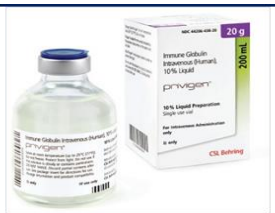
Western Health

BLOOD AND BLOOD PRODUCTS

Blood and blood products are provided to patients free of charge – BUT they are not free!

- Whilst in Australia blood donors give their blood voluntarily, the collection, processing, testing and distribution of blood and blood products incur significant costs.
- Governments, through the NBA, spend over $1 billion per annum funding the supply of blood and blood products.
- Under the National Blood Agreement blood products are funded 63% by the Commonwealth and 37% by the States & Territories.
- The Vic DHHS have introduced financial accountability for blood use by devolving funding responsibility to selected public health services that are major users – Western Health is one of these health services. Note: Patients are not charged for blood products in public hospitals or private hospitals, and there are no plans to change this.

Frequently used blood product prices as of 1 July 2016:

				
1 unit RBC $401.94	Prothrombinex-VF 500IU $275.11	Apheresis Cryoprecipitate $325.58	Privigen (IVIg) 20g/200Ml $900.00	Apheresis Platelets $619.31

Dorevitch Pathology.

- The Dorevitch Pathology laboratory at Sunshine and Footscray Hospital operates 24 hours a day 7 days a week. All blood and blood products are stored in and issued on a per patient basis from the laboratory.
- At Williamstown: No on-site lab all specimens and requests are processed at Footscray.(2 units of uncrossmatched O Rh (D) Neg red cells onsite for emergency use)
- At Sunbury Day Hospital: No on-site lab all specimens and requests are processed at Sunshine.

Contact numbers and Transfusion Clinical Advice.

SUNSHINE: Haematology: ext. 51485. Blood/Blood product requests or requests to activate the MTP only: ext. 51480

FOOTSCRAY: Haematology: ext. 56678. Blood/Blood product requests or requests to activate the MTP only: ext. 56292

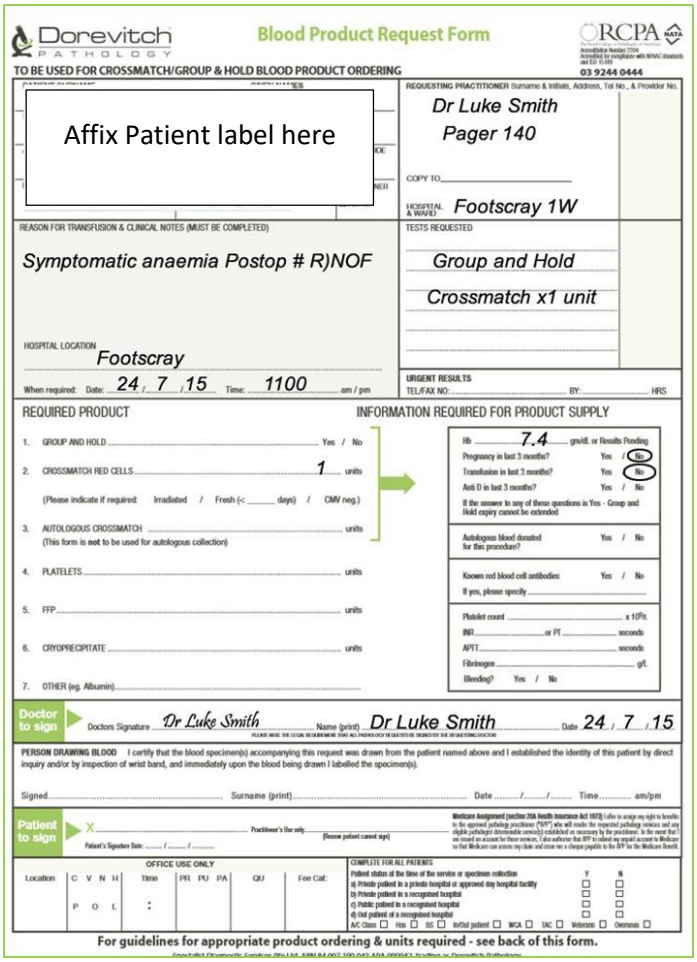
- Dorevitch Pathology provide a 24/7 Haematologist. The Dorevitch Haematologist should be contacted for clinical advice re: non-malignant haematology; abnormal haematology test results, blood products, critical bleeding/massive transfusion and anticoagulation including warfarin reversal.
- During business hours: **extension 51378**. After Hours the on-call Haematologist can be contacted by calling the Heidelberg laboratory number**: 9244 0450.**

Critical Bleeding/Massive Transfusion

- Western Health have implemented a massive transfusion protocol. There is no massive transfusion "pack" - blood and blood products must be requested by the clinician according to the patient's clinical condition and requirements.
- **Suggested criteria for activation of the MTP:**
  - Adults: Actual or anticipated 4 units of RBC in < 4 hours, + haemodynamically unstable, +/– anticipated ongoing bleeding
  - Child requiring >20mL/kg of RBCs in 2 hours and/or anticipated ongoing blood loss
  - Child requiring >40mL/kg of RBC in a 24 hours period with on-going blood loss
  - Massive bleeding with either shock or abnormal coagulopathy
  - Severe thoracic, abdominal, pelvic or multiple long bone trauma
  - Major obstetric, gastrointestinal or surgical bleeding
- The transfusion laboratory must be notified of any critical or potentially critical bleeding episode **as early as possible** as blood product support can take time to organise i.e. additional stock, preparation of frozen products for administration (FFP and Cryo take approx. 30 mins to thaw). Once a request to activate the MTP is received by the transfusion laboratory they will notify the Haematologist. **Note:** Only one pool of platelets is routinely kept at SH to prevent wastage.

Requesting pretransfusion tests (Group, Ab screen, Crossmatch) and blood products.

- The Dorevitch pathology A4 Blood Product request form must be used for all pretransfusion tests and requests for all blood products except initial authorisation requests for Intravenous Immunoglobulins which are submitted in BloodSTAR.


Dorevitch PATHOLOGY

Blood Product Request Form

RCPA

TO BE USED FOR CROSSMATCH/GROUP & HOLD BLOOD PRODUCT ORDERING

03 9244 0444

Affix Patient label here

REQUESTING PRACTITIONER Surname & Initials, Address, Tel No., & Provider No.

Dr Luke Smith
Pager 140

COPY TO

HOSPITAL & WARD Footscray 1W

REASON FOR TRANSFUSION & CLINICAL NOTES (MUST BE COMPLETED)

Symptomatic anaemia Postop # R)NOF

TESTS REQUESTED

Group and Hold

Crossmatch x1 unit

HOSPITAL LOCATION Footscray

When required: Date: 24 / 7 / 15 Time: 1100 am / pm

URGENT RESULTS

TEL/FAX NO: BY: HRS

REQUIRED PRODUCT

1. GROUP AND HOLD ... Yes / No
2. CROSSMATCH RED CELLS ... 1 ... units
   (Please indicate if required: Irradiated / Fresh (< ... days) / CMV neg.)
3. AUTOLOGOUS CROSSMATCH ... units
   (This form is not to be used for autologous collection)
4. PLATELETS ... units
5. FFP ... units
6. CRYOPRECIPITATE ... units
7. OTHER (eg. Albumin) ...

INFORMATION REQUIRED FOR PRODUCT SUPPLY

Hb 7.4 gm/dL or Results Pending

Pregnancy in last 3 months? Yes / No

Transfusion in last 3 months? Yes / No

Anti D in last 3 months? Yes / No

If the answer to any of these questions is Yes - Group and Hold expiry cannot be extended

Autologous blood donated for this procedure? Yes / No

Known red blood cell antibodies Yes / No

If yes, please specify

Platelet count ... x 10⁹/L

INR ... or PT ... seconds

APTT ... seconds

Fibrinogen ... g/L

Bleeding? Yes / No

Doctor to sign

Doctors Signature Dr Luke Smith Name (print) Dr Luke Smith Date 24 / 7 / 15

PERSON DRAWING BLOOD I certify that the blood specimen(s) accompanying this request was drawn from the patient named above and I established the identity of this patient by direct inquiry and/or by inspection of wrist band, and immediately upon the blood being drawn I labelled the specimen(s).

Signed ... Surname (print) ... Date ... Time ... am/pm

Patient to sign

X ... Practitioner's Use only (Please patient cannot sign)

Patient's Signature Date: ... / ... / ...

OFFICE USE ONLY

Location | C V N H P O L | Time : | PR PU PA | QU | Fee Cat:

COMPLETE FOR ALL PATIENTS

Patient status at the time of the service or specimen collection

	Y	N
a) Private patient in a private hospital or approved day hospital facility	☐	☐
b) Private patient in a recognised hospital	☐	☐
c) Public patient in a recognised hospital	☐	☐
d) Out patient of a recognised hospital	☐	☐

A/C Class ☐ Hos ☐ ISS ☐ In/Out patient ☐ WCA ☐ TAC ☐ Veterans ☐ Overseas ☐

For guidelines for appropriate product ordering & units required - see back of this form.

- **The request form must have the following clearly documented:**
  - Full & accurate patient ID (family name, given name, DOB, UR number)
  - Requestor's name & contact number
  - The tests/products requested
  - Clinical notes
  - Date of surgery or date range for elective Caesarean patients.
  - Requestor signature
  - Date of request
- 2 request forms must be completed for Cord Bloods from Rh (D) Neg women – one for the maternal and one for the cord.

Urgent requests

- Urgent requests must be telephoned to the relevant Transfusion Laboratory.

Requests for Pretransfusion Testing in Neonates and Infants

Completion of initial pretransfusion testing in the 4 months after birth should be performed on specimens from both the mother and infant, as follows:

- Maternal sample: ABO, Rh(D) and antibody screen
- Infant sample: ABO, Rh(D) and DAT

Note: If maternal plasma is not available, an IAT antibody screen will be required (and IAT crossmatching if required) on the infant's plasma - cord samples are not suitable for this test.

Group and Hold or Crossmatch?

- There are very few procedures that routinely require a Crossmatch. The time difference for the provision of blood between a Group and Hold and an electronic Crossmatch is in the order of 5 min only. Patients with clinically significant red cell antibodies cannot have electronic crossmatch and so should have crossmatched units requested to ensure availability of blood if required. Patients with placenta praevia/accreta should have crossmatched units requested.
- Haematological advice should be sought as early as possible for any patient with a known bleeding disorder, where the potential for problems with coagulation has been identified or where the patient has a religious/personal objection to blood transfusion.

Validity of samples for pretransfusion testing.

- The **standard validity** of a blood sample taken for red cell antibody screening +/or crossmatching is **72 hours**.

Extended expiry for placenta praevia and elective caesarean section patients

- The validity of blood samples for blood grouping, red cell antibody screening +/ crossmatching for placenta praevia patients and elective caesarean section patients with a negative antibody screen is **7 days**.

Note: The validity of pretransfusion samples for any woman with a positive antibody screen remains 72 hours. Checking the antibody status and arranging for a valid sample to be taken within 72 hours of the procedure, should testing indicate the presence of antibodies, is the responsibility of the treating Western Health clinician.

- Requests for extended expiry group and hold must be made on an Extended Group pathology request form. Note: patients may attend any Dorevitch Pathology collection centre to have their blood samples taken.
- Women with clinically significant antibodies must have at a minimum a valid pretransfusion sample available at the time of delivery, therefore:
  - Any woman who has a positive antibody screen must have blood samples for pretransfusion testing taken the day before surgery at Sunshine hospital.
  - Any women who is Rh (D) Negative must have blood samples for pretransfusion testing taken the day before surgery at Sunshine hospital, as currently passively acquired anti-D (due to Rh(D)-Ig) cannot be serologically differentiated from immune anti-D otherwise stimulated by pregnancy or transfusion.

Note: If the woman does not have a valid pretransfusion sample it will take a minimum of 60 minutes for crossmatched red cells to be available (or longer if atypical antibodies are present).

Extended expiry for elective surgery patients

- For elective surgery patients being seen in a pre-admission clinic the validity of a pretransfusion blood sample can be "Extended" to one (1) month only if:
  - The patient has not been transfused or pregnant within the last 3 months.
    The patient's current red cell antibody screen is negative.
  - The patient has never in the past had a record of a positive red cell antibody screen.
  - The obstetric and transfusion history section on the request form is completed by the requesting clinician.

Labelling of Pretransfusion Samples

- All pretransfusion test (Blood Group and antibody screen, Crossmatch, Cord and Maternal bloods for Rh (D) Negative women) blood samples must be labelled with **legible and accurate hand written** patient and collection details. The use of pre-printed patient labels (Bradmas) is prohibited.

- The person drawing the blood sample must **clearly and legibly print** on the sample tube at the bedside immediately after drawing the specimen the:
  - Patient's family name.
  - Patient's given name(s) – for patients with lengthy names this may be written in the Address/NHS field.
  - UR number (resus number for unknown patients).
  - Patient's DOB.
  - Date and time of collection.
  - Sign the sample tube.

- Samples from newborn infants or cord bloods must have:
    - Maternal family name.
    - "Baby of" mother's given name.
    - Infant's DOB.
    - Infant's UR number (if available) clearly printed. If not available this field should be left blank.
    - Date and time of collection.
    - The collector's signature on the sample tube.

Note: The purpose developed labels that facilitate hand writing patient identification details for cord/neonate specimens may be affixed to these specimens.

- The patient details on the request form must match those on the blood sample exactly and the collector's declaration must be completed. **No corrections are allowed under any circumstances** – a new request form and sample will be required.

Requesting Intravenous Immunoglobulins(IVIg).

- IVIg is issued by the Blood Service on a patient-by-patient basis in accordance with the "Criteria for the clinical use of Intravenous Immunoglobulin in Australia" Second Edition (2012). Requests for IVIg must be approved by Blood Service Specialists before any product can be issued.
- BloodSTAR is the national online system which is used for requesting and managing access and supply of IVIg products.
- All medical officers who prescribe and manage the treatment of patients requiring IVIg must register for BloodSTAR.

BloodSTAR User Registration is a two-part process comprised of:

1. Blood Portal User Registration: Creating a single username and password for all National Blood Authority systems, **and**
2. BloodSTAR Role Request: Requesting a role and location for access to your facility.

The NBA Blood Portal can be found here: https://www.blood.gov.au/

- Once the above 2 steps are completed your User Access Request requires the approval of the Facility Administrator. You will receive an email when your request has been approved.
- Step by step directions for BloodSTAR registration can be found on the WH intranet: Depts. and Services: Blood Products/Transfusion (internal link). or at https://www.blood.gov.au/
- BloodSTAR "How to" information sheets e.g. submitting an initial authorisation requests are accessible from the WH Intranet: Blood Products/Transfusion page.
- Once the request for IVIg has been approved by the Blood Service a completed Dorevitch pathology A4 Blood Product request form must be sent to the transfusion laboratory.

Consent to Blood and Blood Products.

- Prior to the administration of any blood product the risks and benefits must be explained to the patient or person legally responsible so that they may make an informed decision.
- Consent must be documented on the Blood Product Consent and Prescription form and signed by the clinician and the patient/guardian. Consent is either valid for the current admission or for patients having on ongoing transfusions as part of their medical treatment valid for 12 months.
- In an urgent situation where consent cannot be obtained this must be documented on the blood prescription form in the "unable to consent" section by the clinician.
- Multilingual patient brochures can be accessed and printed for patients via the Intranet: Depts. and Services: Blood Products/Transfusion (internal link).

Management of patients who refuse blood and blood products.

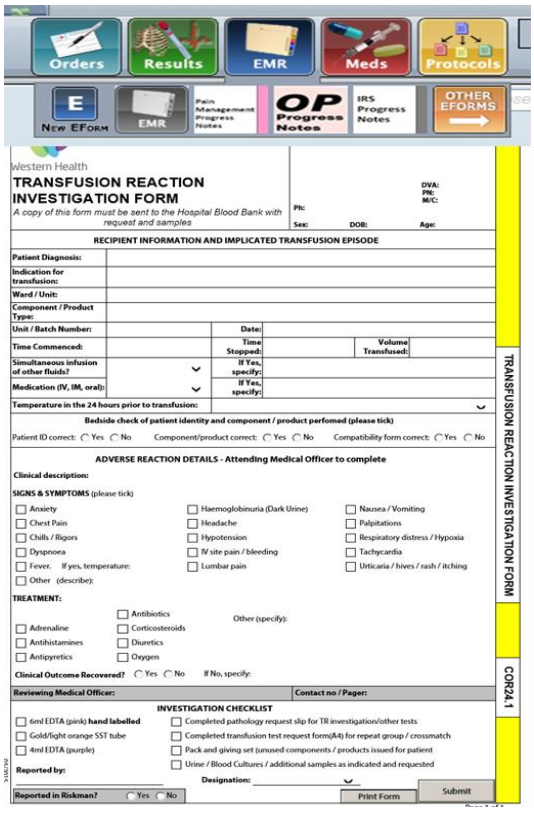
- Many people and groups in the community have philosophical or religious objection to receiving human tissue and blood – the most notable group being Jehovah's Witnesses.
- A fully informed, competent adult patient is entitled to make the decision to accept medical treatment or refuse treatment, including the administration of blood and blood products under the Medical Treatment Act 1988.
- Clinical staff must accept and act on the patient's informed decision irrespective of their personal beliefs and opinions
- Careful documentation of what is and is not acceptable for each patient is required.
- A specific form "Alert *15 Refusal/Consent to Blood, Blood Products& Conservation* "has been developed to assist clinicians and patients to discuss and document the patient's wishes. The form can only be completed by a Medical Officer at Senior Registrar or above level and is valid only for the current admission. Note: A Refusal of Treatment Certificate must also be completed.
- The Refusal/Consent to Blood, Blood Products& Conservation form is accessible via the Intranet: Depts. and Services: Blood Products/Transfusion (internal link).
- Further information: Management of Patients Who Refuse Blood and Blood Products procedure and Guidelines.

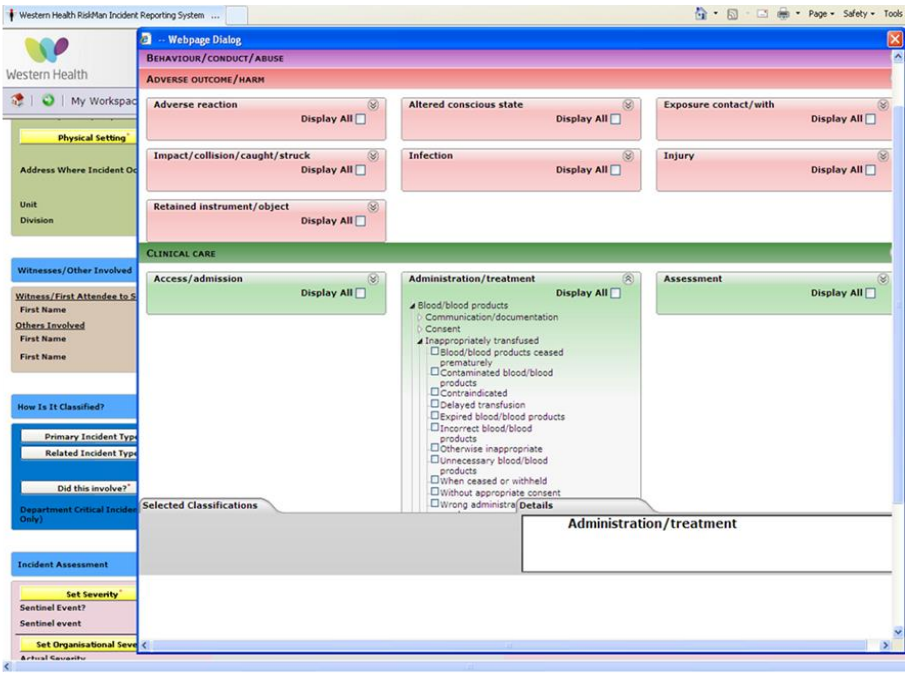
Prescribing blood and Blood Products

- All blood and blood products including immunoglobulins e.g. Hep B, Anti-D must be prescribed on the blood/blood product consent and prescription form AD 283.1. The blood prescription form must include correct and complete patient identifiers.
- The prescription must include:
  - The appropriate product for the patient.
  - The correct dosage for the patient.
  - The appropriate rate for administration – Note: APP **is not** an appropriate rate.
  - The appropriate route for administration
  - The clinical indication code for giving the product.
  - Any special requirements e.g. warming.
  - The signature of the prescriber.
- **For patient safety transfusions should not be commenced between 2000hrs and 0800hrs unless there is an acute clinical need** for the transfusion e.g. active bleeding / haemolysis, the patient has a low Hb with symptoms, the patient requires urgent reversal of warfarin effect etc.
- Single unit transfusion applies to stable, normovolaemic adult patients, in an inpatient setting, who do not have clinically significant bleeding. The transfusion of a single unit of red blood cells, followed by clinical reassessment to determine the need for further transfusion is recommended.
- The prescribing clinician must also document the outcome of the transfusion including whether or not it achieved the desired effect and the occurrence and management of any adverse effects.

Management and Reporting of Adverse Reactions

- The administration of blood/blood products can be associated with various adverse effects. The most common problem associated with transfusion is a rise in the patient's temperature. This can be as a result of the patient's underlying illness or the transfusion itself. A temperature rise to ≥38°C or ≥1°C above baseline (if baseline ≥37°C) should prompt the interruption of the transfusion and a clinical assessment of the patient.
- Recognition and management of acute and delayed adverse effects from transfusion flow charts can be accessed via the WH intranet: Depts. and Services: Blood Products/Transfusion. A suspected/confirmed adverse reaction should be reported to the lab so that the appropriate investigations can be undertaken.
- A WH Transfusion Reaction Investigation eForm must be completed and a copy printed (prior to submitting) to be sent to the lab with test requests and blood samples. Note: One the TR eForm is submitted an alert advising of the reaction is automatically generated and visible on the patient's DMR cover.
- All blood and blood product related adverse events must be reported in Riskman**. Note:** The Blood and Blood Products classification in Riskman is only for incidents/adverse events that directly relate to Blood Products (not all things blood).





Where to find information on the Intranet

1. Departments and Services: Blood and Blood Products/Transfusion Practice
2. Or just type blood in the search engine on the home page