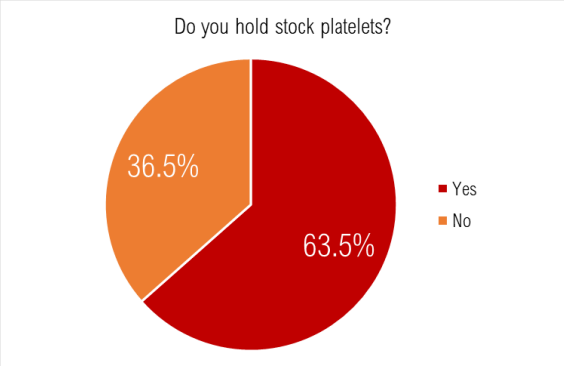
BSMS Hospital Platelet Inventory Practice Survey 2021 - Summary

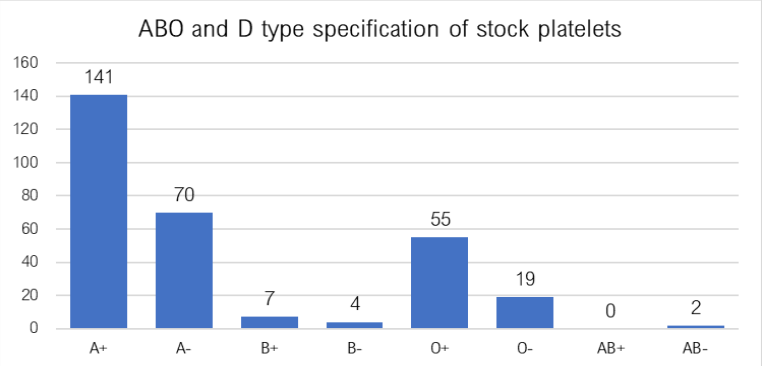
Blood Stocks Management Scheme

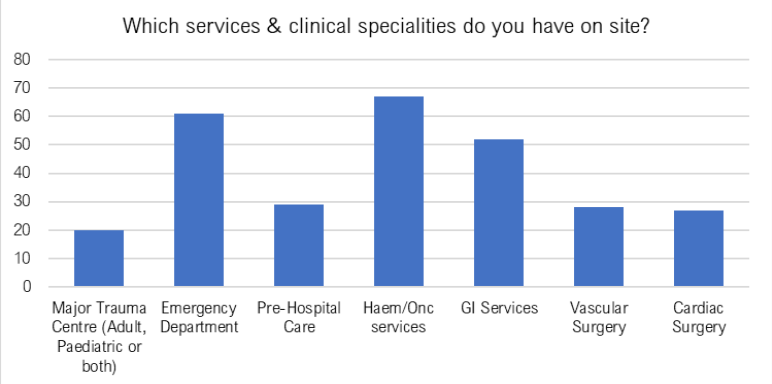
This inventory practice survey was centred around gaining a better understanding of current hospital platelet stock practice and to establish a full picture of the scope and variation of current procedures, to better inform future collection and manufacturing models. We hope to identify best practice models to help support others and where possible, formulate some key recommendations.

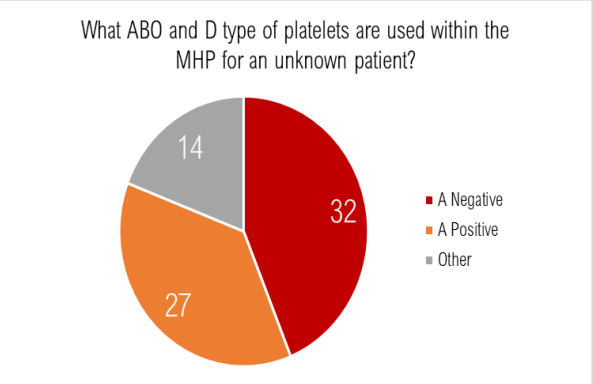
The online survey was sent to all hospital transfusion teams working in hospitals served by NHSBT and a total of 115 (n=258) complete responses were received (additional part responses were received and included as part of stockholding specification analysis).

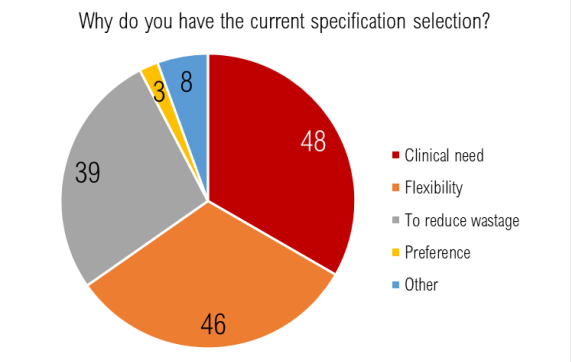
Results

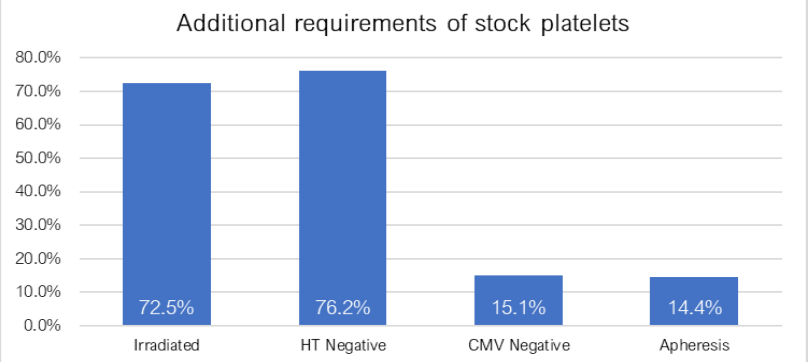












Conclusions

Much like other blood components the decision of whether to and what to hold as stock platelets is multifaceted and highly likely to differ dependent on circumstances. These factors will drive the variability demonstrated above. The short shelf-life of platelets further complicates this process. Whilst no specific actions could be determined from this survey; we should all take the opportunity to review current practices regularly to ensure supply chain optimisation.

Platelet recommendations

(Recommendations have been taken from Hospitals & Science webpages)

Blood Stocks Management Scheme

Emergency use

It is acceptable to use ABO incompatible platelets negative for high titre agglutinins in the management of patients with major haemorrhage. D negative platelets should be used for females <50 years of age of unknown blood group. Source: BSH Haematological management of major haemorrhage, Addendum March 2017(1)

In the absence of HLA or HPA

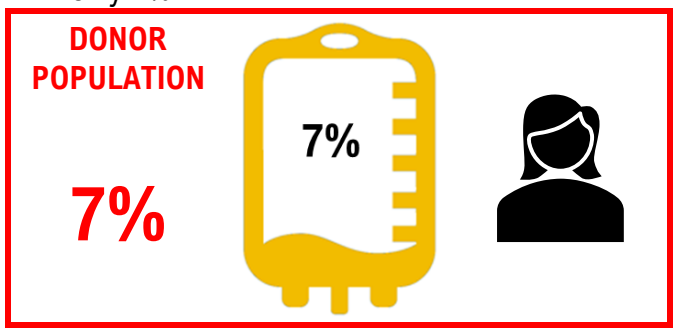
- ABO matched platelets give the highest platelet count increment and are in the patient's best interest.

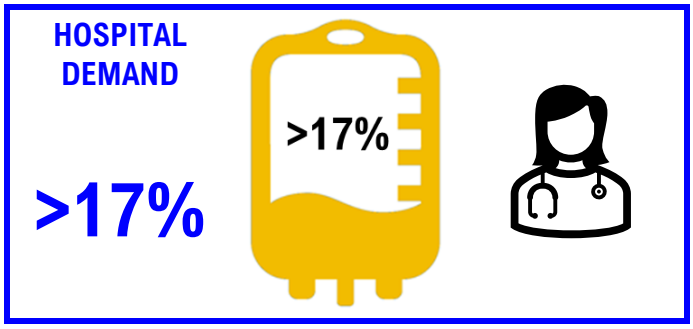
AB D neg

- These platelets should only be ordered for named patients. Demand continues to exceed supply and requests may be met with non-ABO matched substitutions.

A D neg

- When time permits, match ABO group, rather than rely on A D neg platelets. Using these platelets as a 'universal' component contributes to >17% of total platelet demand from a potential donor population of only 7%.





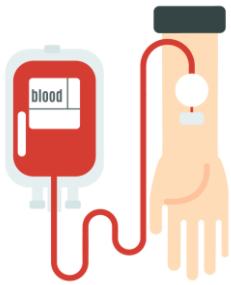
Substitutions

- Demand for A D neg is highly variable which complicates the supply chain of this short shelf-life product.
- To be able to supply highest demand we collect beyond the proportionate donor population to supply all stock holding units to this level.
- When demand is low, we may offer older A D neg units for group acceptable substitutions in date of expiry order to reduce wastage of this valuable resource.

We issue a 'first in first out' process, orders for high spec such as Apheresis, CMV and HT negative may have their appropriateness questioned to reduce wastage.

Platelet Donation and Supply Information

Two-thirds of A Negative supply is able to be met from apheresis donors. This relies on a limited panel of donors who give up several hours of their time every two weeks.



The remaining third is then met by platelet pooling. This is when the platelets from **4** whole blood donations are combined and processed to create one dose of platelets.

A Negative whole blood donations are collected to meet red cell demand so collecting above this level to manufacture additional platelets will lead to red cell wastage. This level will be reached at 18% hospital demand for A Negative platelets.

Please reassess local ordering for A Negative platelets in order to prevent us reaching this point and support maintaining the supply chain. A Positive platelets are a more sustainable stock solution for the majority of patients. Please contact your PBMP, CSM or BSMS team for further support.

Any questions, please contact the BSMS team by email bsms@nhsbt.nhs.uk