



SPECIAL BLOOD REQUIREMENTS TOOLKIT

2021 VERSION



Ontario Regional Blood Coordinating Network

Table of Contents

Background.....	3
What is in this toolkit?	3
How should it be implemented?	3
Glossary of Acronyms	4
Tools	5
Standard Operating Procedure Template	6-10
Special Blood Requirements Letter Template	10
Special Blood Requirements Card	11
Patient Fact Sheets	12-17
Irradiated Blood.....	12
Red Blood Cell (RBC) Antibodies	13
Platelet Antibodies (Includes HLA Antibodies)	14
Washed Blood.....	15
IgA Deficient	16
Weak or Partial D (Rh) Type	17

Special Blood Requirements Toolkit Introduction

Background

Many patients receiving healthcare treatment(s) at a specific hospital may continue their treatment at another hospital closer to their home. Patients that receive a blood transfusion as part of their treatment may require specialized blood components.

Many hospitals use “wallet cards” to inform a patient’s healthcare practitioner and other healthcare facilities of the presence of clinically significant red blood cell (RBC) antibody (ies). The “wallet card” can also be used to identify a patient’s other special blood requirements. (irradiated, washed cells, etc.) This card should be given to any patient who has been identified as having special blood requirements accompanied with an explanation of how the card should be used.

This toolkit was developed to facilitate the provision and communication of special blood component requirements to other healthcare facilities that may be involved in the patient’s treatment. Additionally, it is intended to help hospitals that may not currently have such a process in place to provide this information to patients who may require these special blood components.

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 and/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.

Glossary of Acronyms

HLA:	Human Leukocyte antigen
IGA:	Immunoglobulin A
LIS:	Laboratory Information System
RBC:	Red Blood Cell
Rh:	Rhesus factor
SOP:	Standard Operating Procedure
TA-GvHD:	Transfusion Associated – Graft versus Host Disease
TM:	Transfusion Medicine
WBC:	White Blood Cell

Tools

Standard Operating Procedure Template

Special Blood Requirements Letter

Template Special Blood Requirements Card

Patient Fact Sheets

Special Blood Requirement - Irradiated Blood


Special Blood Requirement- Red Blood Cell (RBC) Antibodies

Special Blood Requirement- Platelet Antibodies (Includes HLA Matched)

Special Blood Requirement- Washed Blood

Special Blood Requirement- IgA Deficient


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

Manual:			TEMPLATE
Section:			
Title:	Special Blood Requirements Notification Letter and Wallet Card		 Ontario Regional Blood Coordinating Network
Author:	Tracy Cameron/Wendy Owens		
Approved by:	ORBCoN Regional Managers		
Effective Date:	Jan 2021	Version 3	
Created:	Mar 2017		
Revised:	May 2020		


- 1. Policy:** When a patient is identified as requiring a special blood component, information should be provided to them to help ensure appropriate transfusion care should they be admitted to another healthcare facility.
- 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 (or an equivalent program) where their information is submitted and stored in a database that is accessible at any time by all first responders and healthcare professionals that may be involved in the care of these patients. Examples of Special blood requirements are:
 - Irradiated components
 - Antigen negative components for patients with known red blood cell (RBC) or platelet antibodies
 - Washed components
 - HLA matched components
 - Phenotype matched components
 - IgA deficient components
 - Rh of components for Weak/Partial D Type

4. Procedure:


Step	Procedure		Rationale
1. Identify patients for special blood requirement	If:	Then:	Verifies and documents request for special requirements for blood components.
	Identification is from physician or designate	1. Review request form or equivalent for accuracy. 2. Review the clinical details of the request.	

Title: Special Blood Requirement Notification Letter and Wallet Card		
Version Date: May 2020	Version: 3	

		3. Ensure that required follow up testing has been completed and documented.	
	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.	
	Patient presents special requirement card or information from MedicAlert® or equivalent program or other healthcare facility prior to pre-transfusion testing	1. Ensure patient identification is confirmed as per hospital policy. 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. 2.2. Information should include: <ul style="list-style-type: none"> Reason for special requirement Duration of special requirement (<i>if applicable</i>) Name of requesting physician Follow up testing date and result Origin of request and contact information if available (if not this facility) 		Documentation ensures patients receive appropriate components or products.
3. Complete the Special Blood Requirements Letter	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. <i>*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.</i> 3.2 Using Special Blood Requirement letter template or an institution specific generated form letter, enter the relevant patient information and select the applicable indication / reason and special requirement. 3.3 Print letter. 3.4 Include relevant information 'fact' sheets for the specific special blood requirement. Obtain a template of these information sheets on the website		MedicAlert® or equivalent program can enhance patient safety and security in their overall health care. Information and registration forms for MedicAlert® can be obtained by visiting https://www.medicalert.ca/ or by calling 1-800-668-1507.

Title: Special Blood Requirement Notification Letter and Wallet Card		
Version Date: May 2020	Version: 3	

	http://transfusionontario.org/en/documents/?cat=special_blood_requirements . 3.5 Inform the patient of the MedicAlert® or other similar programs to help provide health care professionals with important health information.					
4. Complete the Special Blood Requirement Wallet Card	<p>4.1. A Special Blood Requirement Wallet Card template is available on the website http://transfusionontario.org/en/documents/?cat=special_blood_requirements. This card can be filled out electronically or manually.</p> <table><tr><th><i>If:</i></th><th><i>Then:</i></th></tr><tr><td>Preparing the card electronically</td><td><ol style="list-style-type: none">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. <i>* Note: you may choose to batch print (e.g. print weekly or monthly) to save on card stock.</i>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</td></tr></table> <p>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</p>	<i>If:</i>	<i>Then:</i>	Preparing the card electronically	<ol style="list-style-type: none">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. <i>* Note: you may choose to batch print (e.g. print weekly or monthly) to save on card stock.</i>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	
<i>If:</i>	<i>Then:</i>					
Preparing the card electronically	<ol style="list-style-type: none">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. <i>* Note: you may choose to batch print (e.g. print weekly or monthly) to save on card stock.</i>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					

Title: Special Blood Requirement Notification Letter and Wallet Card		
Version Date: May 2020	Version: 3	

	<i>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.</i>		
	If preparing the wallet card manually	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.		

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 Health Sciences Centre – Clinically Significant Antibody Notification Letter
5. [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 \(RBC\) Antibody Patient Fact Sheet](#)
[Special Blood Requirement Platelet Antibody Patient Fact Sheet \(includes HLA matched\)](#)
[Special Blood Requirement Washed Blood Patient Fact Sheet](#)
[Special Blood Requirement IgA Deficient Patient Fact Sheet](#)
[Special Blood Requirement Weak or Partial D \(Rh\) Type Patient Fact Sheet](#)

<<Insert Hospital Logo>>

To:

Address:

Birth Date:

Hospital ID#:

Date:

Dear:

During your recent hospital visit , it was found if you should need a blood transfusion in the future, additional information would be helpful for your doctor to know. According to our hospital protocol it has been determined you are a candidate to receive

Please find attached with this letter, a fact sheet that provides additional information for this particular need.

Also enclosed is a wallet card detailing your special blood requirements. In future, whenever you 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 but this information will provide your doctor with useful background and contact information.

It is also recommended that you consider registering with a medical alert provider such as Medic Alert®Canada (or equivalent). 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 to register.

It would also be helpful to discuss this information with your family physician so that they are aware and can add to your health record.

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

Sincerely,

CONTACT INFORMATION

CONTACT INFORMATION

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

Patient Fact Sheet

Special Blood Requirement - Irradiated Blood

What is irradiated blood?

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

Why is irradiated blood needed?

Irradiated blood is given to prevent a rare but serious transfusion side effect called transfusion-associated graft-versus-host disease (TA-GvHD). TA-GvHD is caused by the activity of the WBCs in the donated blood and can cause severe illness in certain patients at risk.

Patients at risk for TA-GvHD include those:

- 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 Human Leukocyte Antigen

Is all blood routinely irradiated?

Red blood cells and platelets irradiated 'on demand' only. It is important that you tell your medical team if you have been told that you should receive irradiated blood.

What if blood is needed in an emergency?

In an emergency, there may not be enough time to arrange for irradiated blood to be provided. 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® or an equivalent program) to help first responders and emergency physicians in identifying your need for irradiated blood components.

Patient Fact Sheet

Special Blood Requirement – Red Blood Cell (RBC) Antibodies

What are RBC antibodies?

When you are exposed to another person's RBCs through a blood transfusion or pregnancy, sometimes your immune system will form an antibody to these RBCs.

Antibodies are usually formed by the body as part of its normal defense system. For example, your body will develop antibodies to bacteria or viruses which then help to fight infection. In this case, your body recognized a protein (also called an antigen) on the donor's or (in the case of pregnancy) the 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 be more likely to form 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 it will not provide the maximum benefit and may even lead to a transfusion reaction.

Depending on the type of antibody you have, it may take more time to find blood that is a 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 from your blood to your baby through the placenta. If the baby's RBCs are not a match with the antibody, your physician will monitor you and your baby carefully throughout your pregnancy in case you need special care.

- ✓ 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® or an equivalent program) that will identify your need for blood matched to the antibody identified in your blood to first responders and physicians in case of emergencies

Patient Fact Sheet

Special Blood Requirement - Platelet or HLA 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 for example when you are exposed to bacteria or viruses to help fight infection. In this case, your body recognized a protein (also called an antigen) on the donor's platelets (or in the case of pregnancy, your baby's platelets) 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 (about 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 be more likely to form 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 it will not provide the maximum benefit and may even lead to a transfusion reaction. The antibody you formed could be directed against a platelet specific antigen or an antibody to a human leukocyte antigen (HLA), it may take more time to find platelets that are 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 or if you become pregnant, and your antibody is against a platelet specific antigen, it can pass through you to your baby. 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® or an equivalent program) that will identify your need for platelets matched to your identified platelet antibody to first responders and physicians in case of emergencies.



Patient Fact Sheet

Special Blood Requirement - Washed Blood

What is washed blood?

Red blood cells and platelets can be washed using special techniques to remove proteins (known as antigens) that are present in the plasma or liquid part of the blood.

Why is washed blood needed?

If you have experienced repeated, severe allergic reactions to blood transfusion in the past, transfusing washed red blood cells or platelets may be a safer option for you.

Is all blood routinely washed?

Red blood cell and platelet transfusions are only washed 'on demand'. It is important that you tell your medical team if you have been told that you should receive washed blood.

What if blood is needed in an emergency?

In an emergency, there may not be enough time to arrange for washed blood to be provided. 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® or an equivalent program) to help first responders and emergency physicians in identifying your need for washed blood components.

Special Blood Requirement - IgA Deficient

What is IgA deficient blood?

IgA is a protein in your plasma that helps your body fight illness. Some people have very low levels, or no IgA in their blood and are determined to be (based on blood tests) IgA deficient. Many people with IgA deficiency have no health issues but some form antibodies to the IgA protein they are missing. These antibodies are called anti-IgA.

Why is IgA deficient blood needed?

If you have experienced repeated, severe allergic reactions to blood transfusion in the past, you may have been tested for IgA deficiency and the presence of anti-IgA. If anti-IgA is detected, IgA deficient blood would be safer, should a blood transfusion be required. Development of antibodies to IgA is rare but, these antibodies can lead to serious transfusion reactions.

Is IgA deficient blood always available?

IgA deficiency is not common. IgA deficient red blood cells, platelets and plasma can be collected from donors who are known to be IgA deficient. If needed, an IgA deficient blood donor can be contacted by Canadian Blood Services to donate blood for a patient with anti-IgA. If an IgA deficient blood donor is not available, red blood cells and or platelets can undergo washing to remove the plasma portion of the blood. It is important that you tell your health care providers that you have anti-IgA antibodies and require IgA deficient blood.

What if blood is needed in an emergency?

In an emergency, there may not be time to find IgA deficient blood or to wash red blood cells or platelets to provide for you; 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® or an equivalent program) to help first responders and emergency physicians in identifying your need for IgA deficient blood components.

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

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

If your blood type is Rh type positive (for example group O Rh positive) the Rh(D) protein (antigen) is present on your red blood cells; if your Rh type is negative (for example group O Rh negative), that protein is missing from your red blood cells. Most people type clearly as Rh(D) positive or 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. In some cases, less protein is present. This is called a 'Weak D type'. In other cases, some part of the protein is missing. This is called a 'Partial D type'.

The laboratory that tested your blood type found a weaker than usual Rh(D) result. A special blood test called 'genotyping' identified weak Rh(D) or partial Rh(D).

How does it affect me?

Neither of these changes in Rh(D) expression will harm you. However, if you need a transfusion, they will determine the Rh(D) type of the blood product you receive.

The enclosed card will indicate if you should receive Rh(D) positive or Rh(D) negative red blood cells.

If the recommendation is to treat you as Rh(D) negative, you should receive Rh(D) negative red blood cells and, if you become pregnant, you require Rh(D) immune globulin or RhIG (brand name WinRho®) as per obstetrical guidelines for Rh(D) negative women.

What do I need to do?

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

- ✓ 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® or an equivalent program) that will identify your specific Rh(D) blood type to first responders and physicians.