

COVID-19: THE CHANGING DEMANDS OF BLOOD PRODUCTS

Matthew Bend Blood Stocks Management Scheme Manager

Sophie Staples Lead Specialist - Blood Stocks Management Scheme

Andrea Marshall Patient Blood Management Development Manager

Anne Davidson Education Lead: Patient Blood Management Practitioner Team NHSBT

Blood services around the world are working hard to ensure adequate supplies of blood components during the ongoing coronavirus pandemic. In March 2020 the World Health Organization (WHO) published guidance to the blood services highlighting the need to closely monitor blood stocks and promote PBM techniques to safeguard the blood supply. The NHS Blood and Transplant (NHSBT) Patient Blood Management (PBM) and Blood Stocks Management Teams have been and remain crucial to the successful navigation of these previously uncharted waters.

The use of the word unprecedented has become engrained in popular culture and media reporting over the past few months, and we might use the same expression to describe the dramatically changing profile of blood component demand during the coronavirus pandemic.

How has blood demand changed?

Over the past few years demand for red cells in hospitals served by NHSBT has been falling by about 1-2% per year and we currently issue around 1.4million red cells per year. Recent years have shown a steadily increasing demand for “universal” components such as O D negative red cells and A D negative platelets, presenting a challenge for the existing donor base. The challenge has always been anticipating the changing demand, and balancing donation and collection

to optimally meet the needs of hospitals. WHO predicted that during the acute/ peak periods of disease transmission, the demand for blood components would fall due to the change in focus of our health system; however, some of the demand drivers for blood components would remain, including emergency surgery.

The graph below illustrates the impact of the COVID-19 pandemic on hospital red cell demand which showed considerable decline from the second week in March, however, the O D negative demand has remained constant. The reduction in demand is attributed to the cancellation of routine clinical procedures to focus on the pandemic response, leaving hospital transfusion laboratories having to abruptly adjust component stock levels to reflect rapidly evolving demand. At the start of May, NHSBT was issuing -10% fewer red cells per week. The challenge is now to balance predicted increase in demand, as hospitals start to recover suspended services, with a potential reduction in blood donations. NHSBT continues to engage with hospitals gathering first-hand intelligence with the focus on safeguarding blood component supply and minimising component wastage.

PBM now and as services are restored

The response to COVID-19 has seen established PBM practices put at risk, at the very time they need to be maximised to protect component supply.

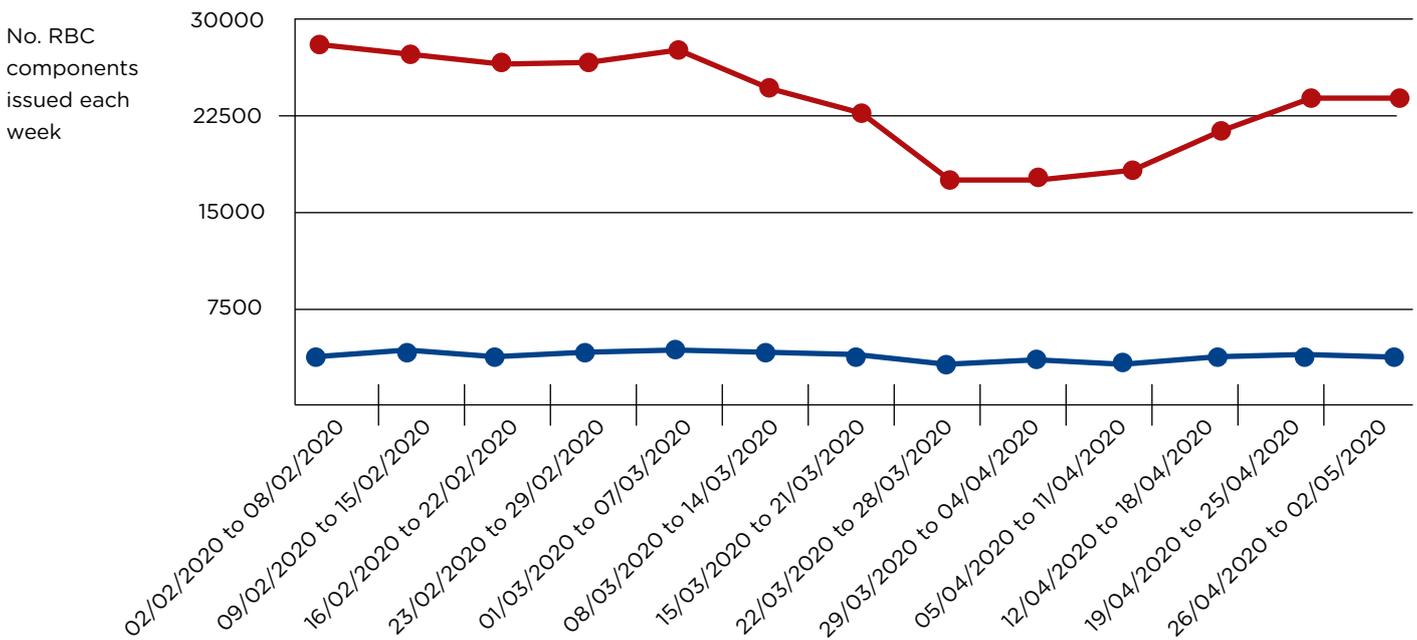
Anaemia management is a core PBM initiative which, when effective, reduces blood transfusion requirements and the cancellation of elective surgery initially offered an opportunity to maximise pre-optimisation of anaemic patients. However, social distancing and redeployment of staff has resulted in reduced capacity and even cancellation of pre-op and IV iron clinics.

For those services remaining open, attendance has plummeted as individuals make an informed decision to ‘stay at home’. Primary care services also became difficult to access for many chronic and acutely anaemic patients. Unfortunately, due to the lack of anaemia management we must be prepared that the drive to recommence chronic anaemia services and elective surgery may result in a rise in component demand.

Concerns have also been raised regarding possible viral transmission of COVID-19 during intra-operative cell salvage, an established and effective alternative to allogeneic blood transfusion used in both routine and emergency surgery. Manufacturers, NHS, and the UK Cell Salvage Action Group have been working together to determine the risk, if any, from this process, but it is probable that using this procedure has fallen recently due to COVID-19.

However, as hospitals start to resume normal activity, we have an opportunity

Hospital Red Cell Weekly issues from NHSBT



to demonstrate the benefits of PBM, both in safeguarding the blood supply and patient outcomes.

To support our clinical colleagues, we are developing a PBM Toolkit to promote previously established and safe techniques to reduce, or provide alternatives to, blood transfusion.

How we kept in touch with hospitals, professionals, patients and the public

Effective communication is never more important than in times of crisis. COVID-19 has tested our relationship with transfusion teams, hospitals, patients and public as well as the wider healthcare community as usual communication routes have been compromised.

In response we have embraced the virtual and digital communication platforms available to us and increased our visibility to provide support, guidance and advice.

We listened to concerns and queries from healthcare staff and worked with the National Blood Transfusion Committee to develop Q&A documents that provided a consistent and considered response to FAQs. These were distributed widely but also hosted on the NHS Blood and Transplant dedicated COVID-19 web page

www.hospital.blood.co.uk/business-continuity/coronavirus-covid-19

We galvanised our PBM Twitter page @PBM_NHS to deliver key messages and cascade supporting documents such as the National Blood Transfusion Committee (NBTC) Red Cell Shortage Plan and guidance on the management of massive haemorrhage during a shortage.

www.transfusionguidelines.org/uk-transfusion-committees/national-blood-transfusion-committee/responses-and-recommendations

We shared COVID-19 news and updates and links from trusted organisations to suppress the cycle of fake news. Social media gives access to a worldwide audience and has provided a great opportunity to share and discuss issues with organisations in countries at different stages of the COVID-19 journey.

Digital, social and remote communications have proved invaluable in the current climate, but we have also continued with more traditional avenues and continue to disseminate messages and support. Our COVID-19 edition of the PBM newsletter focuses on celebrating success stories and taking forward lessons learnt into new and improved ways of working.

Moving forward: can you help?

Please can you help us understand the evolving picture of demand for blood components. If you have any intelligence on how your blood component requirements are changing, please email us at:

Covid19BloodRecovery@nhsbt.nhs.uk

Also, we would like to invite you to contribute to a survey which will collect information about transfusion requirements for patients with COVID-19. Some hospitals have been collecting data to help us understand blood component demand and maintain adequate supplies, and we have received requests from others wishing to contribute: as a result, we are making the data collection tool available to all hospitals on a voluntary basis.

For further information, including a request to join the survey, please send your details to NHSBT

CustomerService@nhsbt.nhs.uk