Local Guideline

Health
Hunter New England
Local Health District

Preoperative Anaesthetic Clinic preparation of patients who refuse blood product transfusion presenting for elective surgery at JHH

Sites where Local Guideline applies	John Hunter Hospital
This Local Guideline applies to:	
1. Adults	Yes
2. Children up to 16 years	No
3. Neonates – less than 29 days	No
Target audience	Anaesthetists, perioperative nurses, surgeons, haematologists
Description	This guideline details the pathway for perioperative assessment and management of patients who refuse blood products before elective surgery.

Go to Guideline

Keywords	Jehovah's Witness, anaemia, perioperative, erythropoiesis stimulating agents, iron
Document registration number	
Replaces existing document?	No

Related Legislation, Australian Standard, NSW Ministry of Health Policy Directive or Guideline, National Safety and Quality Health Service Standard (NSQHSS) and/or other, HNE Health Document, Professional Guideline, Code of Practice or Ethics:

- See Reference Section on page 5

Prerequisites (if required)	Patients should be booked for elective surgery at John Hunter Hospital and should be identified as refusing of blood products.
Local Guideline note	This document reflects what is currently regarded as safe and appropriate practice. This guideline does not replace the need for the application of clinical judgment in respect to each individual patient. If staff believe that the guideline should not apply in a particular clinical situation they must seek advice from their unit manager/delegate and document the variance in the patient's health record. If this document needs to be utilised outside of the John Hunter Hospital please liaise with the local Perioperative and Haematology Services to ensure the appropriateness of the information contained within the Guideline and Procedure.
Position responsible for the Local Guideline and authorised by	Perioperative Executive Committee
Contact person	Dr Paul Healey (Perioperative Service Director)
Contact details	Paul.healey@health.nsw.gov.au, (02) 49332018
Date authorised	
This document contains advice on therapeutics	Yes (If Yes) Approval gained from Local Quality Use of Medicines Committee on (insert date)
Issue date	
Review date	Up to 3 years

Note: Over time links in this document may cease working. Where this occurs please source the document in the PPG Directory at: http://ppg.hne.health.nsw.gov.au/

PURPOSE AND RISKS

Some patients refuse blood and blood products. In particular, Jehovah's Witnesses have specific religious beliefs regarding transfusion although acceptance of minor blood fractions or procedures involving the use of their own blood may vary subject to their conscience views (see Appendix 1 for Jehovah's Witnesses' position on blood products) (1,2).

A fully informed, competent adult is entitled to decide to accept or refuse medical treatments. A patient is competent to refuse treatment if they can demonstrate an understanding of the nature of their condition, the nature and consequences of the treatment being refused and the possible consequences of the refusal of treatment. Medical staff have an obligation to provide any patient with all the information necessary to enable that patient to make an informed decision and to answer any relevant questions the patient may have. Further, staff have an obligation to satisfy themselves that a patient is fully informed before that patient makes a decision to accept or refuse treatment. (1,2)

The outcomes of preoperative anaesthetic consultation of the patient who refuse blood product transfusion should include the following (3):

- Patients should be given a clear explanation of the blood products that the medical team might consider to be required during or after surgery and the risks involved if they refuse, including death. Discussion of alternative treatments should be undertaken if available.
- There should be clear documentation in the medical records of which treatments and/or procedures the patient consents to and which they do not.
- Patients' haemoglobin concentration and iron stores should be optimised.
- Perioperative management of medications that affect coagulation should be documented.

Risk Category*:* Clinical Care & Patient Safety

GLOSSARY

Acronym or Term	Definition
ACD	Advance Care Directive
APTT	Activated partial thromboplastin time
CAP	Clinical Applications Portal
EPO	Erythropoietin
ESA	Erythropoiesis stimulating agent
FBC	Full blood count
JW	Jehovah's Witness
PT	Prothrombin time

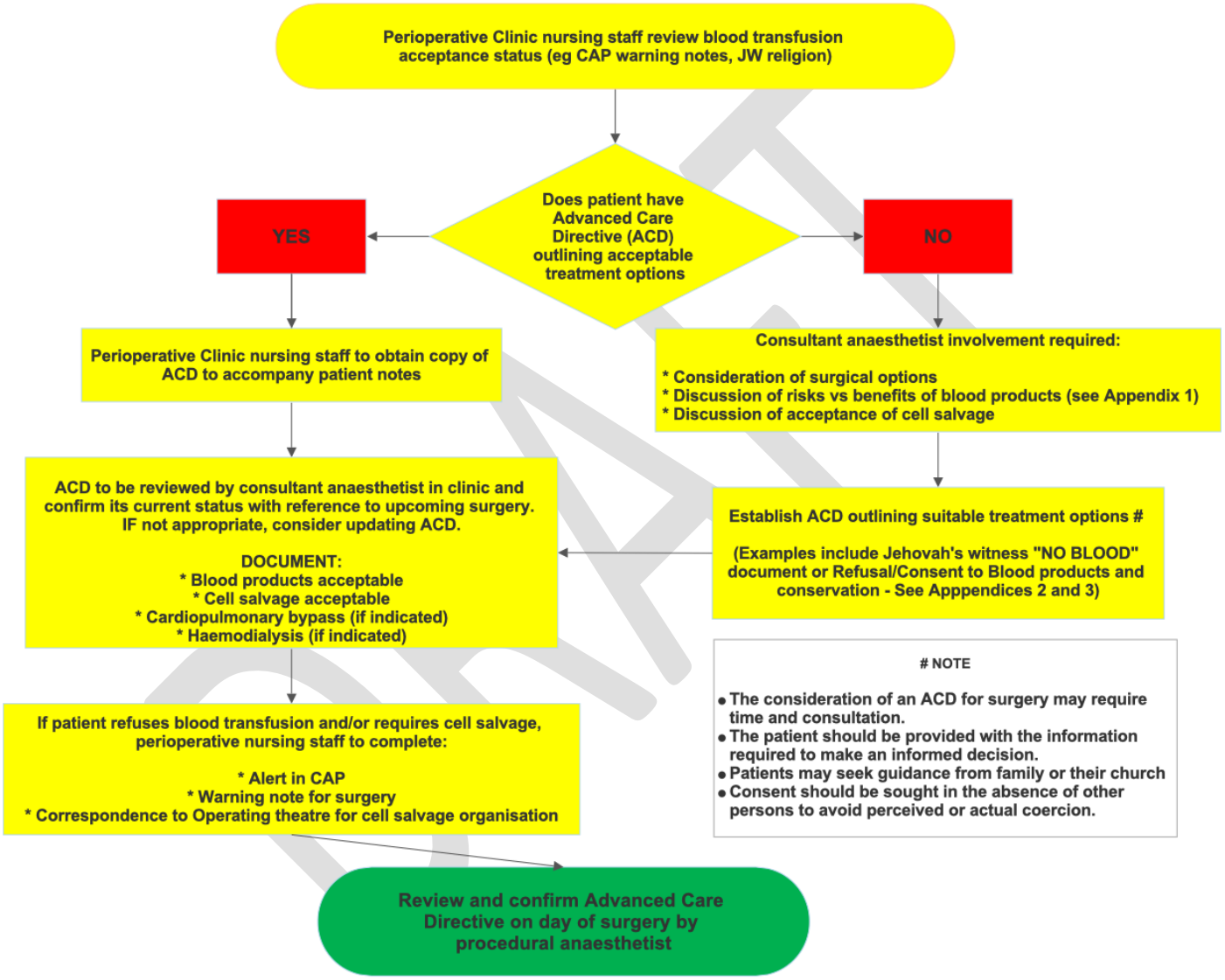
GUIDELINE

This Guideline does not replace the need for the application of clinical judgment in respect to each individual patient.

Preoperative management of patients who refuse blood products should involve the following steps(4)

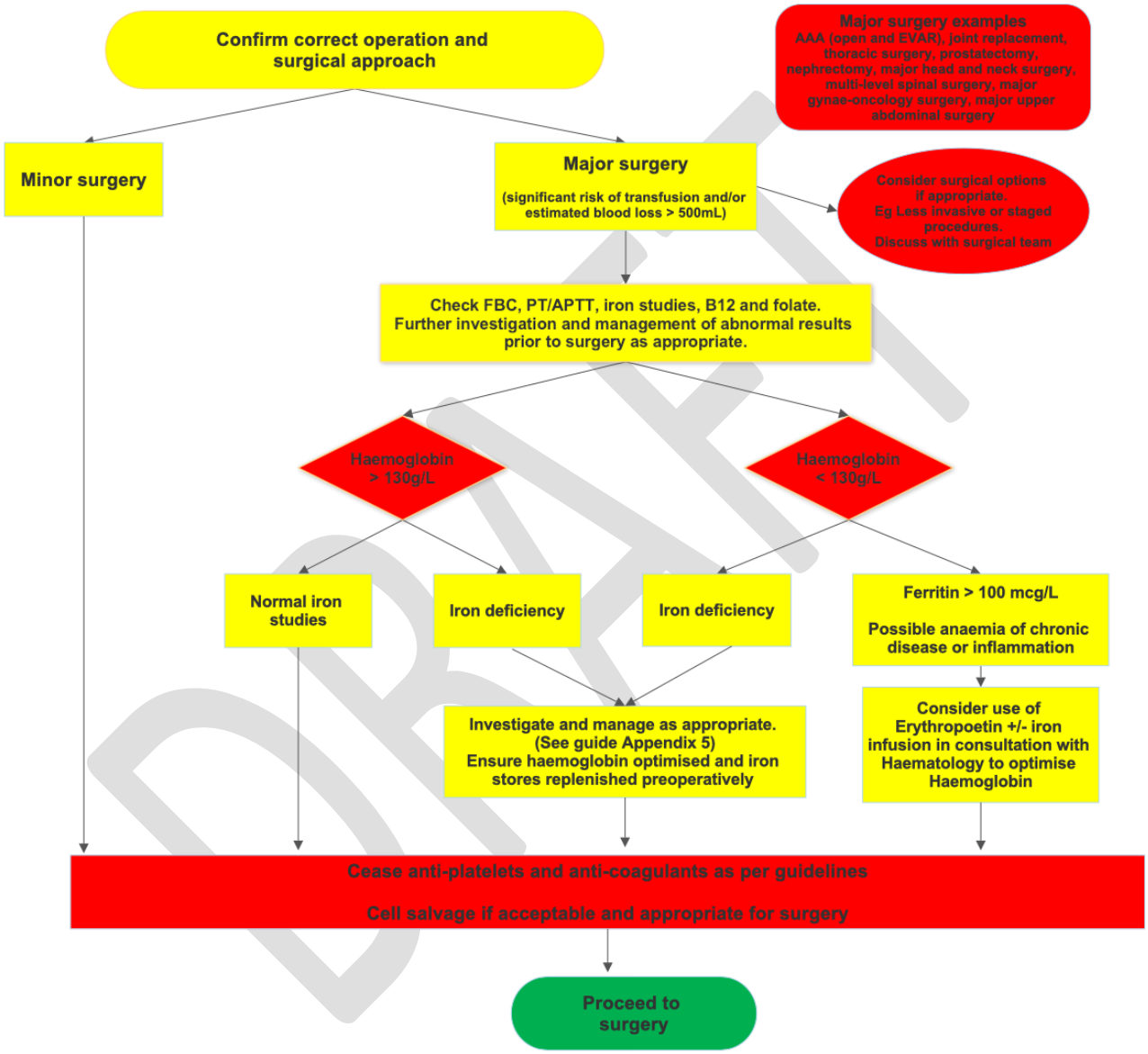
1. **Identification and/or documentation of informed Advanced Care Directive**
    - See Flowchart 1 below
    - Further useful information to guide informed decision making can be found in Appendix 1
    - Examples of advanced care directives for patients who refuse blood transfusions include:
        - Jehovah Witness “No blood” Advanced care directive (Appendix 2)
        - Refusal/Consent to blood products and conservation (Appendix 3)

Flowchart 1: Advance care directive for blood products



2. **Identification of patients having major surgery and significant risk of transfusion and/or bleeding** (see Flowchart 2 below)
    - Optimisation of Hb and iron stores before major surgery (see JHH Local Guideline – Management of Preoperative Anaemia). This may delay surgery – consult surgeon.
    - Perioperative management of antiplatelet and anticoagulant medication (see JHH Local Guideline – Perioperative Management of Medications)
    - Cell salvage if appropriate and acceptable
    - Consideration of erythropoiesis stimulating agents (see JHH Local Guideline – Perioperative use of Erythropoiesis stimulating agents). This may delay surgery – consult surgeon.

Flowchart 2: Identification of major surgery and haemoglobin optimisation



3. **Consultation with surgical team:**
    - If unaware of patient refusal of blood products
    - If consideration of alternate surgical procedure is appropriate
    - If delay in surgery required to optimise iron stores or reduce bleeding risk

4. **Discussion of potential risks of surgery and blood product refusal must be discussed with patient and documented, <u>including death</u>.**

IMPLEMENTATION, MONITORING COMPLIANCE AND AUDIT

This document was developed in conjunction with the John Hunter Hospital Anaesthetic Department, Perioperative Departments, Blood Transfusion Committee and Surgical Services.

The guideline will be communicated to the relevant departments through presentation at continuing medical education meetings and made available electronically through the Policies Procedures and Guidelines intranet page.

As this document pertains to a very small group of patients, compliance will be monitored on a case-by-case basis by the Haematology and Perioperative Services.

APPENDICES

Appendix 1: Blood products and synthetic alternatives, for informed discussion with a patient who refused a blood transfusion.
Appendix 2: Jehovah Witness "No blood" Advanced care example
Appendix 3: Refusal/Consent to blood products and conservation

REFERENCES

1. Considerations in the management of pregnant women who refuse blood and blood products. Queensland Maternal and Perinatal Quality Council. Accessed July 2021: https://www.health.qld.gov.au/__data/assets/pdf_file/0020/440156/qmpqc-guidance-refuse-blood.pdf
2. Austin Health Clinical Guideline: Management of Patients who refuse blood and blood products – Jehovah's Witnesses.
3. Klein, A.A., Bailey, C.R., Charlton, A., Lawson, C., Nimmo, A.F., Payne, S., Ruck Keene, A., Shortland, R., Smith, J., Torella, F. and Wade, P. (2019), Association of Anaesthetists: anaesthesia and peri-operative care for Jehovah's Witnesses and patients who refuse blood. Anaesthesia, 74: 74-82. https://doi.org/10.1111/anae.14441
4. Chae C, Okocha O, Sweitzer B. Preoperative considerations for Jehovah's Witness patients: a clinical guide. Curr Opin Anaesthesiol. 2020 Jun;33(3):432-440. doi: 10.1097/ACO.0000000000000871. PMID: 32371641.
5. Western Health Alert 15 refusal consent to blood, blood products and conservation: https://www2.health.vic.gov.au/about/publications/policiesandguidelines/western-health-refusal-consent-blood-products-conservation
6. National Blood Authority Australia (2016) : Iron product choice and dose calculation for adults. https://www.blood.gov.au/system/files/documents/Iron%20product%20choice%20and%20dose%20calculation20052016.pdf
7. Munoz M, Acheson AG, Auerbach M, et al. International consensus statement on the peri-operative management of anaemia and iron deficiency. Anaesthesia 2017; 72: 233–47.
8. Richards T, et al. Preoperative intravenous iron to treat anaemia before major abdominal surgery (PREVENTT): a randomised, double-blind, controlled trial. *Lancet*. 2020 Oct 24;396(10259):1353-1361. doi: 10.1016/S0140-6736(20)31539-7.

Useful Links

https://intranet.hne.health.nsw.gov.au/QUMC_JHH/_guidelines_protocols_forms

Patient Blood Management Guidelines: Module 2 Perioperative : https://www.blood.gov.au/pbm-module-2

FEEDBACK

Any feedback on this document should be sent to the Contact Officer listed on the front page.

Appendix 1: Blood products and synthetic alternatives

Mostly Unacceptable
May be acceptable
Usually acceptable

Adapted from Western Health and Preoperative considerations for Jehovah's Witness patients Chae et al.

BLOOD COMPONENTS The 4 main components can be separated and used for treatment.
Red Blood Cells (Erythrocytes, RBCs) Red cell component of whole blood, carries oxygen around the body, given RBCs if blood count is too low.

White Blood Cells (Granulocytes, WBCs) White cell component of whole blood used for preventing infections

Platelets (Thrombocytes) small cells without a nucleus found in large numbers in blood. Requited to make clots that prevent or stop bleeding. Given if bleeding is hard to stop or if platelet count is very low.

Plasma (FFP) liquid portion of blood. Consists of water, albumin, clotting factors, salts, sugars, fats, vitamins, and hormones. Given if plasma or clotting factors required

FRACTIONATED PLASMA COMPONENTS separated from whole blood components

Albumin 4% and 20%: Protein purified from plasma which helps maintain fluid in the circulation.

Cryoprecipitate: Concentrated solution of specific protein molecules (FVIII, FXIII, Von Willebrand, Fibrinogen, Fibronectin) involved in blood clotting – made from plasma

Factor Concentrates:
Prothrombinex-VF: Concentrated factor II, IX and X and low levels of factors V and VII. These are proteins which are essential for the normal blood clotting process. Used in the reversal of warfarin and for factor deficiencies
Biostate: Factor VIII/Von Willebrands factor Complex. Both FVIII and VWF are blood proteins that are essential for normal blood clotting.
Mono-FIX: Concentrated factor IX, a protein which is essential for normal blood clotting.
Thrombotrol (antithrombin III): Used to prevent and treat blood clots in people who have an inherited deficiency of antithrombin III
Fibrinogen concentrate: Concentrated factor I. Used in setting of factor deficiency or perioperative bleeding.

AUTOLOGOUS BLOOD

Intra-operative red cell salvage: Collection, washing and re-transfusion of own blood directly aspirated from the surgical field. Does not contain coagulation factors

Epidural Blood patch: Accomplished by injection of patient's own blood into the epidural space

EXTRACORPOREAL CIRCULATION

Cardiopulmonary bypass: Temporarily takes over function of the heart and lungs by mechanically circulating and oxygenating blood through a machine in a continuous circuit.

Haemodialysis: Removes waste and fluid from the blood in renal failure

SYNTHETIC RECOMBINANT PRODUCTS
Erythropoietin (EPO) : Synthetic proteins used to stimulate the production of red blood cells

Recombinant Factor VIIa (NovoSeven) Synthetic protein used in major bleeding and for patients with FVIII and IX inhibitors

Recombinant FVIII and IX: Synthetic protein used in haemophilia

Appendix 2: Jehovah's witness "No blood" Advanced Care Directive

Advance Decision to Refuse Specified Medical Treatment

1. I, _____ (print or type full name), born _____ (date) complete this document to set forth my treatment instructions in case of my incapacity. **The refusal of specified treatment(s) contained herein continues to apply to that/those treatment(s) even if those medically responsible for my welfare and/or any other persons believe that my life is at risk.**
2. I am one of Jehovah's Witnesses with firm religious convictions. With full realization of the implications of this position I direct that **NO TRANSFUSIONS OF BLOOD or primary blood components (red cells, white cells, plasma or platelets)** be administered to me in any circumstances. I also refuse to predonate my blood for later infusion.
3. No Lasting Power of Attorney nor any other document that may be in force should be taken as giving authority to disregard or override my instructions set forth herein. Family members, relatives, or friends may disagree with me, but any such disagreement does not diminish the strength or substance of my refusal of blood or other instructions.
4. Regarding end-of-life matters: [initial one of the two choices]

   (a) _____ I do not want my life to be prolonged if, to a reasonable degree of medical certainty, my situation is hopeless.

   (b) _____ I want my life to be prolonged as long as possible within the limits of generally accepted medical standards, even if this means that I might be kept alive on machines for years.
5. **Regarding other healthcare and welfare instructions** (such as current medications, allergies, medical problems or any other comments about my healthcare wishes):

_____
_____
_____
_____
_____
_____
_____

6. I consent to my relevant medical records and the details of my condition being shared with the Emergency Contact below and/or with member(s) of the Hospital Liaison Committee for Jehovah's Witnesses.
7. _____ Signature _____ NHS No. ___ ___ ___ ___ _____ Date

   _____ Address
8. **STATEMENT OF WITNESSES:** The person who signed this document did so in my presence. He or she appears to be of sound mind and free from duress, fraud, or undue influence. I am 18 years of age or older.

Signature of witness	Signature of witness
Name / Occupation	Name / Occupation
Address	Address
Telephone / Mobile	Telephone / Mobile

9. **EMERGENCY CONTACT:**

Name
Address
Telephone / Mobile

10. **GENERAL PRACTITIONER CONTACT DETAILS:** A copy of this document is lodged with the Registered General Medical Practitioner whose details appear below.

Name
Address
Telephone Number(s)

Page 2 of 2

NO BLOOD

(signed document inside)

Advance Decision to Refuse Specified Medical Treatment

Advance Decision to Refuse Specified Medical Treatment

(signed document inside)

NO BLOOD

Appendix 3: Refusal/Consent to blood products and conservation (5)

Western Health

REFUSAL/CONSENT TO BLOOD, BLOOD PRODUCTS & CONSERVATION

☐ Footscray Hospital ☐ Williamstown Hospital
☐ Sunshine Hospital ☐ Sunbury Day Hospital

PATIENT IDENTIFICATION LABEL

ALERT15

Informed of bleeding risk.

I have been advised that the intended procedure _____ or medical diagnosis of _____ involves a risk of bleeding.

I acknowledge that Dr _____ has explained to me;

- The type of blood products available and the purpose of giving them.
- The risks and benefits associated with the administration of blood products.
- The risks including that serious impairment of my health, permanent injury and death may result from the non-administration of blood or blood products.
- Possible alternative methods of non-blood management including blood conservation techniques and the risk and benefits associated with such alternative treatment and techniques.

A qualified interpreter was (tick): **Present** ❒ **Not present** ❒ **Not required** ❒

Patient (or Legal Representative) to initial below as applicable

_____ **I have** an Advance Directive/Medical Enduring Power of Attorney that addresses the use of blood and blood products in my care and a copy has been provided.

_____ I do **NOT have** an Advance Directive/Medical Enduring Power of Attorney that addresses the use of blood and blood products in my care.

I instruct the healthcare team to **comply with the following directives** even if in the opinion of my Doctor such treatment may be necessary to preserve life or promote recovery (tick and initial):

Major Blood Components	Acceptable	Unacceptable
Red Blood Cells: *Red cell component of whole blood that carries oxygen around the body*	❒	❒
Platelets; *Platelet component of whole blood required for clotting*	❒	❒
Plasma (FFP): *Liquid component of whole blood containing clotting factors*	❒	❒
Granulocytes: *White cell component of whole blood used for preventing infections*	❒	❒

Plasma Fractions	Acceptable	Unacceptable
Cryoprecipitate: *Contains specific protein molecules (FVIII, FXIII, Von Willebrand, Fibrinogen, Fibronectin) involved in blood clotting. It is used in the treatment of patients without enough fibrinogen or when the patient's fibrinogen does not function properly*	❒	❒
Albumin 4% and 20%: *Protein solution used to replace and retain fluid in the blood vessels and to carry other chemicals through the blood stream.*	❒	❒
Factor Concentrates: **Biostate**: *Factor VIII and Von Willebrands factor. Both FVIII and VWF are blood proteins that are essential for normal blood clotting.* **Mono-FIX**: *Concentrated factor IX, a protein which is essential for normal blood clotting.* **Thrombotrol** (antithrombin III): *Used to prevent and treat blood clots in people who have an inherited deficiency of antithrombin III*	❒	❒
Hyperimmune Immunoglobulins (Anti D, CMV, Hep B, Tetanus, Zoster). *High levels of antibody to fight or prevent specific infections or conditions*	❒	❒
Intravenous Immunoglobulins (IVIg): *Concentrated mix of antibodies for replacement of antibodies to provide protection against some infections and for diseases when the immune system is overactive.*	❒	❒
Prothrombinex-VF: *Concentrated factor II, IX and X and low levels of factors V and VII. These are proteins which are essential for the normal blood clotting process. Used in the reversal of warfarin and for factor deficiencies.*	❒	❒

REFUSAL/CONSENT TO BLOOD, BLOOD PRODUCTS & CONSERVATION

ALERT 15

Western Health

REFUSAL/CONSENT TO BLOOD, BLOOD PRODUCTS & CONSERVATION

☐ Footscray Hospital ☐ Williamstown Hospital
☐ Sunshine Hospital ☐ Sunbury Day Hospital

PATIENT IDENTIFICATION LABEL

Recombinant Products	Acceptable	Unacceptable
Recombinant Factor VIIa (NovoSeven) *Synthetic protein used in major bleeding and for patients with FVIII and IX inhibitors*	❒	❒
Recombinant FVIII and IX: *Synthetic protein used in haemophilia*	❒	❒
Erythropoiesis Stimulating Agent (ESAs) *Synthetic proteins used to stimulate the production of red blood cells*	❒	❒
G-CSF (granulocyte colony stimulating factor) *synthetic protein used to stimulate the production of granulocytes.*	❒	❒

Blood Conservation Techniques	Acceptable	Unacceptable
Acute normovolaemic haemodilution: *Whole blood is removed to a target haematocrit shortly after induction of anaesthesia and replaced with cell-free crystalloid or colloid which is transfused as required. Can be performed in closed circuit.*	❒	❒
Intra-operative red cell salvage: *Collection, washing and retransfusion of own blood directly aspirated from the surgical field. Does not contain coagulation factors*	❒	❒
Autologous pre-donation: *Own blood is donated and stored prior to elective surgery and transfused as required*	❒	❒

Extracorporeal circulation	Acceptable	Unacceptable
Cardiopulmonary bypass: *Temporarily takes over function of the heart and lungs by mechanically circulating and oxygenating blood through a machine in a continuous circuit.*	❒	❒
Extracorporeal membrane oxygenation: *Simplified form of cardiopulmonary bypass*	❒	❒
Plasmapheresis: *Removes components of blood plasma in various medical conditions*	❒	❒
Haemodialysis: *Removes waste and fluid from the blood in renal failure*	❒	❒

Other - specify:

I have read and fully understand the above directives I have given and state that the directives I have given today have been made voluntarily. I understand that these directives are valid only for this hospital admission.

I understand the consequences due to my choices may adversely affect my health and could result in serious impairment of my health, permanent injury or death.

I acknowledge that I was given the opportunity to ask questions and my questions have been satisfactorily answered.

This is a true record of my wishes on this date.

Signature _____ Date_____
(Patient or legal representative)

Witness' signature_____ Witness name (Print) _____
(Preferably Medical Enduring Power of Attorney)

I, Dr_____ believe that _____
(Registered Medical Practitioner – Registrar/Consultant) *(Patient or legal representative)*
circle applicable

is competent and understands the importance and implications of this document.

A Refusal of Treatment Certificate completed and included in the patient's medical record: Yes ❒

A copy of the patient's Advance Directive is included in the patient's medical record: Yes ❒ Not Avail ❒

Doctor's signature _____ Date_____