

Good Practice Guidance IV

The use and monitoring of O Rh D Negative red cell stock

Introduction

At the October 2014 London Blood Transfusion Forum data was presented regarding the issue of O RhD negative red cell units to hospitals in the region. The London region receives the highest numbers of O RhD negative red cell units and the average percentage of issues is greater than the national target of 10.5%. Discussion was had regarding the management and review of stock levels of group O RhD negative red cells within hospital transfusion departments and actions that could be taken to ensure this valuable resource is available for patients that cannot receive any other blood group. This would be in preference to NHSBT introducing a premium on O RhD negative red cells if demand continues to be high. It was agreed by the London Regional Transfusion Team to produce a Good Practice Guidance Document to support hospitals with this review process and monitor stock levels.

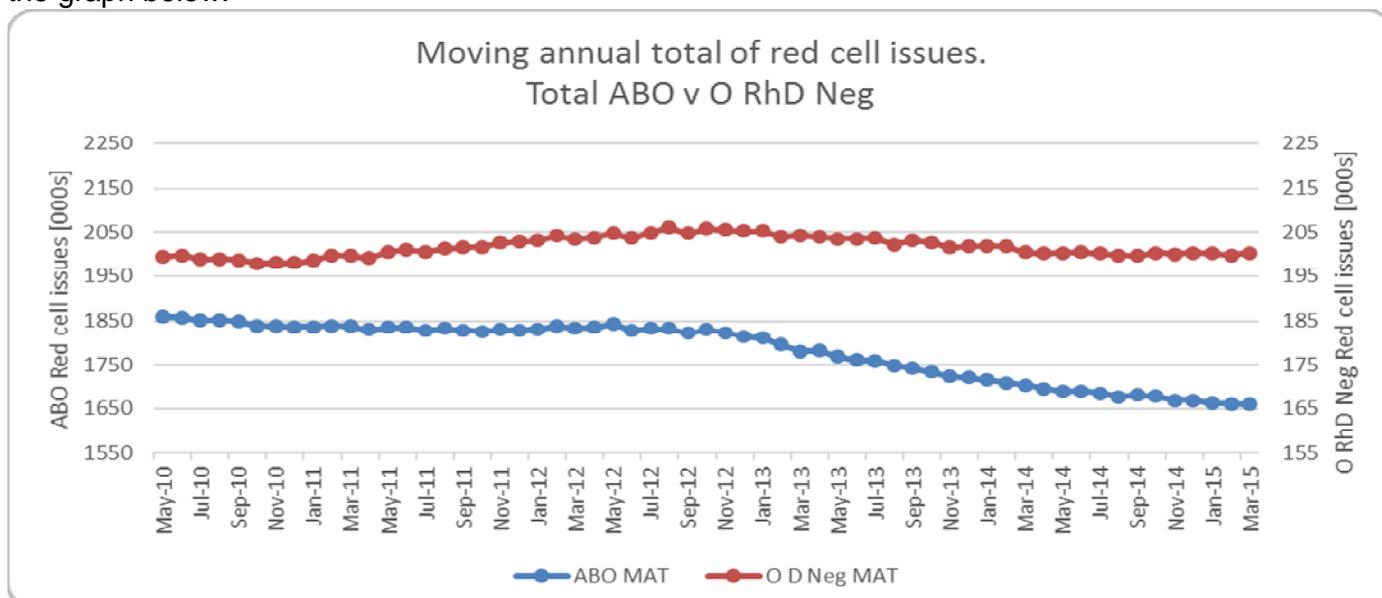
This Good Practice Guidance document provides a process audit for hospitals to review the use of O RhD negative red cells in their hospital and to evaluate the emergency stock levels.

If you would like information about the number of O RhD negative red cells issued to your Hospital please contact your Patient Blood Management Practitioner or Customer Service Manager who will be happy to provide you with the data.

The London RTC Good Practice Documents can be found on the London RTC website under the policy section at <http://www.transfusionguidelines.org.uk/>

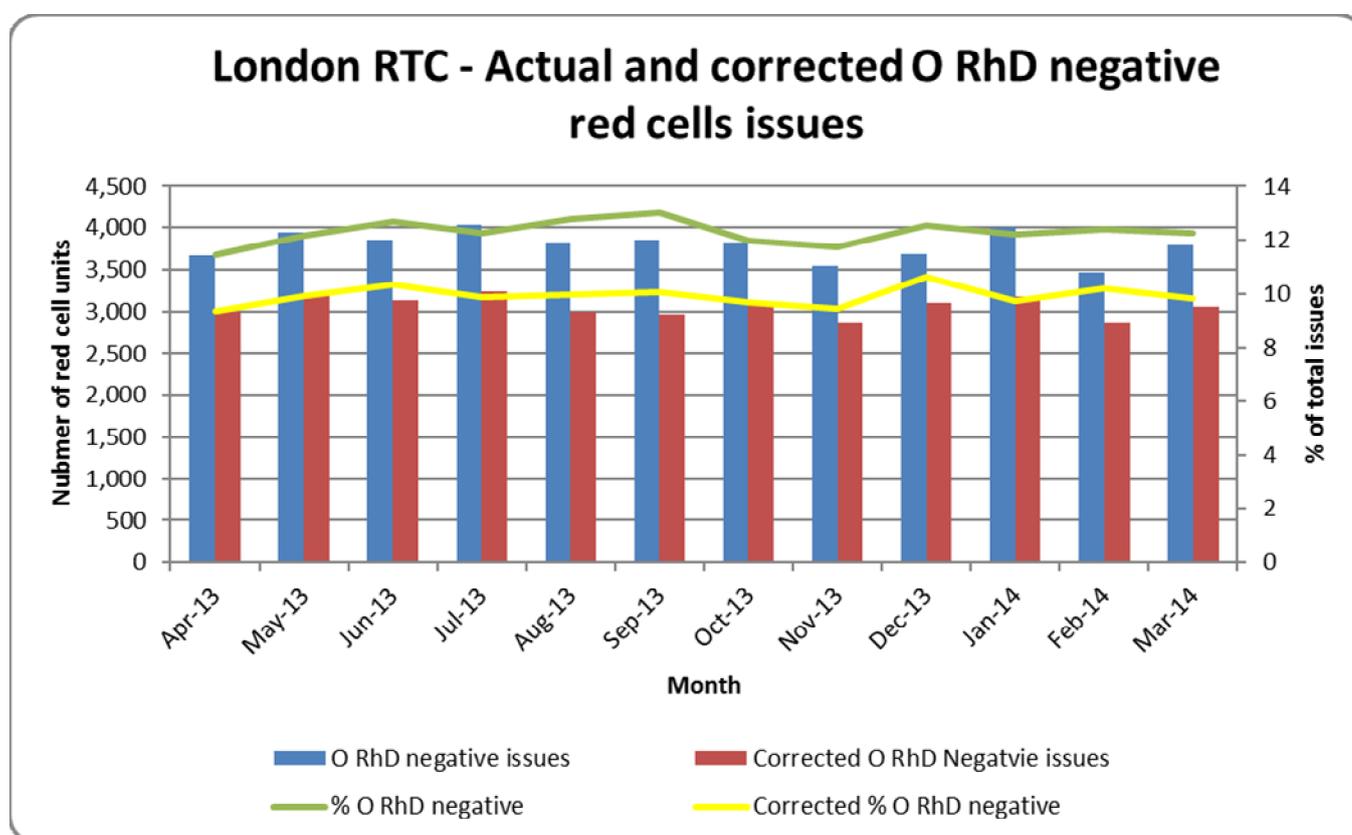
O RhD Negative Red Cell Stocks and London Issues

Over the last 5 years there has been a decrease in the use of red cells in England due to improved surgical techniques and the increased use of alternatives to blood transfusion. This decrease however has not been replicated by issues of group O RhD negative red cells. This has been attributed to the stocking of group O RhD negative red cells for emergency cases in which the blood group is unknown. This is demonstrated in the graph below.



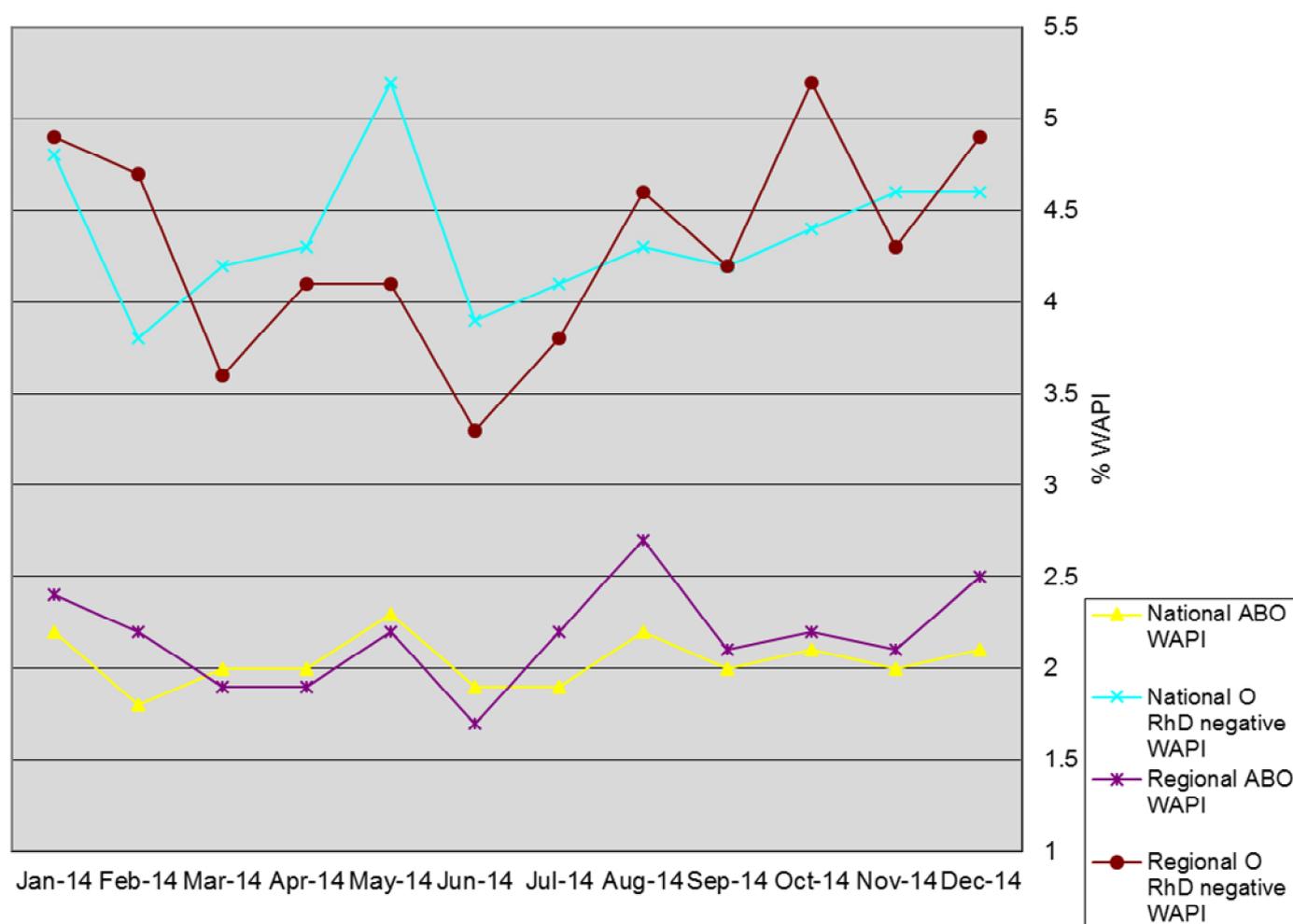
In 2013-14 there were communications sent to Hospital Transfusion Teams from NHSBT regarding low stock levels of O RhD negative red cells. In response to this, NHS Blood and Transplant have looked to increase and retain O RhD negative donors. Following the Audit and re-audit of the use of O RhD negative red cells (2008 and 2010) and based on current prevalence of group O RhD negative in the population a target of 10.5% of total red cell stock was set for hospitals.

It is acknowledged that there is a shortage of donors with compatible Rh phenotypes for some patient groups, especially sickle cell patients that require Ro (Dce/Dce) red cells. In some cases therefore, a number of O RhD negative red cell units are sent to hospitals as a substitution for these phenotyped units. The below graph shows the number of O RhD negative red cell units sent to hospitals as substitutions for other groups ordered. It can be seen that the O RhD negative percentage of issues is reduced to 9.9% when substitutions are taken into account. NHSBT have recognised this and is working to ensure all Ro units are made available for hospitals that request them, there is still a gap between the number of appropriate units available and demand.



In 2014 London hospitals wasted 2006 units of group O RhD negative red cells which equated to 4.3% of stock issued (WAPI). As shown in the graph below this is comparable to the national picture. It can be seen that the WAPI for group O RhD negative components is higher than overall wastage for all components. This may be a reflection of the use of group O RhD negative blood for emergency stock which may expire before being used.

Comparison of Regional and National Wastage as a Percentage of Issue for 2014



What can London do as a region?

Nothing?

It is important to conserve the O RhD negative stocks for patients that are O RhD negative or for unknown female patients faced with life threatening haemorrhage.

Review stock levels locally and discuss at regional meetings?

O RhD negative stocks will be discussed at regional meetings and the Blood Stocks Management Scheme VANESA system can be used to compare hospital red cell issues within speciality and region.

Use the resources on appropriate use of O RhD negative red cells that are currently available?

There are a number of resources available for reviewing red cell stock. These can be found at <http://hospital.blood.co.uk/patient-services/patient-blood-management/o-rhd-neg-red-cell-resources/>

Review and discuss data on survey of O RhD negative practice that will be issued from the National Laboratory Managers group?

There was a survey coordinated by the National Laboratory managers group to look at the use of group O RhD negative red cells and to establish if the recommendations from the NCA audits had been

implemented. The results have been discussed at the transfusion practitioner group meeting and the transfusion advisory groups. The recommendations can be found here <http://www.transfusionguidelines.org.uk/uk-transfusion-committees/national-blood-transfusion-committee/working-groups/transfusion-laboratory-managers>

Share good practice from one site to the next?

Audit has been shown to highlight how blood stock levels can be changed to ensure O RhD negative blood is available for patients that need it but not stocked in excess and used on patients of other blood groups to avoid time expiry. Regular review of blood stock levels has been shown to improve wastage of blood due to time expiry, reducing group O RhD negative stocks by one unit a week can make a difference.

Areas to consider when reviewing group O RhD negative (O-) stock levels

Laboratory Practice		
	Enter details or delete as appropriate	Further Details
Does your hospital have a minimum O- stock level?	Yes/No	Having a minimum stock level ensures you can provide O- blood to patients that require it.
Does your hospital have a maximum O- stock level?	Yes/No	Having a maximum stock level helps prevent over ordering and wastage through time expiry
Is there separate O- emergency stock?	Yes/No	
Is there O- emergency stock held in remote locations? (satellite fridges / spoke hospitals)	Yes/No	
Does your hospital irradiate the emergency stock?	Yes/No	This reduces the shelf life of the blood and may not be necessary depending on the patient demographic
Do you use group O+ red cells for unknown adult males in an emergency situation?	Yes/No	It is recommended in the BCSH guidelines that O+ red cell units can be given to female patients > 50 years and adult males
With how many days shelf life remaining are emergency O- stock returned to the laboratory?		It is recommended that emergency group O- stock is returned to the transfusion laboratory with sufficient time that it might be used for other patients
What % of group O- stock is transfused to patients not group O-?		From looking as a small data set you can determine the number of O- units transfused to patients with other blood groups. In some instances this will be appropriate, stem cell transplant protocol for example.
What is the average shelf life of the O- units transfused to patients with other blood groups?		This is a good indicator as to whether O- stock is being used to prevent time expiry.
How long does it take to move		An audit of the use of red cells in massive

from group O to group specific for emergency unknown patients?		haemorrhage is recommended in the NCA O- audit (2010). This audit tool can be used to review use
Does your hospital stock AB+ and AB- red cells?	Yes/No	Credits are available for unused red cells in these groups and could be used in preference to using group O to prevent time expiry, therefore allowing you to reduce O - stocking
Can you share short dated stock with another hospital site if available?	Yes/No/NA	Sharing short dated O- stock across hospital sites can help to reduce wastage due to time expiry.
Clinical Practice		
Can the number of emergency units be reduced?	Yes/No	An audit into the use of emergency red cells can highlight appropriate stock levels.
Do you use group O+ red cells for unknown adult males in an emergency situation?	Yes/No	It is recommended in the BCSH guidelines that O+ red cell units can be given to female patients > 50 years and adult males
Can the MSBOS be reduced?	Yes/No	Regular review of the MSBOS can help reduce stock holding and wastage due to time expiry.