



# The use of O RhD negative red blood cells according to guidelines audit report 2018

Summary presentation for health services.

Full report available at:

[https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/speciality-diagnostics-therapeutics/blood-matters/~/\\_/link.aspx?id=3D24150FF61C47F4B1C9E861131472D6&z=z](https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/speciality-diagnostics-therapeutics/blood-matters/~/_/link.aspx?id=3D24150FF61C47F4B1C9E861131472D6&z=z)

# Audit: Use of Group O RhD negative RBC

## 17% demand vs 9% population

- **mismatch** between demand for group O RhD negative units and the population who are O RhD negative
  - » This cannot be sustained

Victorian data	2011	2017	% change
Total RBC issued	210,593	176,685	↓ 16%
O RhD neg issued	24,594	29,263	↑ 19%
O RhD neg issues as a proportion of total RBC issues	12%	17%	↑ 41%



# The audit

To understand the demand for O RhD negative units, Blood Matters audited use compared to the 2008 'Guidelines for the Use of Group O RhD negative red cells'

## Part 1: Policy

- Inventory/stock levels
- Rotation

## Part 2: O RhD negative fate

- Units rotated, transferred or discarded
- Units transfused
  - » Patient characteristics
  - » Transfusion episode – urgency, number of units

November 2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

# Use of Group O RhD negative RBC



## 2008 'Guidelines for the Use of Group O RhD negative red cells'

Indications of use are classified as:

- Mandatory
- Recommended
- Acceptable

# The results



## 93 health services completed the audit (100% response rate)

- 8 health services reported on policy only, no group O RhD negative units were issued during November 2017
- 2,510 units (including 43 paedi-packs) issued to Vic AHPs
- 2,258 unique group O RhD negative RBC units reported on
  - » 2,035 units reported as transfused or discarded
  - » 223 were rotated or transferred with no further report of fate

# The results



Indications of use	Number (%)
Mandatory	170 (8.3%)
Recommended	274 (13.4%)
Acceptable	360 (17.7%)
Generally acceptable	493 (24.2%)
Questionable use	650 (31.9%)
Discarded due to time expiry and damage	88 (4%)

# Other reasons given for use outside guidelines



Other reasons given for selection of RBC unit	Number (%)
<b>Perceived clinical need</b>	
Special requirement (e.g. CMV negative)	48 (2.4%)
Exceeded use of two emergency O neg units	42 (2.1%)
<b>Inventory management</b>	
To prevent time expiry	337 (16.6%)
Patient-specific blood group not held in inventory	80 (3.9%)
Insufficient stock	55 (2.7%)
Other reasons/unknown	88 (4.3%)
<b>Total use outside of the guidelines</b>	<b>650 (31.9%)</b>

# Discussion



## 17% of O RhD negative units were used to prevent time expiry

- Mostly avoidable and relates to inventory management rather than transfusion policy or clinical need
  - » 337 units for one month, in one state of Australia = potential to save 4,044 units in one year
  - » Inventory management is complex for “hubs” receiving “spoke” units
- Due in part, to the success of the National Blood and Blood Product Wastage Reduction Strategy 2013-17
  - » Victoria reduced RBC wastage from 5% - 1.6%
  - » Changed blood groups held at some health services



# Demand for group O RhD negative units must be stabilised



- Efforts to meet the demand has focused on donor marketing, the focus needs to change:
  - » Look at what is pushing demand
  - » Whether it is clinically appropriate
- Increased demand is mostly avoidable and relates to inventory management rather than transfusion policy or clinical need
- It is imperative that group O RhD negative units are
  - » Available for patients, who have no other alternative, when required
  - » Distributed in a manner allowing equitable access
  - » Used responsibly, respecting donor welfare



# Recommendations for health services



- Present and discuss results at the Blood Management committee meeting
- Review laboratory inventory levels where indicated
- Where hub and spoke model is used develop a procedure to flag units close to expiry or time to rotate – automated through laboratory inventory system (LIS)
- Explore options to interface LIS with BloodNet
- Encourage regular discussions with the Blood Service about inventory and proportion of O RhD negative RBC inventory
- Reaudit to measure effect of any practice changes



# Blood Matters - actions



- Publish report and circulate to key stakeholders.
- Promote health service/laboratory awareness of the ‘Guidelines for the Use of Group O RhD negative red cells’.
- Develop a process to provide individual health service/pathology provider support and guidance to align with guidelines with Department of Health and Human Services and the Blood Service.
- Request the National Blood Transfusion Committee and Blood Service review the 2008 Guidelines.