



# SPECIAL BLOOD REQUIREMENTS TOOLKIT

2017 VERSION

# Introduction

## Background

Many patients receiving healthcare treatment at a specific hospital may continue treatment at another hospital(s) or one closer in proximity to their home. Some of these patients have had blood transfusions as part of their treatment and have been identified as requiring specific blood components.

This toolkit was developed to facilitate the provision and communication of special blood component requirements to other healthcare facilities that may be involved in a patient's treatment. Use of a "wallet card" to identify a patient's special blood requirements can provide important information for healthcare practitioners involved in the patient's care. This card should be given to any patient who has been identified to have special blood requirements with an explanation of how the card should be used.

Many hospitals already use "wallet cards" to inform a patient's healthcare practitioner of the presence of clinically significant red blood cell (RBC) antibodies (which may cause delays in the provision of RBC products) and some also have a process to inform patients who are candidates to receive specialized blood components such as irradiated blood. This toolkit is intended to help support hospitals that may not currently have a process in place or to provide additional information to a hospital's existing process.

## What is in this toolkit?

The toolkit contains both procedures and templates that can be customized by each hospital as needed. It includes:

- Standard operating procedure (SOP) for the provision of the special blood requirements wallet card
- Template of a letter that can be issued to the patient with the wallet card
- Templates of wallet cards
- Patient fact sheets to be included with the letter for the relevant special blood requirement identified

## How should it be implemented?

If a hospital chooses to use the resources within this toolkit, all documents and templates should be reviewed and approved for use by an appropriate hospital committee (e.g. Transfusion Committee or Medical Advisory Committee). Hospitals are encouraged to use any part of the toolkit if it complements their existing approach.

Note: The letter and fact sheets are also available in French.

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# Glossary of Acronyms

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HLA: Human leukocyte antigen

IgA: Immunoglobulin A

LIS: Laboratory information system

RBC: Red blood cell

Rh: Rhesus factor

SOP: Standard operating procedures

TA-GvHD: Transfusion-associated graft-versus-host disease

TM: Transfusion medicine

WBC: White blood cell

# Standard Operating Procedure Template

This standard operating procedure (SOP) is developed for hospitals to help provide patients with some key information in the form of a wallet card that the patient can present to their caregivers at any facility where they seek treatment. The SOP is available for download at [transfusionontario.org](http://transfusionontario.org).

## SOP Template

Title: Special Blood Requirement Notification Letter and Wallet Card

Issued by:

ID:

Approved by:

Effective Date:

Revised Date Version:

File Name:

Controlled document. Any documents appearing in paper form must be used for reference purposes only. The on-line copy on the file server above must be considered the current documentation.

1. **Policy:** <enter site specific policy for issuing the card>

2. **Purpose:** To initiate and complete the special blood requirement notification letter and wallet card.

3. **Principle:** A standardized card that identifies patients who have special requirements for blood components will help minimize delays in patient care and improve patient safety. These patients should be encouraged to enroll in the MedicAlert® program where their information is submitted and stored in a database that is accessible any time by all first responders and healthcare professionals that may be involved in the care of these patients.

Special blood requirements can be identified as:

- Irradiated components
- Antigen negative components for patients with known red blood cell (RBC) or platelet antibodies
- Washed components
- HLA matched components
- IgA deficient components
- Weak/Partial D Type

# Standard Operating Procedure Template

(continued)

## 4. Procedure:

Step	Procedure	Rationale	
1. Identify patients for special blood requirement	<b>If:</b> 1.1 Identification is from physician or designate	<b>Then:</b> 1. Review request form or equivalent for accuracy. 2. Review the clinical details of the request. 3. Ensure that required follow up testing has been completed and documented.	Verifies and documents request for special requirements for blood components.
	1.2 Notification is through laboratory testing	1. Review that the testing information has been verified and signed by appropriate staff. 2. If results are based on findings reported by a reference laboratory, ensure that laboratory has not already provided a card to the patient.	
	1.3 Patient presents special requirement card or information from MedicAlert® program prior to pre transfusion testing	1. Ensure patient identification is complete. 2. Confirm special requirement is still needed (either through historical record check, testing or communication with facility that issued card/information)	
2. Document Special Blood Requirements	2.1. Ensure that the information is documented electronically (LIS) and/or manually (TM record card) in the patient’s laboratory record.	Documentation ensures patients receive appropriate components or products.	
	2.2 Information should include: <ul style="list-style-type: none"> <li>• Reason for special requirement</li> <li>• Duration of special requirement (if applicable)</li> <li>• Name of requesting physician</li> <li>• Follow up testing date and result</li> <li>• Origin of request and contact information if available (if not this facility)</li> </ul>		

# Standard Operating Procedure Template

(continued)

Step	Procedure	Rationale
3. Complete the Special Blood Requirements Letter	<p>3.1. Using information in the electronic file (LIS) or manual file (TM record card), generate a letter to the patient confirming their special blood requirements.</p> <p>*Note: if they have presented a wallet card and there is no new requirement, there is no need to generate a new letter or card.</p> <p>3.2. Use Special Blood Requirement letter template or use an institution specific generated form letter and enter the relevant patient information and select the applicable indication / reason and special requirement. Obtain a template of the form letter at <a href="http://transfusionontario.org/en/documents/?cat=special_blood_requirements">http://transfusionontario.org/en/documents/?cat=special_blood_requirements</a>.</p> <p>3.3. Print letter.</p> <p>3.4. Include relevant information 'fact' sheets for the specific special blood requirement. Obtain a template of these information sheets on the website <a href="http://transfusionontario.org/en/documents/?cat=special_blood_requirements">http://transfusionontario.org/en/documents/?cat=special_blood_requirements</a>.</p> <p>3.5. Inform the patient of the availability of the MedicAlert® program to help provide health care professionals with important health information.</p>	<p>MedicAlert® can enhance patient safety and security in their overall health care. Information and registration forms can be obtained by visiting <a href="https://www.medicalert.ca/">https://www.medicalert.ca/</a> or by calling 1-800-668-1507.</p>
4. Complete the Special Blood Requirement Wallet Card	<p>4.1. A Special Blood Requirement Wallet Card template is available on the website <a href="http://transfusionontario.org/en/documents/?cat=special_blood_requirements">http://transfusionontario.org/en/documents/?cat=special_blood_requirements</a>. This card can be filled out electronically or manually.</p>	

# Standard Operating Procedure Template

(continued)

## Step

## Procedure

4. Complete the Special Blood Requirement Wallet Card (continued)

### If:

Preparing the card electronically

### Then:

1. Use Avery Business Card Product #55871™ card Size/Dim 2"x3½" (5.08 x 8.89cm) or similar size product.
2. Enter the information in all required sections of the card using existing file.  
\* Note: you may choose to batch print (e.g. print weekly or monthly) to save on card stock.
3. Be sure to set printer up to accept card stock paper. Click File-Print-Page Setup-Paper to ensure that the document is set up to print manually. Ensure card stock paper is in the manual feed tray.
4. Select "Print document".
5. If you need to make a new template be sure to use correct settings: Use Microsoft Word® Tools
  - ▶ Letters and Mailings
  - ▶ Envelopes and labels.
  - ▶ Select Options and select Template 05371™ then OK
  - ▶ Design new card and save

Note: If you use a card with different dimensions, then you will have to set the document up using the Tools tab - Envelope and Labels option and select the appropriate product number. A copy of the card must be pasted to the new document and reformatted. Follow individual instructions that accompany the business card product for formatting details.

# Standard Operating Procedure Template

(continued)

Step	Procedure
4. Complete the Special Blood Requirement Wallet Card (continued)	<b>If:</b> If preparing the wallet card manually
	<b>Then:</b> 6. Access the pre-printed wallet card 7. Hand write all required sections to be completed
5. Supervisory review	5.1. Supervisor - review all supporting results and special blood requirements letter, card and relevant patient fact sheet(s) are correct prior to issuing and sign and date to document review complete.
6. Document date sent	6.1 Indicate on patient's file (LIS or TM Card) the date that the information was sent to the patient.

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## 5. References:

1. Hamilton Regional Laboratory Medicine Program – Special Blood Product Request Form
2. The Ottawa Hospital – Significant Antibody Notification Letter/Card
3. London Laboratory Services Group – Blood Group/Special Needs Notification
4. Thunder Bay Regional Hospital – Clinically Significant Antibody Notification Letter
5. Capital Health – Physician Responsibility for Identifying Patients with Special Blood Requirements – <http://www.cdha.nshealth.ca>
6. MedicAlert® Canada

## 6. Related Documents:

- Special Blood Requirement Letter Template
- Special Blood Requirement Card Template
- Special Blood Requirement Irradiated Blood Patient Fact Sheet
- Special Blood Requirement Red Blood Cell Antibody Patient Fact Sheet
- Special Blood Requirement Platelet Antibody Patient Fact Sheet
- Special Blood Requirement Washed Blood Patient Fact Sheet
- Special Blood Requirement HLA-Matched Platelets Patient Fact Sheet
- Special Blood Requirement IgA Deficient Patient Fact Sheet
- Special Blood Requirement Weak or Partial D (Rh) Type Patient Fact Sheet

# Special Blood Requirements Letter Template

This is a template of a letter that can be filled out and issued to the patient with the wallet card. The fillable PDF letter template is available for download at [transfusionontario.org](http://transfusionontario.org).

To:

Address:

Insert Logo Here

Birth Date:

Hospital ID#:

Date:

Dear:

During your recent hospital visit, it was found <<**Dropdown menu #1**>> if you should need a blood transfusion in the future, there is some information that would be helpful for your treating physician to be aware of. According to our hospital protocol it has been determined you are a candidate to receive <<**Dropdown menu #2**>>

Please find attached with this letter a fact sheet that provides additional information for this particular blood component need. Also enclosed is a wallet card detailing your special blood requirements. If you do visit a hospital for treatment, please ask your nurse / physician to review it and forward the information on the card to the facility's Blood Transfusion Laboratory (Blood Bank) should a blood transfusion be considered. It is possible that protocols may differ between hospitals; however this information will provide your treating physician with background and contact information that is useful.

It is also recommended that you consider registering with Medic Alert® Canada. Medic Alert® Canada is a universally recognized organization that provides first responders and emergency medical personnel with important medical information on your behalf. Please visit [www.medicalert.ca](http://www.medicalert.ca) to register.

It would also be helpful to discuss this information with your family physician so that they are made aware of it and it can be added to your file.

If you have any questions or concerns, please do not hesitate to contact us using the information below.

Sincerely;

CONTACT INFORMATION

# Special Blood Requirements Letter Template

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## Dropdown Menu #1 options:

- you have a red cell antibody and
- you have a platelet antibody and
- that you have an HLA antibody,
- due to your recent transplantation
- you have a weak Rh(D) type and
- you have a weak Rh(D) type and
- due to your transfusion reaction
- due to your transfusion reaction

## Dropdown Menu #2 options:

- red cells negative for the corresponding antigen.
- platelets negative for the corresponding antigen.
- HLA-matched platelets.
- irradiated blood.
- Rh positive blood components.
- Rh negative blood components.
- washed blood components.
- blood from IgA deficient donors.

# Special Blood Requirements Card

This is a template of a wallet-sized card that can be filled out and issued to the patient identifying the phenotyping results and special blood requirements and any antibodies identified. The fillable Word format card template is available for download at [transfusionontario.org](http://transfusionontario.org).

<b>Insert hospital logo</b>	<b>&lt;Insert Hospital contact info&gt; Transfusion Medicine</b>	
<b>NAME:</b>	<b>DOB:</b>	<b>ABO/Rh:</b>
<b>Significant Information:</b> <input checked="" type="checkbox"/> <b>This patient should receive</b>		
<b>Phenotyping results:</b>		
<b>Antibodies Identified:</b>		
<b>Date:</b>		
PRESENT THIS CARD AT ANY HOSPITAL OR LAB VISIT		

# Patient Fact Sheets

The Patient Fact Sheets are one-page documents with information on the special blood product requirements and should be given to the patient with the patient letter and the wallet card. The patient fact sheets are available for download at [transfusionontario.org](http://transfusionontario.org).

## Special Blood Requirement - Irradiated Blood

### What is irradiated blood?

Irradiation of blood results in changes to the white blood cells (WBCs) in the donated blood. Irradiation does not make the blood less beneficial to you. The blood does not become 'radioactive' and will not harm anyone around you.

### Why is irradiated blood needed?

Irradiated blood is given to prevent a rare but serious transfusion reaction called transfusion-associated graft-versus-host disease (TA-GvHD).

### What is TA-GvHD?

TA-GvHD is a rare complication of blood transfusion caused by WBCs found in the donated blood that can cause severe illness in certain patients at risk.

### Which patients are at increased risk of TA-GvHD?

Patients:

- With certain immune system disorders
- Who have received treatment with certain drugs (for example fludarabine)
- Who have received Bone marrow/stem cell transplantation
- Who receive blood from a close relative or blood matched for HLA

### Is all blood routinely irradiated?

No. Red blood cell and platelet transfusions are not routinely irradiated and need to be irradiated 'on demand'. It is important that you tell your medical team if you need irradiated blood.

### What if blood is needed in an emergency?

Although irradiated blood is recommended for you, if you receive non-irradiated blood the risk of TA-GvHD is very small. In emergencies, there may not be enough time to arrange for irradiated blood to be provided as it may be more important to provide blood quickly. The medical team treating you will balance these risks and discuss with you.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered.
- Consider registering with a medical alert program (such as MedicAlert®) to help first responders and emergency physicians in identifying your need for irradiated blood components.

## Special Blood Requirement - Red Blood Cell (RBC) Antibodies

### **What are RBC antibodies?**

When you are exposed to RBCs through a blood transfusion or pregnancy, sometimes your immune system will form an antibody to the donor RBCs.

Antibodies are usually formed by the body as part of its normal defense system. For example, your body will develop antibodies to foreign bacteria or viruses which help to fight infection. In this case, your body recognized a protein on the donor's or (in the case of pregnancy) your baby's RBCs that was different from yours and you formed an antibody against it.

### **Does everyone who receives a blood transfusion form an antibody?**

Only a small percentage of people (about 7 out of every 100) who have been pregnant or transfused will form an antibody. Patients who have had many blood transfusions or multiple pregnancies may have a higher risk of forming an antibody.

### **How does it affect me?**

If you receive a blood transfusion that is not matched for the antibody you have, there is a risk that the blood you receive will not provide you with the maximum benefit and may even result in a transfusion reaction.

Depending on the type of antibody you have, it may take more time to find blood that is a suitable match for you. It is important to let your physician know about this antibody as soon as possible if a blood transfusion is being considered for you.

If you are pregnant, your antibody can pass through your circulation to your baby's. If the baby's RBCs are not a match with the antibody, your physician will monitor you and your baby carefully throughout your pregnancy to make sure the appropriate care and treatment can be initiated as required.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered and/or if you are pregnant.
- Consider registering with a medical alert program (such as MedicAlert®) that will identify your need for blood lacking the antigen corresponding to the antibody identified in your blood to first responders and physicians in case of emergencies.

## Special Blood Requirement - Platelet Antibodies

### **What are platelet antibodies?**

When you are exposed to platelets through a blood transfusion or pregnancy, sometimes your immune system will form an antibody. Antibodies are usually formed by the body as part of its normal defense system when you are exposed to foreign bacteria or viruses to help fight infection. In this case, your body recognized a protein on the donor's cells (or in the case of pregnancy, your baby's cells) that was different from yours and formed an antibody against it.

### **Does everyone who receives a blood transfusion form an antibody?**

Only a small percentage of people (less than 7 out of every 100) who have been pregnant or have received a blood transfusion will form an antibody. Patients who have had many blood transfusions or multiple pregnancies may have a higher risk of forming an antibody.

### **How does it affect me?**

If you receive a blood transfusion that is not matched for the antibody you have, there is a risk that the blood you receive will not provide you with the maximum benefit and may even result in a transfusion reaction.

Depending on the type of antibody you have, it may take more time to find blood that is a suitable match for you. It is important to let your physician know about this antibody as soon as possible if a blood transfusion is being considered for you.

If you are pregnant, your antibody can pass through you to your baby. If the baby's platelets are not a match with the antibody, your physician will monitor you and your baby carefully throughout your pregnancy to make sure the appropriate care and treatment can be initiated as required.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered and/or if you are pregnant.
- Consider registering with a medical alert program (such as MedicAlert®) that will identify your need for platelets lacking the antigen that corresponds to your identified platelet antibody to first responders and physicians in case of emergencies.

# Patient Fact Sheets (continued)

## Special Blood Requirement - Washed Blood

### **What is washed blood?**

Red blood cells (RBCs) and platelets can be washed using special techniques to remove proteins in plasma portion of the blood that may be causing your reactions.

### **Why is washed blood needed?**

If you have suffered repeated, severe allergic or anaphylactic reactions to blood transfusion in the past, use of washed RBCs or platelets may be a safer option for your treatment. This is rare but can be quite serious therefore, this precaution is important.

### **Which patients are at increased risk of severe allergic reactions?**

Some patients are at particular risk of severe allergic reactions. If you are exposed to a protein that is missing from your own plasma during a blood transfusion (or during pregnancy if you are exposed to proteins in your baby's circulation) your body may form an antibody against it. Forming antibodies is normal as this is how our bodies are able to protect us from viruses and bacteria.

If you receive another transfusion, however, the antibody you formed may cause a severe allergic reaction.

### **Is all blood routinely washed?**

No. RBC and platelet transfusions are not routinely washed and need to be washed 'on demand'. It is important that you tell your medical team if you need washed blood in order to prevent the potential of having another severe reaction.

### **What if blood is needed in an emergency?**

In emergencies, there may not be enough time to arrange for washed blood to be provided as it may be more important to provide blood quickly. The medical team treating you will balance these risks and discuss with you.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered.
- Consider registering with a medical alert program (such as MedicAlert®) to help first responders and emergency physicians in identifying your need for washed blood components.

# Patient Fact Sheets (continued)

## Special Blood Requirement - HLA-Matched Platelets

### **What is an HLA-matched platelet?**

Human Leukocyte antigens (HLA) are proteins that are found on most cells in your body including platelets.

An HLA-matched platelet is a blood component from a blood donor with an HLA type very similar to your own.

### **What are HLA antibodies?**

When exposed to HLA from another individual our body can sometimes form antibodies. Antibodies are usually formed by the body as part of its normal defense system. In this case, your body recognized a protein on the donor's (or in the case of pregnancy, your baby's) cells that was different from yours and formed an antibody against it.

### **What does this mean?**

A platelet transfusion may be required to help prevent bleeding if your own platelet count is very low. If you need a platelet transfusion in the future, the HLA antibodies may affect the outcome of your transfusion. If you do require a platelet transfusion in the future, it is important that you tell your physician that you have an HLA antibody.

HLA-matched platelets can then be requested or collected for you so that they will provide the greatest benefit. HLA-matched platelets are irradiated to prevent a reaction called transfusion associated graft versus host disease (TA-GvHD).

### **What happens if I receive platelets that are not HLA-matched?**

If you receive a platelet transfusion that is not HLA-matched, there is a risk that the platelets will not provide you with the greatest benefit.

It may take more time to find platelets that are a good match for you. It is important to let your physicians know about this antibody as soon as possible if a platelet transfusion is being considered for you.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered.
- Consider registering with a medical alert program (such as MedicAlert®) that will identify your need for HLA-matched platelets to first responders and physicians in case of emergencies.

# Patient Fact Sheets (continued)

## Special Blood Requirement - IgA Deficient

### **What is IgA deficient blood?**

IgA is a protein in your plasma that has an antibody function to protect you. Some people are missing this protein and are not able to produce it and are called IgA deficient. Donors that have been tested and identified as being IgA deficient can provide red blood cells (RBCs), platelets and plasma that is IgA deficient.

### **Why is IgA deficient blood needed?**

If you have suffered repeated, severe allergic or anaphylactic reactions to blood transfusion in the past, use of blood components collected from an IgA deficient donor may be a safer option for your treatment. This is rare but can be quite serious therefore, this precaution is important.

### **Which patients are at increased risk of severe allergic reactions?**

Some patients are at particular risk of severe allergic reactions. Patients who are diagnosed with a deficiency in IgA and who have (through exposure to previous transfusions) formed an antibody against IgA are one of the groups of patients who may experience severe anaphylactic reactions should they require blood transfusion.

### **Is blood from IgA deficient donors always available?**

No. People who are deficient in IgA are quite rare. There are lists of blood donors who are known to be IgA deficient. If needed, these donors will be contacted to come in to provide a donation for patients like you. If such a donor is not available, you may be provided with blood that has undergone a washing process to remove the plasma that contains the IgA protein. It is important that you tell your medical team if you need IgA deficient blood in order to prevent the potential of having another severe reaction.

### **What if blood is needed in an emergency?**

In emergencies, there may not be enough time to arrange for blood from an IgA deficient donor to be provided as it may be more important to provide blood quickly. The medical team treating you will balance these risks and discuss with you.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered.
- Consider registering with a medical alert program (such as MedicAlert®) to help first responders and emergency physicians in identifying your need for IgA deficient blood components.

# Patient Fact Sheets (continued)

## Special Blood Requirement - Weak or Partial D (Rh) Type

### **What is a weak or partial D (Rh) type?**

The Rh(D) protein is present on your body's red blood cells (RBCs) if you are Rh type positive (for example group O Rh positive) or absent if you are Rh type negative (for example group O Rh negative). Most people type clearly as Rh positive or Rh negative.

In a small percentage of the population (0.2-1.0%), there is a change in the way the Rh(D) protein is expressed on the RBCs. In some cases less protein is present. This is called a 'Weak D type'. In other cases, the protein is changed so that some parts of it are actually missing. This is called a 'Partial D type'.

The laboratory that performed testing of your blood type found a weaker than usual result. In order to tell if you were a weak D or partial D type, your blood sample was examined by a special test called 'genotyping'.

### **How does it affect me?**

Neither of these changes results in harm to you, however, it may determine if you need to receive a particular blood product and what Rh type of RBC product you receive.

On the card that you received, it will indicate if you should receive Rh positive or Rh negative blood. If the recommendation is to treat you as Rh negative, you should receive Rh negative blood and, if pregnant, receive Rh immune globulin or RhIG (brand name WinRho®).

### **What do I need to do?**

If you require a blood transfusion, or are pregnant, it is important that your health care providers are aware of your Rh (D) type to ensure you receive the appropriate blood product.

- Please carry the attached card with you and show it to your physician or nurse if a blood transfusion is being considered and/or if you are pregnant.
- Consider registering with a medical alert program (such as MedicAlert®) that will identify your particular Rh type for transfusions to first responders and physicians in case of emergencies.