London Regional Transfusion Committee

Care pathways for the management of adult patients refusing blood (including Jehovah's Witness patients)

Aim:

These draft care pathways have been developed on behalf of the London Regional Transfusion Committee with the aim of promoting a more standardised approach to the management of adult surgical patients refusing blood/blood component therapy (including JW patients).

Most Trusts will have their own protocol and in particular a risk framework for the management of such patients. However, in practice, such patients are encountered relatively infrequently with often a lack of clarity as to the role of the various teams/clinicians involved which may result in delays in surgery.

Hospitals may wish to adapt these practical pathways for local use. We recommend that this is undertaken by Hospital Transfusion Teams in discussion with the Hospital Liaison Committee (HLC) for Jehovah's Witnesses and the Clinical Risk department with the process overseen by the Hospital Transfusion Committee.

The following documents are included:

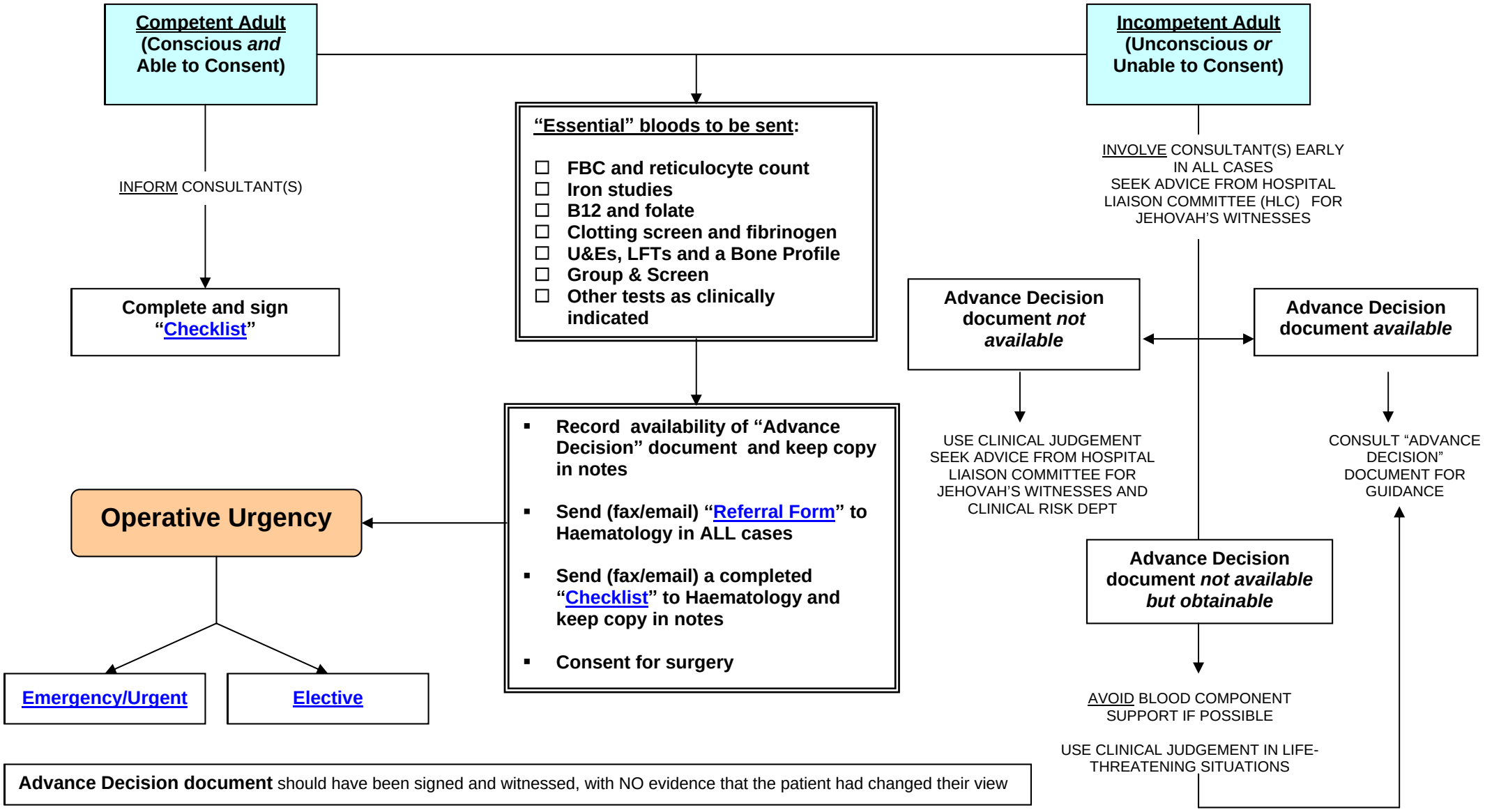
a. Care Pathway for Adult Surgical Patients Refusing Blood/Blood Component Support (Including Jehovah's Witnesses)
b. Care Pathway for Adult Surgical Patients Refusing Blood/Blood Component Support (Including Jehovah's Witnesses) and Requiring Emergency/Urgent Surgery
c. Care Pathway for Adult Surgical Patients Refusing Blood/Blood Component Support (Including Jehovah's Witnesses) and Requiring Elective Surgery
d. "Checklist" for surgical patients refusing blood/blood component support (including Jehovah's Witnesses)
e. "Referral Form" for surgical patients refusing blood/blood component transfusions (including Jehovah's Witnesses)
f. "Preliminary Plan" for surgical patients refusing blood/blood component transfusions (including Jehovah's Witnesses)
g. Use of erythropoietin Therapy in Adult Surgical Patients Refusing Blood (Including Jehovah's Witnesses)
h. Care Pathway for pre-operative optimisation of Haemoglobin of Adult patients refusing blood
i. Care Pathway for post-operative management of Adult patients refusing blood

A care plan for women in labour refusing blood transfusion is available via the following link: http://www.transfusionguidelines.org.uk/docs/pdfs/bbt-04_care-plan-v2.pdf

A care plan for Jehovah's Witnesses with malignant disease is available at http://www.transfusionguidelines.org/docs/pdfs/bbt-03_malignant-diseases-v21.pdf

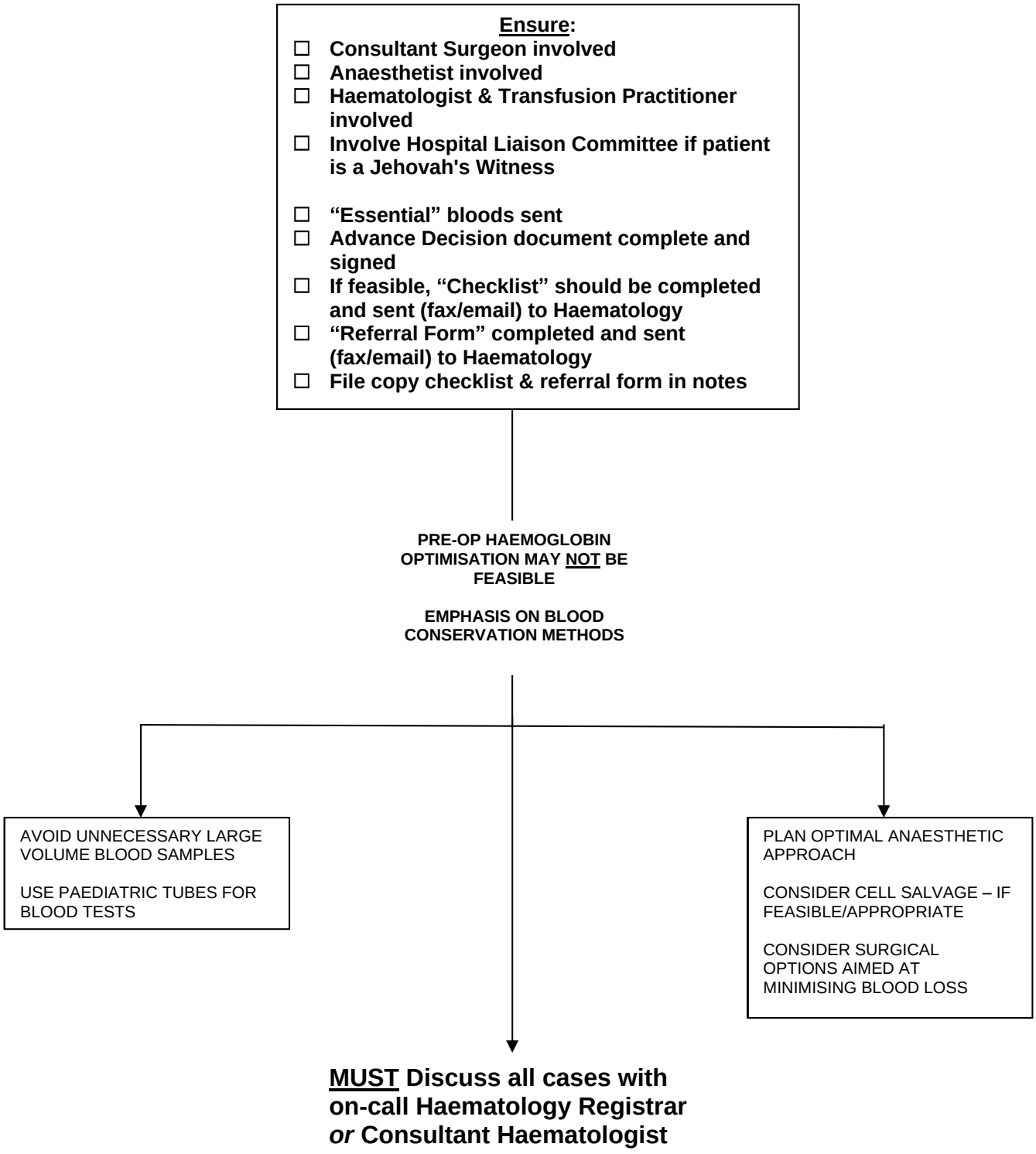
For management of children or adolescents consider referring to guidance produced by Great Ormond Street Hospital and available at http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/protocol-for-families-refusing-blood-and-blood-components-including-jehovahs-witnesses/

Care Pathway for *Adult* Surgical Patients Refusing Blood/Blood Component Support (Including Jehovah's Witnesses)



Advance Decision document should have been signed and witnessed, with NO evidence that the patient had changed their view

Care Pathway for *Adult* Patients Refusing Blood/Blood Component Support (including Jehovah's Witnesses) and Requiring Emergency or Urgent Surgery



Care Pathway for *Adult* Patients Refusing Blood/Blood Component Support (including Jehovah's Witnesses) and Requiring Elective Surgery

Ensure:

- ☐ **Consultant surgeon informed**
- ☐ **Anaesthetist informed**
- ☐ **Haematologist & Transfusion Practitioner informed**
- ☐ **Involve Hospital Liaison Committee if patient is a Jehovah's Witness**
- ☐ **"Essential" bloods sent**
- ☐ **Consent/Advance Decision document complete and signed**
- ☐ **"Checklist" should be completed and sent (fax/email) to Haematology**
- ☐ **"Referral Form" completed and sent (fax/email) to Haematology**
- ☐ **File copy checklist & referral form in notes**

PRE-ADMISSION ASSESSMENT AT LEAST 6 WEEKS PRIOR TO OPERATION

OPTIMISE HAEMOGLOGLOBIN (HB)

A LETTER HIGHLIGHTING PRE-OPERATIVE HB OPTIMISATION PLAN SHOULD BE PUT FORWARD BY HAEMATOLOGY TEAM WITHIN 1 WEEK OF RECEIPT OF A COMPLETED REFERRAL FORM.

THE NEED FOR FURTHER TESTS OR TREATMENTS WILL BE BASED ON PATIENT'S CLINICAL SITUATION

FAX/EMAIL HB OPTIMISATION PLAN TO SURGICAL TEAM FOR PROMPT ACTION AND FILE COPY IN NOTES

Contact details
Name:
Fax no:
Email:

OPTIMISE CARDIO-RESPIRATORY FUNCTION.

INVOLVE MEDICAL TEAMS IF NECESSARY.

PLAN OPTIMAL ANAESTHETIC APPROACH

PLAN CELL SALVAGE USE – IF APPROPRIATE

CONSIDER SURGICAL OPTIONS AIMED AT MINIMISING BLOOD LOSS

“Checklist” for surgical patients refusing blood/blood component support (including Jehovah’s Witnesses)

	I accept				I accept		
	YES	NO	Not Discussed		YES	NO	Not Discussed
Red Blood Cells				Acute Normovolaemic Haemodilution			
Platelets				Intra-op Cell Salvage			
Fresh Frozen Plasma				Post-op Cell Salvage			
Cryoprecipitate				Fibrin glues and sealants (human)			
Albumin				Fibrin glues and sealants (non-human)			
Recombinant clotting factors (rVIIa)				Other treatment (Specify):			
Prothrombin Complex Concentrate (PCC)							
Fibrinogen concentrate							

If required to save my life:	
Red Cells:	YES / NO
Platelets:	YES / NO
Fresh Frozen Plasma (FFP):	YES / NO

Hospitals should agree content of checklist with the Hospital Liaison Committee & Clinical Risk Dept before adapting for local use. The checklist must be completed IN FULL by the treating surgical team. Items not discussed on the first visit may be re-initialled by patient/witness after appropriate discussion. The checklist should include the following statements to be signed by the patient indicating that:

- The patient has confirmed understanding and agreement with all the statements made above.
- The patient has also confirmed understanding that this document will remain in force and binding to all those involved in his/her care until he/she personally revokes it either verbally or in writing.
- The patient is signing the relevant document of his/her own free will.

"Referral Form" for surgical patients refusing blood/blood component transfusions (including Jehovah's Witnesses)

Please send completed forms either by fax xxxxxxxxx or email xxxxxxxxx to the Haematology Department, xxxx Hospital. All forms MUST be signed by referring clinician. Poorly completed forms may result in delays.

Surname: _____	**Consultant**: _____
First name: _____	**Department**: _____
MRN: _____	**Outpatient** □
DOB: _____	**Inpatient** □
	Location _____

All sections MUST be completed (*tick boxes where appropriate*)

Operation description								
Urgency	**Emergency/Urgent**			**Elective**				
Operation date								
Estimated Blood Loss	**millilitres**							
Anticoagulant Meds?	**Warfarin**		**Heparin**		**Aspirin**		**Others (Which?)**	
	If yes, give reason:							

Circle appropriate response

"Advance Decision" Document Available?	**YES**	**NO**
If available, ensure the document is scanned onto EPR and a copy is kept in the patient's medical records		
Checklist completed and signed?	**YES**	**NO**
The checklist is an essential part of the consenting process and must be completed IN FULL. The checklist MUST be faxed with Referral Form and a copy should be kept in patient's medical records		
Blood tests done?	**YES**	**NO**
If not done, when are they booked for? ***Ensure "essential" blood tests were sent – as set in the Care Pathway*** ***Blood results must not be older than 2 weeks from date of referral***		

Completed by (PRINT): _____ **Grade:**

Signature _____

"Preliminary Plan" for surgical patients refusing blood/blood component transfusions (including Jehovah's Witnesses)

Surname: _____

First name: _____

MRN: _____

DOB: _____

Consultant: _____

Department: _____

Outpatient ☐

Inpatient ☐

Location _____

Hb		**Ferritin**	
WCC		**B12**	
Platelets		**Serum Folate**	
APTT		**Retics**	
PT			
INR			
Fibrinogen			

A. Does NOT require pre-operative optimisation. ☐

B. Requires pre-operative optimisation. ☐

Details:

C. Requires interview to discuss component therapy. ☐

D. Pre-operative optimisation NOT feasible. ☐

Appointments Made for Haematology clinic? **Yes / No**

Location: **Date:**

Appointments Made for Surgical clinic? **Yes / No**

Location: **Date:**

Use of Erythropoietin therapy in *Adult* Surgical Patients Refusing Blood (Including Jehovah's Witnesses)

Recombinant erythropoietin (EPO) is widely used in chronic kidney disease (CRF) patients to increase haemoglobin (Hb) level. EPO can also be used peri-operatively as an alternative to blood transfusion although not all EPO preparations are licensed for this indication. EPO may be the only method to replace blood losses in patients who refuse blood transfusion. Epoetin alfa and epoetin zeta are licensed for use in patients with anaemia (haemoglobin concentration of 10-13 grams per decilitre (g/dL)) before planned orthopaedic surgery with expected moderate blood loss, to reduce exposure to allogeneic blood transfusion.

The decision to use EPO must be made by a Consultant Haematologist and the team responsible for the patient following an assessment of benefits vs risks of side effects.

Use of EPO pre-operatively to optimise Haemoglobin
Patients must have an Hb < 13g/dL and be at risk of significant blood loss during their procedure to be eligible for EPO use.

The first dose should be given 3 weeks before surgery and the last dose on the day of surgery. If a sufficient response is seen after the 2nd or 3rd dose then subsequent doses should be omitted. EPO should not be initiated in patients with a baseline Hb > 13g/dL as there may be an increased risk of post-op thrombotic events. EPO must be stopped if Hb >15g/dL. Caution is advised in using this drug in older patients >70yrs.

EPO is relatively contra-indicated in patients who have any of the following:
Uncontrolled hypertension, severe coronary, peripheral arterial, carotid or cerebrovascular disease (increased thrombotic risk as PCV increased). Recent MI or CVA within one month; unstable angina; previous history of thrombosis

EPO should be used with caution in patients who have any of the following:
Raised platelets, hypertension, epilepsy, chronic liver failure, pregnancy and lactation, malignancy

Examples of dosage regime include:
Epoetin alfa or epoetin zeta given subcutaneously pre-surgery in adults with expected moderate blood loss to reduce exposure to allogeneic blood transfusion: 600 units/kg once a week for 3 weeks before surgery (and on day of surgery) or 300 units/kg daily for 15 days starting 10 days before surgery (as stated for orthopaedic surgery in the British National Formulary).

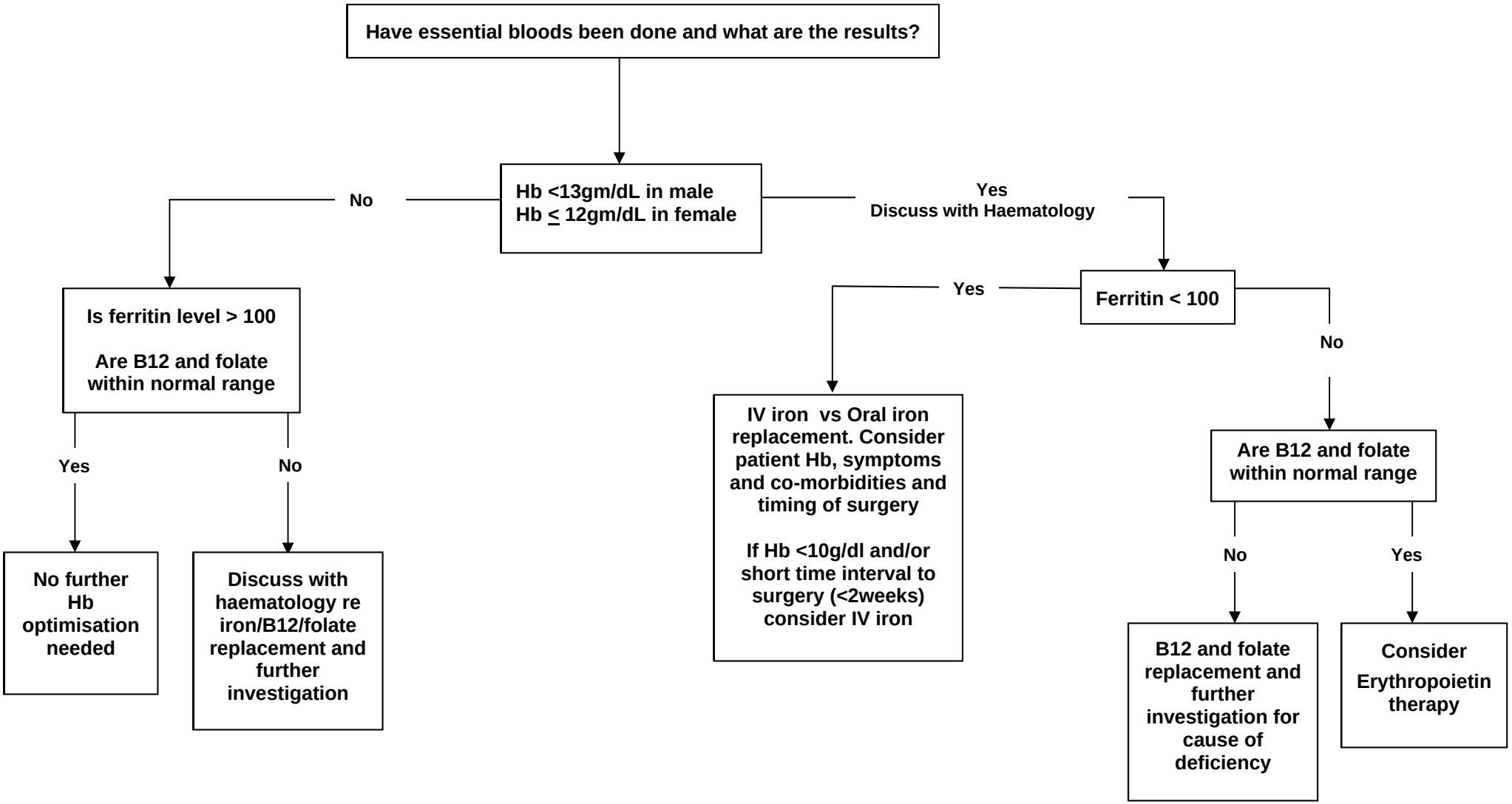
Iron, Vitamin B12 and Folate supplementation
EPO is ineffective if the patient is deficient in iron, vitamin B12 or folate. These must therefore be checked and any replacement started before initiating EPO therapy. All patients should be fully evaluated to determine the cause of any deficiency. If baseline ferritin level is <100ng/ml IV Iron should be prescribed.
Ferritin levels inevitably fall in all patients receiving EPO therapy. Patients with baseline ferritin > 100ng/ml should therefore be prescribed oral iron (ferrous sulphate 200mg TDS) in order to avoid the development of a deficiency state. If oral iron cannot be tolerated or if ferritin levels fall below 100ng/ml despite oral iron administration, IV Iron should be prescribed

Monitoring
All patients must have the following baseline tests. Paediatric tubes should be used.
• FBC • CRP • Ferritin • U&E• LFT
During treatment FBC must be checked at least weekly. The patient's blood pressure must be checked prior to start of EPO and then weekly.
Potential EPO side effects include hypertension, flu-like symptoms, mild pain on injection site, pure red cell aplasia, stroke, thrombosis.

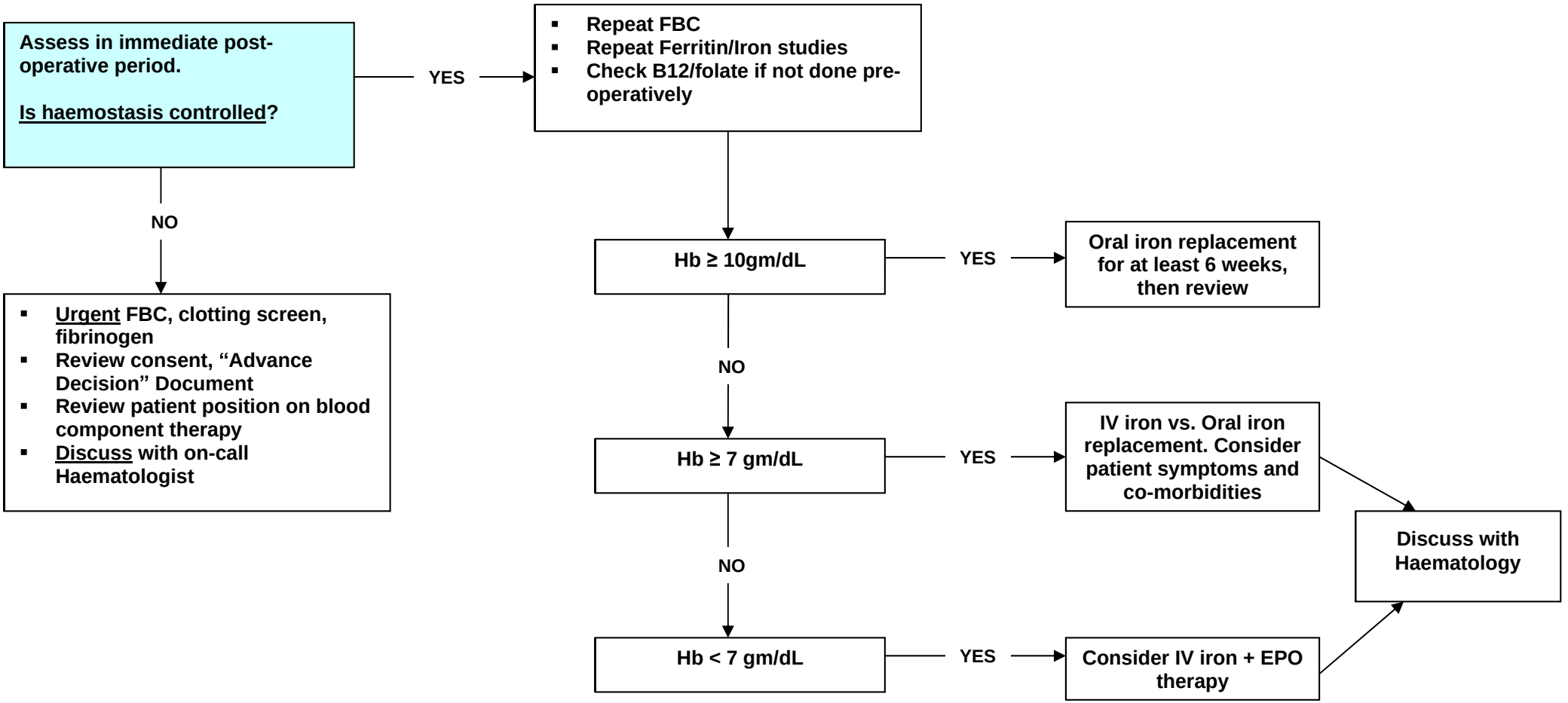
Health Technology Assessment Report 8 Use of Epoetin Alfa before Orthopaedic Surgery in Patients with Mild Anaemia 2006; British National Formulary 62; Recombinant human erythropoietins 2011

Care Pathway for pre-operative optimisation of Haemoglobin of *Adult* patients refusing blood

Date of pre-operative assessment



Care Pathway for Post-operative Management of *Adult* patients refusing blood



The writing group was convened on behalf of the London Regional Transfusion Committee and consisted of the following members:

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We are very grateful to Rob Gargan, Hospital Liaison Committee for Jehovah's Witnesses, London North for his comments and input.