

This document has been produced to assist hospitals with their inventory management practices during NHSBT blood shortages. Resources and data provided by the Scheme have been summarised to encourage best practice, allowing users to gain maximum benefit from the information on offer.

Contents:

1. Best practice – Preparing for a blood shortage alert at each alert stage with specific actions for each component
2. Inventory Management Best Practice Guide
3. Audit tool for inventory management during a blood shortage alert
4. VANESA Participation
5. Reports and Data - How to use BSMS reports for stock reductions and emergency planning.
6. Accessing help



1. Best Practice Guidance specific to shortage alerts;

Shortage alerts may be **component specific** where either all or individual blood groups are affected or they may be **blood group specific** where all associated components will be impacted. This section highlights specific actions that can be taken to promote best practice for inventory management and to contribute to improving and maximising stock holding practices during each phase of a blood shortage alert.

During a Pre-Amber Alert Phase – For all components

- **Review stock levels** and reduce stockholding where possible. Small reductions can make a significant difference overall. Contact BSMS for guidance.
- **Enter daily stock levels, movement and wastage data** into VANESA to aid in determining our national stock holding.
- **Share stock** between sites to prevent direct ordering and make best use of specialised components (eg: antigen negative, irradiated).
- Provide **ABO matched** components where possible.
- **Highlight** expiring stock clearly within the laboratory and communicate to all sites within the Trust.
- **Monitor activity** against targets – Consult the BSMS monthly component report.

In addition for each component during a pre-Amber alert:

Red Cells

- **Conserve** O D negative red cells for O D negative patients in line with national guidance.
- **Reduce dereservation periods** to 24 hours for red cells to ensure good rotation of stock.
- Promote **PBM initiatives** e.g. Single unit transfusion, alternatives.

Platelets

- Introduce or reduce dereservation periods for issued platelets.
- **Review standing orders** and cancel if not required.
- Do not request long dated stock.
- Use both apheresis and pooled platelets (except for HLA/HPA matched).
- **ABO match** where possible.

Plasma

- Ensure regular **checks of frozen stock** to review expiry dates and appropriate storage to avoid errors when defrosting.
- Consider the use of group A (HT-) plasma for MHP/unknown patients to **conserve group AB**.

During an Amber Alert Phase – For all components

- **Continue** with pre-amber actions.
- **Consider reducing stock** numbers on a group by group basis, or across all groups if data supports this and is clinically safe to do so.
- **Share** stock with other organisations outside the Trust (where possible) to reduce direct ordering, increasing your availability of components and reducing wastage. For independent hospitals this may require identifying an NHS partner site, agreeing an SLA and transport arrangements.
- **Prepare** for NHSBT reduction in components issued to hospitals by discussing with clinical teams and updating your EBMP.
- **Enforce** your local sampling rules for obtaining a confirmed patient group, allowing issue of group specific components and avoiding an over reliance on universal components.
- **Continuously review data** on usage and stockholding and adjust as activity changes.

In addition for each component during an Amber alert:

Red Cells

- **Reduce** dereservation periods to **12 hours** for red cells.
- **Reduce** satellite fridge stocks and emergency stocks where possible if clinically safe to do so and manage locally.
- **Consider** use of O D Positive emergency stock instead of O D Negative for adult males and females over 50 (if not already established).
- **Continue** to promote PBM initiatives –single unit transfusion, lower Hb thresholds, alternatives to transfusion eg: iron, cell salvage and tranexamic acid (discuss with local HTC/EBMP members).

Platelets

- Consider reducing routine stock holding for **standby platelets** if clinical need is reduced.
- Consider **sharing stock** of platelets with other hospital sites both within your Trust and outside the organisation where possible.
- **Reduce** the dereservation periods for issued platelets further.
- **Substitutions** across blood groups and CMV status may be unavoidable (in line with national guidance). Discuss with the HTC/EBMP members and include in plans.

Plasma

- Review plasma stockholding.
- Ensure thawed stock that is not transfused has been considered for use with **alternative patients** (in line with guidance).
- Consider **transport to other hospitals** of thawed and not required stock.
- Consult the guidelines for use of **alternative clotting factor products** (such as Lyoplas (freeze-dried plasma), Fibrinogen Concentrate and Prothrombin Complex Concentrates) and discuss with clinical teams to include in EBMP.

During a Red Alert Phase – for all components

- **Continue** with amber actions.
- **Accept** older stock from NHSBT to reduce wastage.
- **Review and authorise** all requests according to local policy (Consultant/clinician involvement, as agreed in the EBMP, during a red phase).
- All platelet requests will be authorised by a senior clinician (eg: Consultant Haematologist).
- **Monitor** all wastage and discuss locally or with BSMS how to manage and reduce wastage.
- **Share** stock with other hospitals both within and outside of your Trust, where geographically possible to increase component availability and reduce wastage.

In addition for each component:

Red Cells

- Reduce red cell stockholding further and usage by a percentage (based on normal use).
- **Reduce** dereservation periods to **4 hours** where practicable.

Platelets

- Track **the fate** of each platelet delivered (as per NHSBT request).
- **Move** unused platelets elsewhere.

Plasma

- Further **reduction** in **stockholding**.
- Reduction in **usage** by a percentage (based on normal use).

2. Best Practice guide for inventory management

The BSMS best practice guide is available on our website [here](#).

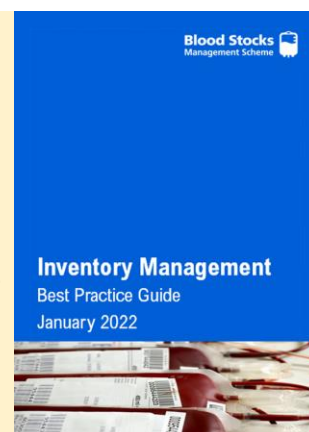
3. Audit tool for use during a blood shortage

BSMS have produced an audit tool designed for hospital transfusion laboratories to access in the event of an amber or red alert. The audit focuses on the preparedness of the laboratory as well as the inclusion and employment of good practice.

- [Blood Shortage Audit Tool \(Dec 22\)](#)

4. We need your data.

VANESA is the web-based platform for data entry and analysis for UK hospitals (UK, Wales, Northern Ireland) and blood services. Managed by the BSMS team, it allows the Scheme to collect stock level, movement and wastage data, vital for determining how much stock is held throughout the UK and how it is being utilised. Hospitals can now input daily stock data for platelets and frozen plasma components in addition to red cells. Please submit data by 10th of the month, Monthly reports will be issued on the 12th of the month.



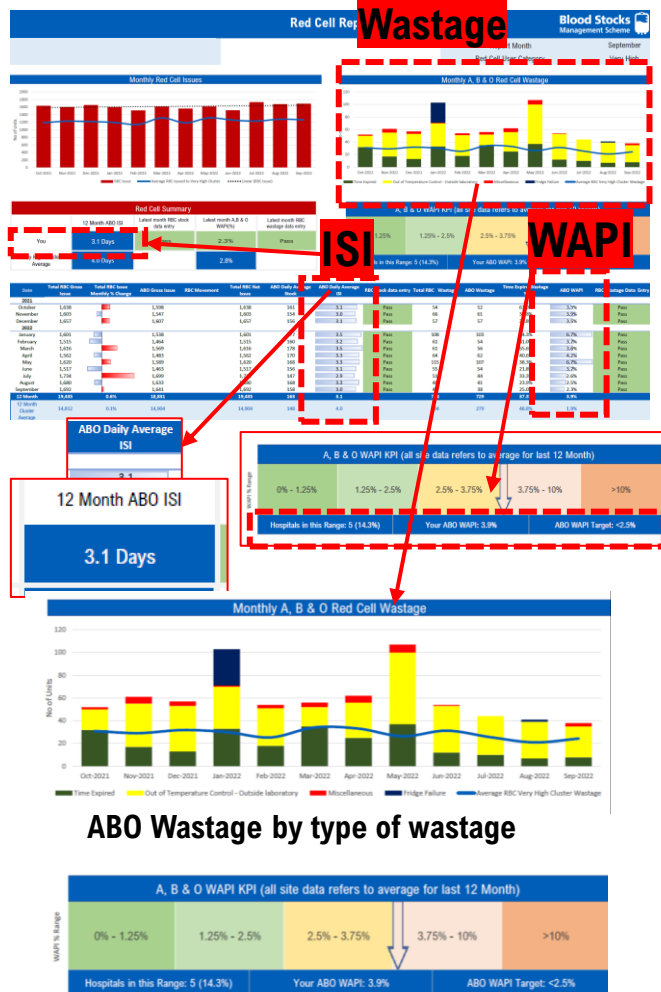
We urge all hospitals to enter inventory management data routinely so that the information is accurate and up to date.

5. BSMS Reports and Data - How can we use BSMS reports during blood component shortages?

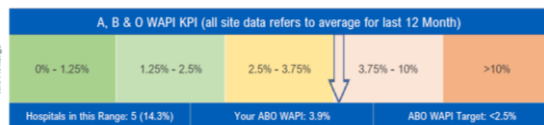
BSMS Monthly component reports – Red cells, O Neg, Platelets and Plasma

- Identify your **issuable stock index (ISI)** for RBC and **wastage as a percentage of issue (WAPI)** (for RBC, PLT, plasma) data.
- RBC:** Higher ISI values are associated with higher time expired (TIMEX) wastage. If your hospital's ISI is higher than your cluster average, can you identify areas to reduce stockholding to bring your ISI down?
- ISI targets for individual **RBC** blood groups are on page 5 of the report. ISI levels for Individual blood groups are displayed on your daily stock entry screen in VANESA.
- RBC:** The type of wastage is shown in the coloured ABO wastage chart, this might help identify an area to focus on e.g. if the majority of wastage is because of out of temperature control (OTCOL), can you consider using temperature loggers in blood transport boxes? Increase communication and education within the clinical areas who are responsible for the wastage? Reduce the number of red cells collected at a time?
- All Components:** WAPI is a ratio of your wastage against your issues, higher WAPI values indicate more of your inventory is wasted. If your WAPI is above your target threshold (shown on the red cell report and O Neg focus report), can you identify an area to focus on to reduce wastage?
- All components:** Identify any trends over time in issues, wastage and ISI (stock holding for RBC) using the 12 months of data displayed. Identify how these trends link to the clinical activity in your hospital and whether you can identify any areas to focus efforts from the transfusion laboratory to improve your inventory management practices.

BSMS Monthly Component Report

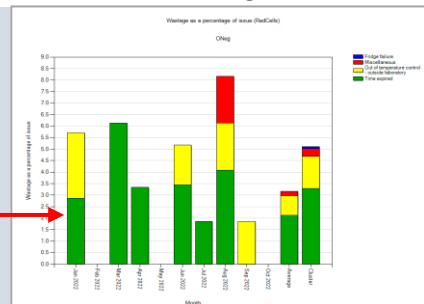


ABO Wastage by type of wastage



WAPI Target scale to help benchmark wastage against cluster

VANESA Chart - Types of O Neg wastage




VANESA

The data analysis features on VANESA may assist you with additional information for interpretation of your monthly component reports. Useful VANESA data includes:

- WAPI breakdown by blood group – which blood group is responsible for higher wastage of certain types (e.g. wastage type of O Neg RBC)
- ISI by blood group – Are some blood groups more highly stocked than others?
- Additional BSMS reports may be issued to assist hospitals with tailored stock reviews.
- BSMS/VANESA data may be used to supplement your internal data analysis.

6. Accessing Help - Extra support and guidance can be found on the [BSMS website \(Publications\)](#)

 For further advice please contact BSMS by email: BSMS@nhsbt.nhs.uk