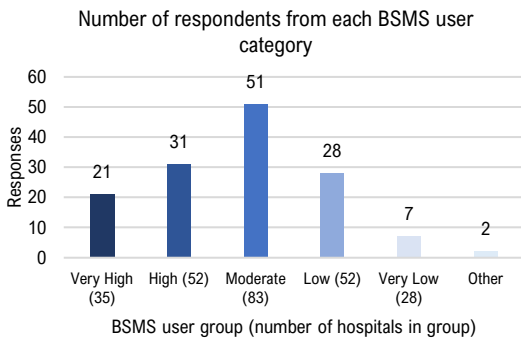




The Blood Stocks Management Scheme (BSMS) invited hospitals to complete the annual inventory practice survey on adult frozen components.

BSMS has observed in some hospitals that frozen component practices have changed and we understand there to be several contributing factors that have affected clinical utilisation of frozen components.

The purpose of this survey was to obtain qualitative data from hospitals on their current inventory management practices for frozen components that may be contributing to the changes observed in the issues and wastage data.



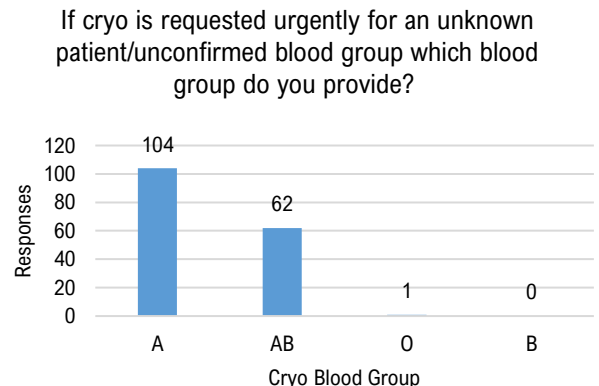
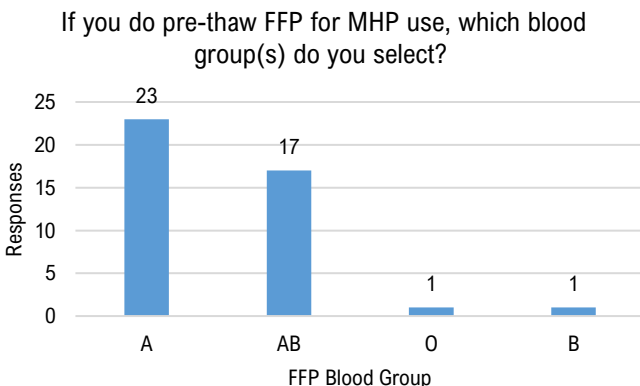
We received **141** responses with an average time of 14 minutes to complete the survey.



The survey was mainly completed by a Transfusion laboratory manager (75) or Senior BMS/Transfusion Lead (53).

## Results

- The majority of hospitals that stock FFP and cryo hold a variety of blood groups in varying quantities.
- The majority of responses (112/141, 79%) indicated they do not pre-thaw FFP whilst 29/141 (21%) indicated they do pre thaw FFP for rapid issue.
- 24/141 (17%) hospitals indicated they did support pre-hospital care initiatives. A variety of components are issued for pre-hospital care, including O Neg and O Pos RBC, FFP, lyophilised plasma and fibrinogen concentrate.
- When asked how long thawed, unused FFP was stored prior to discarding, most popular responses were either 24 hours (65/141 46%) or 5 days (120 hours) (57/141 40%). Additional comments stated that if stored for 5 days it would only be used for MHP patients.
- Some hospitals stock alternative components such as fibrinogen concentrates, lyophilised plasma, solvent detergent treated FFP (SDFFP) in addition or instead of FFP and cryo to provide clotting factor support.
- VANESA data reporting is positive, however there are missing data for frozen component wastage, stock and movements. 51 respondents 'were not aware' of some aspects of data reporting in VANESA for frozen components.



## Limitations

This survey collected qualitative data from voluntary respondents. This data is not comprehensive (141 hospitals responded), answers may contain error and missing data.

## Conclusions

- Variations in stock holding and provision of frozen components were identified, this data supports there are additional factors which may be driving the change to FFP issues and wastage including adoption of clotting product alternatives, however insufficient responses were received for any firm conclusions.
- Whilst 17% respondents indicated they do support pre-hospital care initiatives, not all who support pre-hospital care provide FFP, other clotting products and RBC are reported to be provided.
- 21% of respondents indicate they pre-thaw FFP for rapid issue. There were 60% responses from very high and high user groups so it is suspected the number of hospitals pre-thawing is likely to be higher, particularly for major trauma centres.
- Responses identified that thawed FFP that is not transfused is not always kept for maximum recommended periods and re-issued to appropriate patients.<sup>1</sup>
- There were 8 hospitals that reported they stock only group AB FFP or cryo and several hospitals reported utilisation of group AB FFP or cryo for an unknown trauma patient. Current evidence supports utilisation of compatible group frozen components for patients of unknown blood group to conserve group AB plasma.<sup>1,2,3</sup>
- VANESA data submission is known to be lower for frozen components, one barrier to data submission was reported to be respondents are unaware of the functionality to record stock and wastage.
- Not all hospitals stock both frozen components therefore the development of BSMS frozen component usage categories would need to be based on issues for individual frozen components.

Recommendation	Action identified
<p>Promote best practice guidance for utilisation of FFP up to 5 days post defrosting for patients with unexpected major bleeding only. For patients with other indications, FFP is suitable for 24 hours post defrost.<sup>1</sup></p>	<p>Ways BSMS aim to share our survey report and recommendations;</p> <ul style="list-style-type: none"> <li>• The BSMS quarterly newsletter and 'The NHSBT Update'.</li> <li>• The BSMS website</li> <li>• Presentation by BSMS at regional and national meetings and internally within NHSBT where appropriate.</li> </ul>
<p>To conserve AB plasma, promote the evidence for utilisation of compatible blood group plasma for MHP or major unexpected bleeding in unknown ABO group patients i.e. Group A HT Neg<sup>1,2,3</sup></p>	<ul style="list-style-type: none"> <li>• <a href="#">BSMS VANESA user guide</a> is available to assist hospitals with navigating data entry.</li> <li>• BSMS aim to produce some digital materials to assist with using VANESA e.g. 1 minute how to guides and Webinar materials.</li> </ul>
<p>Promote and assist hospitals with VANESA data entry for frozen component wastage, stock and movement to allow BSMS to continue to support hospitals and NHSBT using data supplied by hospitals.</p>	<ul style="list-style-type: none"> <li>• BSMS to perform development work to improve definitions of wastage categories.</li> </ul>
<p>BSMS to explore the amendment of wastage categories to capture the changes in the ways frozen components are used and wasted.</p>	<ul style="list-style-type: none"> <li>• BSMS to assign hospitals discrete FFP and cryo user categories and develop KPIs and benchmarking for issues and wastage.</li> </ul>
<p>BSMS to develop FFP and cryo usage categories based on number of issues to allow development of key performance indicators (KPIs) and benchmarking for frozen components.</p>	

## References

1. Green, L., Bolton-Maggs, P., Beattie, C., Cardigan, R., Kallis, Y., Stanworth, S.J., Thachil, J. and Zahra, S. (2018), British Society of Haematology Guidelines on the spectrum of fresh frozen plasma and cryoprecipitate products: their handling and use in various patient groups in the absence of major bleeding. *Br J Haematol*, 181: 54-67. <https://doi.org/10.1111/bjh.15167>
2. Dunbar, N.M., Yazer, M.H. and (2017), Safety of the use of group A plasma in trauma: the STAT study. *Transfusion*, 57: 1879-1884. <https://doi.org/10.1111/trf.14139>
3. Chhibber, V., Greene, M., Vauthrin, M., Bailey, J. and Weinstein, R. (2014), Group A Plasma for Emergency Release. *Transfusion*, 54: 1751-1755. <https://doi.org/10.1111/trf.12537>

