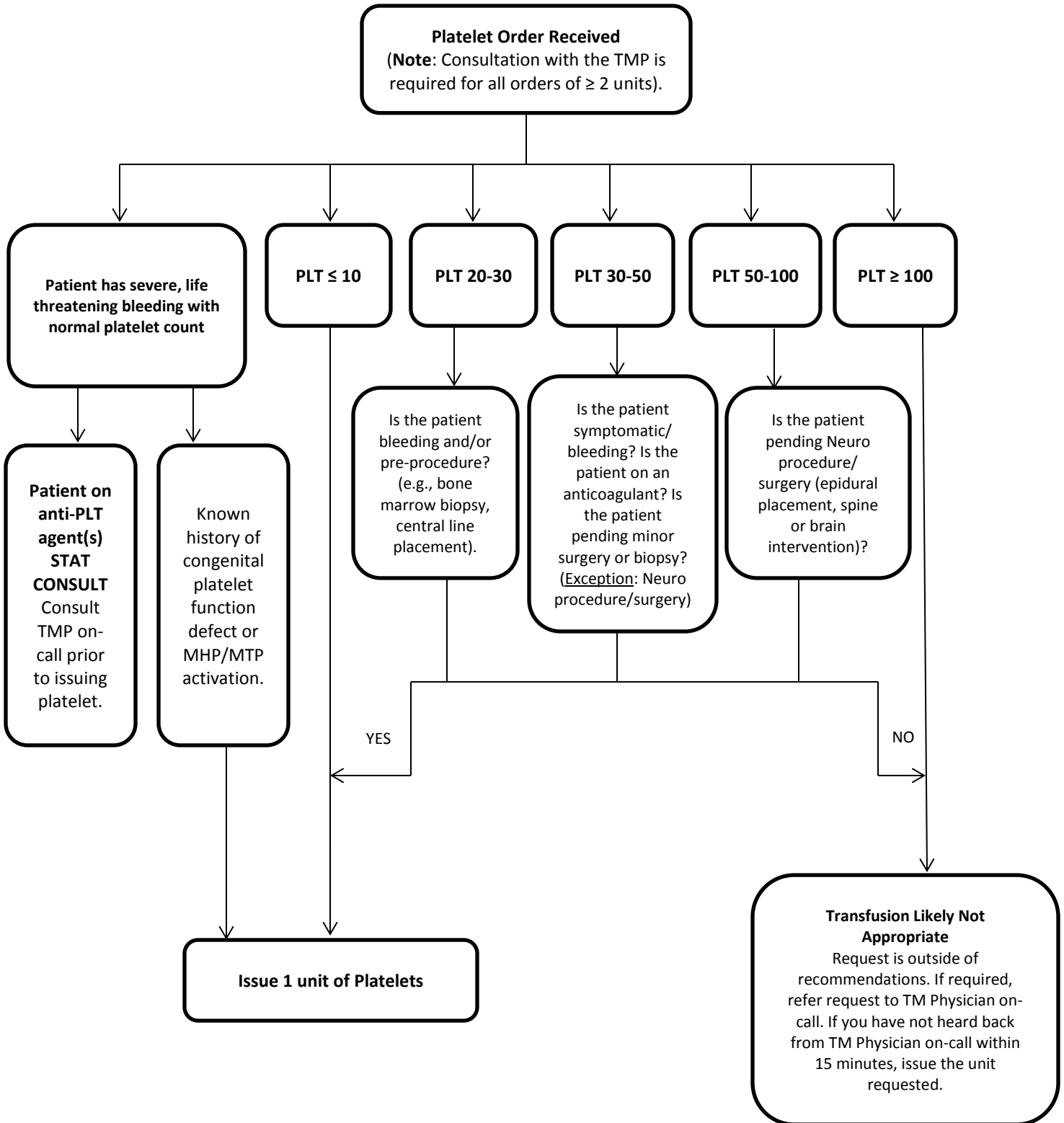
B - Adult Outpatient Red Blood Cell Transfusion Decision Algorithm



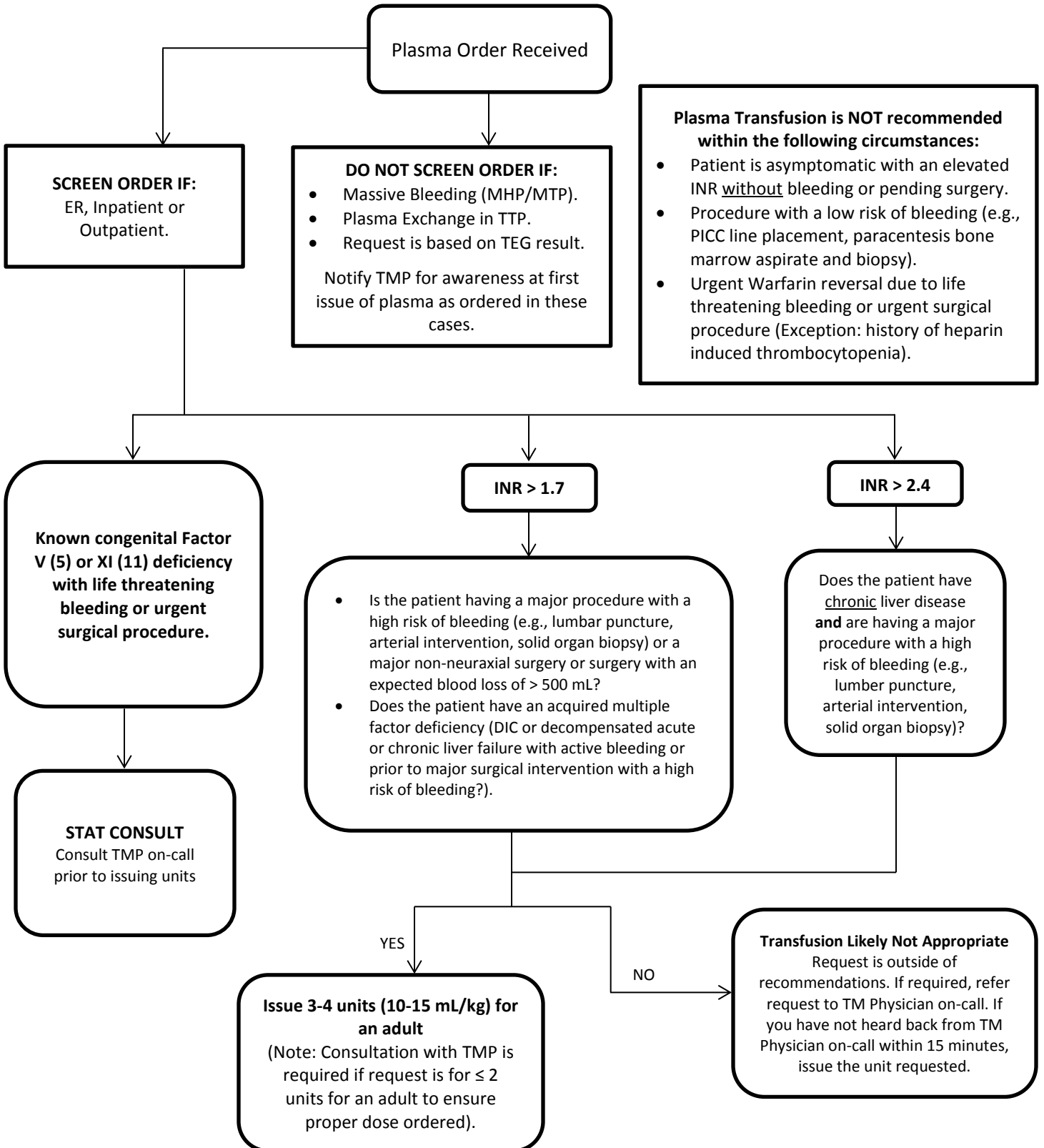
RBC transfusion is NOT recommended if other non-transfusion therapies or observation would be just as effective. For example, hemodynamically stable patients with iron deficiency should be given iron therapy instead of RBC.

- Symptoms**
- HR >100
 - SBP <90
 - Syncope (fainting)
 - Pre-syncope (feeling faint)
 - Dizziness
 - Chest pain
 - Dyspnea (shortness of breath)
 - Positive Troponin
 - ST changes on ECG

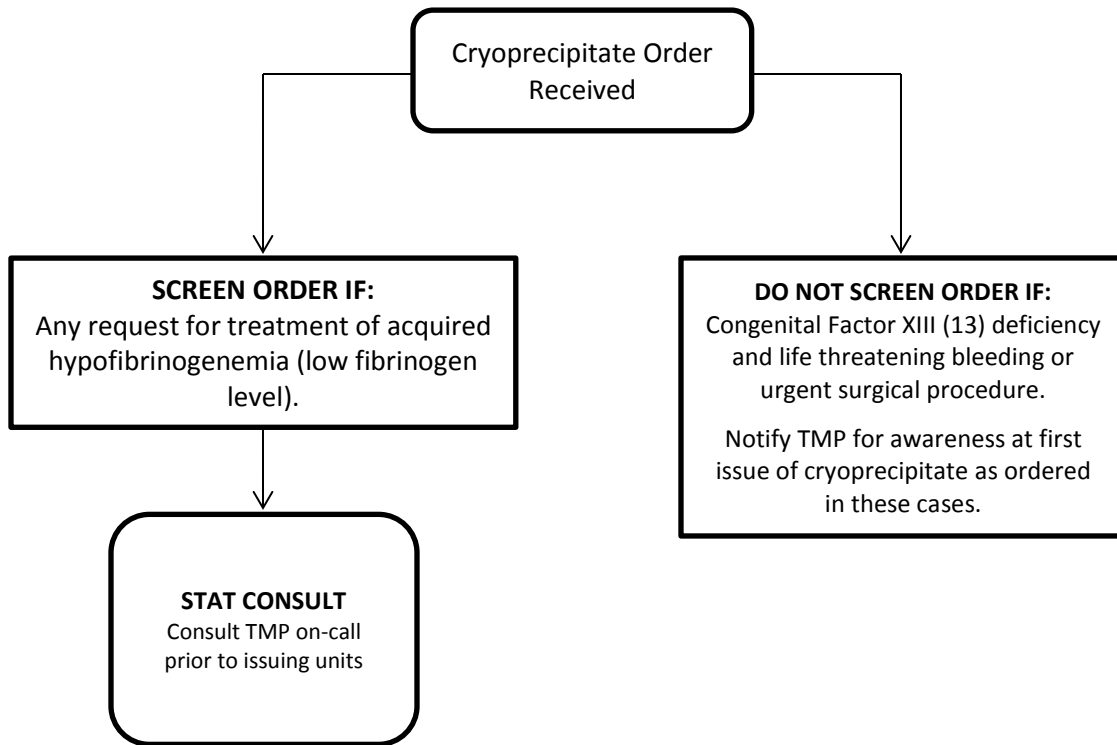
C - Adult (Inpatient or Outpatient) Platelet Transfusion Decision Algorithm



D - Adult (Inpatient) Plasma Transfusion Decision Algorithm



E - Adult (Inpatient or Outpatient) Cryoprecipitate Transfusion Decision Algorithm



References

¹Callum, JL et al; Canadian Blood Services; Bloody Easy 4; Blood Transfusions, Blood Alternatives and Transfusion Reactions; A Guide to Transfusion Medicine 4th Edition; 2016.

² Transfusion Best Practice Recommendations in Adult Patients – Saskatchewan. saskblood.ca. Accessed March 26, 2021.

³ Choosing Wisely Canada www.choosingwiselycanada.org . Lists from the Canadian Society for Transfusion Medicine, the Canadian Hematology Society, the Canadian Society of Internal Medicine, and the Canadian Society of Palliative Care Physicians.

⁴ Mueller MM, et al. Patient blood management recommendations from the 2018 Frankfurt consensus conference. JAMA. 2019;321(10):983-997.

⁵ Escourt LJ, et al. British Committee for Standards in Haematology Guidelines. Guidelines for Use of Platelet Transfusions. British J Haem. 2017;176:365-94.

⁶ Patel JJ, et al. Society of Interventional Radiology Consensus Guidelines for the Periprocedural Management of Thrombotic and Management of Thrombotic and Bleeding Risk in Patients Undergoing Percutaneous Image-Guided Interventions – Part II: Recommendations. J Vasc Interv Radiol. 2019;30:1168-84.