

# Checking the patient and pack before transfusion

Administer the right blood component, to the right patient, at the right time

# Prior learning knowledge test

Locate the following items on the labels:

- Patient name and date of birth
- Product type
- Any special testing and/or requirements
- Blood group
- Blood donation number
- Expiry date and time



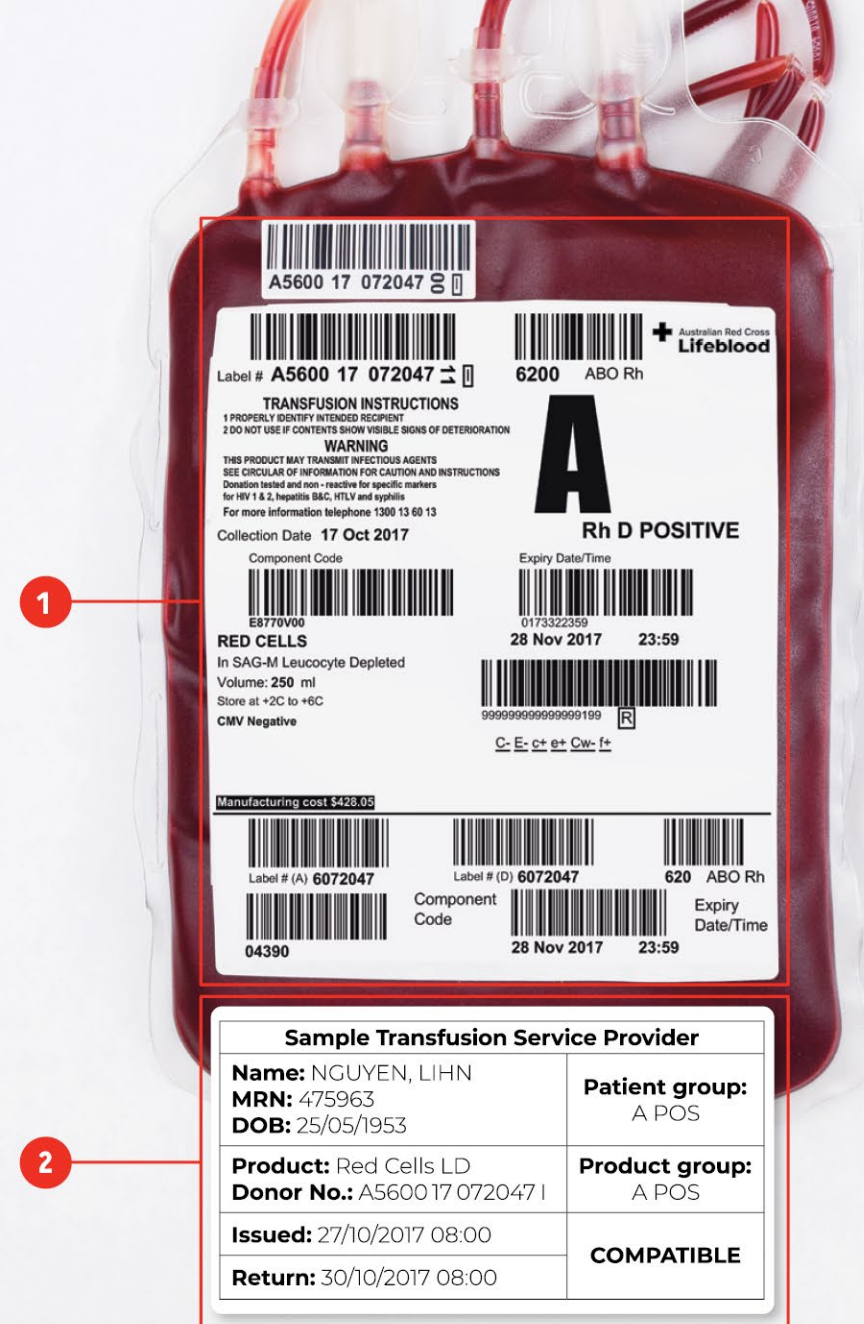
# Labels on a blood pack

## 1 Blood component label

This label is attached by Australian Red Cross Lifeblood in the donation and manufacturing processes.

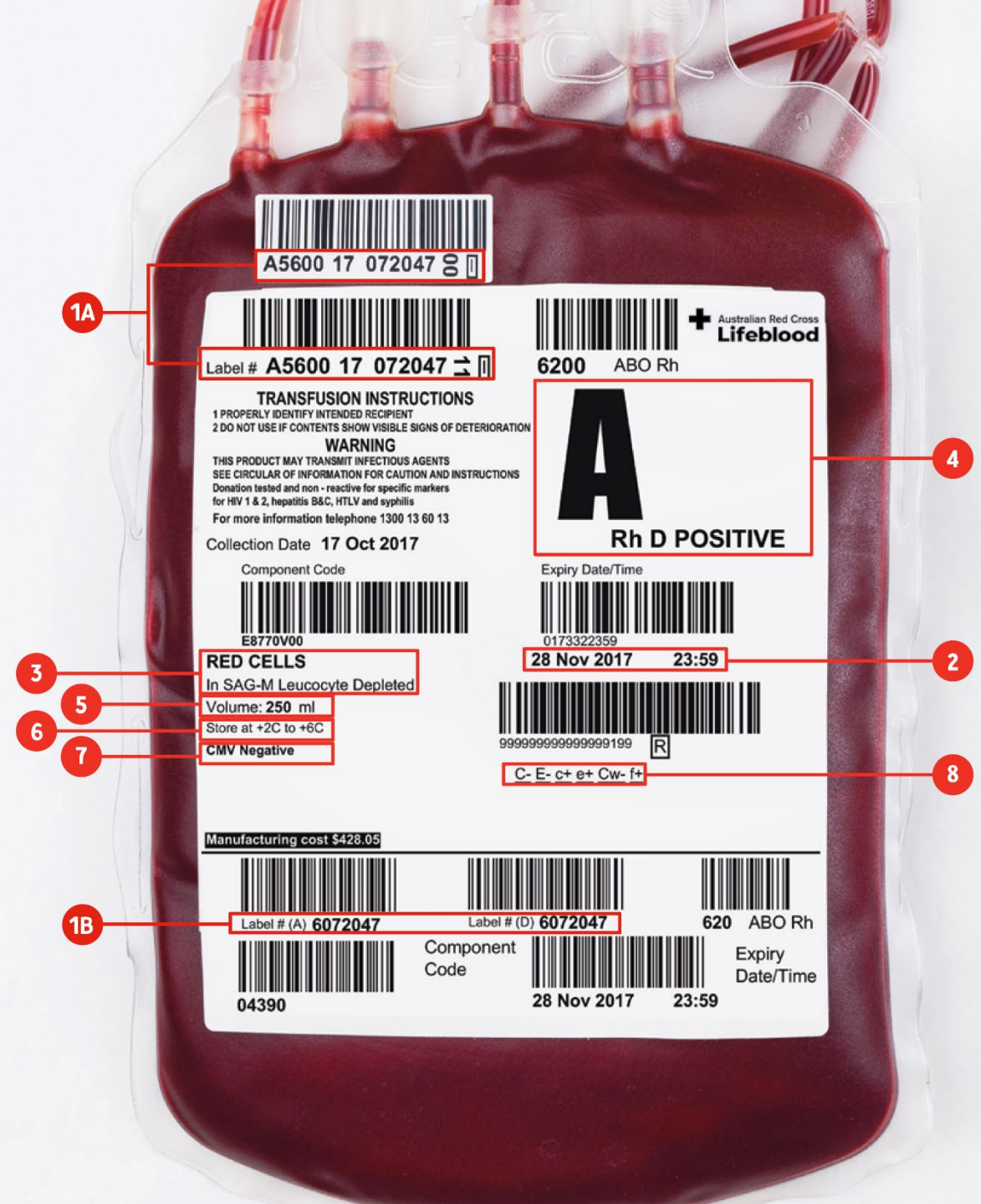
## 2 Compatibility label

This label is attached by the Transfusion Service Provider once the pack has been allocated to a specific patient.



# What's on a blood component label?

- 1 Donation identification number
- 2 Expiry date and time
- 3 Component name
- 4 Blood group
- 5 Component volume in mL
- 6 Storage temperature
- 7 Modifiers
- 8 Phenotype results (if applicable)



# Patient, prescription and pack check

The patient, prescription and pack check is only one part of blood component administration, completed at the patient's side immediately prior to transfusion.

The full blood component administration process involves:

1. Preparation for transfusion
2. Blood component collection
3. **Patient, prescription and pack check**
4. Blood component administration
5. Post-transfusion processes

The checklist for blood component administration is available at [\*\*transfusion.com.au/packcheck\*\*](https://transfusion.com.au/packcheck)



# Step 1: Preparation for transfusion

- ☐ Staff and equipment are available
- ☐ Informed consent discussion has occurred and is documented
- ☐ Prescription is valid
- ☐ IV access is patent
- ☐ Patient ID band is attached and correct - ask patient or carer if possible
- ☐ Patient understands procedure and possible adverse events
- ☐ Baseline observations recorded within the last 60 minutes
- ☐ Administer premedication if ordered
- ☐ Appropriate to transfuse patient at this time

# Step 2: Blood component collection

- ☐ Collect pack only when ready to start transfusion
- ☐ Documented patient details are available
- ☐ Collect the prescribed blood component
- ☐ Check special requirements (if any) on the prescription have been met
- ☐ Check documented patient details and compatibility label attached to pack are identical

## How and where does collection occur?



Your Transfusion Service Provider



Pneumatic tube



Shipper



Remote blood fridge

# Step 3: Patient, prescription and pack check

**The patient, prescription and pack check must be performed uninterrupted by two independently at the patient's side.**

- 3.1 Inspect the pack
- 3.2 Identical patient and pack details
- 3.3 Identical patient and prescription details
- 3.4 Identical prescription and pack details
- 3.5 Double independent checks completed

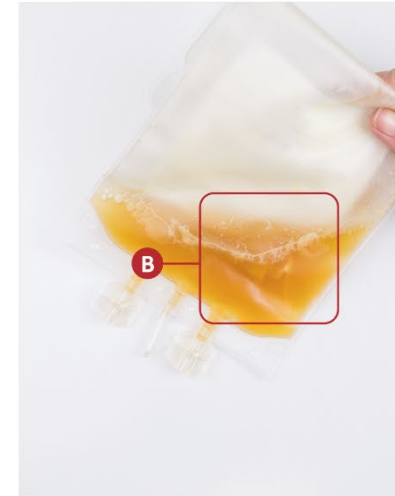
**Remember: If you have any doubts or discrepancies at any stage, contact the Transfusion Service Provider, senior nurse or medical officer.**



## 3.1 Inspect the pack

## Check the pack for:

- A** No leaks or splits
- B** No clots, discolouration, cloudiness
- C** Within expiry date(s) and time



The patient, prescription and pack check

## 3.2 Identical pack and patient

Compare the details on the patient's wristband with the component and compatibility labels.

Check all the details are identical:

- A** Patient first and last names
- B** Patient DOB
- C** Patient MRN/URN
- D** ABO blood group compatibility
- E** Blood donation and batch numbers



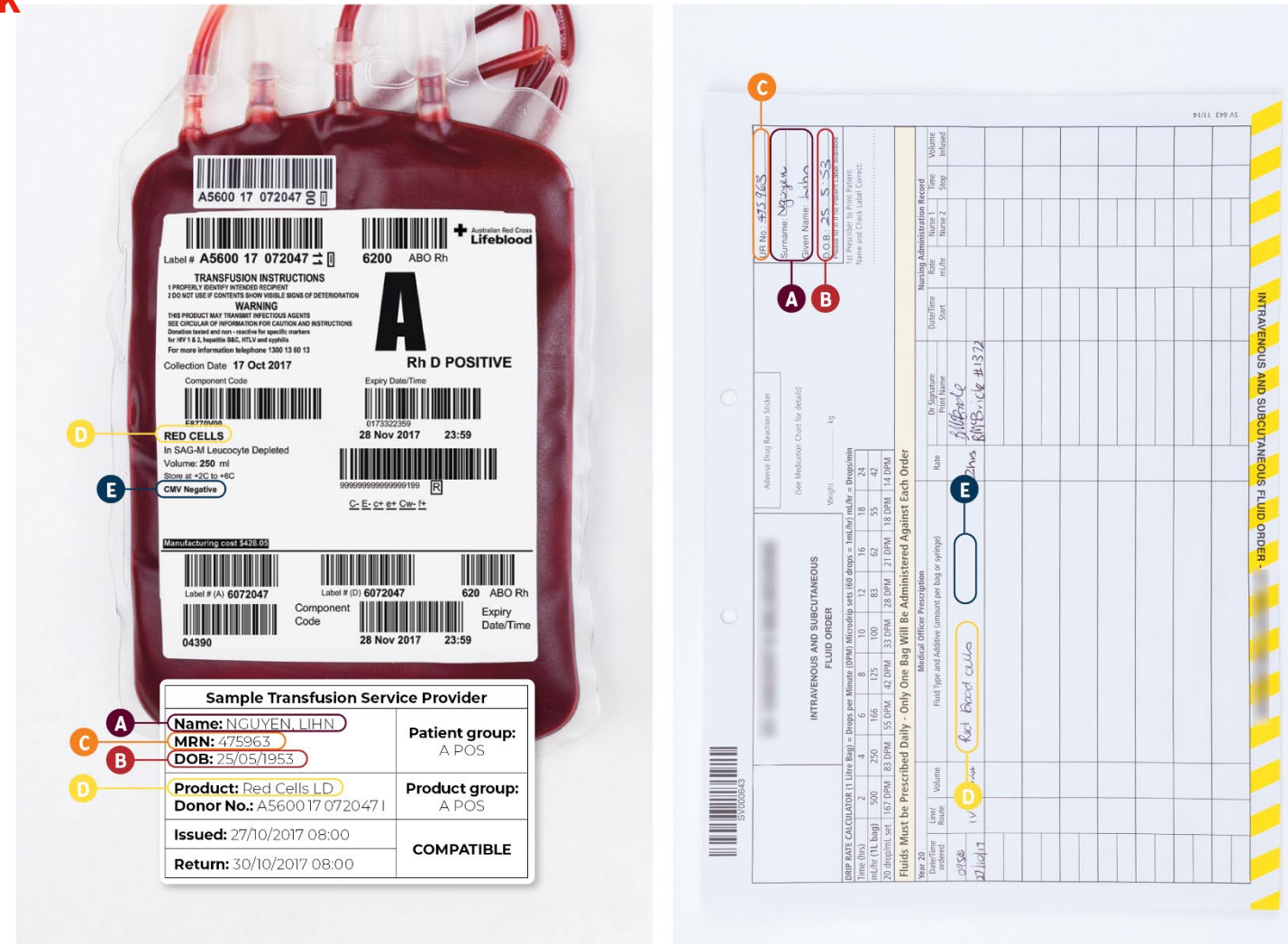




### 3.4 Identical prescription and pack

## Check all the details are identical:

- A** Patient first and last names
- B** Patient DOB
- C** Patient MRN/URN
- D** Component type
- E** Special requirements met (if any)



The patient, prescription and pack check

## 3.5 Confirmation and documentation

### Check:

- All steps of the patient, prescription and pack check were performed uninterrupted by two independent checkers.
- Both checkers must agree that this is the right pack for the right patient.
- The process has been documented.

### After the checks are completed:

**The blood must then be spiked by one of the staff members who performed the bedside check.**

**The staff member spiking the pack is responsible for ensuring that it is clinically appropriate to proceed with the transfusion at that time.**

# Step 4: Blood component administration

- ☐ Blood component administration to be started by a person who has completed all checks
- ☐ Start component as soon as possible and within 30 minutes of pack leaving controlled temperature storage
- ☐ Patient closely observed for the first 15 minutes
- ☐ Patient vital signs monitored throughout the transfusion as per your institutions protocol
- ☐ Administer component as per prescription specific infusion rates
- ☐ Transfusion completed within 4 hours and/or prior to component expiry



# Step 5: Post-transfusion processes

- ❑ Ensure patient has received all the prescribed component
- ❑ Monitor the patient as required post-transfusion
- ❑ Dispose of blood component pack safely if transfusion uneventful
- ❑ Complete documentation:
  - ❑ Start and finish dates and times
  - ❑ Blood donation number
  - ❑ Transfusion observations and outcomes in patient records (electronic/paper)

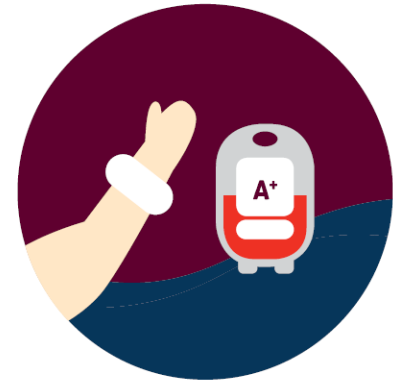
# Things to remember when transfusing a blood component



Always follow your local health service policies



Ensure that the right pack is given to the right patient at the right time



Verify the patient's identity at each stage of the process, involving the patient if possible

# Things to remember when transfusing a blood component



Do not proceed if you have any doubts and contact the Transfusion Service Provider, senior nurse or medical officer



Each person should understand their roles and responsibilities according to the ANZSBT Administration Guidelines



Be aware of potential adverse transfusion reactions and their clinical presentation, and carefully monitor your patient throughout the transfusion

# Further learning Q&A

1. What should you prime your IV line with prior to administering blood components?
2. Can a pump be used for all blood components?
3. Can medications be given concurrently with a blood transfusion?
4. How is bolus medication administered?
5. When should a blood warmer be used?
6. Who can perform the patient, prescription and pack check?
7. Why should non-urgent transfusions be avoided overnight?
8. Why is only one unit of red cells released for use at a time for non-urgent transfusions?
9. Do you have to flush blood lines at the end of a transfusion? Why or why not?
10. What does turbidity and clumping look like in a cryoprecipitate pack?

# Clinical scenarios

Practice completing the patient, prescription and pack check in a clinical scenario



Australian Red Cross  
**Lifeblood**

# Scenario 1: Red cells



**Lihn Nguyen, aged 65, was experiencing difficulty walking and performing everyday activities. She was initially examined by her local GP, who referred her to an orthopaedic surgeon. Advanced osteoarthritis was diagnosed and surgery planned to perform a total hip replacement. Her medications included warfarin for atrial fibrillation and a fish oil supplement.**

Post-surgery, Lihn had a haemoglobin count of 79 g/L and was experiencing ongoing blood loss, shortness of breath and associated chest pain. The decision is made to transfuse Lihn Nguyen one unit of red cells today **(27/10/2017)**, following which she would be reassessed to identify the need for further blood products.

## **Activity**

With a partner, check Lihn Nguyen's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.



# Scenario 1: Red cells



## Additional learning

1. What are red cells?
2. What are the clinical uses of red cells?
3. What are the minimum observations when transfusing red cells?
4. What signs and symptoms are being looked for during observations?
5. What are the compatible intravenous solutions for red cells?
6. Why has Lihn Nguyen been ordered Frusemide post-transfusion?

# Scenario 2: FFP



**May June is a 79-year-old female who suffers from hypertension, poorly controlled type 2 diabetes and atrial fibrillation. May often experiences chest pain, and following investigations by her doctor, has been diagnosed with coronary artery disease.**

Her doctor initially treats her condition with aspirin and warfarin to prevent platelet clumping and blood clotting in her narrowed arteries. However, her chest pain exacerbates and she is admitted to hospital. May June has to undergo urgent coronary artery bypass graft surgery on advice from the cardiologist, as she has significant narrowing in multiple arteries. Warfarin was reversed pre-operatively with vitamin K and Prothrombinex. During her surgery there was some extra bleeding. Coagulation test results indicate normal fibrinogen, normal platelet count and a prolonged clotting time. As part of her treatment, May June requires a transfusion of fresh frozen plasma (FFP) today (**10/05/2018**) to help reverse the effects of warfarin.

## Activity

With a partner, check May June's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.

# Scenario 2: FFP



## Additional learning

1. What is fresh frozen plasma (FFP)?
2. What are the clinical uses of FFP?
3. What are the minimum observations when transfusing FFP?
4. What signs and symptoms are being looked for during observations?
5. What are the compatible intravenous solutions for FFP?
6. Why does FFP have two expiry dates?

# Scenario 3: Platelets

Name: GRAHAME-McGOVER, CULLEN  
MRN: 578521  
DOB: 18/09/1998



**Cullen Grahame-McGover is a 19-year-old male who has presented with a history of upper respiratory tract infections and more recently pallor, bone pain, fatigue and dizziness today (20/10/17). Tests conclude the diagnosis to be acute myeloid leukaemia. A gastrointestinal haemorrhage has also been found.**

Important parts of Cullen's care are platelet transfusions to maintain a platelet count greater than  $10 \times 10^9/\text{L}$ . This decreases the risk and occurrence of bleeding complications associated with leukaemia and chemotherapy.

## Activity

With a partner, check Cullen Grahame-McGover's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.

# Scenario 3: Platelets

Name: GRAHAME-McGOVER, CULLEN  
MRN: 578521  
DOB: 18/09/1998



## Additional learning

1. What are platelets?
2. What are the clinical uses of platelets?
3. What are the minimum observations when transfusing platelets?
4. What signs and symptoms are being looked for during observations?
5. What should be considered if a transfusion reaction is suspected with platelets?
6. What are the compatible intravenous solutions for platelets?
7. What are the incremental changes/responses in platelet count that you would expect following the transfusion?

# Scenario 4: Cryoprecipitate

Name: YORDANYOTOU, VLADISLAV  
MRN: 927659  
DOB: 18/04/1972



**Vladislav Yordanyotou is a 45-year-old male admitted to the emergency department following a motor vehicle accident on his way home from work today (27/10/18). He is conscious and able to speak with the doctors. His medical history includes liver disease secondary to chronic hepatitis, hypertension and gastro-oesophageal reflux disease.**

Severe internal bleeding from the trauma complicated by the presence of liver disease has been determined, and he is rushed to surgery to find the cause. Cryoprecipitate is transfused as part of his critical bleeding/massive transfusion management.

## Activity

With a partner, check Vladislav Yordanyotou's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.



# Scenario 4: Cryoprecipitate

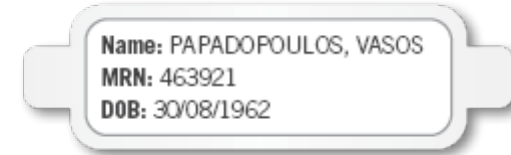
Name: YORDANYOTOU, VLADISLAV  
MRN: 927659  
DOB: 18/04/1972



## Additional learning

1. What is cryoprecipitate?
2. What are the clinical uses of cryoprecipitate?
3. What are the minimum observations when transfusing cryoprecipitate?
4. What signs and symptoms are being looked for during observations?
5. What are the compatible intravenous solutions for cryoprecipitate?
6. What is critical bleeding?

# Scenario 5: Thalassaemia



**Vasos Papadopoulos is a 55-year-old male with thalassaemia major. This condition results in severe anaemia requiring regular red cell transfusions, approximately every three to four weeks. He is undergoing a transfusion today (25/10/17).**

## **Activity**

With a partner, check Vasos Papadopoulos's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.

# Scenario 6: Neonatal



**Asadi Yousefzai is a neonate with anaemia due to RhD incompatibility and requires red cells.**

His young mother (pregnant three times, birthed twice) presented to hospital in labour today (25/10/2017). She is RhD negative and did not receive Anti-D prophylaxis during her previous pregnancies. Maternal anti-D antibodies have been detected for the first time late in her third pregnancy. She gives birth to a 32-week preterm baby boy, weighing 2 kg. The infant appeared pale and needed low flow oxygen supplement. The infant also has mildly low arterial BP and significant anaemia with a Hb of 100 g/L.

The doctor prescribes Asadi 30 mL of red cells (15 mL/kg) to increase BP and start correcting the anaemia.

## **Activity**

With a partner, check Asadi Yousefzai's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.

# Scenario 6: Neonatal



## Additional learning

1. What are the clinical benefits of using a paediatric red cell component?
2. What considerations need to be taken into account when obtaining consent to perform blood transfusions in neonates?
3. What special equipment might be required for a neonatal blood transfusion?
4. What special requirements need to be fulfilled in order for the red cell transfusion to be safe for the neonate?
5. What are the signs and symptoms of adverse events in a neonate?
6. What if the baby has not been named yet?

# Scenario 7: Paediatric



**7-year-old Maxwell Ferguson presented to the emergency department with a 2-week history of abdominal pain, fever, malaise, loss of appetite and weight loss. He was noted to have a distended abdomen with a palpable mass on examination. Following multiple investigations, Max was diagnosed with stage 4 neuroblastoma.**

The decision was made for Maxwell to have several courses of high-dose chemotherapy and a stem cell transplant. Today is day +7 following transplant (25/10/17), Maxwell was noted to have a petechial rash and was experiencing nose bleeds. His platelet count was  $7 \times 10^9/L$ . Maxwell's doctor prescribed one unit of platelets.

## Activity

With a partner, check Maxwell Ferguson's blood component pack. Use the appropriate documentation to ensure it matches the component to be transfused.

# Scenario 7: Paediatric



## Additional learning

1. What considerations need to be taken into account when obtaining consent to perform blood transfusions in paediatric patients?
2. What special equipment might be required for a paediatric blood transfusion?
3. Are there any additional safety precautions that need to be taken into account for platelet administration?
4. What are the signs and symptoms of adverse events in paediatric patients?
5. If a transfusion reaction does occur with platelets, what should be considered?



# Resources for further learning

## **Blood Compatibility Card**

This quick reference card covers the basics of ABO and RhD compatibility for red cells, platelets and plasma components.

## **Blood Component Administration Checklist**

A quick reference guide for the administration of fresh blood components including red cells, platelets and plasma.

## **Blood Product Administration Checklist**

A quick reference guide for the administration of fractionated blood products including immunoglobulins, albumin and clotting factors.

## **iTransfuse App**

The iTransfuse App includes interactive versions of the checklists, as well as a library of easy access resources including:

- Blood Component Administration Checklist
- Blood Product Administration Checklist
- Blood Compatibility Card
- Acute Transfusion Reactions Card

## **Blood Book:**

### **Australian Blood Administration Handbook**

A handbook to assist health professionals in safe transfusion practice, including information on the range of blood components and products, guidance on the safe use and administration of blood components and products.



# The app to support your transfusion practice

Download the free app at [\*\*itransfuseapp.com\*\*](https://itransfuseapp.com)

# Checking the patient and pack before transfusion

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[transfusion.com.au/packcheck](https://transfusion.com.au/packcheck)





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Information for patients about blood transfusion.



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