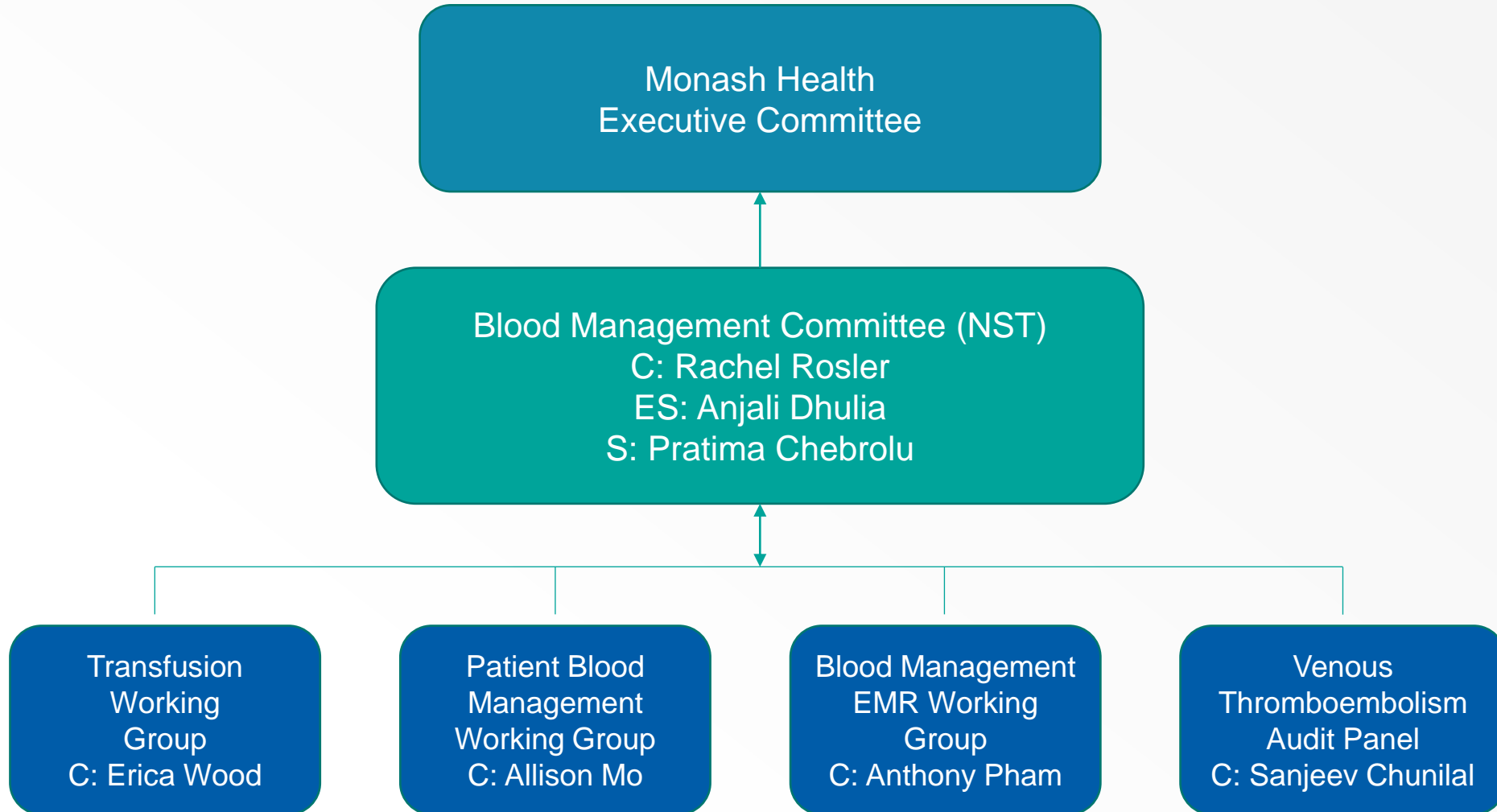




# Blood Management Standard

Employee forum 4/10/22

# Governance



# Areas to be highlighted



- EMR
- PBM – Patient Blood Management
- Consumer input – consent, SCIG
- Research



# Blood Management

- Specific functionality developed in EMR to support the blood administration workflow
- Focused on
  - Blood Product View Results Flow Sheet to easily oversee the supply and administration of blood products
  - Interactive View documentation witness signature to ensure double checking occurs where necessary
  - Matched list of fresh and batched products for ordering and documentation
  - Matched list of special requirements specific to the product
  - Real time electronic ordering of blood products which have decreased critical **sample** collection errors, lack of **clinical indication** and **transfusion history**. This has also assisted in time critical requests.
- Live demonstration of EMR



# Order Details transmitted to LIS

LOC: CW44	XREF:	COL: 27/07/22 09:03
NOTE! Sp.Comms :Irradiated products.		?? PREG
225015154 BGAB		
225015154 EI		
CLINICAL NOTES		
Clinical Information: 60M Burkitts lymphoma + HLH, anaemic		
specimen type: BLDBlood		
antibodies: UNK		
previous Transfusions: YES		
transfusion Reactions: NO		
BO: A		
Rh D: POSITIVE		
AddOn Clinical Information: 60M burkit lymphoma anaemic		
AddOn Special Requirements: Irradiated		
AddOn Transfuse Reason: Bone Marrow Failure		
CLINICAL NOTES		
AddOn Quantity Description: 1 units		
AddOn Date/Time Product Required: 27/07/2022 09:39AM		
AddOn Treatment Location: Monash Medical Centre, Clayton		



# Best Practice Program



## EMR Best Practice Passport – Documenting Blood Administration, Fluid Balance Charting, Lines and Devices Care and Pathology Collection

*This Passport will provide you with a checklist of resources to review for EMR Documentation of Blood Administration, Fluid Balance Charting, Lines and Device Care and Pathology Collection. Utilise the Key Workflow videos as your Primary Resource. Refer to QRG's and e-Learning videos, as listed below, for further reference.*

*Note: Prior to any documentation in the EMR, 3 points of patient ID must be used to ensure that the correct record is accessed, and the patients' Allergy status must be reviewed.*

### Blood Administration

- [Video: EMR Blood Product Administration](#)
- [Key Workflow: Massive Blood Transfusion Retrospective Documentation](#)
- [Blood and Manufactured Blood Product Administration QRG](#)
- [Reviewing Blood product Orders and Administration QRG](#)
- [Anti D and Hepatitis B Immunoglobulin Ordering and Administration](#)
- [Retrospective Documentation of Blood Product](#)

- [Key Workflow: Fluid Balance Chart – Blood Administration](#)

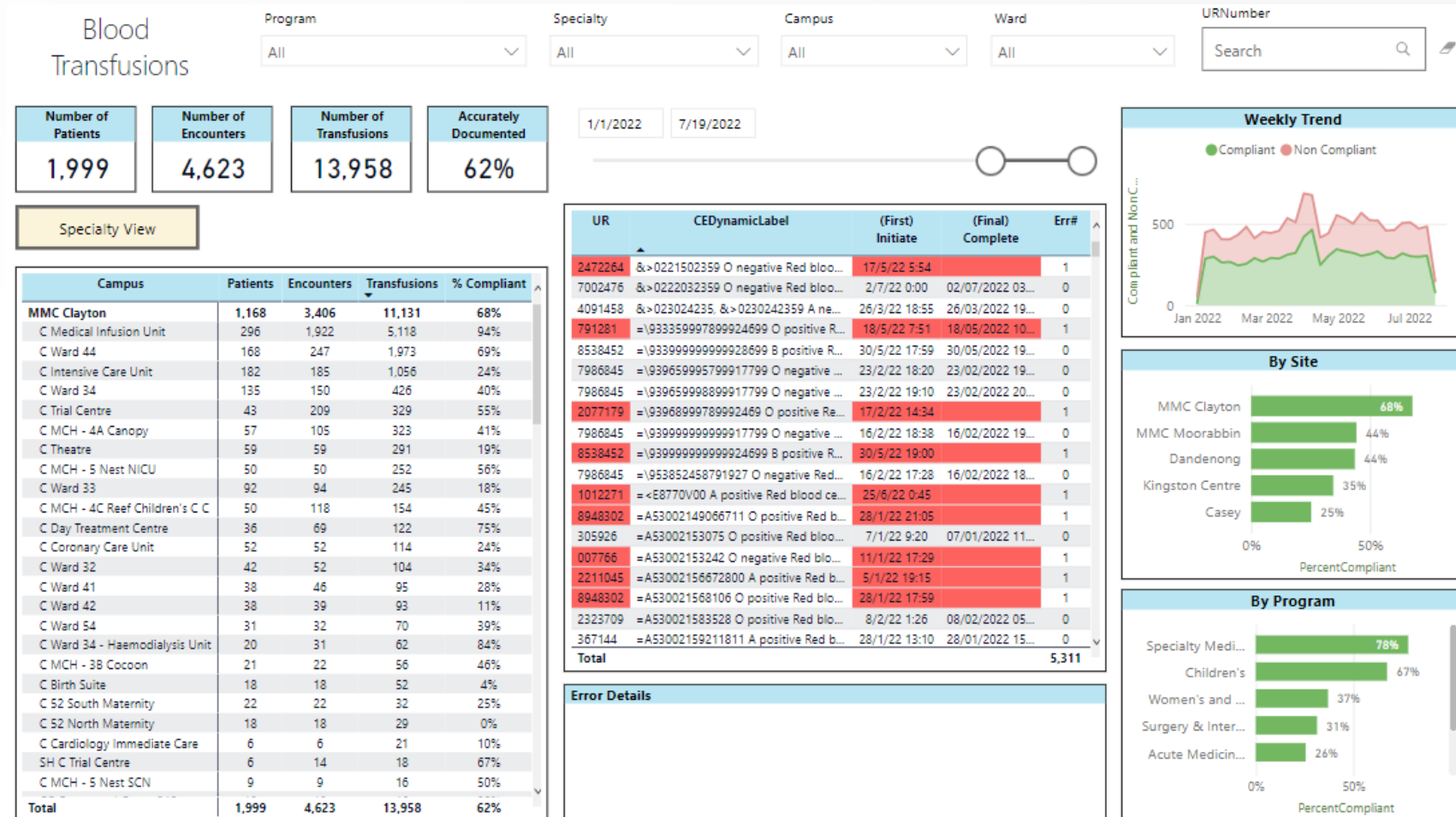
- [Video: Fluid Balance Chart Overview](#)
- [Fluid Balance Charting in Interactive View QRG](#)
- [Fluid Balance Paediatric Documentation QRG](#)

### Lines and Device Care

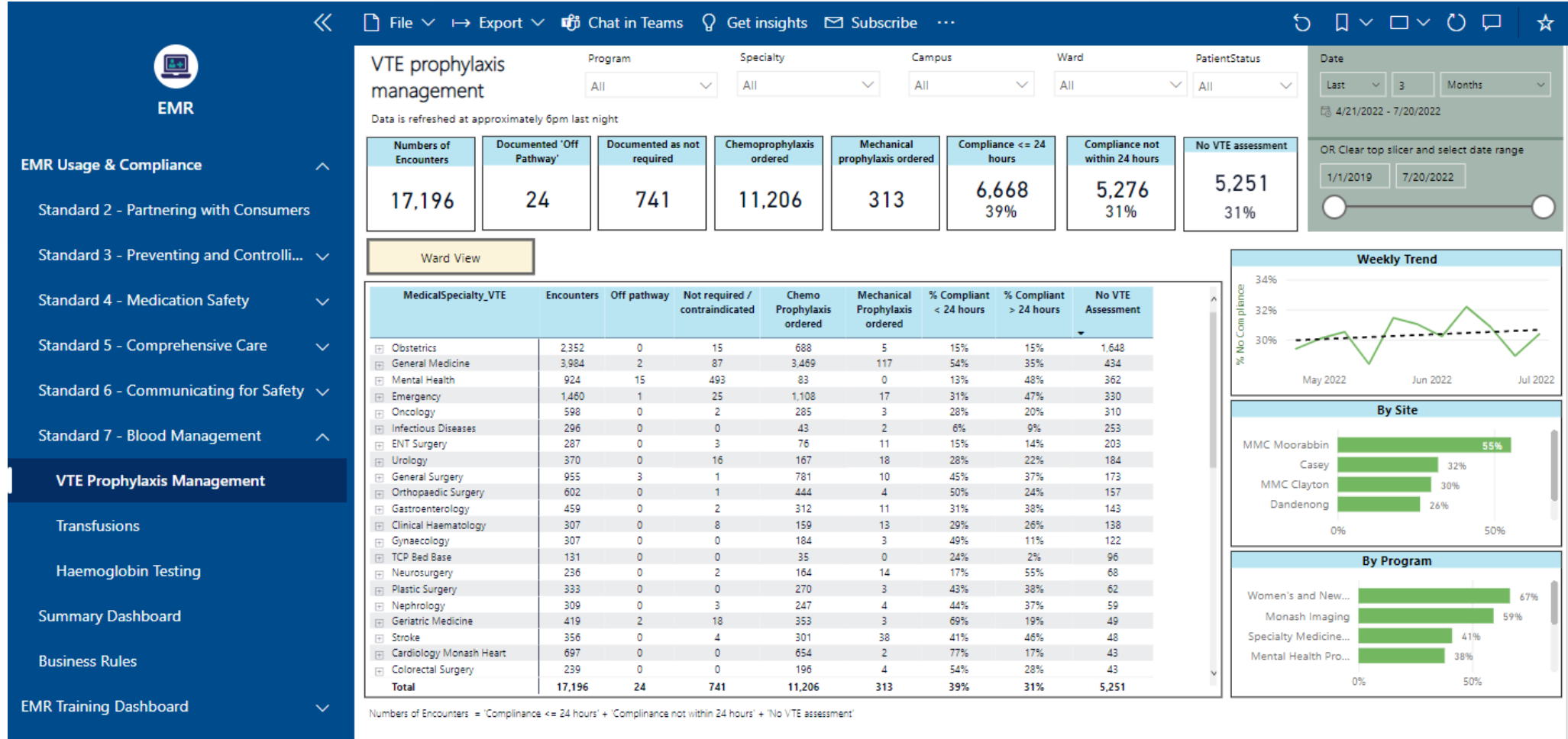
- [Video: Intravenous Cannula Documentation](#)
- [Peripheral Intravenous Cannula Documentation QRG](#)
- [Arterial Lines Venous Devices and Site assessment QRG](#)



# Transfusion dashboard



# VTE dashboard





# Patient Blood Management (PBM)

- PBM working party
- Aim to improve PBM practice at Monash Health, via:
  - Development and ongoing review of relevant policies and protocols
  - Education and information sessions for medical, nursing, laboratory staff
  - Facilitating further working parties in other relevant specific areas (eg preoperative anaemia)
  - Conducting relevant audits to monitor PBM practice and feedback to relevant units
- Preoperative anaemia and iron deficiency
- Single unit red cell transfusion



# Preoperative anaemia and iron deficiency: clinical guideline



## Pre-operative Anaemia and Iron Deficiency (Adult) Clinical Guideline

### TABLE OF CONTENTS

AUTHORS .....	1
TARGET AUDIENCE and SETTING .....	1
DEFINITIONS .....	1
CLINICAL GUIDELINE .....	1
CLINICAL PATHWAY FLOWCHART.....	10
ADDITIONAL RESOURCES .....	11
KEY LEGISLATION AND STANDARDS.....	11
REFERENCES.....	11

### AUTHORS

This Clinical Guideline has been developed by Haematology and Anaesthetics units, in consultation with Surgical and Gastroenterology units.

### TARGET AUDIENCE and SETTING

- Clinicians responsible for the clinical assessment, care planning and management of patients scheduled for elective surgery.
- Surgical and anaesthetic nursing staff involved in the assessment and planning of patients scheduled for elective surgery.
- This clinical guideline applies to adult patients scheduled to undergo major elective surgery at Monash Health with expected significant blood loss. See below for a list of included surgical procedures.
- This guideline does not apply to pre-operative patients who refuse blood products. Please refer to the relevant guidelines “Refusal of Blood Products” and “Medications for Adult Patients Declining Blood Products”

- Developed in consultation with:
  - Haematology
  - Anaesthetics
  - All surgical units
  - HITH
  - Gastroenterology
  - Pharmacy
  - Perioperative nursing



# Single unit transfusion

- NBA guidelines module 3 “Medical”
- *Where indicated, transfusion of a single unit of RBC, followed by clinical reassessment to determine the need for further transfusion, is appropriate*

## Single Unit Blood Transfusion

Only **ONE unit of blood** should be ordered if the inpatient does not have clinically significant bleeding

**Each unit transfused is an independent clinical decision**

Second unit can be requested after patient has been assessed and remains symptomatic

Indications for a second unit:

- Active blood loss
- Ongoing symptoms of anaemia

For more information on patient blood management visit [www.blood.gov.au/pbm-guidelines](http://www.blood.gov.au/pbm-guidelines) to access the latest guidelines.



# Single Unit Red Cell Transfusion (Adult) Procedure



## Single Unit Red Cell Transfusion (Adult)

### TABLE OF CONTENTS

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[Target Audience and Setting](#)

[Purpose](#)

[Definitions](#)

[Precautions/Contraindications](#)

[Procedure](#)

1. Summary Points
2. Why
3. Iron Deficiency Anaemia
4. Blood Bank Procedure
5. Flow chart

### **Why use Two when ONE will do?**

Only one unit of red cells has been released.  
If a second unit is still required after clinical assessment,  
the Doctor will need to place a new order in EMR or  
on MRL28 after this first unit is completed.

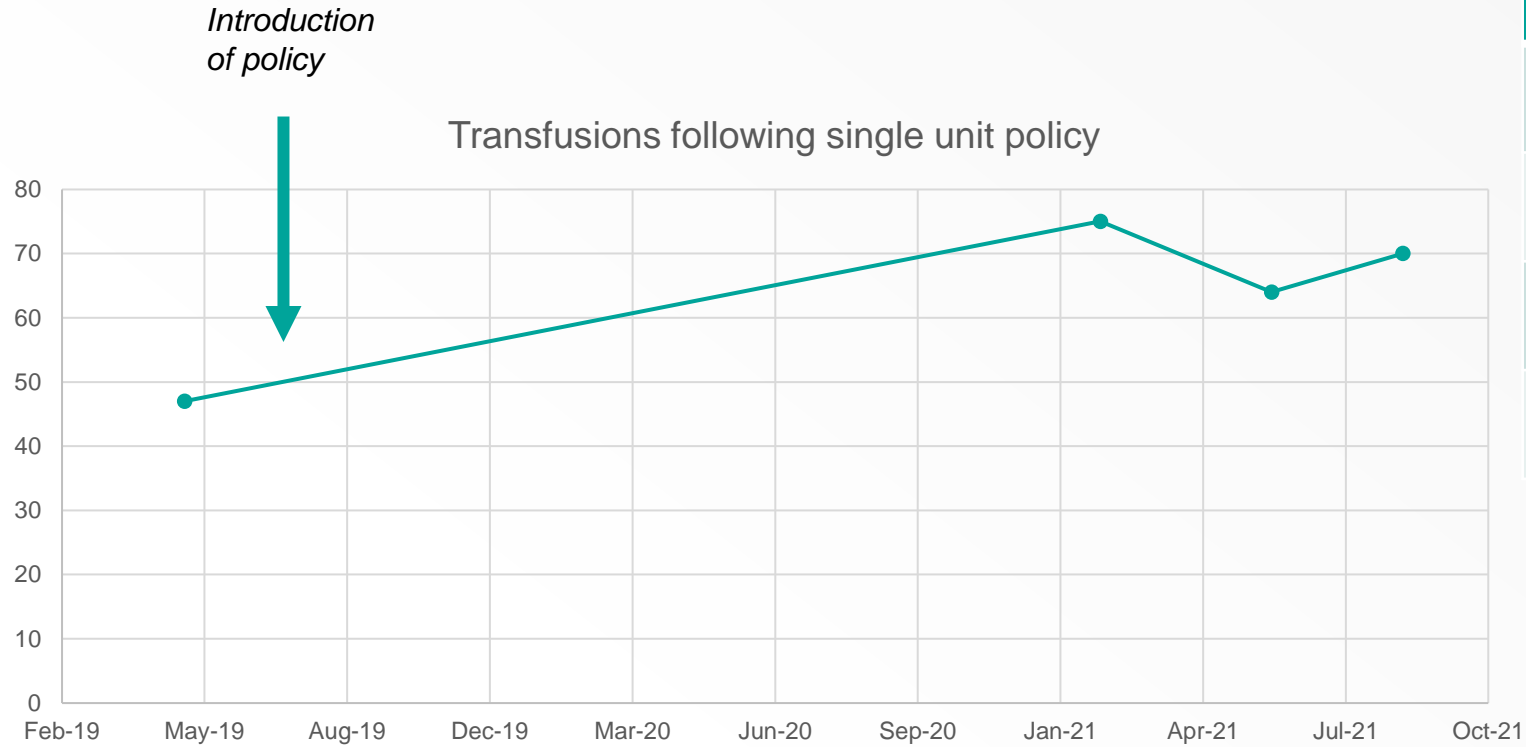
### **Why use Two when ONE will do?**

Only one unit of red cells has been released.  
If a second unit is still required after clinical assessment,  
the Doctor will need to place a new order in EMR or  
on MRL28 after this first unit is completed.



# Follow up audits

% of RBC transfusions following single unit policy

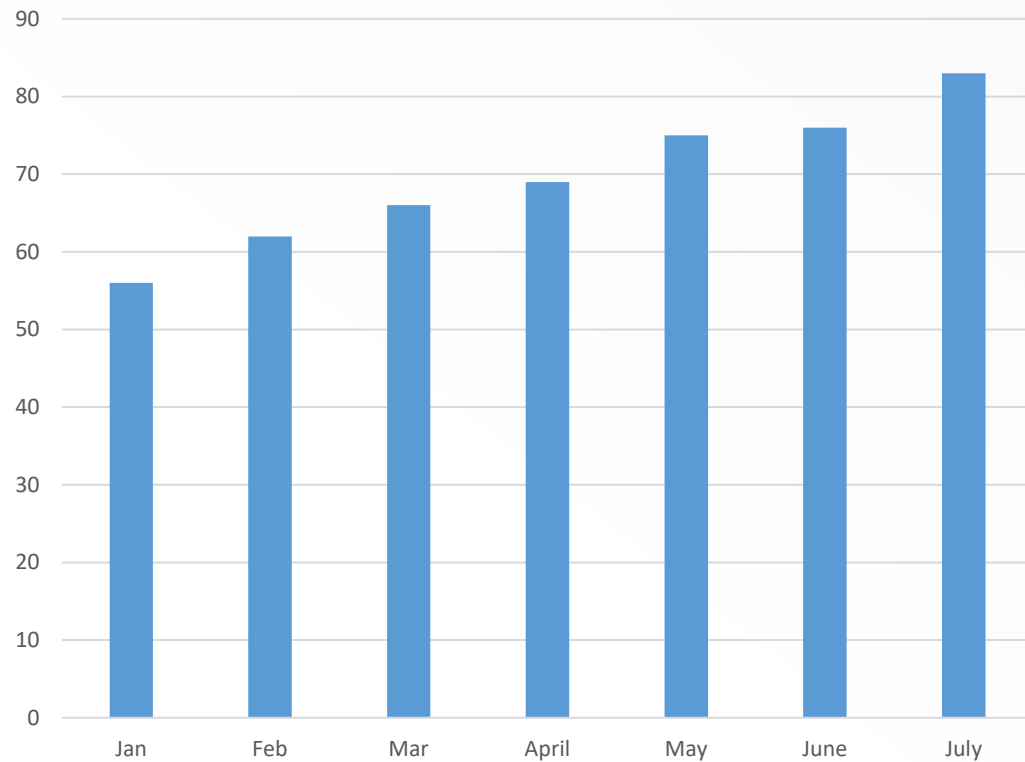


Date of audit	No. transfusion episodes	% single unit
23/5/19-29/5/19	200	47%
01/02/21-08/02/21	284	75%
01/06/21-07/06/21	124	64%
1/09/21-08/09/21	147	70%



# Subcutaneous Immunoglobulin

Monash Health patients on SCIg 2022



## Monash Health Guiding Principal

We orientate care towards our community to optimise access, independence, and wellbeing



“Joining the SCIg program has been lifechanging! My Ig levels are finally rising and I feel super comfortable with the process and my lifestyle is much more “doable” as a consequence of SCIg. I am a massive advocate”

Carolyn

Primary immunodeficiency diseases (PID)

“I cant begin to tell you how great it is to be able to administer my treatment in my own home...I was scared to take the leap...but its the best decision I have made as I can take control of my own recovery, and not having to come back into hospital my mental health is the best is has been in a long time. Knowing that I can reach out at any time is a relief too!”

Caryn

Chronic inflammatory demyelinating polyneuropathy (CIDP)

“What seemed daunting at first is now second nature...the biggest advantage of switching to SCIg from IVIg apart from not having to travel and spend the whole day to Monash Hospital every 28 days is the freedom it now gives me to enjoy my retirement.

We have spent a lot of time in our caravan without having to plan around 4 weekly visits. I could not do this before.

Thanks for your efforts and patience in swapping me over”

Alex

Chronic inflammatory demyelinating polyneuropathy (CIDP)





# Consent form review

Information for Clinicians	
Consent information and a complete list of blood products can be found in the Obtaining consent to administer blood products Procedure on PROMPT	
<b>Transfusion Risks</b> Transfusion risk classifications and estimates Incidence of adverse transfusion reactions <a href="https://transfusion.com.au/">https://transfusion.com.au/</a>	
<b>Other blood products</b> Monash Health clinical intranet >transfusion service <a href="http://intranet.southernhealth.org.au/transfusion/piinfo_sheets.htm">http://intranet.southernhealth.org.au/transfusion/piinfo_sheets.htm</a> OR Monash Health patient information library <a href="http://intranet.southernhealth.org.au/quality/Patient%20Experience/patient_information_general.html">http://intranet.southernhealth.org.au/quality/Patient%20Experience/patient_information_general.html</a>	<b>Monash Health intranet</b> - information can be printed and given to patients
Information for Patients	
<b>Receiving a blood transfusion</b> -information for patients <a href="https://transfusion.com.au/node/2481">https://transfusion.com.au/node/2481</a>	
<b>Babies receiving a blood transfusion</b> -information for parents <a href="https://transfusion.com.au/node/2185">https://transfusion.com.au/node/2185</a>	
<b>Children receiving a blood transfusion</b> -information for parents and caregivers <a href="https://transfusion.com.au/node/2210">https://transfusion.com.au/node/2210</a>	
<b>Additional languages</b> <a href="https://www.ccc.health.nsw.gov.au/keep-patients-safe/blood-watch/information-for-patients">https://www.ccc.health.nsw.gov.au/keep-patients-safe/blood-watch/information-for-patients</a>	
<b>Further information</b> for patients to learn about different transfusions, risk and benefits and what to expect <a href="http://www.mytransfusion.com.au">www.mytransfusion.com.au</a>	



Dandenong Hospital     Monash Medical Centre Clayton  
 Kingston Centre     Moorabbin Hospital  
 Jessie McPherson     Monash Health Community  
 Casey Hospital     Cranbourne Integrated Care Centre

*Affix Patient Identification Label*

Unit Record Number: \_\_\_\_\_

Surname: \_\_\_\_\_

Given Name: \_\_\_\_\_

D.O.B: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Address: \_\_\_\_\_

---

**Clinician to Complete**

<b>Duration of consent</b>  <input type="checkbox"/> <b>For this admission only</b>  <input type="checkbox"/> <b>Consent for 12 months</b> For transfusion dependent blood disorder or Immunoglobulin deficiency  <input type="checkbox"/> <b>Consent for 12 months</b> RhD immunoglobulin for obstetric/pregnancy care	<b>Blood products</b> <i>tick applicable products for consent</i> <input type="checkbox"/> Red cells <input type="checkbox"/> Platelets <input type="checkbox"/> Fresh Frozen Plasma <input type="checkbox"/> Cryoprecipitate <input type="checkbox"/> Cryodepleted Plasma <input type="checkbox"/> Granulocytes  <b>Manufactured Plasma product</b> <input type="checkbox"/> Albumin <input type="checkbox"/> Immunoglobulin Specify..... <input type="checkbox"/> Coagulation Factors Specify..... <input type="checkbox"/> <b>Recombinant products/other</b> Specify.....	<b>Patient information</b>  Written, QR code or other information on relevant blood products has been provided:  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Declined    QR code: <i>Receiving a transfusion.</i> See reverse for additional languages and information options.
---	--	--

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**Patient Consent**

I have been advised of the need for treatment using blood products for:  ..... (clinician to write clinical indication)  I agree to this treatment and understand the following matters as explained by the Clinician: <ul style="list-style-type: none"> <li>• the reason why the transfusion is recommended;</li> <li>• the product(s) recommended and what they do;</li> <li>• the expected benefits;</li> <li>• alternative treatments (if any) and;</li> <li>• the potential risks arising from both transfusion and not receiving transfusion.</li> </ul>	Patient Name <i>please print</i> ..... Medical Treatment Decision Maker Name <i>please print or N/A</i> ..... Relationship to patient ..... Signature: ..... Date: / /
---	---

---

**Clinician Declaration**

I have explained to the patient / Medical Treatment Decision Maker information about treatment using blood products and I am of the opinion that they have understood the information and had an opportunity to ask questions.  Where required I have used an interpreter and this has been recorded below  <input type="checkbox"/> <b>Consent obtained via Telehealth</b>  Forward MRM001 to treatment area in time for appointment and patient signature	Clinician name <i>please print</i> ..... Signature: ..... Designation: <i>tick appropriate box</i> <input type="checkbox"/> Consultant <input type="checkbox"/> Registrar <input type="checkbox"/> HMO <input type="checkbox"/> Intern <input type="checkbox"/> Nurse Practitioner / Midwife Contact number/pager: ..... Date: / /
---	---

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**Interpreter Required**

Language.....  If required but not used, reason.....	Name of interpreter <i>please print</i> ..... Signature: .....
--	---

BLOOD PRODUCT CONSENT FORM

MRM001

MRM001  
08/21





# Research to optimise transfusion support and identify alternatives to transfusion

## Clinical trials



- **TREATT:** Tranexamic acid in haem/onc patients (NHMRC)
- **DIAAMOND:** Avatrombopag to increase blood counts in aplastic anaemia (MRFF)
- **COVID-19 convalescent plasma:** REMAP-CAP (ICU), ASCOT (less severe) (MRFF)
- **REDDS2:** Hb threshold and RBC transfusion interval for outpatients with MDS
- **RATIONALISE:** Continue v stop Ig Rx in patients with blood cancers (NHMRC)
- **HABIT:** HLA-matched RBCs to minimise antibody formation in patients with end-stage kidney disease planned for live donor kidney transplant
- **WashT:** Washed vs unwashed RBC to reduce morbidity & mortality in infants born <28w gestation (NHMRC)
- **RECIPE:** ROTEM-guided blood component prophylaxis in patients with cirrhosis and coagulopathy undergoing invasive procedures

## Registries



- Aplastic anaemia (and new biobank, with Biobanking Victoria)
- Myeloma, lymphoma/CLL
- Thalassaemia and sickle cell disease
- TTP: thrombotic thrombocytopenic purpura
- FNAIT: fetal/maternal alloimmune thrombocytopenia



# Research to optimise transfusion support and identify alternatives to transfusion

## International practice surveys



- Home transfusion
- Massive transfusion definitions project
- COVID-19 effects on transfusion services

## Health economics studies:



- Hospital costs of RBC transfusions in patients with myelodysplasia
- Hospital costs of immunoglobulin infusions

## Other projects:



- Cochrane reviews of convalescent plasma, hyperimmune Ig and monoclonals for COVID-19
- Decision support tool for massive transfusion (PhD, Brenton Sanderson, Westmead/Macquarie)

## Developing national research capacity, and transfusion science and clinical practice expertise



- Blood Matters collaborative
- VIC Immunohaematology Discussion Group, National Immunohaem Continuing Education
- ANZSBT, International Society of Blood Transfusion, International Haemovigilance Network, Biomedical Excellence for Safer Transfusion
- NHMRC Blood Synergy research program, PhD and other projects

