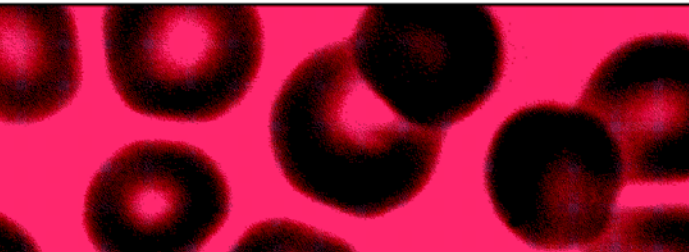


Blood Matters Breakthrough Collaborative

Improving Transfusion Practice



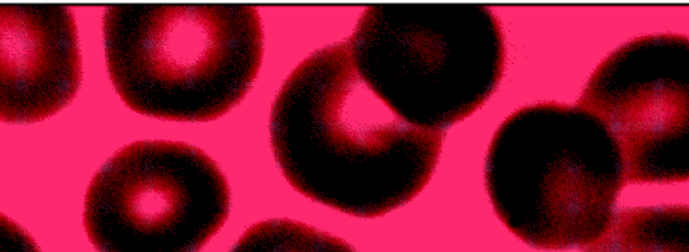
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Project Structural Outline

5 Areas for Improvement

- Aligning Clinician decision making about transfusion within guideline recommendations.
- Enhancing patient understanding of the risks and benefits of transfusion
- Improving the capture of error and adverse events in transfusion practice
- Improving blood product and patient/sample identification
- Improved handling and storage of blood products
- Improving the protocols and procedures for administration of blood products.



Rationale

- Variable knowledge among clinicians of risks and benefits of transfusion
- Results of research into best transfusion practice inadequately disseminated
- Current clinical practice not reflecting latest research findings or professional guidelines

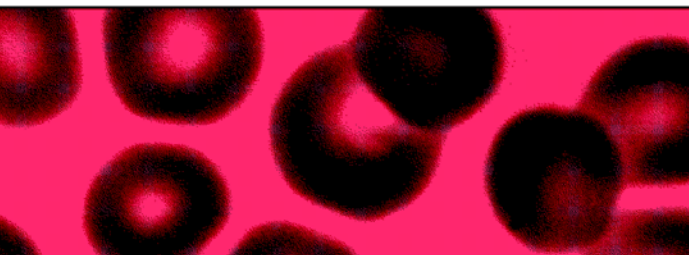


Peter Mac

Appropriateness of Usage

Blood Product	Hospital 1		Hospital 2		H1 vs H2	
	Total	Inappropriate (%)	Total	Inappropriate (%)	z	p > z
Red Cells						
Transfusion episodes	81	16 (19.8)	50	13 (26.0)	0.84	0.4028 †
Units transfused	154	21 (13.6)	104	18 (17.3)		
Platelets						
Transfusion episodes	94	25 (26.6)	50	18 (36.0)	1.17	0.2404 †
Units transfused	466	130 (27.9)	259	99 (38.2)		
Fresh frozen plasma						
Transfusion episodes	87	37 (42.5)	50	26 (52.0)	1.07	0.2842 †
Units transfused	325	139 (42.8)	166	82 (49.4)		

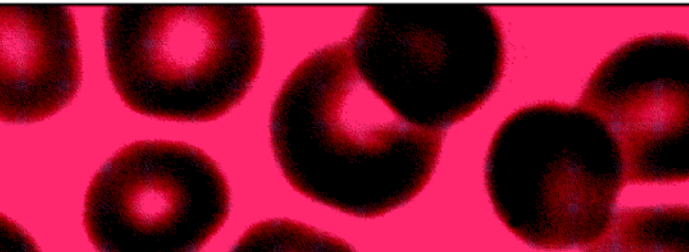
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Durability of response to intervention

Blood Product	% Inappropriate			1996 vs 1999 *		1993 vs 1999 *	
	1993	1996	1999	z	p > z	z	p > z
Red Cells	16.0	3.0	19.8	4.74	< 0.0000	0.76	0.4489 †
Platelets	13.0	2.5	26.6	6.37	< 0.0000	2.87	0.0041
Fresh frozen plasma	30.0	15.0	42.5	5.07	< 0.0000	2.06	0.0392

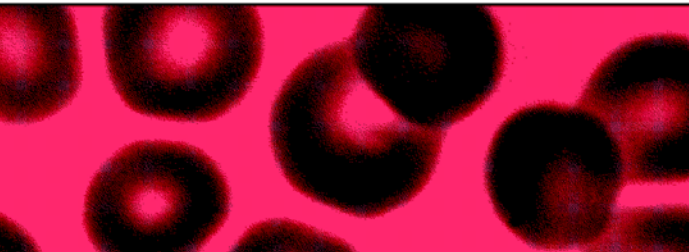


Purpose of NH&MRC Guidelines

- Align clinical practice with Guidelines
- Reduce inappropriate use of blood
- Reduce adverse events
- Make best use of valuable community resource

Guidelines for appropriate use of red blood cells

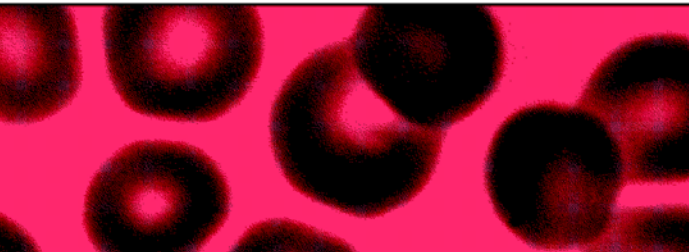
- Consider potential risk versus expected benefit
- Hb > 100 g/L - not likely to be appropriate unless specific indications
- Hb 70 - 100 g/L – may be appropriate if signs or symptoms of impaired oxygen transport, requires individual assessment
- Hb < 70 g/L – lower thresholds may be acceptable in patients without symptoms, consider whether reversible by other means



Guidelines for appropriate use of FFP and cryoprecipitate

May be appropriate in:

- Acute DIC
- TTP
- Warfarin effect – in addition to Vit K.
- Coagulation inhibitor deficiencies – use specific factors where available
- Liver disease – if bleeding and abnormal coagulation
- Massive transfusion or cardiac bypass



FFP NOT Recommended:

- Single coagulation factor deficiency
 - use specific factor where available
- Chronic DIC

FFP Contraindicated:

- Hypovolaemia
- Plasma exchange
- Treatment of immunodeficiency

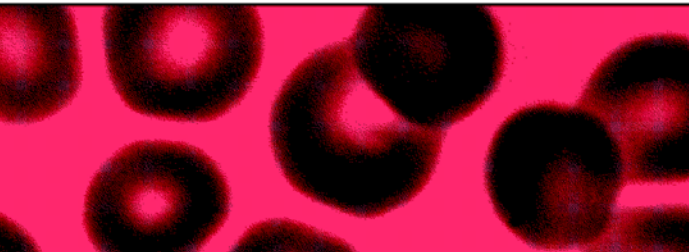
Guidelines for appropriate use of platelets

BONE MARROW FAILURE

- Platelet count $< 10 \times 10^9$ L in absence of risk factors
- Platelet count $< 20 \times 10^9$ L in presence of risk factors e.g. fever, antibiotics

BLEEDING

- Where thrombocytopenia is a factor

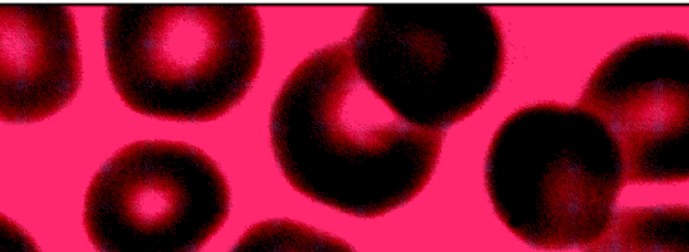


SURGERY/ INVASIVE PROCEDURE

- To maintain platelet count $> 50 \times 10^9$ L
- Ocular/Neuro surgery – where high risk of bleeding, to maintain platelet count 100×10^9 L

PLATELET FUNCTION DISORDERS

- May be appropriate in inherited/ acquired disorders
- Platelet count not a reliable indicator



Other recommendations of the guidelines.

- Transfusion request form to contain NH&MRC Guidelines summary.
- Use monitored by hospital transfusion committee.
- Patient informed consent / what constitutes consent?

Benefits of using NHMRC Guidelines

- Improves consistency & appropriateness of practice
- Decreases overall no. of transfusion-related complications
- Conserves a limited resource
- Increases community awareness of issues surrounding blood therapy
- Monitoring / Appropriateness / Integration into QMS leads to accepted practice

Blood Matters Breakthrough Collaborative

- Auspiced by Victorian Quality Council
- High priority of Clinical Innovation Agency & Executive Sponsors
- Hospital Transfusion Committee's will actively participate in project