

**NHSBT Board**  
July 2018

**NHSBT Pricing Proposals for 2019-20**

- 1. Status – Public**
- 2. Executive Summary**

This paper provides a summary of the pricing proposals for NHSBT's blood components and specialist services for 2019-20. Following approval by the Board, these will be discussed with the National Commissioning Group (NCG) in September 2018, with a view to implementation in 2019/20.

We anticipate that demand for red cells will continue to decline for the next five years, rather than flattening as was previously assumed due to changing demographics. Managing demand at these reducing levels is creating significant supply challenges due to the unequal decline in individual blood groups. There is also a need to increase Ro donor numbers to support increasing demand from patients with sickle cell disease, which will substantially increase marketing costs.

In parallel, there is a requirement to fund a series of major IT investments, the most important of which is to replace the system which underpins the blood supply chain. Change on this scale is inevitably disrupting the organisation's capacity to resource further cost reduction and efficiency programmes.

Our pricing proposals for 2019/20 are designed to ensure that the NHS's overall expenditure on blood remains flat, despite the significant reduction in income that NHSBT is facing and the need to make substantial investments in Core Systems Modernisation. We are proposing an increase in the red cell price of 2.8%, i.e. from £128.99 to £132.72, which, when linked with the forecast decline in red cell demand (2.8%), results in overall NHS expenditure on blood being unchanged. Taking Diagnostic and Therapeutic Services into account, where increases in demand are being seen, the total change in cost to the NHS will be an increase of 1% for next year.

Although we can avoid increasing the overall cost of blood to the NHS in 2019/20, removing cost to keep pace with reducing red cell demand is becoming significantly more challenging, particularly given the significant costs already removed. There is a possibility, therefore, that there would need to be a further price increase in 2020/21.

Nevertheless, NHSBT remains one of the lowest cost blood services in the world and has already delivered savings of £95m over the last 6 years.

### 3. Action Requested

The Board is asked to approve the pricing proposals prior to the NCG meeting.

### 4. Purpose

#### 4.1 Background: red blood cell and platelet demand

Demand for red cells has declined steadily over the last 5 years, driven by a combination of medical advances such as laparoscopic surgery, pharmacological developments and educational initiatives such as NHSBT's "patient blood management" (PBM) programme which encourages the safe and appropriate use of blood. Publications in medical journals have also demonstrated that patients can have a better outcome when less blood is used. Despite an increase in the population over 60 years old (i.e. the age group which uses most blood), blood usage continues to decline.

Since the end of 2009/10, NHSBT has seen a 33% reduction in the demand for blood. In the same period, the NHS's expenditure on blood (and hence NHSBT's income) has reduced from £317m in 2009/10 to a forecast of £260m in 2018/19, while the unit price of red cells has reduced from £133.19 to £128.99 (including HEV testing of £2.11 per unit) despite increasing levels of safety and availability.

The latest demand figures are suggesting a red cell forecast for 2019/20 of 1.359m units. This is 2.8% lower than the plan originally agreed for this year with the NCG (1.398m units).

Although we had previously thought that demand for platelets had stabilised at c.0.260m, which is slightly higher than the 0.259m agreed with the NCG, the forecast for 2019/20 now indicates that demand will decline next year.

Description	Original NCG Plan 2018/19	Revised Demand 2018/19	NCG Plan 2019/20	+ / - NCG Plan to Plan
Red Cells	1.398m	1.398m	1.359m	-0.039m
Platelets	0.259m	0.253m	0.249m	-0.010m
Plasma Components	0.347m	0.357m	0.358m	0.011m

NHSBT has implemented substantial cost reduction programmes (£95m since 2011/12) and has a cost improvement plan of £5m in 2018/19. The cost reductions have included the rationalisation of manufacturing and testing facilities and a reduction in blood collection capacity leading to substantial decreases in headcount. However, there is a need for significant investment to replace an ageing IT infrastructure and to replace the application underpinning the blood supply chain. The ongoing provision of critical products and services is highly dependent on its successful replacement. The overall cost of this

change to NHSBT will be substantial and is estimated to be in the range of £40m-£50m over 5 years.

The plan for 2019/20 includes a cost improvement target of £7.3m, which combines cost pressures over which NHSBT has no control, e.g. staff grade increment increases, capital charge adjustments, inflation, the cumulative impact of the new 3-year NHS pay deal (for non-basic pay) and the Treasury GDP Deflator (1.7%), and lost contribution through reduced demand for red cells. At this stage it is not clear whether the new 3-year pay deal for NHS staff will be built into tariff from 2019/20 onwards. If this is confirmed, NHSBT will realign its prices accordingly.

The cost improvement plan for 2019/20 will be derived from demand reduction and productivity improvements, operational and support function efficiencies, and estate management and procurement savings. We will confirm these as part of the budget process scheduled for later in the year.

Category	Blood £m	DTS £m	Total £m
<b>Opening position (closing NCG position 2018/19)</b>	<b>260.6</b>	<b>60.7</b>	<b>321.3</b>
2019/20 Product and Service Demand Impact	1.5	2.3	3.9
2019/20 Cost Reduction Programme	-6.9	-0.4	-7.3
2019/20 Cost Pressures and Developments	1.4	0.4	1.8
2019/20 Inflation funding increase (e.g. pay 1%; non-pay 1.7%)	4.0	1.0	5.0
<b>Total Impact</b>	<b>0.0</b>	<b>3.3</b>	<b>3.3</b>
<b>2019/20 Revised Position</b>	<b>260.6</b>	<b>64.0</b>	<b>324.6</b>
<b>Percentage increase / (decrease)</b>	<b>0.0%</b>	<b>5.5%</b>	<b>1.0%</b>

## 4.2 Pricing: Red Cells

The proposed level of cost improvement for 2019/20 represents a balanced approach in the context of the significant organisational challenges facing NHSBT, particularly the degree of resource which is being focused on Core Systems Modernisation. It is in this context that the most realistic approach is to recommend a price of £132.72 p/unit for blood in 2019/20. This proposal is based on the premise that NHS expenditure on blood will remain flat.

## 4.3 Blood Component Trends and Pricing

Demand for O D negative units has declined slightly during the current financial year at c.12% of total demand, compared with prevalence in the donor population of 8%. Issues of this group are higher, however, at around 13% of total red cell issues. This reflects the need to substitute Ro units with O D negative units. In response, we have put plans in place for the recruitment of additional donors that will be necessary to meet the demand, with £1m set aside in transformation funds to pay for this new activity during the current year and an equivalent amount for each of the next two years.

Demand for group A D negative platelets continues to remain high at c.15%, albeit that it appears to have stabilised at this level since late 2015. Meeting demand at these levels continues to be challenging. At a hospital level, there continues to be evidence of differing ordering practices. In response, we are continuing to work closely with hospitals to influence the usage of the universal blood groups (for both red cells and platelets) through PBM routes.

There are no plans to differentially price O D negative red cells or A D negative platelets, given previous feedback that this would not change ordering behaviour and would be extremely unpopular with customers. We are continuing to pursue a variety of PBM strategies which are proving successful.

#### 4.4 Longer term demand and pricing

Demand continues to be difficult to predict. The long-term planning model indicates a continued decline over the next 5 years; we had previously assumed a flattening of demand in the outer years due to changing demographics, which has not occurred. The forecast for 2019/20 is suggesting a demand of 1.359m, which is a further reduction of c. 39,000 units compared with the 1.398m agreed with the NCG for 2018/19. This also impacts on the demand trajectory of the following years.

The increasing decline in demand combined with a potential increase in costs, has major implications for NHSBT's financial situation in terms of the consequent requirement for significant cost savings. Removing further capacity and cost in line with the demand forecast is also particularly challenging given the need for major investments in IT, which are designed to improve the future resilience of the blood supply chain. Operational efficiencies also need to be balanced with maintaining security of supply and the ability to respond if demand were to increase.

Year	2017-18 outturn	2018-19 forecast	2019-20 forecast	2020-21 forecast	2021-22 forecast	2022-23 forecast
Red cell issues (million)	1.445	1.398	1.359	1.315	1.265	1.224
% change vs 2017/18		-3.3%	-6.0%	-9%	-12.5%	-15.3%

#### 4.5 Platelet demand and pricing

In 2018/19 we will be further reducing the production of apheresis platelets to 48% of overall demand (vs 50% in 2017/18). The actual demand for apheresis platelets is c. 26% and we will continue to price platelets to reflect their differential cost of manufacture, to fully recover our costs. The different cost of production will be reflected in the pricing and in overall terms will be cost neutral to the NHS. It is proposed that the price of apheresis-derived platelets is set at £232.76 compared with £186.86 for a pooled unit.

Certain hospitals continue to order a disproportionate number of platelets collected by apheresis. They will be reminded that NHSBT’s clinical guidance on the use of platelets makes clear that apheresis and pooled platelets are functionally equivalent and should be used interchangeably, with the caveat that only those recipients born on or after 1<sup>st</sup> January 1996 should receive apheresis donation platelets, if possible.

Year	2017-18 outturn	2018-19 forecast	2019-20 forecast	2020-21 forecast	2021-22 forecast	2022-23 forecast
Platelet issues (million)	0.259	0.253	0.249	0.244	0.240	0.236
% change vs 2017/18		-2.4%	-3.9%	-5.6%	-7.2%	-8.9%

#### 4.6 Fresh frozen plasma (FFP) and cryoprecipitate

As a risk reduction measure for variant Creutzfeld-Jacob disease (vCJD), NHSBT imports plasma for the manufacture of low-vCJD risk FFP and cryoprecipitate components for patients born on or after 1 January 1996, and treats the plasma with methylene blue to further reduce pathogen transfer risk. As this overall cohort ages, the demand for adult-sized FFP (manufactured from one plasma donation) and cryoprecipitate (pooled from 5 plasma donations) is increasing and is becoming a significant challenge, particularly for vulnerable blood groups. The limited market from which plasma can be sourced also increases the price.

The market for these products has also evolved over time, with many UK hospitals (and other UK blood services) having chosen to switch to the pharmaceutical product Octaplas LG, as a near-direct and less expensive alternative to NHSBT's FFP portfolio. In contrast, for cryoprecipitate there is no commercially-available pharmaceutical alternative and NHSBT remains the sole supplier of this product.

In 2018, the Advisory Committee on the Safety of Blood, Tissues and Organs (SaBTO) is due to consider whether the current requirement for plasma importation remains valid. A decision by SaBTO to maintain the import requirement would have the potential to render the long-term supply of lower-vCJD risk FFP and cryoprecipitate components unsustainable. In these circumstances, NHSBT would need to consider alternative options, amongst which would be the need to consider reducing the routine supply of imported FFP to hospitals for adult and older paediatric recipients, given the predominance of the pharmaceutical alternative. This would have the benefit of allowing NHSBT to divert its plasma imports and resources to maintain a sufficient supply of lower-vCJD risk for adult and neonatal cryoprecipitate components and neonatal FFP components for recipients born after 1 January 1996. Once the SaBTO decision is known, NHSBT will revise its supply strategy for plasma-derived products.

## 4.7 Diagnostic and Therapeutic Services Pricing

DTS is a varied directorate containing several strategic operating units. Each area has a strategy which is intended to establish NHSBT as a preferred supplier within the NHS, underpinned by sustainable financial plans.

Although every effort has been made to retain flat prices, we have been unable to contain a number of pressures next year. We are continuing to respond to customer demands for provision of a 24/7 service, and increases to the cost of our key consumables. The impact of these specific pressures at a business unit level will result in Red Cell Immunohaematology, Reagents and Stem Cells each increasing prices by 1%. However, prices for our Therapeutic Apheresis Services will reduce by 1% in 2019/20, with the focus of this reduction on Plasma Exchange and Red Cell Exchange services.

The Tissues and Eyes (TES) business unit operates in a highly competitive commercial environment, and during the current financial year has seen its market share across several product areas come under pressure, most notably with a decline in the demand for skin. Pressure on NHS funding has impacted upon product demand in areas such as elective orthopaedic surgery. When these factors are combined, this results in TES continuing to make a significant deficit. We are developing plans to improve the financial position and are examining several options for improving demand for our products, adjusting pricing to more closely reflect market conditions and to reduce our cost base where appropriate. In overall terms our intention we will be to retain flat prices for 2019/20, we do however, reserve the right to respond to evolving market conditions.

Our Histocompatibility and Immunogenetics (H&I) service is developing patient facing next-generation sequencing (NGS) technology for implementation in 2019/20. This will improve the specificity of matching between donor and patient and will also result in quicker turnaround times, which will consequently improve patient outcomes. The new technology will be phased in during 2019/20 and until we have fully understood the impact on our costs, we will be retaining flat prices for next year, with a commitment to review this fully for 2020/21.

A significant element of the Cellular and Molecular Therapies income (c. £3.6m p.a.) derives from the storage of stem cells post-transplant. Harvested cells are maintained in on-site cryostorage facilities in case they are required for re-transplantation. NHSBT levies a charge to recover the ongoing costs of storage after the first year. Stored cells are reviewed with respective hospitals and discarded in line with relevant guidance. We had expected there to be new guidance on the optimal length of time that cells should be stored in 2019/20, however this now appears to be unlikely. CMT is experiencing higher consumable costs and will need to pass these on through a 1% price increase.

## **5. NHSBT Transport Arrangements**

NHSBT is undertaking a review of its logistics arrangements to improve the efficiency of the fleet. For example, NHSBT currently commits to a window of +/- 15 mins against the allotted time for delivery, which neither reflects reality in many cases and is also not cost effective to manage. In its place we are proposing the introduction of broader delivery windows (90 minutes before pre-agreed delivery time and 30 minutes afterwards), with analysis showing that deliveries are already in many cases near to what will be proposed. Broadening the delivery window could result in significant increases in fleet productivity and reductions in cost (c. £0.75m). The intention will be to discuss these proposed changes with hospitals and user groups this year. The revised timings will not change hospital order cut off times or operating hours.

The trend towards self-collection of blood by hospitals and its adverse impact on both the efficient management of our supply chain and the reduced income from *ad hoc* delivery charges resulted in the adoption of a fixed charge of £11 per order for the self-collection of blood in 2017/18. The self-collect charge was retained in 2018-19 and will continue in 2019/20.

There are no further logistics changes planned for 2019/20 and as a result, the *ad-hoc* and emergency deliveries, which are currently charged at £52.15 per order regardless of distance from the supplying blood centre, will remain unchanged for 2019/20.

## **6. Summary**

NHSBT continues to face a challenging financial situation, with rapidly declining demand, substantial cost reduction programmes and a parallel need for investment in core systems. It is in this context that we are recommending a price rise for red cells which ensures that overall NHS expenditure on blood components remains flat. NHSBT is also recommending that the separate prices for pooled and apheresis platelets (reflecting the different cost of production) and the “self-collect” charge are retained for 2019/20.

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