

Stock update for the SW region

Transfusion Matters – SW RTC Education event

April 2023

- SW RTC user groups
- SW RTC issues data compared to other regions – all components
- Wastage and WAPI for SW RTC
- Amber alert – What happened in our hospitals?

- **SW RTC user groups**
- SW RTC issues data compared to other regions – all components
- Wastage and WAPI for SW RTC
- Amber alert – What happened in our hospitals?

Annual red cell issues can be used to identify a hospital “cluster”



- **Very high** (>9500 red cell units issued per annum)
- **High** (>5750 to ≤9500 units issued per annum)
- **Moderate** (>3000 to ≤5750 units issued per annum)
- **Low** (>500 to ≤3000 units issued per annum)
- **Very low** (≤500 units issued per annum)

Annual Platelet issues can be used to identify a hospital “cluster”

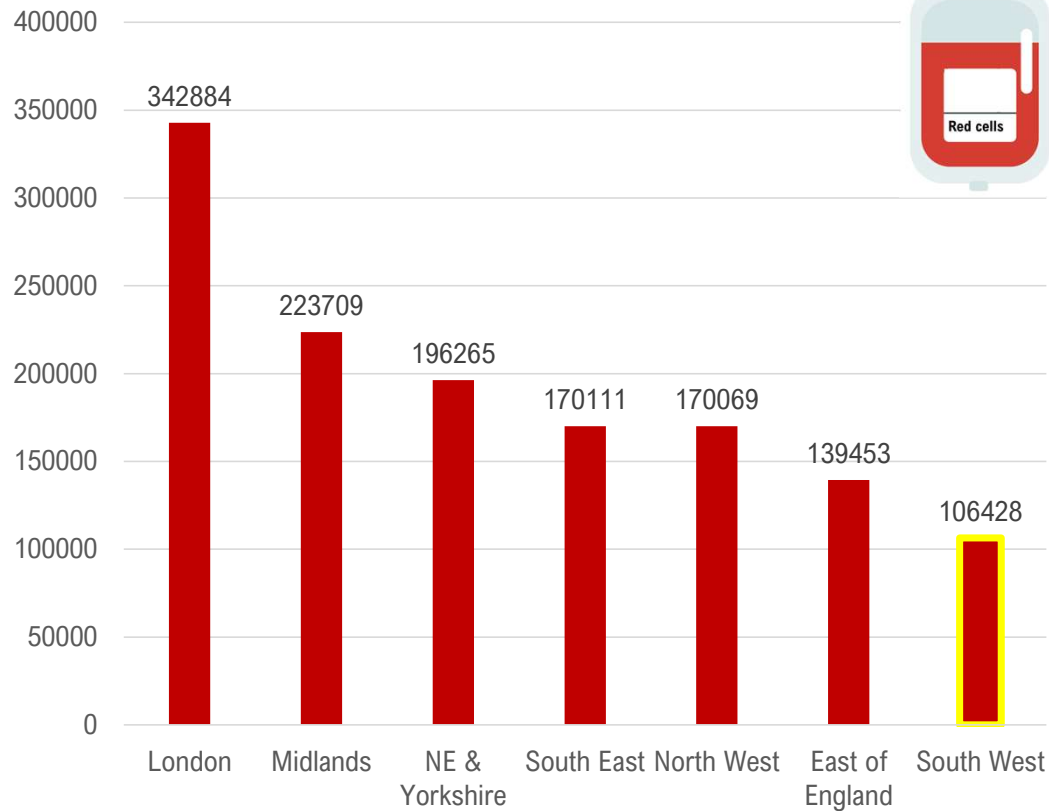


- **Very high** (>1800 issues per annum)
- **High** (>900 to ≤1800 issues per annum)
- **Moderate** (>300 to ≤900 issues per annum)
- **Low** (>45 to ≤300 issues per annum)
- **Very low** (<45 issues per annum)

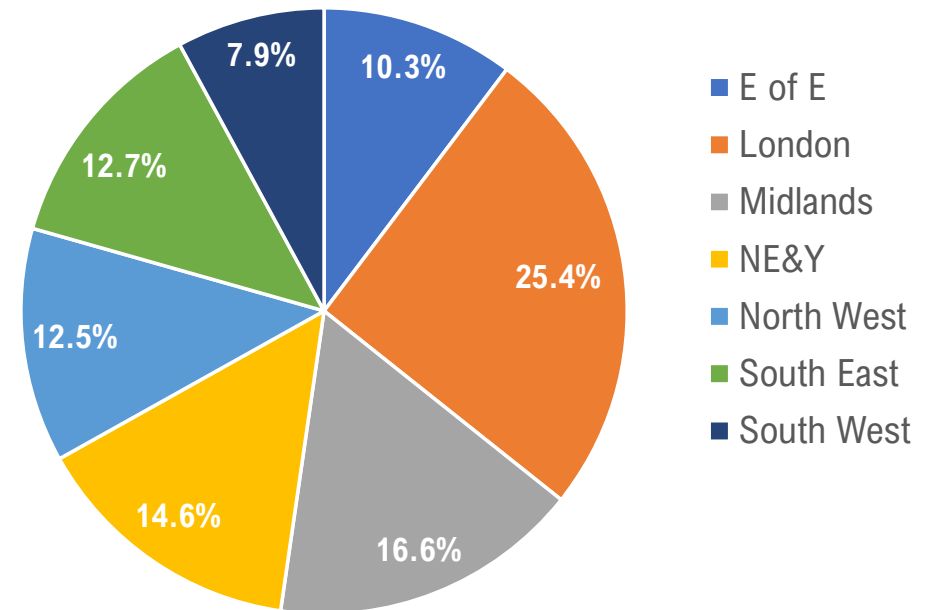
- SW RTC user groups
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Regional RBC issues data 2022

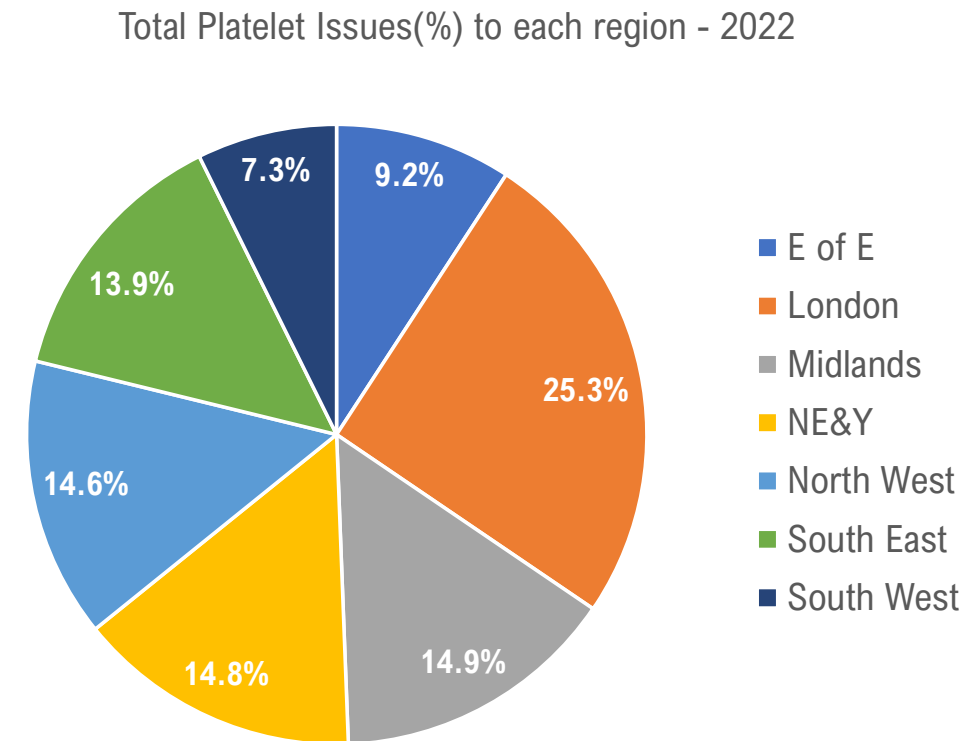
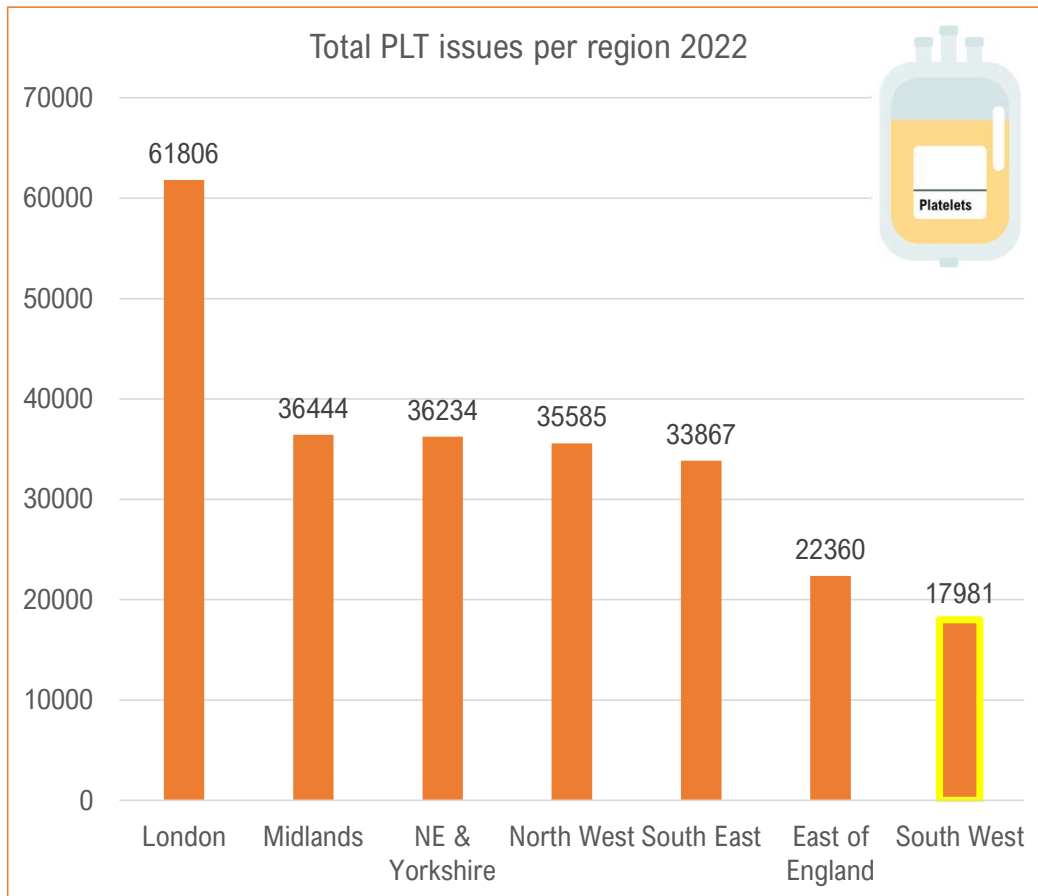
Total RBC Issues per region 2022



Total RBC Issues(%) to each region - 2022

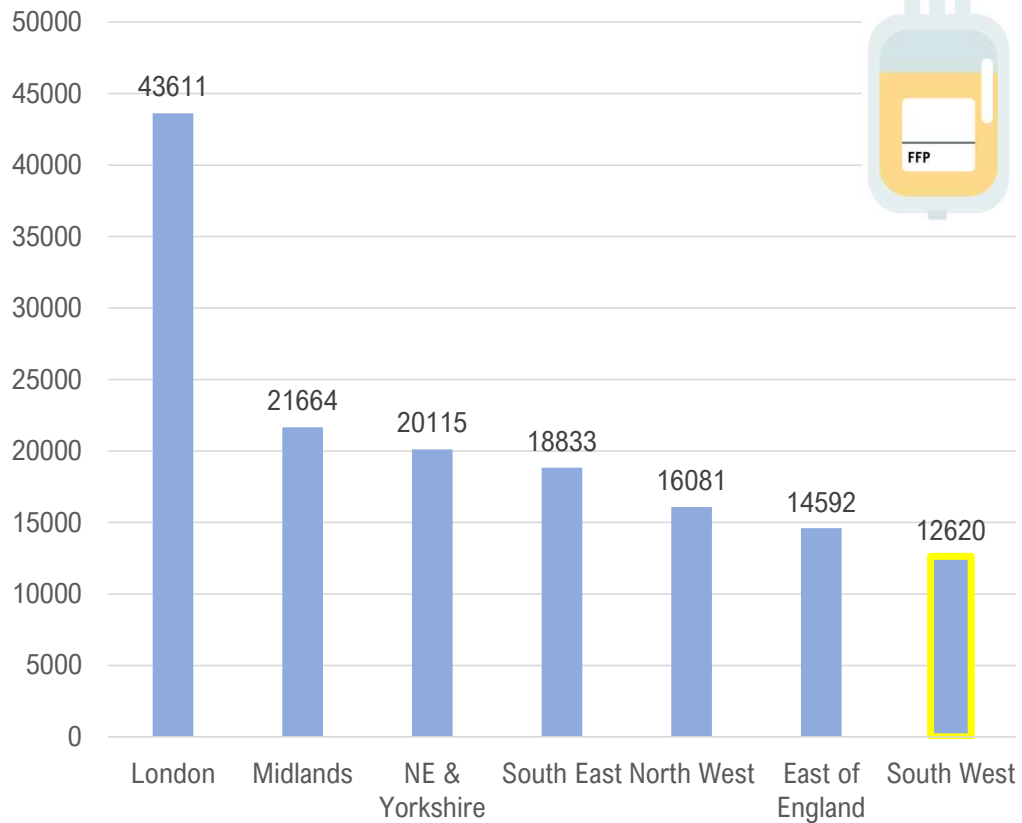


Regional PLT issues data 2022

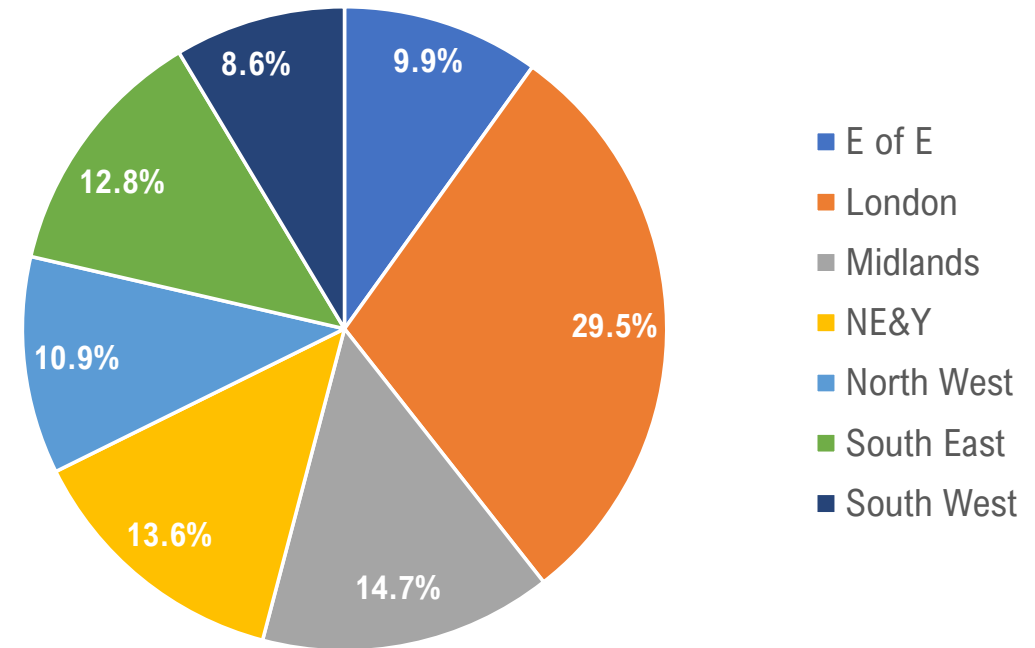


Regional FFP issues data 2022

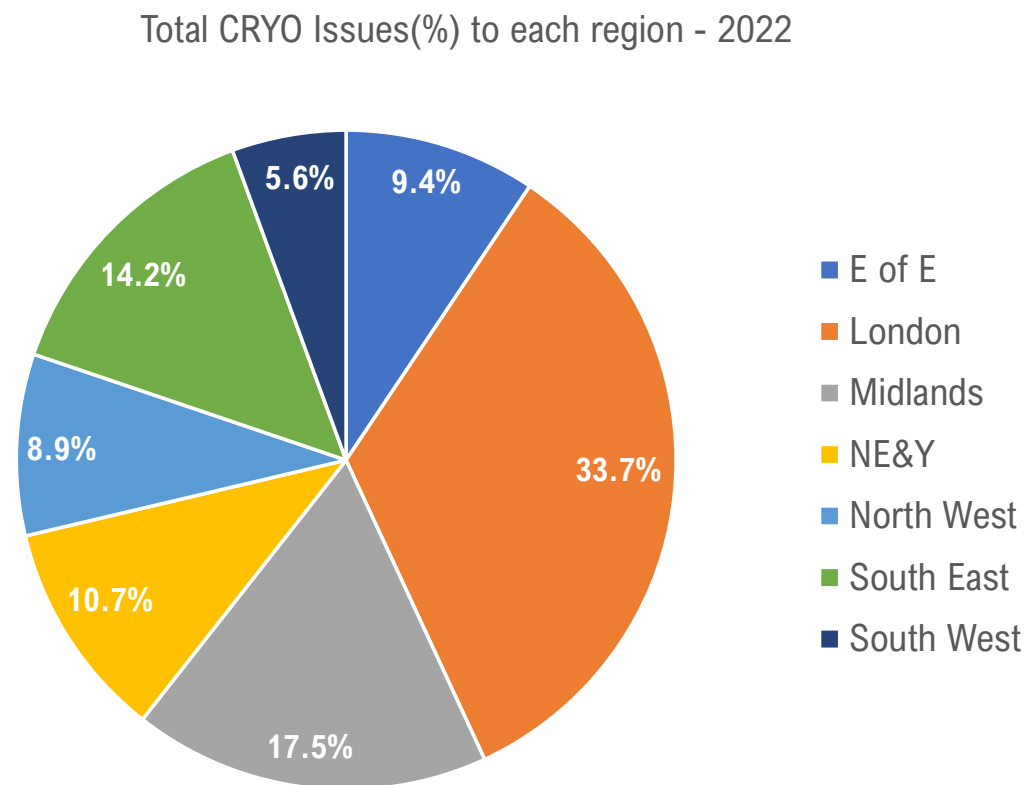
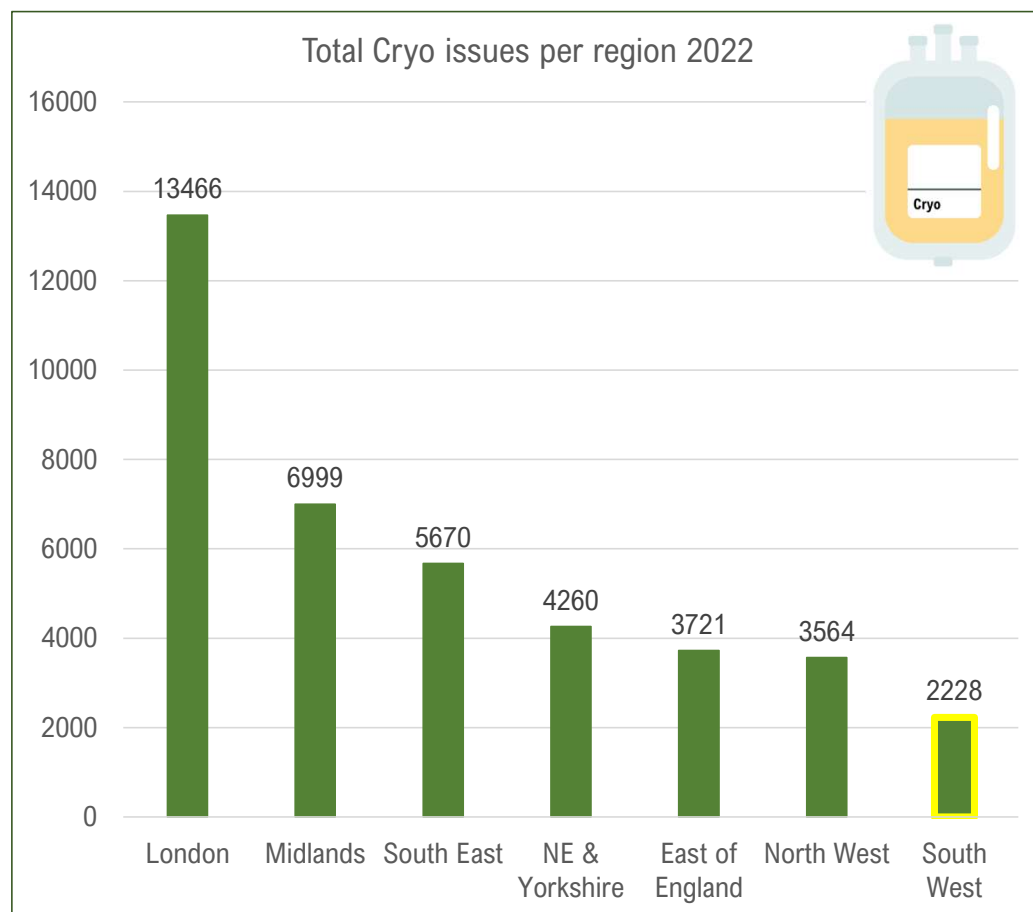
Total FFP issues per region 2022



Total FFP Issues(%) to each region - 2022

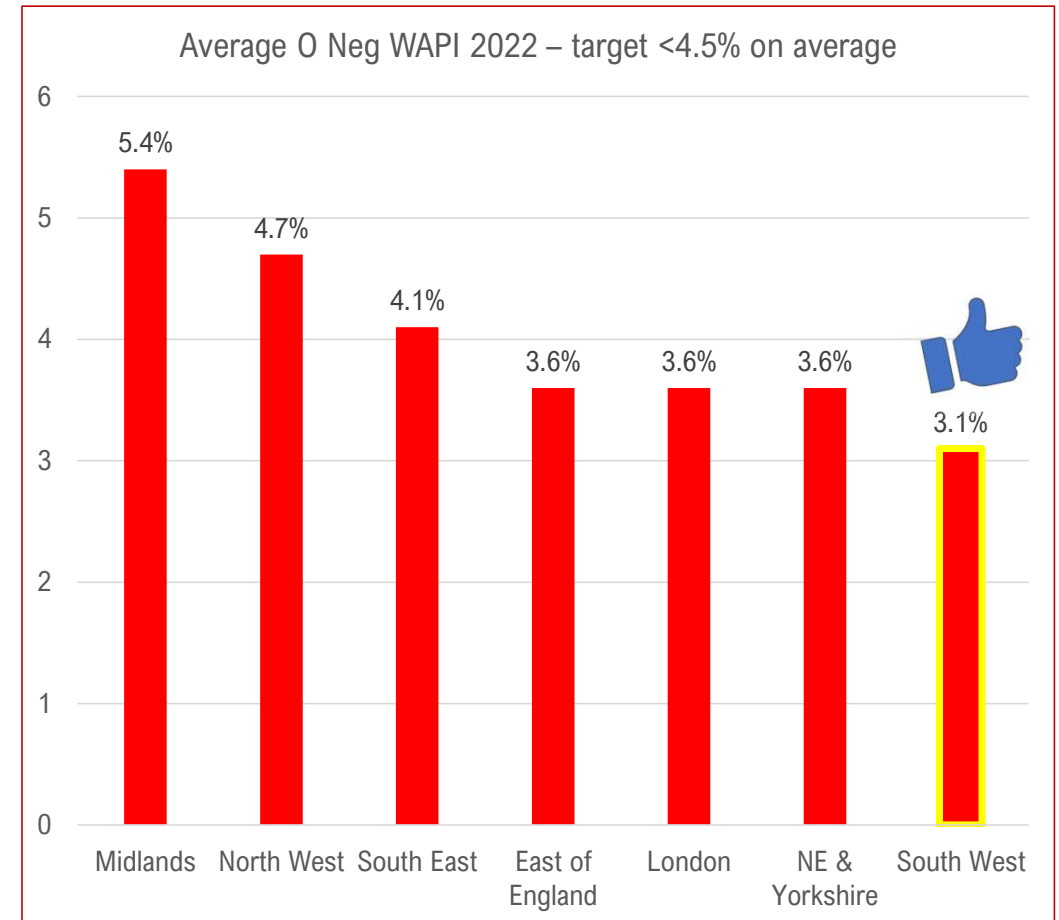
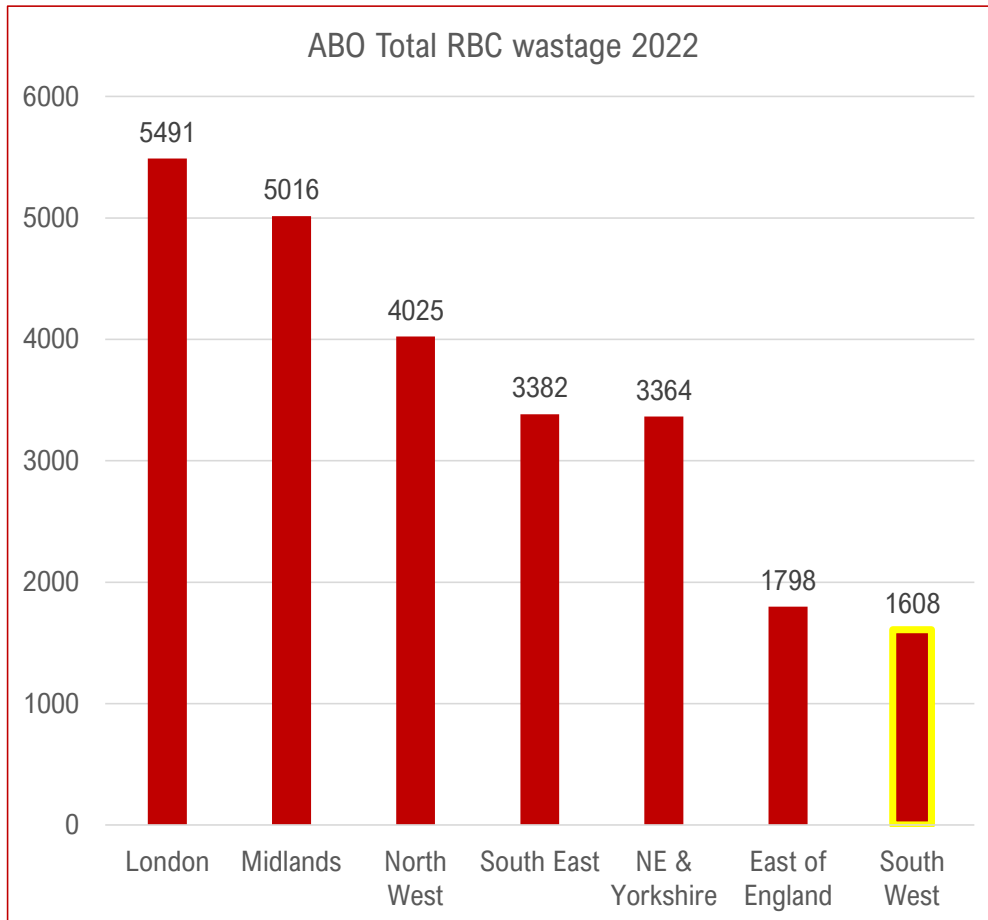


Regional CRYO issues data 2022



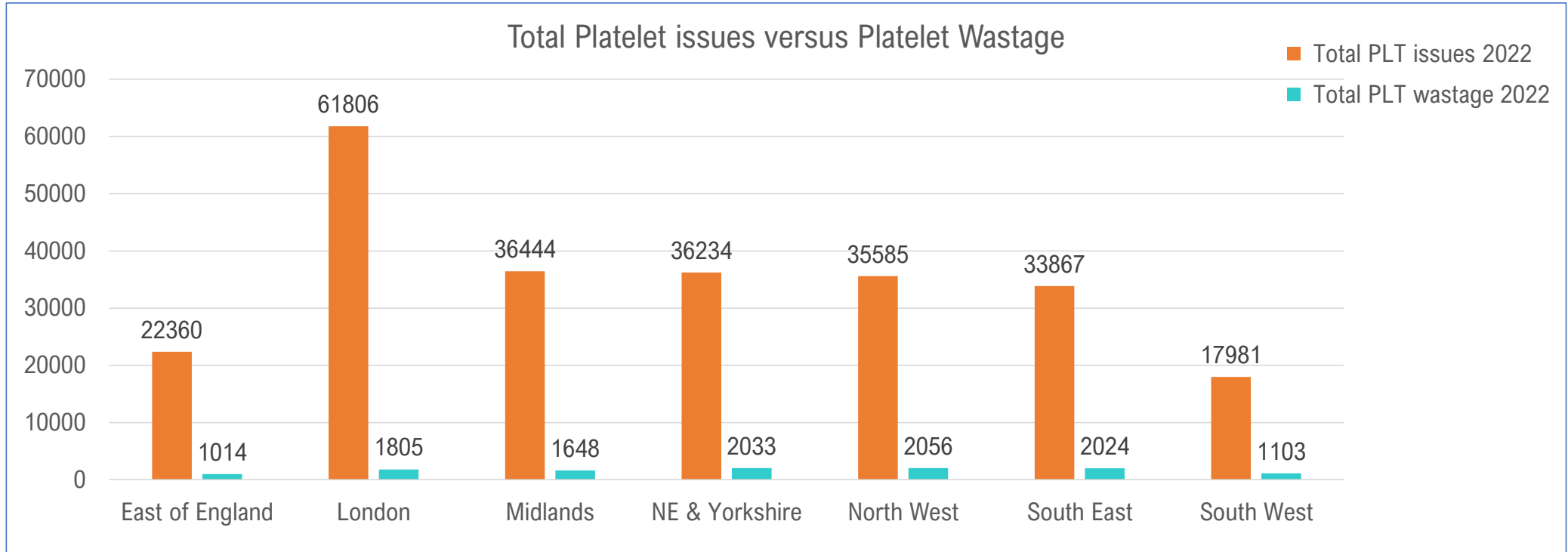
- SW RTC user groups
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Total ABO/O NEG RBC Wastage 2022



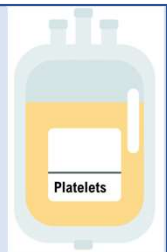
WAPI = Wastage as a % of total issues

Regional platelet issues -v- wastage 2022



East of England = 4.5%
London = 2.9%
Midlands = 4.5%
North East & Yorkshire = 5.6%

North West = 5.7%
South East = 5.9%
South West = 6.1%

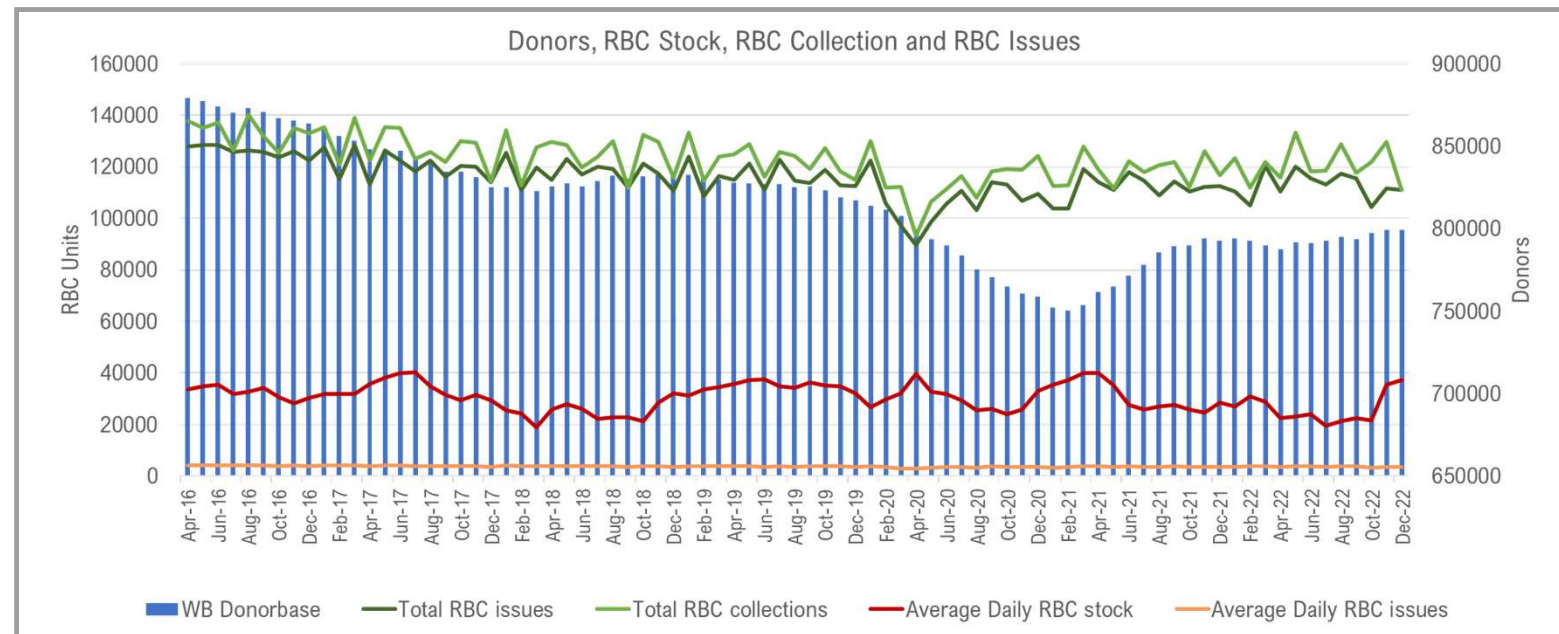


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- **Amber alert – What happened in our hospitals?**

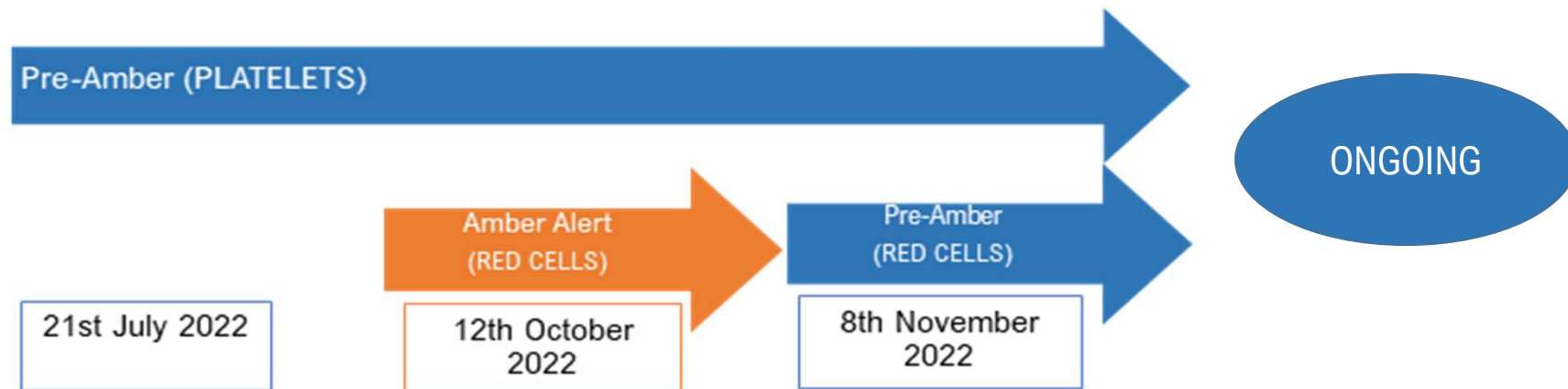
Why did we have a blood shortage?

COVID Effects = Reduced donations

- Donors infected/symptoms
- Staffing sickness
- Social distancing – removal of donation chairs/appointments
- Fear of leaving house
- Cancelled appointments



Shortage timeline and actions



- Timeline for SHORTAGES – red cells and platelets – currently back in Pre-Amber.
- BSMS tasked to reach out to hospitals and encourage stock reviews and a reduction in stock holding if possible.
- We focused on ISI values/stock holding – sent out recommended stock adjustments. (**Issuable Stock Index = Days of unreserved stock available**)
- BSMS were also asked to provide 2 x per week updates of stockholding figures for DHSC and to help with demand planning.

Red Cell Stock Review & Guidance



This document is designed to advise hospitals of calculated red cell stock levels based on their current red cell provision. Its recommendations are evidence based to establish optimised stock levels from all hospitals within the same user group cluster. Please consider now if you can make any changes to your red cell stock levels, however minimal, to alleviate the national stock pressures and safeguard supply for all who need them.

Data displayed relates to the named hospital only All information below relates to data provided for the period Jul'21 to Jun '22

Hospital Red Cell Issues and Stock data (taken from VANESA for adult red cells)

Annual RBC data represents GROSS red cell issues (units issued by NHSBT to the specified site excluding any stock movements)

Site specific data	O+	O-	A+	A-	B+	B-	AB+	AB-	Total
Annual RBC issues	3974	1584	3212	868	901	164	174	61	10938
Average Daily RBC stock	47.7	24.7	34.7	14.3	13.8	2.4	2.6	2.7	143.0
Red cell Nominal stock value	10.9	4.3	8.8	2.4	2.5	0.4	0.5	0.2	30.0
Days of stock (ISI)	4.4	5.7	3.9	6.0	5.6	5.3	5.5	16.4	4.8

Nominal stock value equates to 1 days worth of stock based on current use and current practices.

Issuable Stock Index (ISI) represents an approximated number of days worth of stock held per blood group based on submitted stock data entered through VANESA. Recording **less than 15 stock data points per month** is likely to skew these values and create a statistical bias.

Red Cell Stock Calculator

It is possible to calculate a suggested red cell stock level using the information above based on the target ISI thresholds established by the BSMS and includes current operational practices.

Very High Cluster Targets	O+	O-	A+	A-	B+	B-	AB+	AB-	Total
Lower ISI threshold	3	4	3	4	4	4	4	4	
Upper ISI threshold	4	5	4	5	5	6	6	6	
	O+	O-	A+	A-	B+	B-	AB+	AB-	Total
Minimum RBC stock target	33	17	26	10	10	2	2	1	100
Maximum RBC stock target	44	22	35	12	12	3	3	1	131

ISI upper and lower threshold targets above calculated by BSMS are evidence based. (Max/Min values use upper & lower ISI thresholds). Please note that there are multiple factors that might influence stockholding and these have not been considered as part of this document.

The above are guidance values - you should also include consideration of local variables that might influence these stock targets. If your laboratory routinely holds irradiated and/or extended phenotyped red cell units as standard then these should be included within the totals above. There is strong evidence to suggest holding excess stock within your inventory will contribute directly to red cell wastage (TIMEX).

Your Hospital's Red Cell Stock Indicator Tool

This tool demonstrates stock changes required to achieve the upper ISI target threshold for your cluster. Comparing maximum stock target values against your actual red cell stock values indicates where these are above calculated values and by what extent. Attention should be given to values identified as **red** or **amber**. **Green** indicates within calculated threshold, please continue to maintain this level.

Traffic light indicator for average daily stock compared against maximum stock target	O+	O-	A+	A-	B+	B-	AB+	AB-
	●	●	●	●	●	●	●	●
Recommended RBC stock changes to achieve upper ISI threshold	O+	O-	A+	A-	B+	B-	AB+	AB-
	-4	-3		-2	-1			-2

Blank values require no amendment to achieve optimum stock target. This document has been produced by the Blood Stocks Management Scheme and is based on hospital and blood service data provided to the scheme. All data correct at the time of production but may be subject to change if additional data added.

For further advice, help or support please contact BSMS@nhsbt.nhs.uk

- BSMS provided every hospital with a bespoke red cells stock review and guidance report.
- We focused on ISI values/stock holding.
- We provided recommendations in stock adjustments based on the higher end of each target ISI (per group).
- Traffic light system/numbers provided.

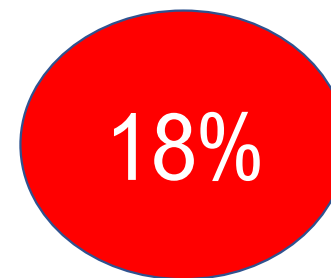
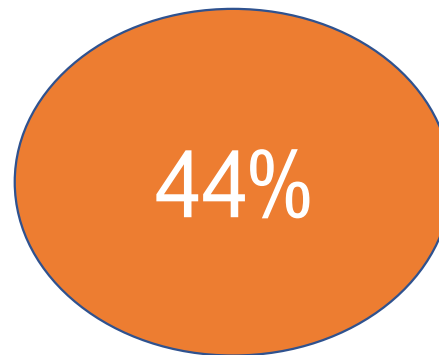
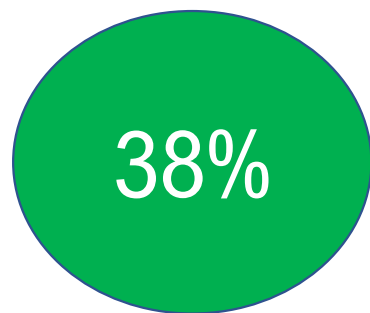
Green – Within target for ISI

Amber – Overstocking up to 5 units outside ISI higher target

Red – Overstocking by 10 or more units outside ISI higher target.

Distance from target ISI values

	Very High		High		Moderate		Low		TOTAL	
	Number of Hospitals	%	Number of Hospitals	%	Number of Hospitals	%	Number of Hospitals	%		
Above green	12	34%	15	29%	30	36%	22	55%	79	38%
At amber	9	26%	22	42%	49	59%	13	33%	93	44%
at or below red	14	40%	14	27%	4	5%	5	13%	37	18%
Total Hospitals	35		52		*83		*40		210	



- Did hospitals reduce their stockholding?
- Did it reduce wastage?
- Did it make a difference?



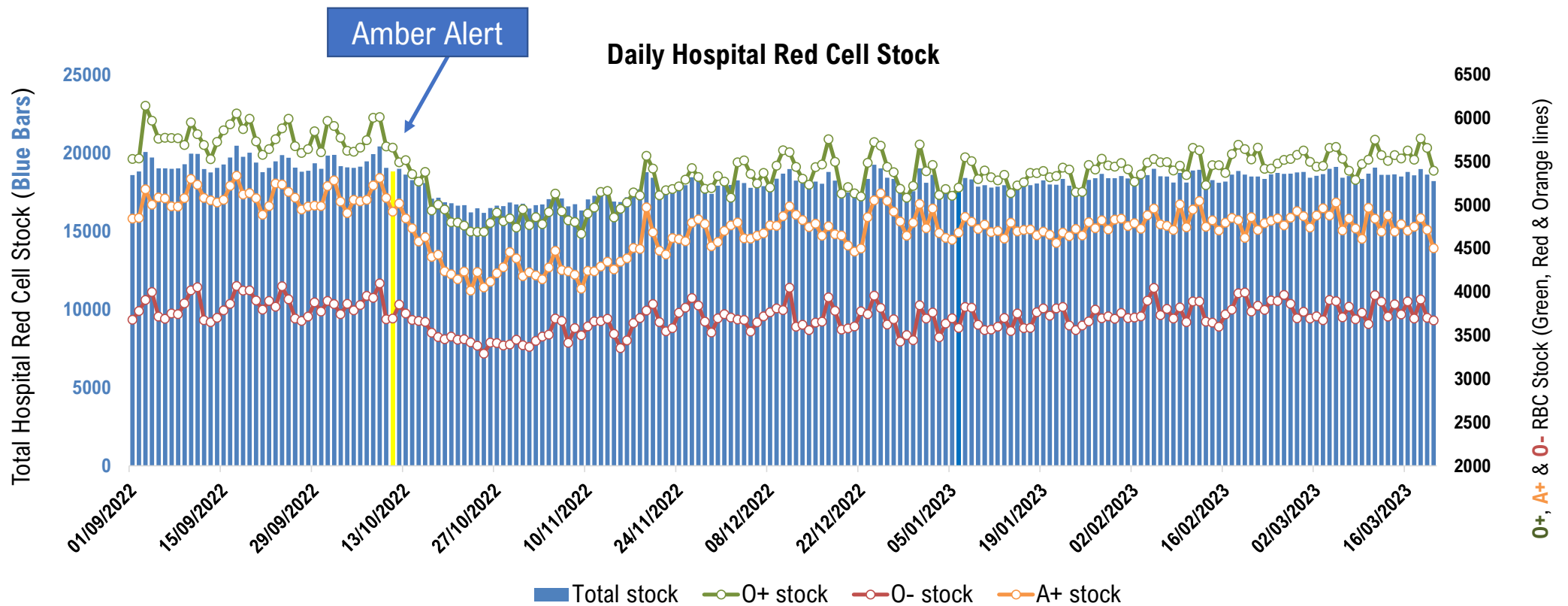
Stockholding results

	BSMS User Category									
	Very High		High		Moderate		Low		All Hospitals	
	Number of Hospitals	%	Number of Hospitals	%	Number of Hospitals	%	Number of Hospitals	%	TOTAL	
Increase/no change average Stock holding	21	40%	13	25%	41	50%	28	71%	103	50%
Decreased average Stock holding Oct 22	14	60%	39	75%	40	49%	11	29%	104	50%
Total Hospitals	35		52		*81		*39		207	207
Unit Decrease change	-206		-219		-170		-25		-620	
Unit Increase change	65		43		109		75		292	
Net change	-141		-176		-61		50		-328	

Overall there were **328** less red cells being stocked in hospital blood banks each day

Example of what was being provided

Current Hospital Red Cell stock holding (represents **daily** average stock data per user group submitted during Sept 22 – Mar 2023 up to and including **20.03.2023**).



We looked at hospital wastage over 2 different time periods.

This would allow time for any readjustments to take place and be accounted for.

Other recommendations also influencing factors eg: PBM, NHSBT communications.

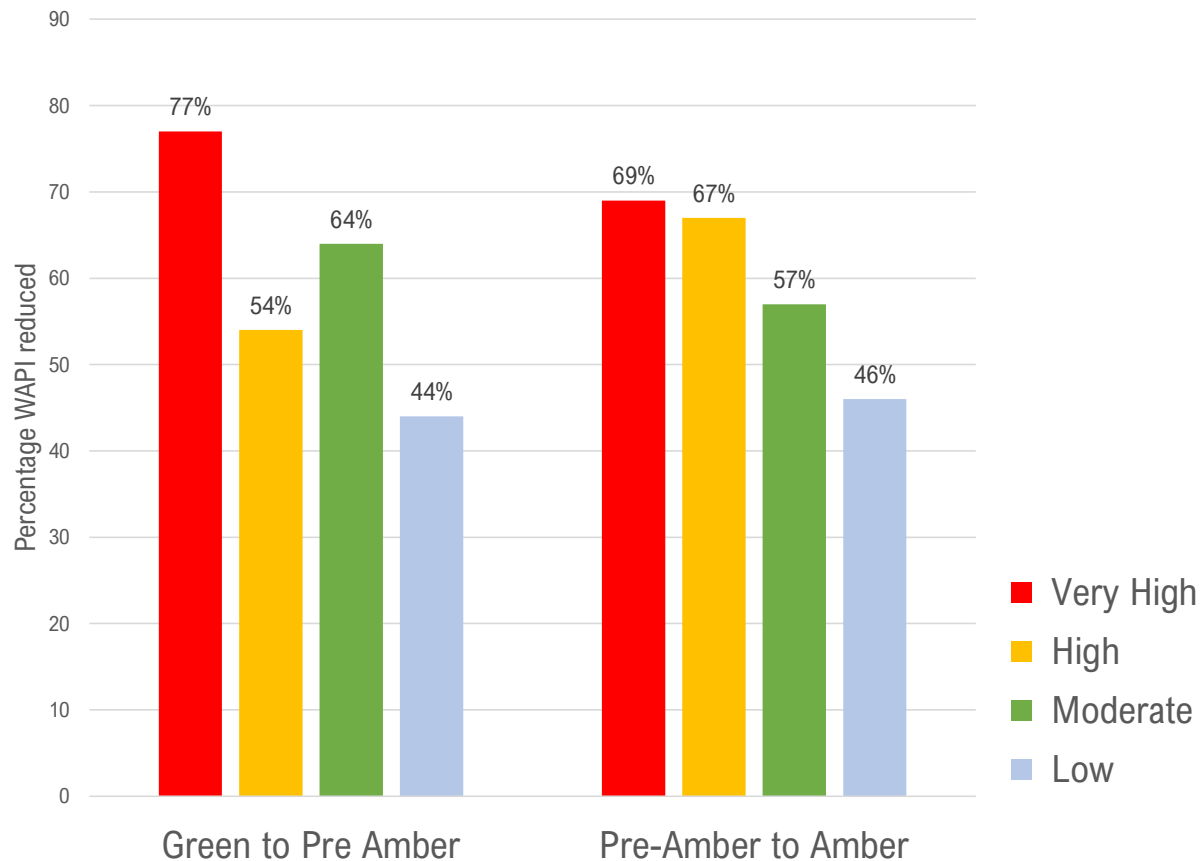
Presented as WAPI – Wastage as a percentage of issues.

1. The **Green** to **Pre-Amber** phase
2. The **Pre-Amber** to **Amber** phase

- **October 2021 – July 2022 Green phase – normal NHSBT stock levels**
- **August 2022 – September 2022 Pre-Amber phase – Reduced NHSBT stocks**
- **October 2022 – Amber phase (Called 12th October) NHSBT stock <2 days**

Percentage reduction per user group

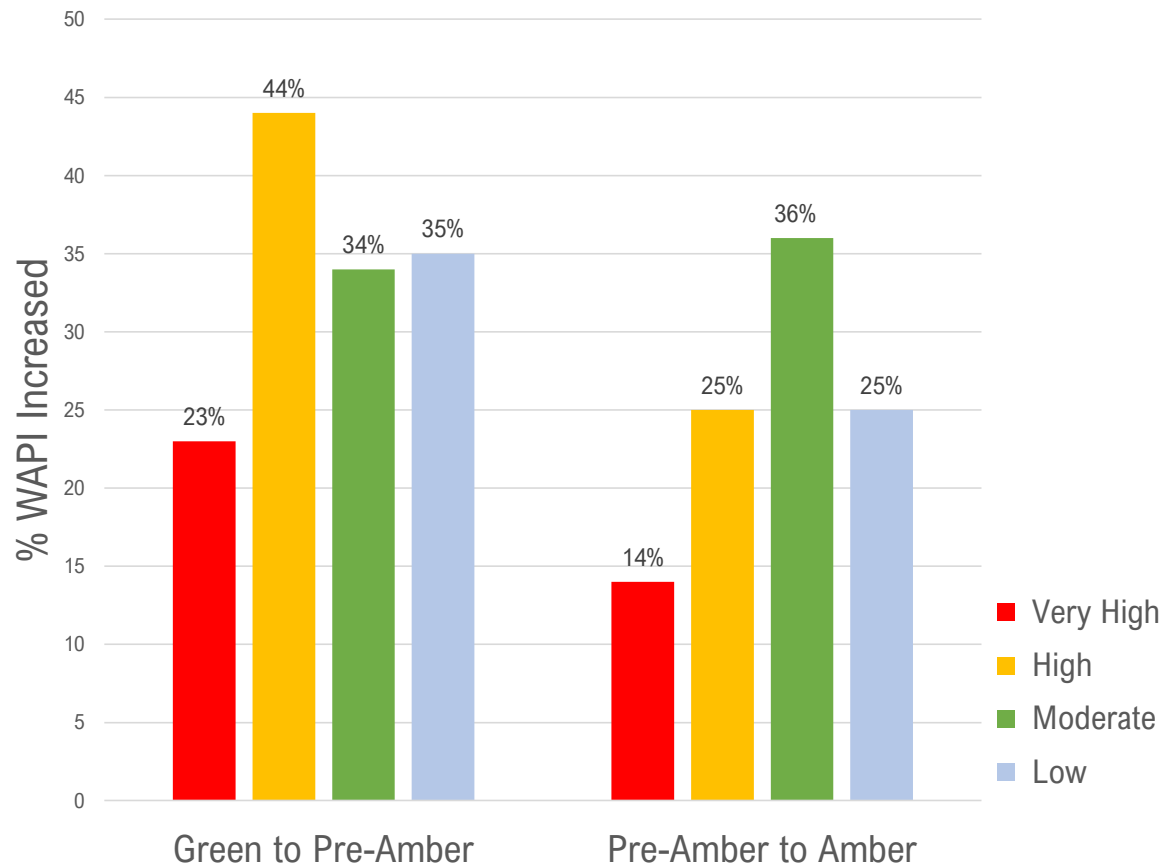
Percentage of hospitals who **reduced** their WAPI during each phase



- Charts to show the total percentage of hospitals within each user group who either reduced or increased their WAPI during the Green to Pre-Amber phase and Pre-Amber to Amber phase.
- WAPI was reduced overall in **60%** of hospitals during the green to pre-amber phase.
- WAPI was further reduced by **60%** of hospitals during the pre-amber to amber phase.

Percentage reduction per user group

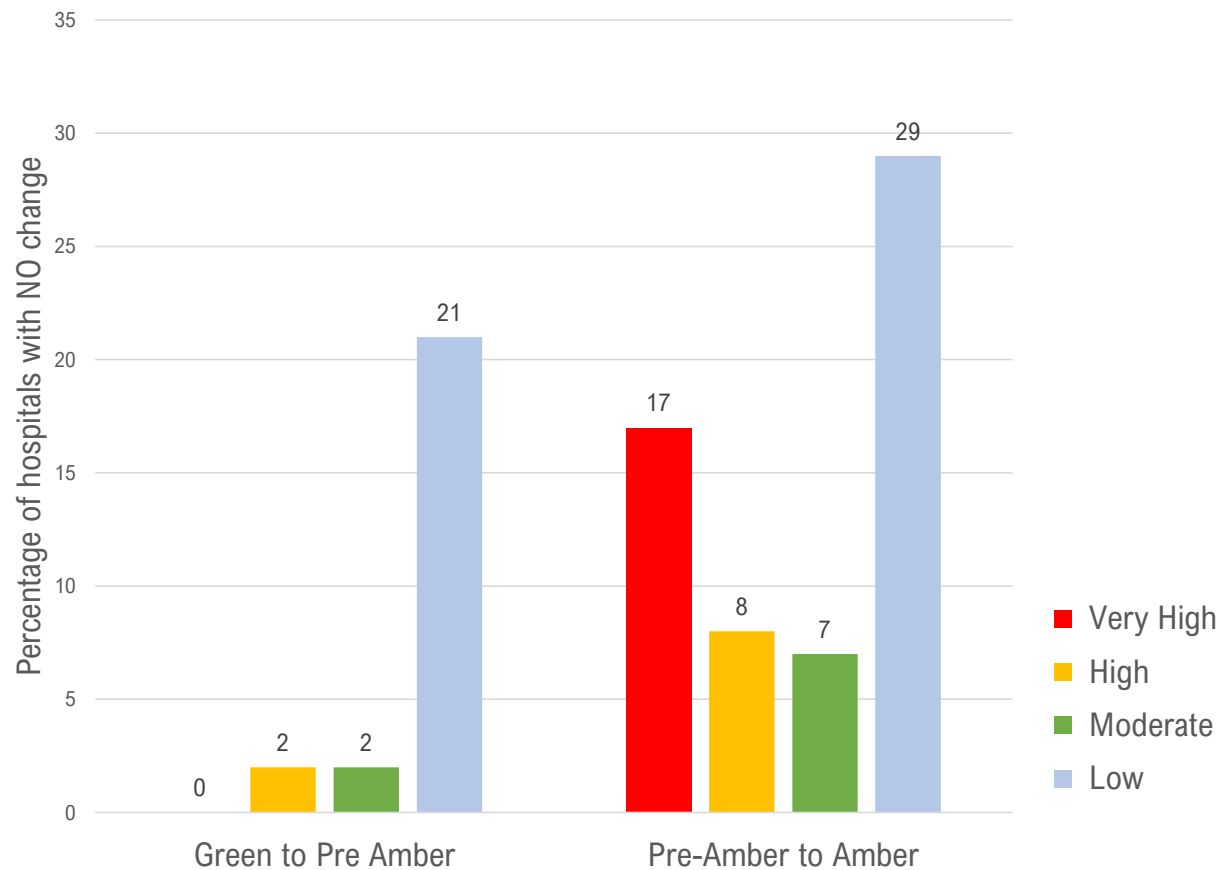
Percentage of hospitals who **increased** their WAPI during each phase



- Charts to show the total percentage of hospitals within each user group who either reduced or increased their WAPI during the Green to Pre-Amber phase and Pre-Amber to Amber phase.
- WAPI was increased in **34%** of hospitals during the green to pre-amber phase.
- WAPI was also increased in **25%** of hospitals during the pre-amber to amber phase.

Percentage change

Percentage of hospitals who had **NO CHANGE** in WAPI during each phase



- Chart to show the total percentage of hospitals within each user group who had no change in WAPI during the Green to Pre-Amber phase and Pre-Amber to Amber phase.
- There was no change seen in WAPI in **6%** of hospitals during the green to pre-amber phase.
- There was no change seen in WAPI in **15%** of hospitals during the pre-amber to amber phase.

- Overall more hospitals reduced their stock holding, majority in **High** user groups
- Increases perhaps due to amalgamated services, attempts to recover post COVID?
- There was a reduction in WAPI seen in both phases (green to pre-amber and pre-amber to amber)
- Stocks are recovering – currently in Pre-amber due to ongoing strikes and Bank Holidays
- Stock holding increasing but not at Pre-COVID levels
- Huge thanks to all hospitals for their support

It is important to review your stock levels regularly or at least annually

