

Blood Stocks Management Scheme – SE RTC Education Event

Sophie Staples – Lead Specialist



The BSMS and how we support the blood supply chain now and for the future



Your component issues, stocks and wastage data and why it is so important



What happens with your hospital blood component data?

- The team behind Vanesa
- BMSs, data analysts – with hospital transfusion experience
- Stock management experts
- Advocate for hospitals and NHSBT
- Monitor and analyse the supply chain – stocks, issues and wastage – adult blood components using automated and hospital inputted data.



BSMS Manager
Matt Bend



BSMS Lead Specialists
Sophie Staples
Jill Caulfield
Chris Gallagher



BSMS Data Analysts
Matt Sharp
Mitchell Cooke

- Our goal is to promote active stock management – reduce excess blood component wastage and improve consistency of supply.
 - BSMS over 22 years of data and counting, in the last year –
 - 1.79 million NHSBT Issued blood component units.
 - 79,000 Hospital wasted blood component units recorded.
 - 15,900 RBC units in hospital stock per day.
 - 241 hospitals in England receiving a monthly report – 2892 BSMS reports.
- (Financial year 22/23)

Welcome to Blood Stocks Management Scheme


LIVE ENVIRONMENT
Blood Stocks Management Scheme 4.2.0(BSMS Data:4.0.11)

User Name

Password

[Register](#)
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Sign in



Red Cell Report
Blood Stocks Management Scheme

PulseCode: M032 Hospital: North Manchester General Hospital
Report Month: December Red Cell User Category: Moderate

Monthly Red Cell Issues

Monthly A, B & O Red Cell Wastage

Red Cell Summary

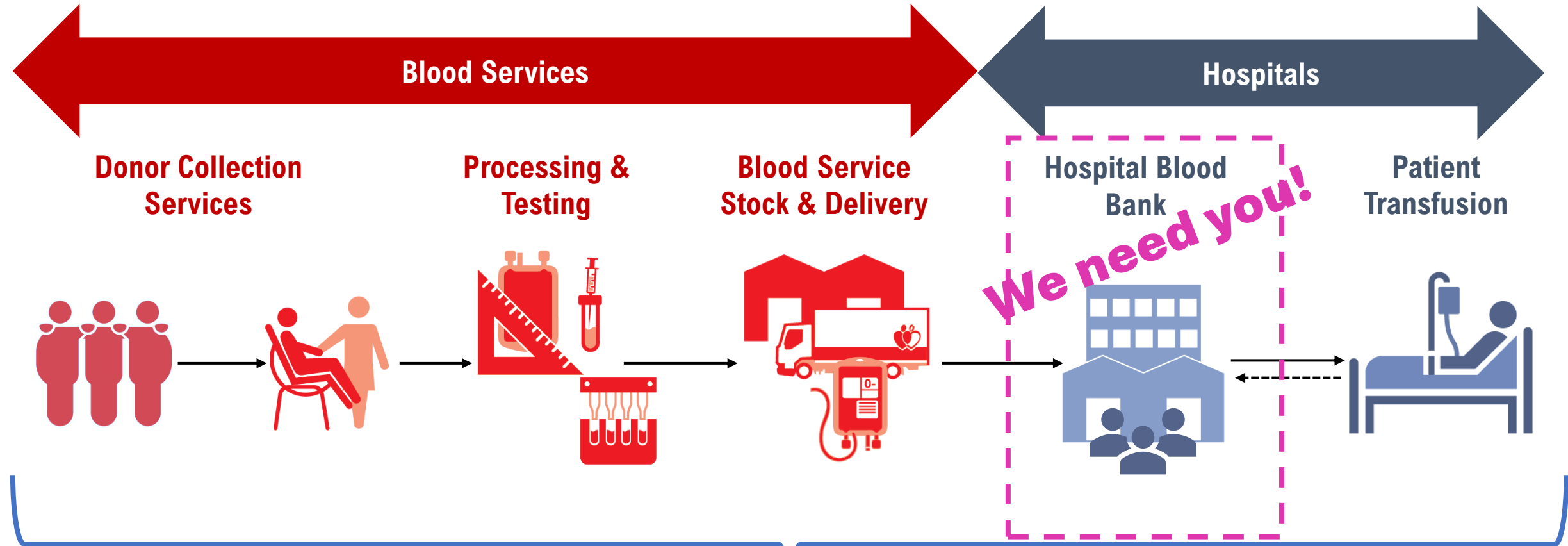
	12 Month ABO ISI	Latest month RBC stock data entry	Latest month A,B & O WAPI(%)	Latest month RBC wastage data entry
You	6.5 Days	Pass	2.0%	Pass
Moderate Cluster Average	6.1 Days		2.6%	

A, B & O WAPI KPI (all site data refers to average for last 12 Month)

WAPI % Range	Hospitals in Range: 34/56 (30.5%)	Your ABO WAPI: 2.0%	ABO WAPI Target: <2.5%
0% - 1.25%			
1.25% - 2.5%			
2.5% - 3.75%			
3.75% - 10%			
>10%			

Date	Total RBC Gross Issue	Total RBC Issue Monthly % Change	ABO Gross Issue	RBC Movement	Total RBC Ret Stock	ABO Daily Average Stock	ABO Daily Average ISI	RBC Stock data entry	Total RBC Wastage	ABO Wastage	Time Expire Wastage %	ABO WAPI	RBC Wastage Data Entry
2023													
January	379		377		379	81	7.2	Pass	6	6		1.6%	Pass
February	322		322		322	82	7.5	Pass	8	8	75.0%	2.5%	Pass
March	317		317		317	83	6.6	Pass	8	8	62.5%	2.2%	Pass
April	337		337		337	82	7.4	Pass	6	6	87.5%	2.2%	Pass
May	357		357		357	84	7.4	Pass	13	13	25.1%	3.6%	Pass
June	347		346		347	80	6.9	Pass	6	6	100.0%	2.3%	Pass
July	319		319		319	84	7.5	Pass	4	4		1.2%	Pass
August	257		256		257	83	7.8	Fail	6	6	33.3%	2.3%	Pass
September	272		272		272	78	7.3	Pass	1	1		0.4%	Pass
October	295		295		295	71	6.8	Fail	3	3	66.7%	1.5%	Pass
November	294		294		294	77	7.2	Pass	6	6	83.3%	2.0%	Pass
December	372		372		372	78	8.9	Pass	6	6	100.0%	3.6%	Pass
12 Month	3,668	-0.4%	3,664		3,668	82	6.5	Pass	77	77	57.1%	2.9%	
12 Month Cluster Average	4,358	-0.5%	4,374		4,374	88	6.1		91	74	67.0%	1.8%	

Visit the Blood Stocks Management Scheme Website



The blood component data we need



- Vanesa Data Entry
- RBC stocks daily (>15 entries a month)
- Wastage at least once monthly (or daily) and by 10th of month
- (issues data is automated)

Blood Group	Ideal stock	Issuable stock	Nominal stock	Issuable Stock Index
O Pos	25	<input type="text" value="17"/>	1.84	9.26
O Neg	8	<input type="text" value="6"/>	0.81	7.42
A Pos	25	<input type="text" value="15"/>	1.66	9.06
A Neg	8	<input type="text" value="4"/>	0.58	6.84
B Pos	6	<input type="text" value="8"/>	0.9	8.87
B Neg	2	<input type="text" value="2"/>	0.25	7.96
AB Pos	2	<input type="text" value="0"/>	0.01	0
AB Neg	2	<input type="text" value="0"/>	0.11	0

Red Cell Summary

	12 Month ABO ISI	Latest month RBC stock data entry	Latest month A,B & O WAPI(%)	Latest month RBC wastage data entry
You	4.0 Days	Pass	No Data	No Data
High Cluster Average	4.8 Days		2.6%	

Month	ISI	WAPI(%)	RBC Stock data entry	Total RBC	Wastage	ABO Wastage	Time Expire Wastage %	ABO WAPI	RBC Wastage Data Entry
April	4.5		Pass						No Data
May	4.2		Pass						No Data
June	4.5		Pass						No Data
July	4.3		Pass						No Data
August	4.0		Pass						No Data
September	3.8		Pass						No Data
October	3.9		Pass	10	8	20.0%	1.2%	Pass	
November	4.0		Pass	6	6	50.0%	0.9%	Pass	
December	4.0		Pass	8	8	50.0%	1.3%	Pass	
2024	4.0		Pass	12	8	50.0%	1.3%	Pass	
January	3.7		Pass						No Data
12 Month	4.0	2.2%	Pass	8,345	83	36	33.3%	0.4%	No Data
12 Month Cluster Average	4.8	0.1%	Pass	7,638	98	179	61.6%	2.0%	No Data

- Thank you! To all who supply data – we couldn't do it without you!
- Enter PLT, FFP and Cryo stock levels too
- For the future: Could you be your local stock champion and improve our ratings?

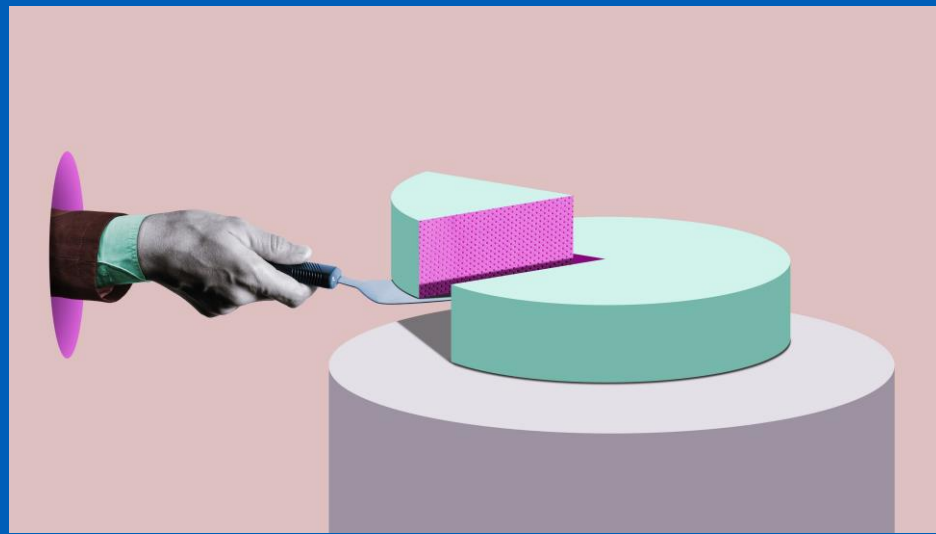


19 hospitals received our certificate of appreciation in 2023

Hospitals with 100% Data entry for the key Vanesa data (mean 12 months) n=241:



What is the data used for?



- **Monitoring and analysis of hospital practices**

- Component reports to hospitals
- Stock held across UK hospitals (NHSBT, Department of Health and Social Care)
- Central planning (NHSBT)
- Benchmarking, targeting outliers, driving improvement
- Working group initiatives

Current Practices

- **Trend analysis + surveillance**

- Identify variation, changes and good practice
- Vulnerable components

Past Practices

- **Research + improving transfusion practice**

- BTRU (Blood Transfusion Research Unit)
- Component reports, electronic systems and wastage

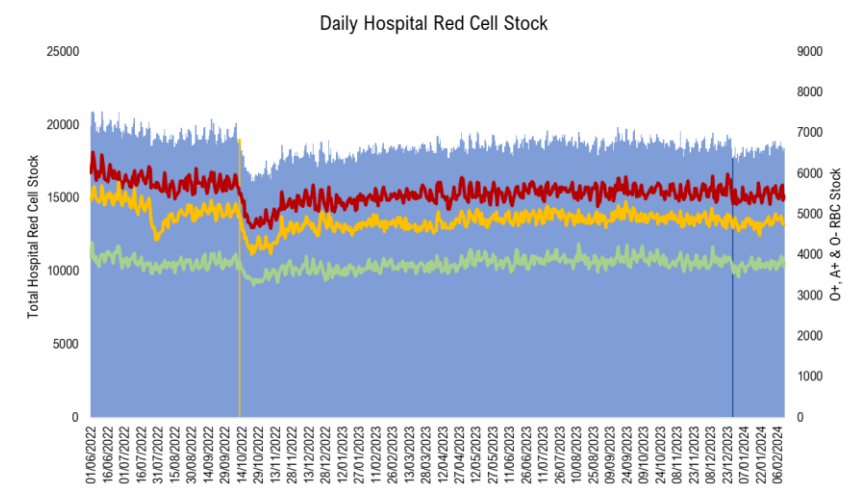
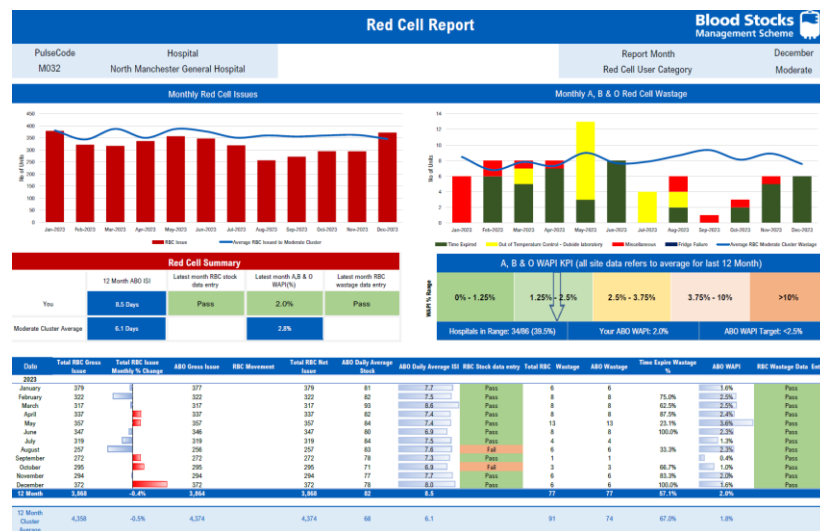
Future Practices

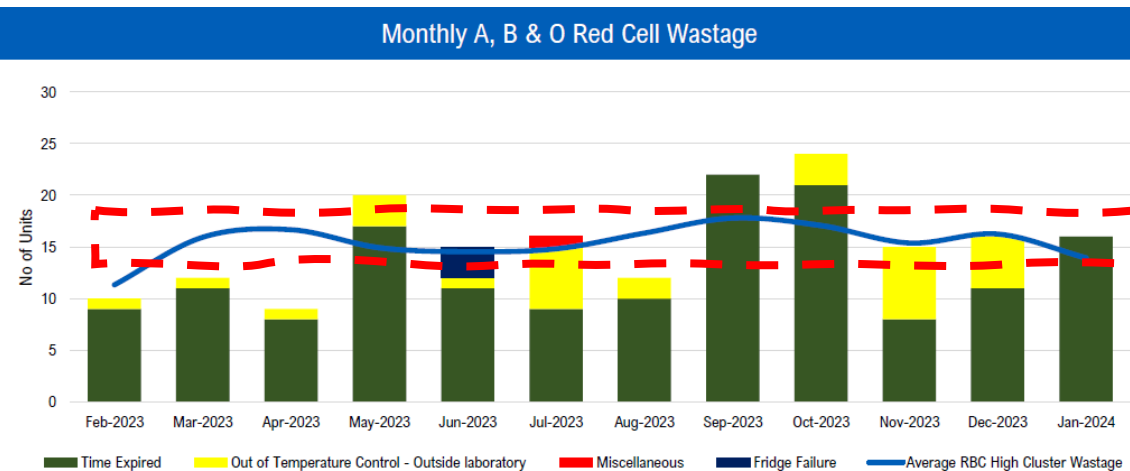
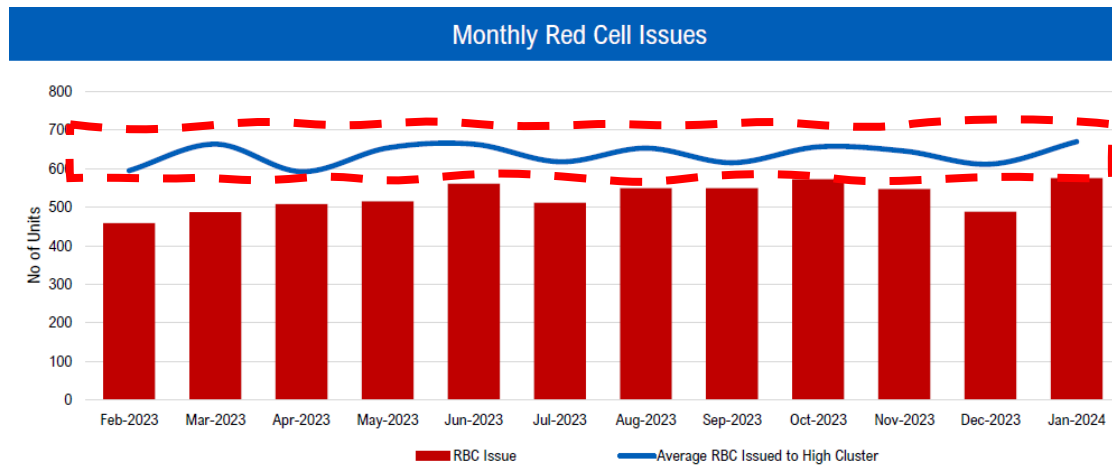
- **Monitoring and analysis of hospital practices**

- Component reports to hospitals
- Stock held across UK hospitals (NHSBT, Department of Health and Social Care)
- Central planning (NHSBT)
- Benchmarking, targeting outliers, driving improvement
- Working group initiatives

Current Practices

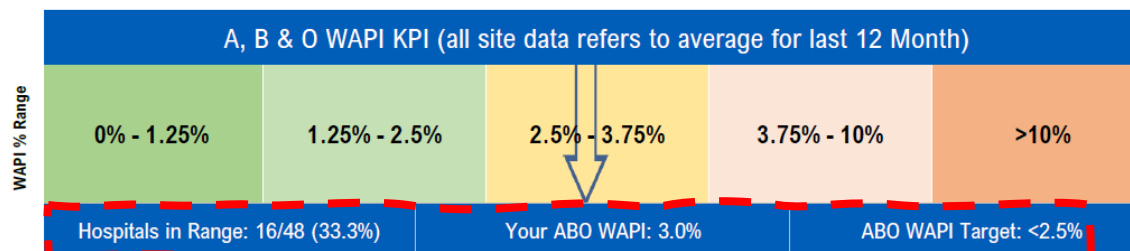
- Monitor issues/wastage monthly
- Hospital stock holding
- Highlight areas of concern to prevent threat to the supply chain





Red Cell Summary

	12 Month ABO ISI	Latest month RBC stock data entry	Latest month A,B & O WAPI(%)	Latest month RBC wastage data entry
You	6.3 Days	Pass	2.9%	Pass
High Cluster Average	4.8 Days		2.6%	

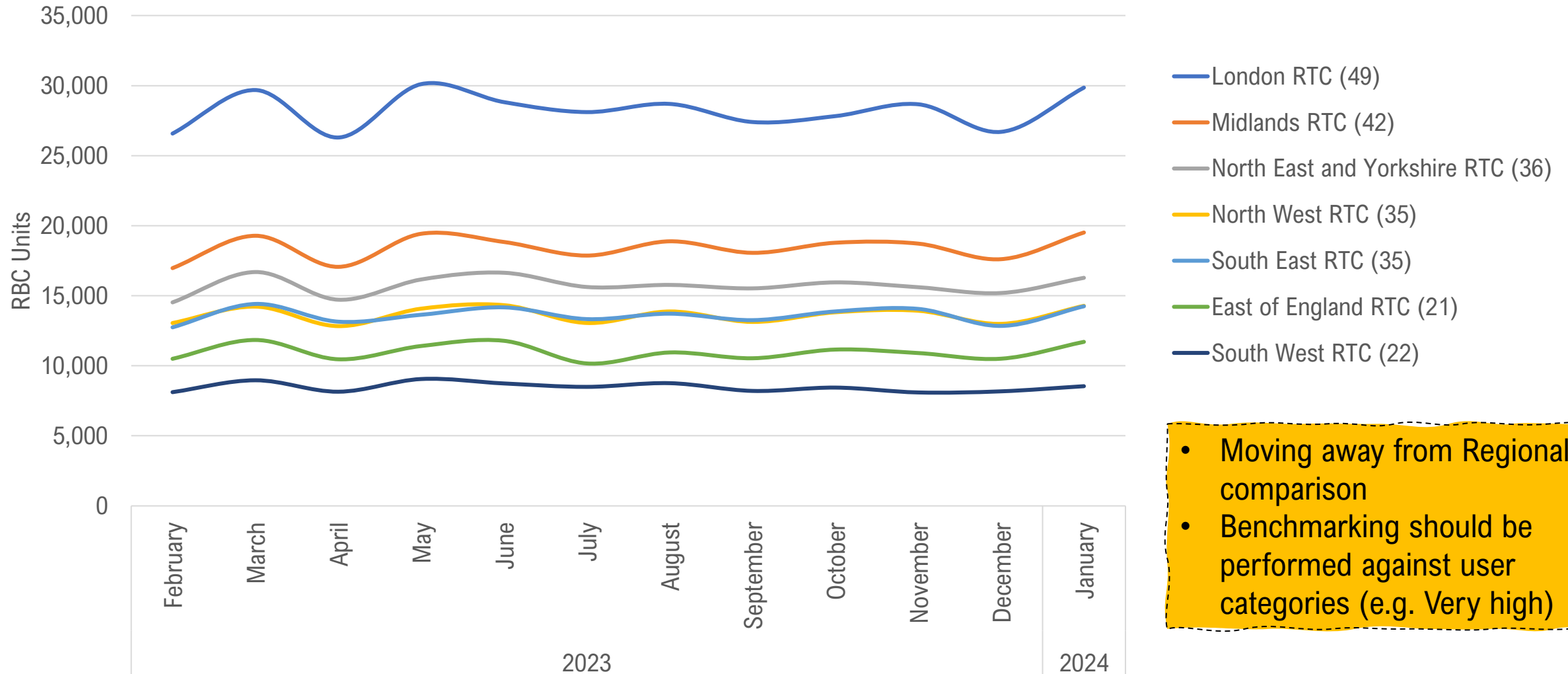


- Several areas on component reports displaying benchmarking against BSMS user categories
- Important to supply timely data input for your own and other's benchmarking
- For the future: Trust benchmarking?

Red Cell BSMS User Groups

BSMS user category	Annual component issues for cluster
Very High	> 10,000
High	> 6,000 & ≤ 10,000
Moderate	> 3,000 & ≤ 6,000
Low	> 500 & ≤ 3,000
Very Low	≤ 500

RTC RBC Issues

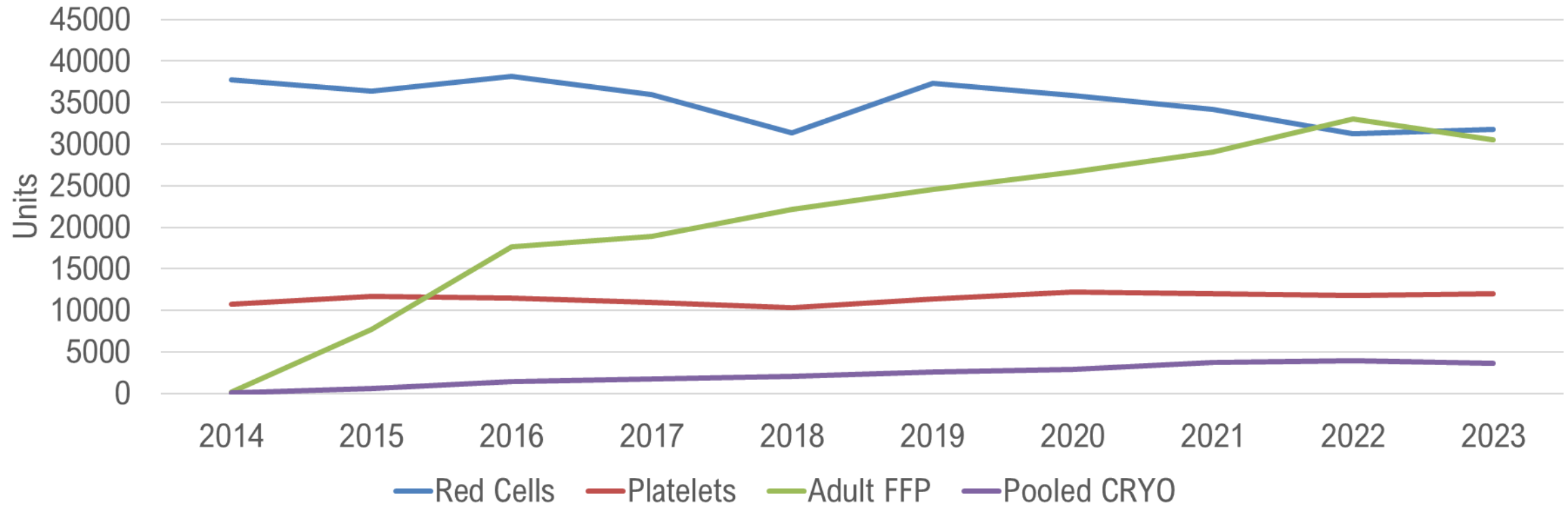


- Moving away from Regional comparison
- Benchmarking should be performed against user categories (e.g. Very high)

- **Trend analysis + surveillance**
 - Identify variation, changes and good practice
 - Vulnerable components

Past Practices


Annual component wastage (units)



RBC WAPI 2023
2.37% 

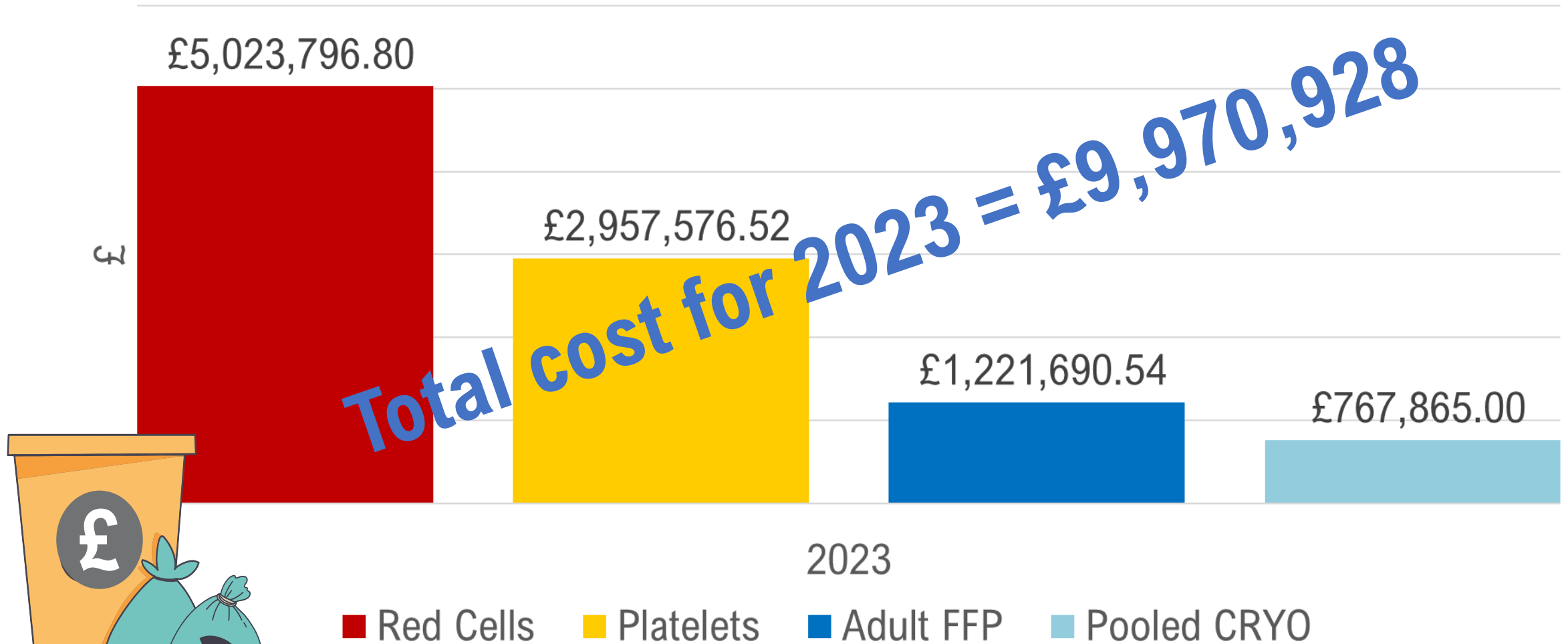
Platelet WAPI 2023
4.85% 

FFP WAPI 2023
21.26% 

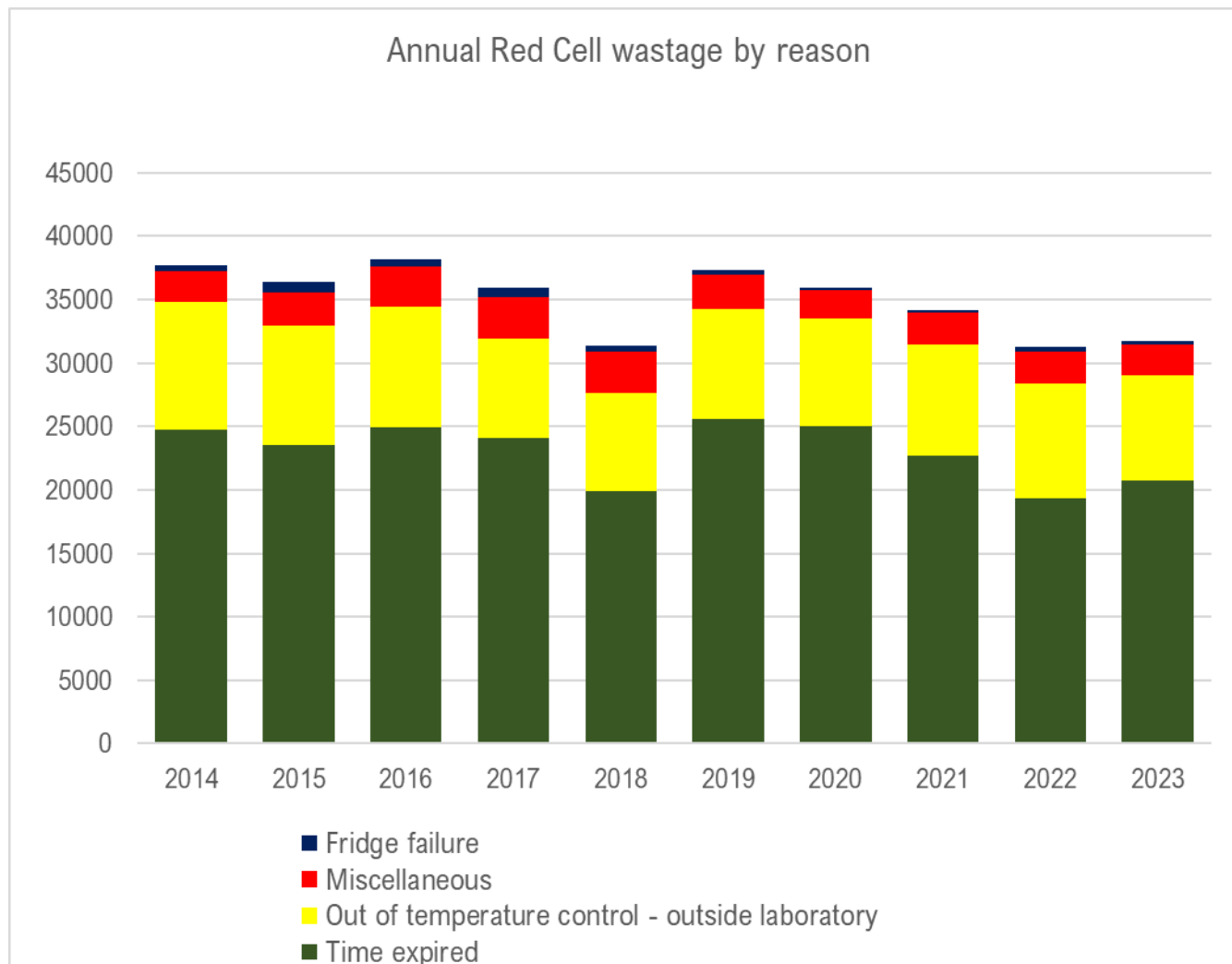
Cryo WAPI 2023
8.86% 

All component wastage for 2023

Annual Component Wastage Cost



The highest cause of RBC wastage is TIMEX



What improves Time Expiry (TIMEX) wastage?

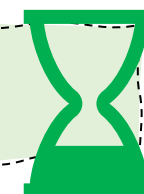
Good stock levels of RBC units

Short dereservation time

Unit selection when issuing

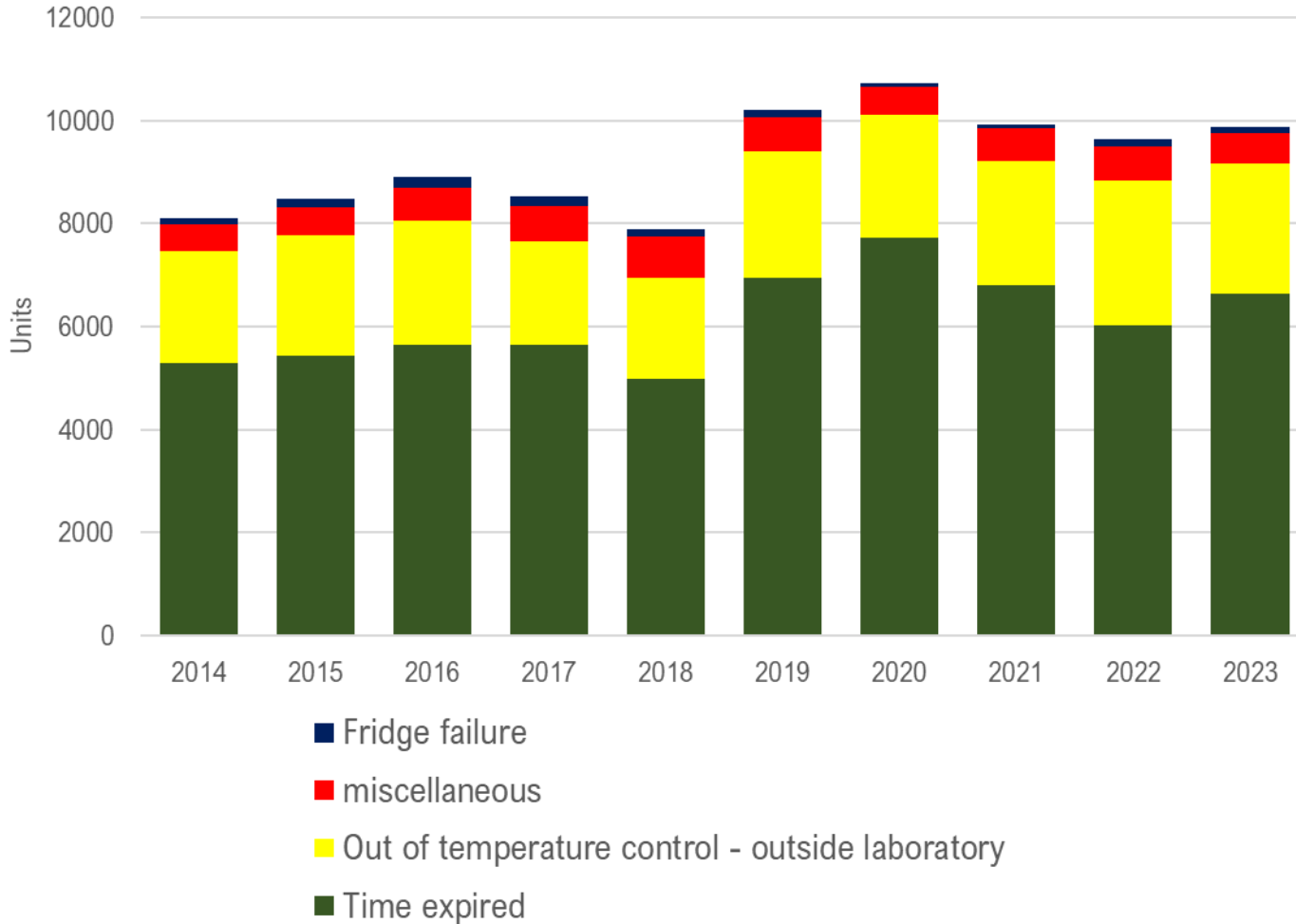
Stock rotation

Share and recycle



The 2nd highest cause of RBC wastage is OTCOL

Annual O Neg Red Cell Wastage by Reason



What improves Out of Temperature Control (OTCOL) wastage?

Good cold chain compliance

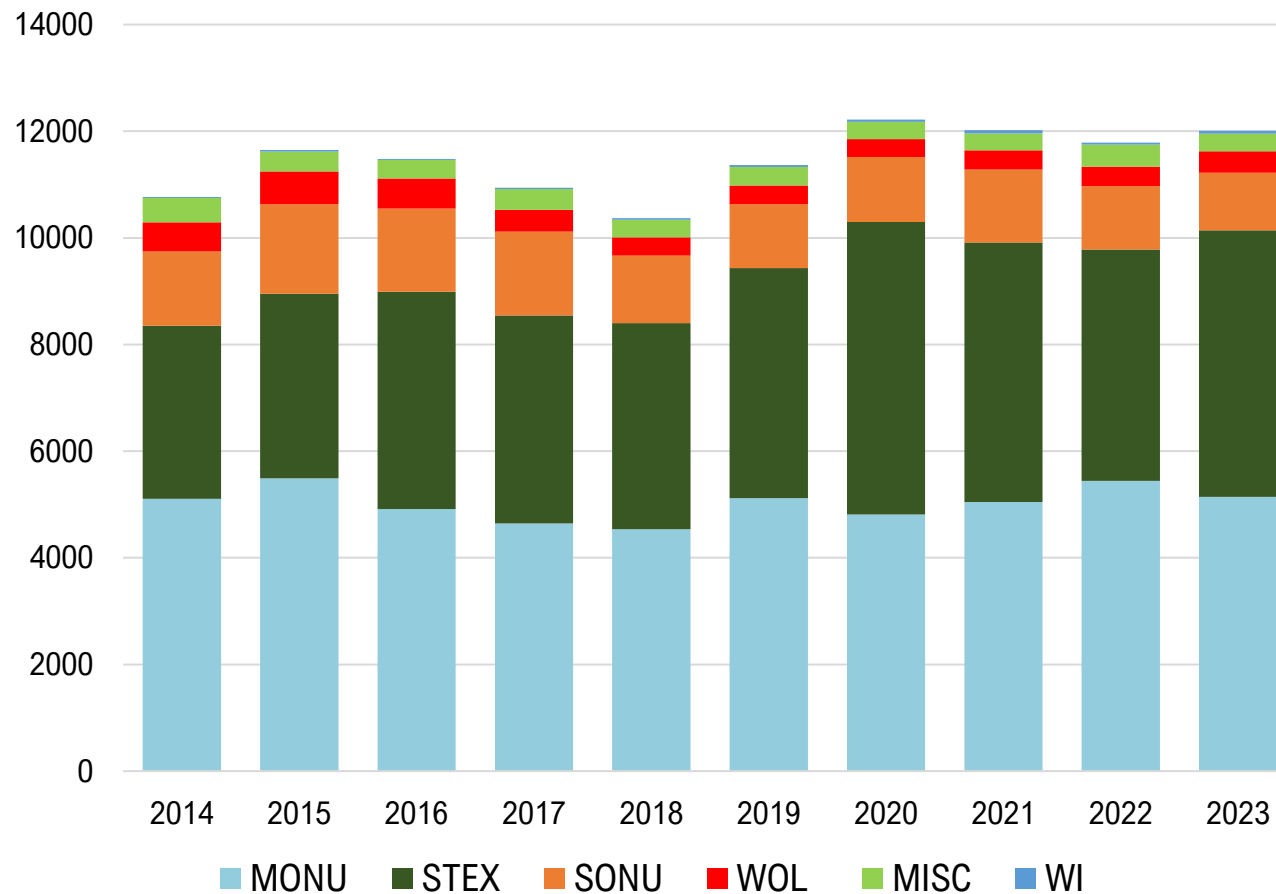
Collection of units only when patient is ready

MHP Good practice

Supporting HEMS + BOB



Annual Platelet wastage by reason



Platelet wastage can be reduced by:

Sharing stock platelets

Smart stock holding

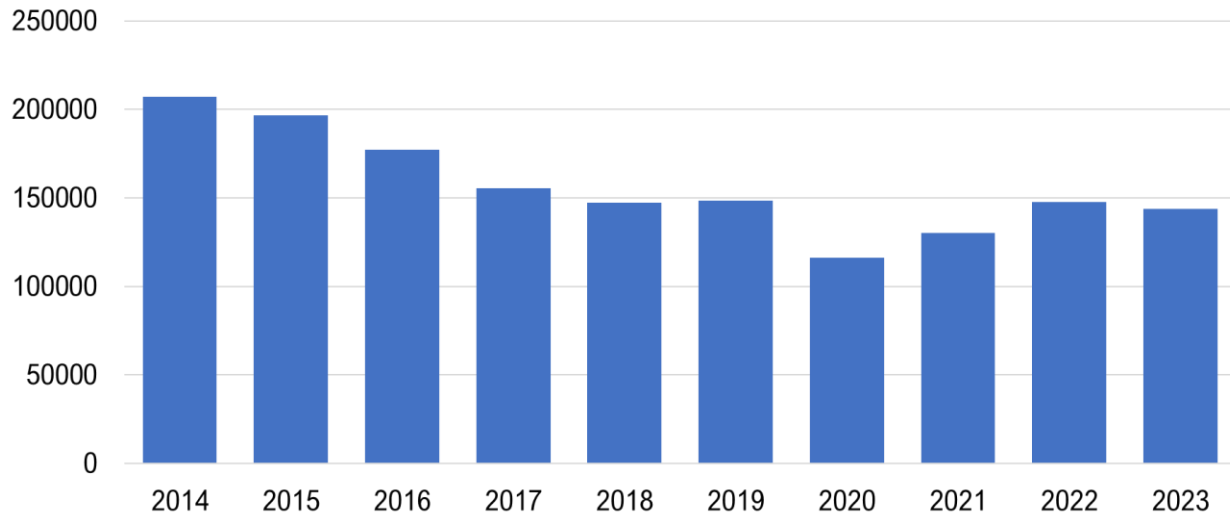
Carry a mix of blood groups

Order for named patients

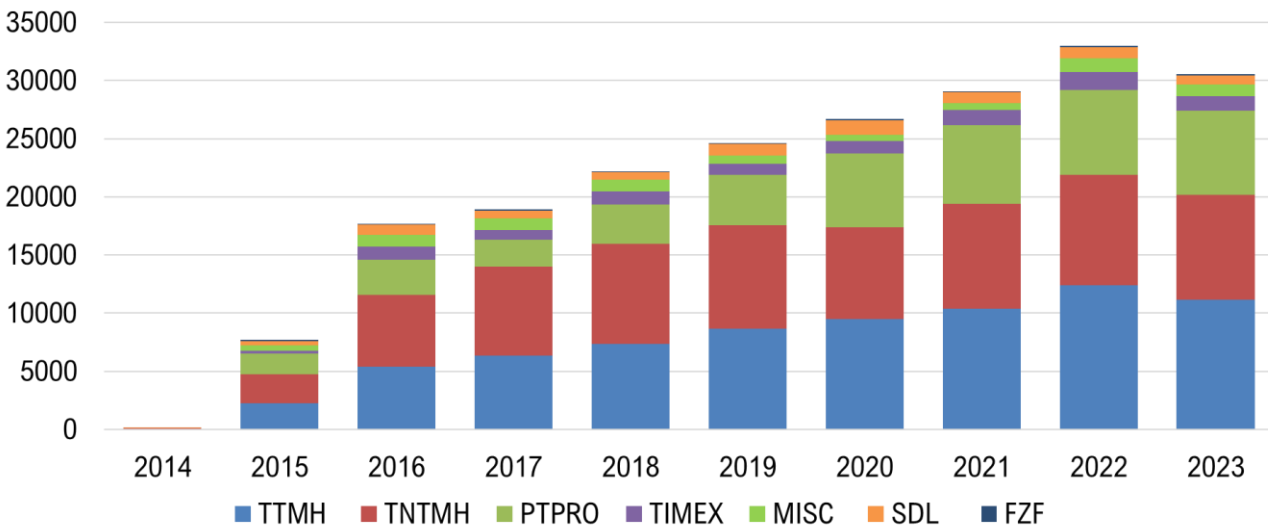
Active stock management



Annual FFP Issues



Annual FFP wastage by reason



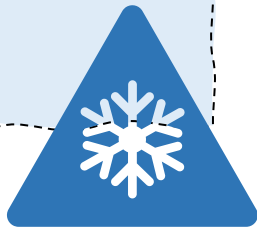
FFP + Cryo wastage can be reduced by:

Thaw only when required

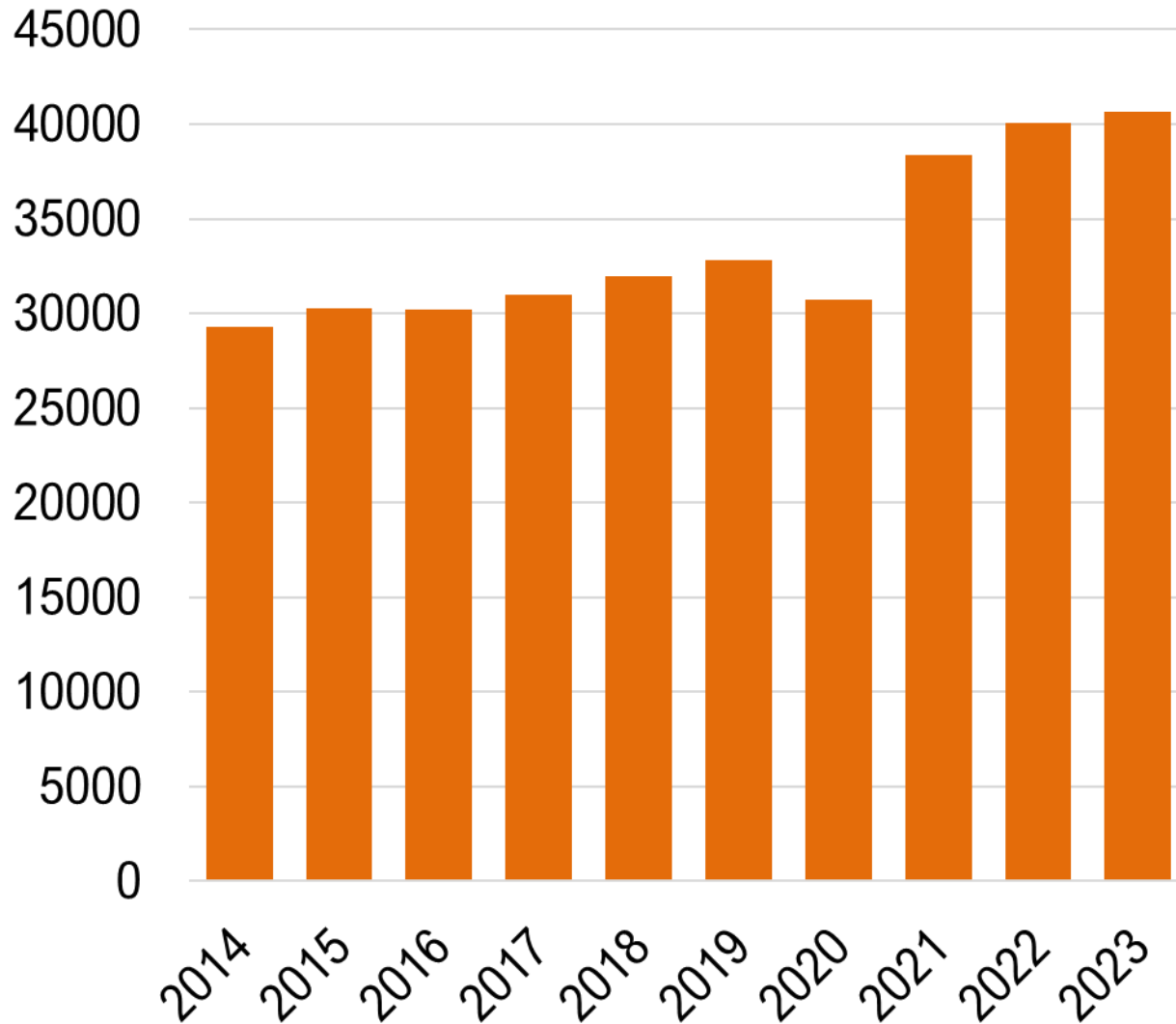
Thawed FFP expires 5 days after thawing

Group A (HT-) for trauma

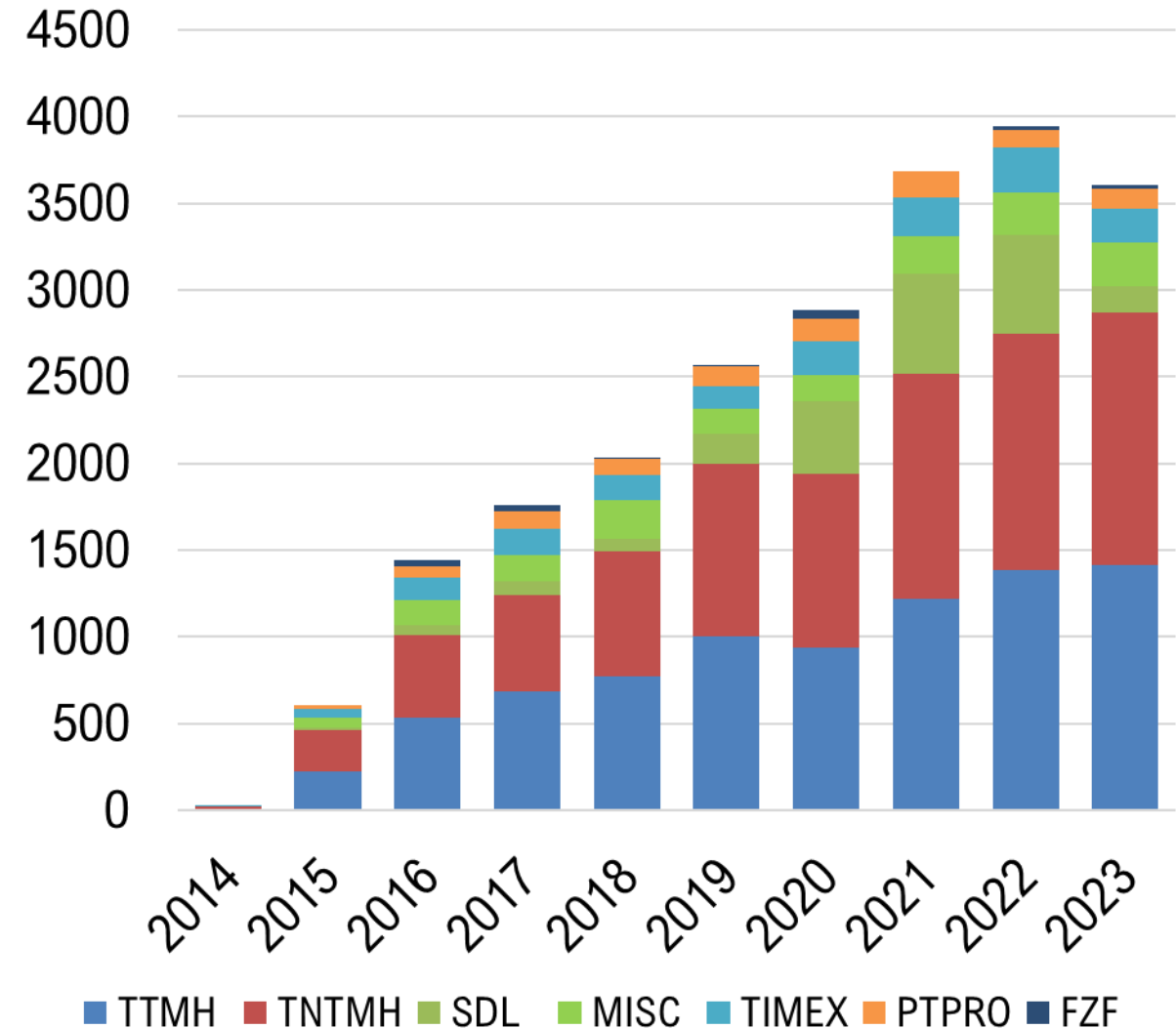
Handle with care



Annual Cryo Issues



Annual CRYO wastage by reason



O Neg
RBC

R0
RBC

A Neg
Platelets

AB
Plasma

High
Specification
Components



- Data shows some of our components are more valuable now than ever
- What can you do to protect the supply for the future?
- More information in our January Newsletter on the BSMS website (bloodstocks.co.uk)



- **Research + improving transfusion practice**
 - BTRU (Blood Transfusion Research Unit)
 - Component reports, electronic systems and wastage

Future Practices

Using data to identify opportunities for improving



- Opportunity for BSMS to collaborate with research

What is the Blood Transfusion Research Unit (BTRU)?

- There are five BTRUs in the latest round of funding, co-funded by the NIHR (National Institute for Health and Care Research) and NHSBT (£16m from the NIHR and £4m from NHSBT).
- These are aimed at providing new technologies, techniques or insights that will benefit donation, transfusion, and transplantation.
- Their work will run from 2022 to 2027.
- “Developing pragmatic evidence-based standards for safe and effective transfusion which are supported by data and IT, and which enable more efficient, cost-effective and iterative benchmarking of practice and quality improvements.”

How do we know the reporting/feedback BSMS is providing is effective and having the desired outcome?

- Do our BSMS reports help hospital laboratory staff make changes to reduce their wastage?

What is the impact of adoption of electronic transfusion systems?

- How electronic systems benefit inventory management – stocks, issues, wastage
- How can we provide the evidence to help hospitals deploy electronic systems



Smarter component reports

- Improve stock management practices

Collaboration, sharing knowledge

- Bi-directional knowledge – hospitals + NHSBT

Automated data feeds

- Free up lab time for active stock management tasks

Smarter inventory management

- Reduce manual task requirement and reduce waste in the supply chain





- Refresh knowledge of BSMS and what we do.



- The data we desire from hospitals.



- The benefits these data have for you and other areas of the supply chain.



- How we're using data to improve stock management for the future.

BSMS Education Day

Blood Stocks
Management Scheme 

Introduction to smarter inventory management

Free 1 day online course for state registered healthcare professionals provided by the Blood Stocks Management Scheme team.

Course content includes:

- Understanding the role of Blood Stocks Management Scheme – Aims and objectives and how we fit into the supply chain.
- VANESA – Features and navigation of the web-based data management system, employed by BSMS, includes a live demo.
- Understanding your nominal stock, issuable stock index (ISI) and WAPI.
- Considerations for setting appropriate stock levels.
- Ordering patterns and management of stocks.
- Discussion around the reasons and types of wastage.
- Challenges within the blood supply chain including forecasting and demand planning.
- The role of Patient Blood Management within the laboratory.
- Vulnerable components and employing best practice.
- Understanding your monthly component report.
- Participation in scenario-based case studies with the use of the **VEVOX** voting app.
- Questionnaire and self-assessment.

Dates:

Tuesday 20th January 2024
Thursday 7th March 2024
Wednesday 15th May 2024
Thursday 27th June 2024
Tuesday 10th September 2024
Monday 4th November

(Course runs 10am – 3pm via Teams)



Please register your interest at BSMS@nhsbt.nhs.uk. Provide your contact details, job title and the date you can attend. You will be contacted by member of the BSMS when a space has been secured.



Thank you for listening!

BSMS@NHSBT.NHS.UK