Declining Blood and Blood Products in Maternity

University Hospitals of Leicester NHS Trust

Trust Ref: C98/2006

Contents

1. Introduction & who this guideline **applies to**

This guideline is for use by all health care professionals providing care at the UHL for pregnant women and pregnant people who decline blood and blood products. These guidelines aim to collate the best available evidence on the management of those who decline blood and blood products,in order to provide all clinicians who may be involved in caring for these pregnant women and pregnant people with a reference point to inform their practice.

Pregnant women and pregnant people may refuse some or all blood components for a range of reasons. Their reason for refusal of blood products should be explored by the health professionals providing care. Some people may refuse due to fear of infection, a previous transfusion reaction or a misunderstanding of the risks and benefits of blood transfusion. They must all be provided with adequate information to form an informed decision about the risks and benefits of potential blood component use and any alternativesas well as the consequences of blood component refusal. The main group of people declining blood and blood products are Jehovah's Witnesses and reference to their specific requirements will be made in Appendix 1.

For the purpose of this guideline the following definitions are used:

- **Blood** consists of **red cells, white cells, platelets, or plasma**
- **Blood products** are deemed to be plasma derivatives such as **Albumin,Cryoprecipitate, Anti-D and many others**

For specific guidance on the treatment of children please refer to the Declining Blood and Blood Products UHL Policy.pdf Appendix 3 pages 18 & 19.

Related documents

Mental Capacity Act UHL Policy.pdf B23/2007
Declining Blood Products UHL Policy B39/2010
Consent to Examination or Treatment UHL Policy.pdf B35/2024
Anaemia and use of iron supplements and parenteral iron in pregnancy C1/2012
Postpartum Haemorrhage C38/2011

BEST PRACTICE POINTS

- Provide comprehensive information about the risks, benefits, and alternatives to the use of blood and blood products to enable informed decision-making.
- Refer pregnant women and pregnant people to consultant-led care early in pregnancy to ensure appropriate planning and management.
- Aim to optimize haemoglobin levels to at least 130 g/L during pregnancy through early intervention and treatment.
- Ensure that the UHL "People Who Decline Blood or Blood Products" Standard Care Plan and Checklist (Appendix 2a and 2b) are completed and properly filed in the maternity handheld notes.
- Maintain a low threshold for seeking consultant advice to address any concerns promptly.
- Notify the on-call obstetric and anaesthetic consultants as soon as a person declining blood products is admitted in labour to facilitate immediate and appropriate care.
- On admission in labour, the PPH management checklist must be completed and reviewed as appropriate, identifying any increased risks.
- Each case should be individually risk assessed.

- In the event of haemorrhage, act without delay. Summon senior assistance early, as rapid decision-making and prompt intervention, including surgical options, if necessary, are critical to minimizing significant blood loss.
- With Jehovah's witnesses, during any complex situations, such as when a patient declines to provide written consent and gives verbal consent for a procedure or examination, contact the 24-hour Hospital Liaison Committee (HLC) at **07894 9884493** for guidance and resolution with the patient's consent.
- For difficult situations involving patients who are not Jehovah's witness and Jehovah's witness declining HLC input, the trust legal team can be contacted as detailed under Legal consideration section.

2. General Considerations

When counselling and planning care, the following should be considered:

- Any adult with the necessary mental capacity to understand the implications of their decision may refuse treatment even though it may lead to their death.
- No other person can legally give or withhold consent for another competent adult.
- The pregnant woman or pregnant person needs full, honest and open discussion in order to make informed decisions to give or withhold consent. It is important to avoid a confrontational approach.
- Decisions should be the pregnant woman or pregnant person's own free will and not made under coercion or unduepressure.
- If treatment with blood transfusion or blood products is recommended, ensure that the pregnant woman or pregnant person understands the reasons why.
- If treatment without blood products is proving ineffective ensure that this understood. Staff should also reinforce this information, to give the pregnant woman or pregnant person the opportunity to change their decision.
- It is important to maintain a professional attitude at all times, although staff may feel frustrated and powerless by the decision to decline blood products, it is important that the pregnant woman or pregnant person maintains their trust in those caring for them.
- If the person dies despite all efforts made, their family will require the same support as any other bereaved family. All staff involved in their care should be offered the appropriate

3. Antenatal care plan

Ideally, a person's decision to decline blood and blood products should be identified and recorded at the time of booking or during early pregnancy. Appropriate counselling and information should be offered in a consultant led setting, and relevant consent forms, care plans and documentation should be completed and filed in the maternity health record/ handheld notes.

3.1 Early identification

- A person's decision to decline blood and blood products should be identified antenatally where possible. Early identification of a decision to decline blood and blood products will allow time to be devoted to discussion of the potential implications in a relaxed and unhurried environment. This should be documented in dedicated space in the handheld maternity record and on the maternity electronic records. Additionally, if they have advanced directive that can be uploaded to the electronic records.

3.2 Consultant-led appointment

- Pregnant women and pregnant people should be offered an appointment in a consultant led obstetric clinic to discuss the implications, formulate a care plan and review acceptable alternatives like cell salvage according to Appendix 1b. Refer to the UHL Policy Declining Blood and Blood Products UHL Policy and Care plan for Women in labour refusing a blood transfusion' (Appendix 2a) and checklist (Appendix 2b) when formulating an agreed care plan during the antenatal period.
- Pregnant women or pregnant people declining blood or blood products in any circumstances should be advised to birth in a consultant led unit with Level 3 critical care facilities for the prompt management of major obstetric haemorrhage, including hysterectomy. This will be Leicester Royal Infirmary if birthing within UHL.

3.3 Documentation:

- Ensure that all discussions regarding treatment are fully documented in the presence of a witness, any healthcare professional who is witnessing the signature given by the pregnant woman or pregnant person. This should include clearly written accounts of what advice has been given and the patient's reaction to that advice. This information is vital to determine the validity of consent or refusal to treatment.
- A Standard Care Plan for declining Blood or Blood Products (Appendix 2) should be completed by an experienced Obstetrician, ST3 or above who identifies the pregnant woman or person's wish to refuse blood or blood products. The care plan should include the identification and documentation of any specific blood products or interventions (cell salvage) that would be accepted in an emergency.
- The "General Consent Form Excluding Blood Transfusion"(See the Royal College of Surgeons guide, "Caring for patients who refuse blood"; Appendix A pages 28, 29 or the UHL Policy Declining Blood and Blood Products UHL Policy Appendix Five) must be completed at the earliest opportunity and copies kept with the handheld notes and main maternity folder. If the pregnant woman or pregnant person is below the age of16 follow the UHL policy B39/2010 appendix 3.
- The pregnant woman or pregnant may present with an "Advanced Directive to Refuse Specified Medical Treatment" already completed. This document should be adhered to and included in the health care record. The "General Consent Form excluding Blood Transfusion" should also be completed as referred to above.
- The standard of documentation should be followed as for all clinical records.

3.4 Information and Counselling:

- Provide written patient information leaflet titled "Declining Blood Products or a Blood Transfusion in Pregnancy or after Childbirth."
- Discuss and document the risks of refusing blood transfusion, alternatives, and the potential need for procedures like hysterectomy in case of major haemorrhage.

3.5 Haematinic and iron optimization:

- Oral iron supplementation during pregnancy and regular full blood count assessment during booking, second and third trimester are recommended, with a view to early identification and correction of anaemia. (see Blood essentials : Anemia management , which gives recommendations regarding early identification and correction of anemia. For management of anaemia in pregnancy please refer to; Anaemia and Use of Ferinject UHL Obstetric Guideline.pdf
- An initial check for B12, folate, transferrin and ferritin should be undertaken at booking, and these should be repeated if anaemia develops. Maximize haemoglobin levels to at least 130 g/L through oral or intravenous iron supplementation, ensuring folate and B12 levels are adequate[7,8]. (Association of anaesthetist 2018 Guideline - Anaesthesia Peri-operative care for Jehovah's Witnesses and patients who decline blood, P2, recommendation 3).
- Consider erythropoiesis-stimulating agents in consultation with a Haematologist for severe anemia.

3.6 Placental Assessment:

- Perform an ultrasound at the anomaly scan to identify placental site and assess risks of conditions like placenta praevia.

4. Admission in labour

On admission in labour;

- It is important to confirm with the pregnant woman or pregnant person that the wishes previously expressed in advance are still valid. If the pregnant woman or pregnant person has not been seen in the clinic previously, they should be given detailed information to make an informed choice and due attention should be given to documentation. Refer to the '*Care Plan for women in Labour refusing a Blood Transfusion'* (Appendix 2a) (as referred to in the RCOG Newsof the Royal College of Obstetricians and Gynaecologists).

- The PPH management checklist must be completed and reviewed as appropriate, identifying any increased risks.
- Each case should be individually risk assessed.
- A full blood count should be offered in all cases. It is important to have a baseline FBC so that staff caring for the pregnant woman or pregnant person can make decisions on the management of their care with the available clinical information. [1]
- A group and save sample should be recommended in cases with additional risk factors.
- Intravenous access should be offered and recommended in cases with additional risk factors.
- If low risk, people declining blood products can be offered intrapartum care in one of UHL's alongside birth centres.
- The Consultant Obstetrician on-call and the Consultant Anaesthetist on-call should be notified. The pregnant woman or pregnant person should be cared for by experienced Midwifery and Medical staff. The pregnant woman or pregnant person should be cared for by experienced clinicians, junior staff must be overseen by senior midwives and obstetricians throughout labour and the postpartum period.

With Jehovah's witnesses, during any complex situations, such as when a patient declines to provide written consent and gives verbal consent for a procedure or examination, contact the 24-hour Hospital Liaison Committee at **07894 9884493** for guidance and resolution. This is possible only with patient's consent, that can also be seen documented in patient's handheld advanced directive No.6. They will also be available to attend in person, as needed, depending on the situation, including during out-of-hours periods.
For difficult situations involving patients who are not Jehovah's witness and Jehovah's witness declining HLC input, the trust legal team can be contacted as detailed under Legal consideration section.

5. Intrapartum Management

Labour should be managed as any other, however the third stage should be actively managed and preparations made in anticipation of a postpartum haemorrhage.

Antenatal and/or intrapartum risk factors for PPH should be identified and documented andprophylactic measures taken where possible

As with any other treatment proposed, sufficient information to make an informed choice should be given.

Care should reflect the need to keep blood loss to a minimum. Risk factors for PPH should be identified prior to onset of labor and/or intrapartum, and prophylactic steps should be taken where possible.[5] Active management of the third stage is associated with reduction in the risk of postpartum haemorrhage and severe postpartum haemorrhage. [3]

It is important to avoid any delay in the treatment of postpartum haemorrhage,[1] and as a result it is prudent to have basic equipment in the delivery room to include - equipment for the siting of an intravenous infusion, with the appropriate fluid, blood bottles for full blood count and clotting studies and a suitable oxytocic.

6. CAESAREAN SECTION

6.1 Consent;

Use the 'General Consent Form Excluding Blood Transfusion' as referred to in the Documentation Section above.

- Informed consent should be obtained, as in any case, however it is important that specific risks of refusal of blood or blood products is explained and documented. At the same time, the pregnant woman or pregnant person should be fully appraised about the risks associated with receiving a blood transfusion and this discussion must include an explanation of suitable alternative treatment options available.

- Regional anaesthesia should be used whenever possible.

6.2 Elective Caesarean section

- Early detection and correction of anaemia is essential in preparation for elective Caesarean section. (See the reference in section 3 for details regarding this.)

- Due to the lack of the option to transfuse blood or blood products, a consultant obstetrician should be involved in the surgery; the anaesthetic managed by a consultant anaesthetist.

- When booking the procedure, clear communication with theatre staff is essential so that arrangements are made to ensure that necessary staff and equipment are available.

- Seek early consent for cell salvage where permissible. Clarify with the pregnant woman or pregnant person if this is acceptable, document it clearly and notify theatres. In addition, ensure the checklist in Appendix 2b is completed antenatally.

6.3 Emergency Caesarean section

- Due to the risks of bleeding associated with emergency Caesarean section, particularly in established/advanced labour, the Caesarean should be performed bythe staff outlined above. However, if maternal or fetal safety would be compromised byawaiting their arrival if not on-site, the Caesarean section must be commenced by the most senior staff available, awaiting senior support. (See section in the Blood essentials : Anaemia management, regarding Major Haemorrhage.)

7. Management of obstetric hemorrhage

In the event of any abnormal bleeding the Consultant Anaesthetist, Consultant Obstetrician and Consultant Haematologist should be contacted to ensure they have early involvement in the management.

- The management of major obstetric haemorrhage necessitates the involvement of staff from these disciplines[1]. In cases where treatment options are limited due to the refusal of treatment with blood or blood products it is prudent to involve senior staff at an early stage.

- In the event of antepartum haemorrhage inform the Consultant Obstetrician and Anaesthetist on-call and treat as appropriate to the clinical findings.

- In the event of postpartum haemorrhage refer to the UHL Postpartum Haemorrhage management guideline. However, as resuscitation with blood or blood products will be unavailable, the threshold for the use of the guidance on management of massive obstetric haemorrhage should be low. In any case the Consultant Obstetrician on- call should be informed immediately.

- Escalate promptly to definitive interventions like uterine tamponade, B-Lynch suture, or hysterectomy as needed.

- Tranexamic acid should also be considered for use in obstetric haemorrhage, the WOMAN trial showed reduction in bleeding deaths and need for surgery in people with PPH. A second dose is recommended where bleeding persists after 30 minutes or recurs within 24 hours[7].

- Refer to section 7.1 of the Blood essentials : Anemia management dealing with major obstetric haemorrhage.

- Document all steps of care, discussions, and interventions accurately and contemporaneously.

8. Postpartum Observation and Follow-Up

Close observation for signs of bleeding should continue for at least one hour following delivery. During this time the woman or person should not be left alone. They should be advised on the importance of the prompt reporting of any abnormal bleeding or other symptoms of blood loss (palpitations, dizziness, fainting, shortness of breath etc.)

It is important that any excessive bleeding or deterioration in the maternal condition isidentified early and treated promptly. [1,4,5,6]

Signs of bleeding include;

- Tachycardia
- Agitation

- Raised respiratory rate
- Drop in blood pressure
- Rise in heart rate

Any perineal or vaginal trauma that is bleeding should be sutured promptly in order to minimise the blood loss.

An example of a suggested care plan for managing people refusing blood transfusionis in Appendix 2a and 2b.

Continue haematinic support postpartum, using oral or intravenous iron as needed. Consider erythropoiesis-stimulating agents in consultation with a Hematologist for severe anemia.

9. LEGAL CONSIDERATIONS

In cases of serious difficulty, the Trust is obligated to seek legal advice, therefore the Trust Risk and Litigation Manager should be contacted without delay in these circumstances.

If immediate legal advice/assistance is required, the Risk & Litigation department canbe contacted on the numbers below:

The Directorate of Corporate and Legal Affairs team are responsible for providing legal advice and can be contacted as follows:

- Assistant Director (Head of Legal Service), Tel. Number: 0116 502 7079
- Corporate and Committee Services, Tel. Number: 0116 502 7137

Outside normal working hours, including weekends, please contact the Hospital Duty Manager.

The Transfusion Practitioners' Team are responsible for:

a. Providing advice and support during normal working hours (Monday to Friday 9am to 5pm)and can be contacted on the following numbers:

LRI – ext. 17876 **LGH –** ext. 14557

Out of hours and during weekends, clinical advice is provided by the on-call hematology SpR (or consultant on the blood transfusion /haemostasis on call rota who can be contacted via switch board)

b. Reviewing the policy, related procedures and guidelines as required to ascertain changes, additions or deletions deemed necessary due to change in local/national guideline

10. USEFUL TELEPHONE NUMBERS

The Leicester Hospital Liaison Committee for Jehovah's Witnesses is available 24 hours aday, 7 days a week.

It is an information and support service for both Patients and Healthcare Practitioners, via thecontact details below:

Leicester Hospital Liaison Committee for Jehovah's Witnesses Chairman: Andy Appleby M: 07799883711 E: aapleby@jw-hlc.org.uk	**Emergency Number:** **07894 9884493** E: midlands@jw-hlc.org.uk

11. References and Bibliography

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3. Kinch RAH, Paul, WM. Management of primary postpartum haemorrhage. *Journal of theSociety of Obstetricians and Gynaecologists of Canada* 1991; 13(5): 33-5, 37-41

4. RCOG; Blood Transfusions in Obstetrics. Guideline number 47. London. RCOG 2015.

5. RCOG "Prevention and Management of PostPartum Haemorrhage" Green-top GuidelineNo. 52 (2016)

6. MBRRACE-UK – Saving Lives, Improving Mothers' Care 2020 – Executive Summary

7. Klein AA, Bailey CR, Charlton A, Lawson C, Nimmo AF, Payne S, Ruck Keene A, Shortland R, Smith J, Torella F, Wade P. Association of Anaesthetists: anaesthesia and peri-operative care for Jehovah's Witnesses and patients who refuse blood. Anaesthesia. 2019 Jan;74(1):74-82.

8. Kidson-Gerber G, Kerridge I, Farmer S, Stewart CL, Savoia H, Challis D. Caring for pregnant women for whom transfusion is not an option. A national review to assist in patient care. Australian and New Zealand Journal of Obstetrics and Gynaecology. 2016 Apr;56(2):127-36.

When treating Jehovah's Witnesses patients, reference should be made to the following documents :-

Documents published by Jehovah's Witnesses (containing current clinical and scientific knowledge on non-blood management, directing clinicians to the search engine PubMed.Gov using the PMID number):

- Clinical Strategies for avoiding and controlling Haemorrhage and Anaemia Without Blood Transfusions in Obstetrics and Gynaecology (2011) Hospital Information Services
- Clinical Strategies for Managing Haemorrhage and Anaemia Without Blood Transfusion in Critically Ill patients (2012) Hospital Information Services
- Clinical Strategies for Avoiding and Controlling Haemorrhage and Anaemia Without Blood Transfusion in Surgical Patients (2010) Hospital Information Services
- Care Plan - Surgery and Medical Treatment for Jehovah's Witnesses jw.org/en/medical-library

Documents from other sources (still specific to Jehovah's Witnesses):

- Caring for Patients Who Refuse Blood –A Guide to Good Practice for the Surgical Management of Jehovah's Witnesses and Other Patients Who Decline Transfusion November 2016 The Royal College of Surgeons of London.
- Management of Anaesthesia for Jehovah's Witnesses (July 2018) The Association of Anaesthetists of Great Britain and Ireland
- How to approach major surgery where patients refuse blood transfusion (including Jehovah's Witnesses) 87:3-14 (2005) Gohel et al (Cheltenham General Hospital)
- London Regional Transfusion Committee. Care Pathways for adult patients refusing blood (including Jehovah's Witnesses) May 2012

12. Monitoring Requirements

There is an individual management plan documented in the health records of women who have declined blood and blood products.

13. Education and Training

Regular slot on junior doctors' induction and OPD's
The Hospital Liaison Committee are available to make presentations, facilitate workshops and answer questions regarding treatment of Jehovah's Witnesses to doctors, nurses, midwives and groups studying medicine at all levels. They can also share information regarding blood conservation techniques and transfusion alternative strategies together with the development, review and application of policies/guidelines for treatment of Jehovah's Witness patients.

14. Keywords

Cell salvage, Consent, Haemorrhage, Jehovah's Witness, Transfusion

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

EDI Statement

We are fully committed to being an inclusive employer and oppose all forms of unlawful or unfair discrimination, bullying, harassment and victimisation.

It is our legal and moral duty to provide equity in employment and service delivery to all and to prevent and act upon any forms of discrimination to all people of protected characteristic: Age, Disability (physical, mental and long-term health conditions), Sex, Gender reassignment, Marriage and Civil Partnership, Sexual orientation, Pregnancy and Maternity, Race (including nationality, ethnicity and colour), Religion or Belief, and beyond.

We are also committed to the principles in respect of social deprivation and health inequalities.

Our aim is to create an environment where all staff are able to contribute, develop and progress based on their ability, competence and performance. We recognise that some staff may require specific initiatives and/or assistance to progress and develop within the organisation.

We are also committed to delivering services that ensure our patients are cared for, comfortable and as far as possible meet their individual needs.

Development and approval record for this document			
Original Author:	P Bosio - Consultant Obstetrician		**Lead Officer: Chief Medical Officer**
Reviewed by:	V Sudhakar - Specialist Doctor O Joseph – Consultant Obstetrician		
REVIEW RECORD			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
June 2021	V 3	A Akkad - Consultant	Format update & related documents added Jehovah's witness specific references placed in new appendix Added introduction to include general considerations for any person declining blood products, consent and capacity included. Added recommendations' to ensure counselling and documentation is complete experienced clinicians, junior staff must be overseen by senior midwives and obstetricians throughout labour and the postpartum period. Added that when admitted in labour confirmation that advanced wishes are still valid & intravenous access should be sited Signs of bleeding added to recommendation 5 References and contact details updated

January 2025	V:4	Vedhapriya Sudhakar Registrar in Obstetrics and Gynaecology Andrew Appleby - Hospital Liaison Committee. Mr O Joseph – Consultant Obstetrician	**Updated related documents** **Specified documentation recommendations** **Advise to birth in a consultant led unit with access to level 3 critical care (LRI if within UHL)** **Added** An initial check for B12, folate, transferrin and ferritin should be undertaken at booking, and these should be repeated if anaemia develops. Maximize haemoglobin levels to at least 130 g/L through oral or intravenous iron supplementation, ensuring folate and B12 levels are adequate[7] Perform an ultrasound at the anomaly scan to identify placental site and assess risks of conditions like placenta praevia. In cases of ELCS; Seek early consent for cell salvage where permissible. Clarify with the woman if this is acceptable, document it clearly and notify theatres. In cases of MOH, escalate promptly to definitive interventions like uterine tamponade, B-Lynch suture, or hysterectomy as needed. Tranexamic acid should also be considered for use in obstetric haemorrhage, the WOMAN trial showed reduction in bleeding deaths and need for surgery in women with PPH. A second dose is recommended where bleeding persists after 30 minutes or recurs within 24 hours Continue hematinic support antepartum or postpartum, using oral or intravenous iron as needed. Consider erythropoiesis-stimulating agents in consultation with a Haematologist for severe anemia. Process of escalation in complex situations Updated care plan in line with the guideline updates

Appendix 1a Jehova's Witnesses – Best practice points

The majority of this policy, including ethical, legal, and clinical guidance is applicable to Jehovah's Witnesses. However, the following key information should be carefully noted whendetermining and working with their treatment choices:

- For Jehovah's Witnesses, the **refusal** of blood components (red cells, white cells, platelets and plasma [FFP]) is a more than a treatment choice; it is deeply held corevalue.

- Each one of Jehovah's Witnesses will make a **personal decision** regarding:
    - all plasma derivatives (these may be referred to by Jehovah's Witnesses as"fractions")
    - all autologous procedures (with the exception of pre-donation, which isunacceptable).

- Jehovah's Witnesses generally complete and carry an ***Advance Decision to Refuse Specific Medical Treatment*** document which records their wishes. When correctly completed this document is legally binding. This document may also be filed with theirGP and/or Summary Care Record.

- Jehovah's Witnesses have established a support network for Witnesses facing medical treatment, particularly when this involves their treatment choices regardingtransfusion. These are known as **Hospital Liaison Committees (HLC)**. This arrangement also exists to assist clinicians who are providing care to Jehovah's Witnesses.
    - The 24/7 contact details for the local HLC are: 07894 984493
    - The 24/7 contact details for Hospital Information Services for Jehovah's Witnesses (national office) are: 020 8731 3415 his.gb@jw.org

- Jehovah's Witnesses recognise that there are significant clinical and legal challengeswhen it comes to the treatment of **minors** who are Jehovah's Witnesses or the children of Jehovah's Witnesses. In such situations it is important—with consent—to involve the HLC, either via the details above or by contacting Hospital Information Services.

In consultation with Hospital Information Services, the following professional bodieshave compiled Guidelines regarding treating Jehovah's Witnesses:
The Royal College of Surgeons The Association of Anaesthetists

Appendix 1b: Products and Procedures to clarify with pregnant woman or pregnant person declining blood/blood products:

Product or Procedure	Detail	Usual Jehovah's Witness stance
Major blood components	Red blood cells Platelets Fresh frozen plasma (White blood cells)	Refusal
Blood fractions	Cryoprecipitate Albumin Prothrombinex Biostate Fibrinogen concentrate	Individual decision
RhD Immunoglobulin (Anti-D)	Processed from Human Blood Donors	Individual decision
Autologous blood donation	Own blood stored	Refusal
Recombinant products	Epoetin, Darbepoietin (ESAs) Recombinant Factor 7	Usually accept
Intra-operative measures	Intra-operative blood salvage Acute normovolaemic haemodilution	Individual decision
Measures to treat complications	Haemodialysis	Individual decision

Appendix 2a Standard Care plan and checklist

STANDARD CARE PLAN – DECLINING BLOOD OR BLOOD PRODUCTS	
DEMOGRAPHIC DETAILS PLACE PATIENT STICKER HERE	EDD TEAM CLINICS DATE PLAN MADE MADE BY

PLAN FOR ANTENATAL MANAGEMENT

FIRST ANTENATAL CLINIC APPOINTMENT

Identify and record the woman's decision to decline blood and blood products with the checklist in the next page
Consultant Obstetrician to review woman and Consultant Anaesthetist if appropriate
Discuss potential implications: Death /Obstetric Haemorrhage
Physical symptoms of severe anemia including impaired supply of breast milk
Complete "The General Consent Form excluding blood transfusion" (see UHL Policy " Management of Individuals Declining Blood and Blood Products") and file in hospital and hand held notes/advance directive
Give UHL written information (Declining Blood Products or a Blood Transfusion in Pregnancy or after Childbirth)
Check Hb, ferritin, folate and B_{12} at booking
FBC at 28 weeks and 36 weeks
Discuss place of birth – Consultant led unit with level 3 critical care facilities (LRI if within UHL)

INTRAPARTUM

FBC and Group and Save on admission
Notify Consultant Obstetrician and Anaesthetist on call
Experienced Midwife and medical staff to provide care
Manage labour as any other
Contact Consultant Anaesthetist and Haematologist in the event of abnormal bleeding
Recheck woman's opinion of blood transfusion if clinically indicated
Consider contacting Hospital Liaison Committee (07894 984493) in an emergency

THIRD STAGE

Manage actively
Qualified Clinician to observe closely for at least one hour following delivery

Appendix 2b Checklist for patients who refuse blood

Use as a checklist to clarify and record what is, and is not, acceptable to the patient (or parent/guardian) who does not want blood and/or blood components or derivative. Use in conjunction with a consent form, and any *Advance Decision to Refuse Specified Medical Treatment* document that the patient may already have.

Where clinically indicated and available,

If required to save my life		
Red Blood Cells	**Yes**	**No**
Platelets	**Yes**	**No**
Fresh Frozen Plasma	**Yes**	**No**
Cryoprecipitate	**Yes**	**No**
Intra-Operative Cell Salvage	**Yes**	**No**

I Will Accept:	YES	NO	NOT DISCUSSED
Red Blood Cells			
Platelets			
Fresh Frozen Plasma			
Cryoprecipitate			
HAS (Human Albumin Solution)			
Recombinant Clotting Factors (rVIIa)			
Prothrombin Complex Concentrate (PCC)			
Fibrinogen Concentrate			
Intra-Operative Cell Salvage			
Fibrin Glues and Sealants (Human)			
Fibrin Glues and Sealants (Non-Human)			
Other Treatment (Please Specify):			

Appendix 2c Published Care Plan referred to by RCOG

CARE PLAN FOR WOMEN IN LABOUR REFUSING A BLOOD TRANSFUSION

(As referred to in the *RCOG News* of the Royal College of Obstetricians & Gynaecologists)

This document is an aid for medical staff and midwives managing a Jehovah's Witness or other patient who declines blood. Autologous procedures such as **blood salvage** and the use of **plasma-derived products** such as clotting agents are a **matter of personal choice for each Witness**. Most will carry an advance decision document expressing their wishes. Please check with the patient.

Risk management

- All Jehovah's Witnesses or those declining a blood transfusion should be seen in a consultant clinic.
- Clinicians should **plan in advance for blood loss.** If the Hb is ≤ 10.5g/dl use **ferrous sulphate 200mg tds and folic acid–**with acidic fruit juice or 100mg ascorbic acid to aid absorption. If unresponsive to oral iron, use **IV iron** which replenishes iron stores faster and more effectively than oral iron[1,2]. A single total-dose IV iron preparation may be more acceptable to the patient than repeat infusions. Addition of **recombinant human erythropoietin (EPO)**, which does not cross the placenta and is reportedly safely used in pregnancy, enhances Hb response[3,4].
- High-risk patients should be booked into a unit with **facilities such as interventional radiology, blood salvage and surgical expertise.** All elective surgery must be planned as far ahead as possible.
- For **high-risk caesarean section**, e.g. abnormal placentation, consider with the interventional radiologist elective insertion of catheters for **uterine artery embolisation** immediately pre-operatively and arrange **blood salvage**.
- At the time of labour ensure the **consultant obstetrician and anaesthetist are aware a Jehovah's Witness has been admitted.**
- The **third stage of labour should be actively managed with oxytocics** with consideration of **prophylactic syntocinon** infusion.
- Consider **delayed cord clamping 1-2 min for pre-term infants** to maximise Hb, with controlled cord traction after placental separation[5].
- Check patient's **vital signs and evidence of uterine contraction** every 15 min for 1 to 2 hours after delivery.
- Contact the **Hospital Liaison Committee for Jehovah's Witnesses in an emergency** (contact details over page).

Management of active haemorrhage

First steps: AVOID DELAY. Involve obstetric, anaesthetic and haematology consultants. Establish IV infusion, along with **uterine massage** (every 10 min for 1 hour can reduce blood loss[6]). **Give oxytocic drugs first, then exclude retained products of conception or trauma** (this could save time). Proceed with **bimanual uterine compression**. Give oxygen. Catheterise and monitor urine output. Consider CVP line. **Slow, but persistent blood loss requires action**. Anticipate coagulation problems. Keep patient fully informed. Proceed with following strategies if bleeding continues:

Oxytocic agents: Ergometrine with **oxytocin (Syntometrine)**: Marginally more effective than oxytocin alone. If patient is hypertensive, use **oxytocin** 10U (not 5U) by slow IV injection (in serious PPH the benefits of higher dose outweigh the risks)[7,8]. **Carboprost (Hemabate)** 250µg/ml IM, can be repeated after 15 min. Direct intra-myometrial injection is faster (less hazardous at open operation).

Misoprostol (Cytotec): Useful option in atonic PPH where first-line treatment has failed. Can be given either by **sub-lingual (**600-800µg), **rectal (**800-1000µg) or **intrauterine route (**800µg)[9,10,11]. Control of haemorrhage reported for rectal and intrauterine routes when unresponsive to oxytocin, ergometrine and carboprost[10 11].

Intrauterine balloon tamponade: Have available purpose-designed 500 ml **Bakri tamponade balloon** (Cookmedical). Drainage of blood and cessation of bleeding can be observed via the catheter drainage shaft. Continue oxytocin. Expulsion of balloon can be prevented by vaginal packing. To minimise bleeding risk during removal, use graduated deflation or slowly deflate to half volume and observe; if no bleeding, continue deflation; if bleeding starts, reinflate[12,13]. Alternatively, stomach balloon of **Sengstaken-Blakemore oesophageal catheter** has controlled haemorrhage in 84% of 43 cases (in 2 studies), in the majority of successful cases bleeding was due to uterine atony[12,14]. Distal end of tube beyond balloon should be cut off to reduce risk of occlusion or perforation. Indwell time of balloon averaged 24 hours[14]. **Bakri balloon also used to control PPH due to vaginal lacerations**[15].

Non-inflatable anti-shock garment: Recently developed neoprene Velcro-fastened garment (zoexniasg.com) can be applied in 2 minutes and allows perineal access for obstetric procedures. Can reduce blood loss and reverse hypovolaemic shock within minutes by the transfer of 0.5 to 1.5 litres of blood from the lower body and abdomen to the vital organs. This can stabilise the patient and gain time while awaiting senior staff input. Successful trials have been conducted with >400 women experiencing PPH in developing countries[16].

Recombinant factor VIIa (NovoSeven): Increasing evidence of effectiveness for control of PPH unresponsive to standard therapies. This product and the following haemostatic agents should be used under consultant guidance. 90 µg/kg provide site-specific thrombin generation, repeat if unresponsive. Successfully used to stop or reduce bleeding in 88% of 118 massive PPH cases[17]. Also to control bleeding in 17 anecdotal PPH cases complicated by DIC[18]. (Novo Nordisk have 24-hour emergency distribution for UK-wide delivery [01889 565652] or a small stock can be held to avoid delivery delay.) Occasional failure of FVIIa has been attributed to a low fibrinogen level[19]. The **fibrinogen concentrate Haemocomplettan** (a plasma-derived **alternative to cryoprecipitate;** available on a named-patient basis within 24 hours from CSL Behring; 01444 447400) can enhance clot strength and normalise clotting in the presence of FVIIa[20,21].

Other haemostatic agents: Prothrombin complex concentrates (PCCs) such as **Beriplex** and **Octaplex** (plasma-derived), are proposed as substitutes for fresh frozen plasma and are widely prescribed as such in Europe. Beriplex reported to achieve control of bleeding in cardiac and other surgery[22]. **Tranexamic acid (Cyklokapron)**: anti-fibrinolytic agent well established for controlling haemorrhage, use 1gm IV x tds, slowly[23]. **Fibrin sealants**: **Flowseal** used to arrest massive bleeding in surgical bed following hysterectomy[24]; **Tisseel** has controlled bleeding of complicated vulval and vaginal lacerations when suture haemostasis failed due to tissue friability[25]. Also consider IV **vitamin K.**

B-Lynch uterine compression suture: The B-Lynch brace suture can also be **combined with intrauterine balloon catheter** if bleeding persists[26]. **Prophylactic insertion of this suture** has been used in high-risk caesarean section[4]. The **Hayman suture technique** may be a simpler procedure and quicker to apply as the lower uterine segment is not opened[27].

Embolisation/ligation of internal iliac arteries or embolisation/bilateral mass ligation of uterine vessels: Angioplasty balloon catheters can be used for emergency temporary occlusion in theatre, with transfer to the angiography suite for definitive embolisation[28].

Hysterectomy and care in theatre: Subtotal hysterectomy can be just as effective, also quicker and safer. Use Flowtrons Excell to decrease risk of DVTs. Avoid hypothermia (impairs coagulation), use fluid warmer, bear hugger, hats etc. Avoid unnecessary over-dilution. Have blood salvage and experienced operator on hand (see below).

Intraoperative blood salvage: Endorsed by NICE (2005) and RCOG (2008) guidelines. Should be set up whenever possible (check if acceptable to the patient). Either single or double suction methods can be used for collection. However, to maximise blood recovery, there is good evidence that single suction is a safe procedure[29]. Swab washing also increases RBC recovery. A 'collect only' set-up of the anticoagulation/suction tubing will enable blood salvage to begin within minutes[30]. Conventionally, a leukocyte filter has been used when reinfusing, though in an emergency situation the filter may be removed completely to maximise the flow rate, as prior to availability of filters no adverse events were reported. These are clinical decisions based on the balance of benefit/risk.

Management of postpartum anaemia

IV iron should be considered for severe anaemia as oral iron is known to be slow and unreliable. In a randomised controlled study of 44 women with postpartum anaemia, significantly higher mean haemoglobin and ferritin levels from baseline were achieved for patients on **IV iron sucrose** (200 mg x 2, 48 hours apart) in comparison to those on oral iron (mean Hb day 5: IV vs oral iron, 2.5 vs 0.7gm/dl - day 14 Hb: 3.8 vs 1.5gm/dl, p = <0.01 for both periods)[31]. Comparable results for IV iron sucrose were reported in 2 similar trials (mean Hb 2.8 & 3.1, both day 14)[32,33]. These increases in Hb from baseline with IV iron exceed the expected rise after a 2U blood transfusion[32]. The level of life-threatening adverse drug events of IV iron preparations is now very low, varying from 0.6 to 3.3 per million, depending on the iron preparation (FDA data)[34].

Erythropoiesis-stimulating agents (ESAs) should be administered **together with IV iron** in life-threatening anaemia to further accelerate erythropoiesis. A **once weekly EPO dosage of 600 IU/kg subcutaneously** (**e.g. 40,000IU for a 66kg patient**) is being increasingly used and found to be satisfactory in critically ill anaemic patients[35,36]. An **EPO dosage of 300 IU/kg x 3 weekly together with IV iron (200mg x 3 weekly)** has also proved efficacious for postpartum anaemia[37]. Augment with **vitamin B-12 and folic acid**.

Check oxygen saturations: Give **100% oxygen** if necessary (no contraindications for 48-72 hrs of use). Use **microsampling techniques** to conserve blood (e.g. HemoCue), as well as **paediatric sample tubes**. If bleeding continues consider reinfusing washed drain fluid.

Hyperbaric oxygen therapy: Option in life-threatening anaemia[38]. (0151 648 8000 [24 hrs] for suitable and available centres.)

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This document has been reviewed by consultants in obstetrics, gynaecology, anaesthesia and haematology (including experts in haemostasis). It reflects current clinical and scientific knowledge and is subject to change. The strategies are not intended as an exclusive guide to treatment. Good clinical judgement, taking into account individual circumstances, may require adjustments.

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