Issued by JPAC: 20 June 2018	**Implementation:** To be determined by each Service

Change Notification UK National Blood Services No. 07 2018

Haemodilution algorithm

This change applies to Appendix 3 in the Deceased Tissue Donor Selection Guidelines

Appendix 3 – Calculation of Blood & Plasma Dilution

Please find attached an algorithm for determining the suitability of post-transfusion/infusion samples for mandatory screening for transmissible infections.

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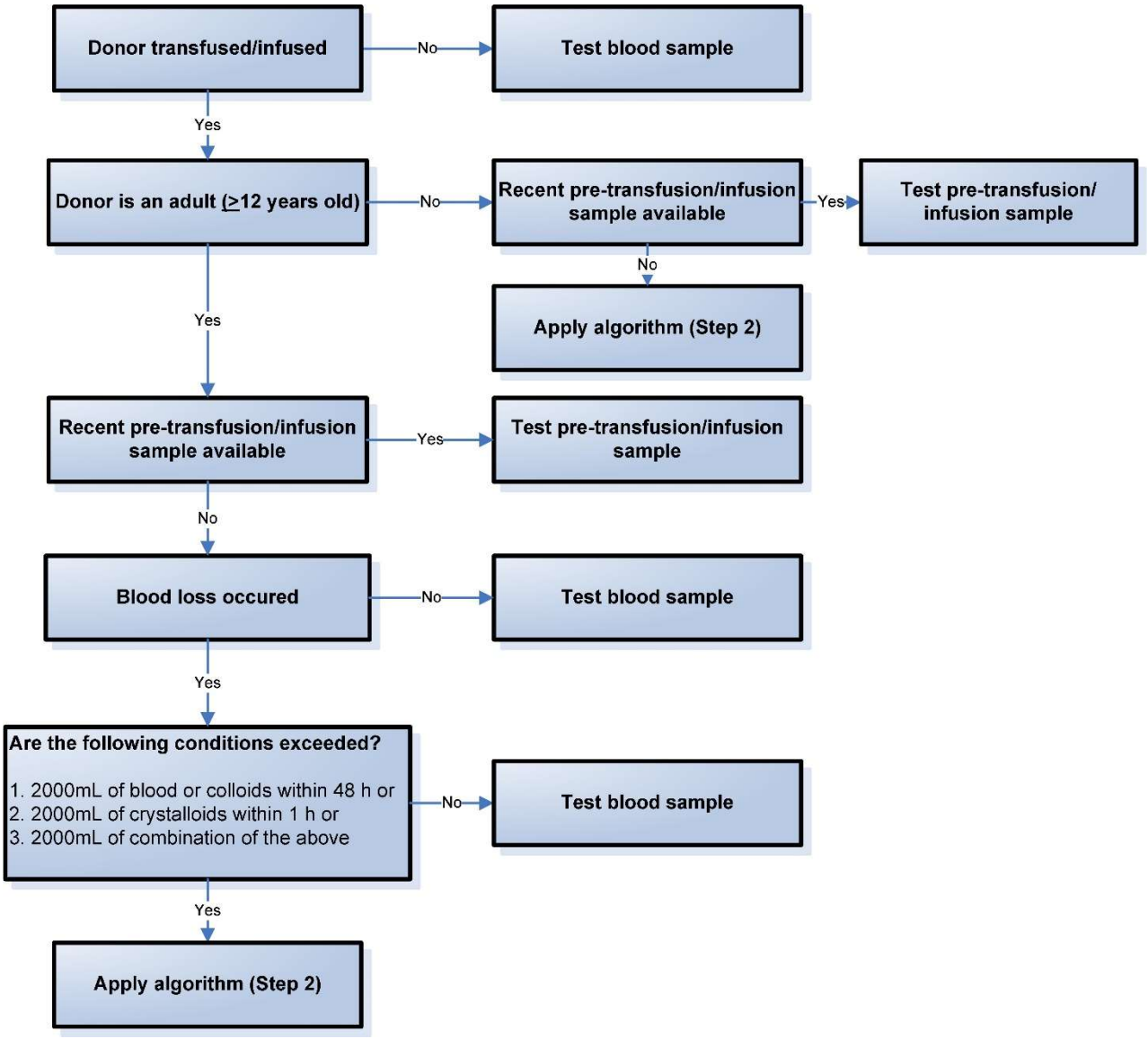
Continued

Determining the Suitability of Post-transfusion/Infusion Samples for Mandatory Screening for Transmissible Infections

Determing sample suitability - Step 1



Determing sample suitability - Step 2

Donor ID:		Date & Time blood sample taken:	

Step 2A

Calculate plasma volume	Donor weight (kg) _____ 0.025	_____mL
Calculate blood volume	Donor weight (kg) _____ 0.015	_____mL
A) Record total volume of blood transfused in the **48 h** prior to death or sample collection (whichever comes first)	_____mL of RBC transfused/48 h _____mL of whole blood transfused/48 h _____mL of reconstituted blood/48 h	Sum A: _____mL
B) Record total volume of colloid infused in the **48 h** prior to death or sample collection (whichever comes first)	_____mL plasma/48 h _____mL platelets/48 h _____mL albumin/48 h _____mL HES or other colloids/48 h	Sum B: _____mL
C) Record total volume of crystalloid infused in the **1 h** prior to death or sample collection (whichever comes first)	_____mL	Sum C: _____mL

Step 2B

Calculated Plasma Volume	_____mL	Sum B + Sum C	_____mL	
Calculated Blood Volume	_____mL	Sum A + Sum B + Sum C	_____mL	
Calculate plasma dilution	Is Sum B + Sum C > plasma volume?		No	Yes
Calculate blood dilution	Is Sum A + Sum B + Sum C > blood volume?		No	Yes

If the answers to **both** questions are 'No', the post-transfusion/infusion sample is acceptable

If the answer to **either** of the questions is 'Yes' use a pre-transfusion/infusion sample. If a suitable sample is not available, seek expert advice and inform transplant centre, testing laboratory, tissue bank as necessary.

RBC = red blood cells; HES = hydroxyethyl starch

Based on the algorithm developed by the Food and Drug Administration, USA[1]

www.fda.gov/downloads/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Tissue/ucm091345.pdf (Appendices 2&3)