

Blood Supply – Productivity & Continuity of Supply

NHSBT Board Jan 2020

Caring Expert Quality

Rationale of Blood Productivity & Capacity Review



After the request at the November Board to initiate a deep dive into Blood Supply Productivity and Costs at the December Finance Committee, the following has been prepared in order to gain alignment at the Executive Team and Board on the way forward and to ensure continuity of supply, give context to the current position and propose some potential strategic options going forward.

The main insights from the December Finance Committee were:

- The central question was whether NHSBT had sufficient blood collection capacity or not.
- Capacity overall has not been an issue with some centres and sessions under-utilised, over collection through Summer / Autumn, high stock and declining productivity.
- But with significant under-collection over the last few weeks coming into Winter.
- The capacity question can therefore only be answered through clarity of the operating model and how it flexes to changing donor / staff attendance.
- This is anticipated to emerge from the McKinsey work.

Meanwhile we will also engage with McKinsey around re-imagining the Donor Experience and look to truly invest in process improvement to fundamentally change our Blood Supply Operating Model in order to *supply the right blood, at the right time in the right place in a safe and sustainable way.*

Context: Blood Donation Risks



Strategic Risk	<i>"There is a risk that NH blood components, cau resources, or misalignm</i>	<i>"There is a risk that NHSBT fails to collect to demand for blood or blood components, caused by failure in collections, lack of resources, or misalignment of the donor base (current and future)"</i>		
Main Collection Risks	 BD-03 Collection of WB is in BD-07 Impact on Deferrals. BD-09 Collection of Platelets 	 BD-03 Collection of WB is inadequate to meet CPT requirements. BD-07 Impact on Deferrals. BD-09 Collection of Platelets is inadequate to meet CPT requirements. 		
Main Associated Divisional Risks	Divisional Risk	Strategic Link		
	IT and Technology	IT systems will fail - Brian Henry		
	Loss of Estate / Venues	Loss of a key facility - Ian Bateman		
	Staffing Levels	Insufficient skilled staff - Katherine Robinson		

Horizon Scanning: Growing and Emerging Risks

- Insufficient (black) Ro donors, meaning more capacity required in London.
- Impact on Ferritin testing, meaning loss of (mainly) female donors.
- Continuing rising demand for universal components (O neg red cells, A neg/AB neg platelets).
- NHSBT financial horizon coupled with continued forecast demand reduction.
- Delivery of necessary change, e.g. organisational redesign and Session Solution.

Planned Collection Capacity was raised to help us sail above the rocks of variation...





... removing and reducing these rocks could help to lower planned capacity as we have done successfully in the past.

An increase in low Hb deferrals meant that we collected 41.8k units less, requiring an extra c.32 FTE



- Low Hb deferrals have been c.50% higher over the last 12 months as compared with the previous 12 months following introduction of capillary Hemocue testing (7.0% of total donor attends vs. 4.6%).
- This meant that over the last 12 months we "lost" c.42k units and required an extra c.32 FTE to deploy extra capacity to make-up this loss.

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NHSBT-initiated donor cancellations remained a challenge in 2019





- In 2018, we cancelled an average of c.4.9k donors per month as compared with c.3.3k in 2019.
- There were two spikes in cancellations during 2018 caused by weather and staffing challenges.
- 2019 cancellations have been steadily increasing since April.



 Excluding weather-related cancellations, in 2018 we cancelled an average of c.4.1k donors per month, as compared with 3.1k in 2019.

"Staffing Issues" continue to make up the main reason for donor cancellations at c.60%



Staffing Issues, 60%



2019 Appointment Cancellations (Jan-Nov)

After 5-years of decline, Blood Donation Operations costs are increasing as compared with last year

YoY change ■ Non pay ■ Pay £70.7m £63.6m £58.6m £56.2m £55.6m £54.2m £53.4m £48.9m £45.4m £43.7m £44.2m £42.7m £17.4m £14.7m £13.2m £12.5m £11.5m £11.4m 2014-15 2015-16 2016-17 Forecast 2019-20 2017-18 2018-19 -10.1% -7.9% -4.1% -3.5% +2.5%

- Up until 2018-19, Blood Donation Operations costs improved year-on-year.
- However, we are forecasting to end 2019-20 with a 2.5% cost increase, driven by an increase in pay costs (+£1.5m), despite a continued decline in non-pay costs (-£0.1m).

Note: Excludes hire of halls and equipment budgets transferred to Strategy team in 2016-17. Includes donor records moved from manufacturing to Blood donation in 2017-18.

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Blood Donation Operations Costs 2018-19 Breakdown by Quarter





 Blood Donation Operations costs increased in 2018-19 as the year progressed and continued to increase into 2019-20.



BD operations pay costs reduced year on year, up to 2018-19 when additional staff was put in place



Number of FTE in BD Operations actual (all staff including management and donor records)



- Implementation of several initiatives (detailed in the next slides) enabled year-on-year reductions of staffing levels up to 2017-18
- In 2018-19, staffing increased to address the stock challenges (actual 1,315 vs. budget of 1,165 FTE)

Initiatives leading to improved Blood Donation productivity up to 2017-18

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BD budget increased by c.£8m in 2019-20, of which half was in front line operations

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Budget to budget change 2019-20 vs. 2018-19. Total Blood Donation. £m



The increase of £4m in BD budget in 2019-20 was from an increase of 133 FTE added to front-line Ops



Budget to budget change 2019-20 vs. 2018-19. Total Blood Donation. Number of FTE



Top Quartile EBA Collection Productivity c.1,850 units/FTE/year

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 Current top quartile EBA productivity is c.1,850 units/FTE/year

 NHSBT performance in 2018 was in the middle of the scale.
 Current performance would need to improve by more than 25% to achieve top quartile performance.

Note: No signs of "over leaning"

New Operating Model: short-term areas of focus for 2020-21



- Following the completion of the new Operating Model for the new Blood Supply Directorate, review opportunities in areas where there may be synergies or duplication:
 - ✓ Planning
 - ✓ Performance and Reporting
 - Management structures
- Develop a plan to Strengthen the Capacity to develop and deliver strategies and change in Blood Supply (in particular in Blood Donation).
- Develop a short-term plan to Reduce Variability in collections by team by better aligning capacity with their collections.

Delivering a step-change in BD productivity requires significant investment in our collection model!

Looking at top quartile blood operators – how our collection model would need to change to deliver a step change in productivity?		Reduce non donor facing time (e.g., travel, set and pack up)	 Increase our collection in successful/busy donor centres; no travel time (current average 1.5 hours) and shorter set up and pack down than on mobiles (15-20 minutes shorter). Review working day travel time allocation to mobile sessions 	 All activity listed would require substantial investment and lead times for planning and delivery
		Remove activities in session and eventually roles	 Use technology in session to remove the need to undertake some activities (e.g. donors self check-in, reconciliation). Move Hb testing out of session as part of the post donation testing strategy (fewer screening roles). 	
		Increase the throughput per session without changing roles	 Increase the conversion rate of booked appointment to actual collection by enhancing tools for donors to self-defer before the session (e.g. DHC online). Explore a more flexible staffing model to align better with expected collection for the session. Run continuous sessions (avoid inefficient ramp up/down). 	 In the short term, the ambition is to revert to previous levels of BD productivity before the stock challenges (i.e.
		Collect more components with higher weight in EBA benchmarking	 Start collecting plasmaphaeresis for fractionation (if risk assessment indicates UK plasma is safe to re-renter the supply chains of PDMP). 	c1,400 units/FTE/year 16

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Short-term vs. Long-term Capacity Considerations



Short-term

- We have enough capacity planned to collect enough to fulfil the current demand forecast.
- We have some flexibility to vary the number of appointments throughout the year, e.g. to compensate for anticipated higher low Hb deferrals over summer.
- While overall appointment numbers will be sufficient, our biggest challenge will be to mobilise donors by the right blood groups (e.g. to meet rising O neg demand).

Longer-term

- As part of the Blood Strategy, we will consider options to:
 - Modernise the session environment and our offer to donors (e.g. session solution, online DHC, automated checkin).
 - Review our session footprint to attract more of the donors we need (e.g. more London sessions in Black community venues).
 - Improve our operating model with a view to reducing deferrals (e.g. post donation testing).
 - Enhance the flexibility of our staffing model to reduce donor cancellations.

Blood Donation Key Messages



We should be cautious about removing too much cost and chasing productivity too aggressively, too soon.



1.

It will take a while to properly plan for and address some of the current and future issues on session preventing us from achieving step-changes in performance, e.g. low Hbs and modernising sessions.

3.

In the meantime, there are some things we can do to improve incrementally, like getting productivity back to 1,400 and removing duplication.

Manufacturing & Logistics Productivity in EBA Top Quartile

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- M&L are proposing productivity target increases in Manufacturing and Hospital Services while keeping the target flat in Testing.
- Medium term productivity trends are shown in the charts below.

	19/20	Current	EBA Upper	Proposed
PRODUCTIVITY	Target	Performance M7	Quartile	20/21 Target
Manufacturing	10,700	11,227	11,528	11,250
Testing	33,700	34,939	30,352	33,700
Hospital Services	36,000	36,642	n/a	36,500







Manufacturing & Logistics Budget Trending Downwards





- M&L Budget has been reduced from £106.3m in 12/13 to a proposed £87.2m in 2021 a fall of 18%.
- High level estimated movements from 19/20-20/21:

BAU Savings	1.415M
LRP Savings	1.025M
Cessation of Plasma Imports	3.460M
Cost Pressures	0.400M
6 Day Graulocytes	0.192M
Volume Increase (inc Plasma)	0.136M
Automatic Pay Cost Increases	3.513M
Net Budget Reduction	1.659M

Contribution of Functional Costs to the Red Cell Price

Standard Red Cell £/unit – 2018/19 budget 45 Fixed Collection £26/unit Variable 40 Source donors £11/unit Management, planning £4/unit 35 30 **Direct supply chain costs** DCs, team bases £3/unit **Processing/Testing** £2/unit £/unit 25 SHUs £3/unit Other £2/unit 20 15 10 Process Testing Distibution Estate costs 5 Rep Pund Other 0 Clinical Finance consumables processing processing HR \langle

- Blood donation (collection and marketing) is around
 - 40% of the red cell cost / price.
 - Other areas of the Blood Supply Chain have achieved productivity gains (e.g. manufacturing and testing). In general, consumables are also low.
 - As demand continues to decline, falling productivity in collection means pressure on prices, with limited mitigation.

