

# **NHSBT Board – May 2019**

Performance Discussion

Period 1 – April 2019

- **BLOOD**

- Stock levels at / above target - outlook through to July is positive
- Adverse and noisy trend in O neg RC demand (as % of total) - risk
- New 5 year demand plans produced – high level of uncertainty?

- **ODT**

- Activity in April and early May is low
- Highly adverse trend in both deceased donation and transplant
- Risk to performance in 2019/20

- **DTS**

- Ongoing growth in activity and income.....but growth slowing
- Cord blood issues picking up / UK forum to meet in July re strategy
- Concern re ACT performance (being offset in CMT by CBC)

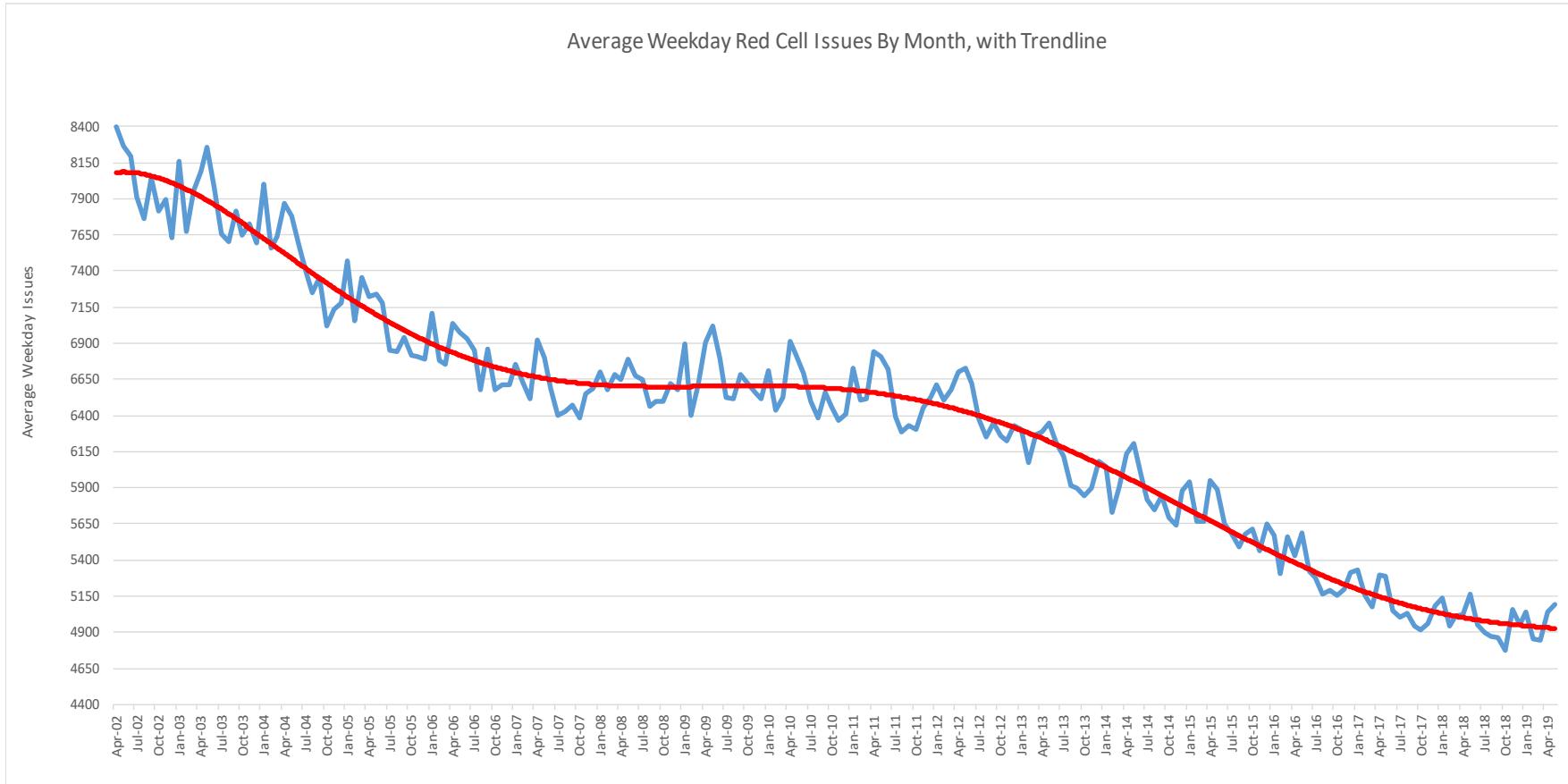
## Demand – Red Cells

NHS

Blood and Transplant

April - demand was 1.3% higher than forecast

Recent demand suggests the curve is flattening.....but its happened before



Since mid 2018 average work day issues by month are  
within a much tighter range of 4,900-5,100 units.

Trend = 6 order polynomial

## New red cell 5-year demand forecast

Financial year	Forecast (in K)	50% prediction interval - low	50% prediction interval - high	% change from 2018/19	Year on Year change	RBC / 1000 pop
2018/19 (actual)	1,415.9	NA	NA	NA	NA	25.2
2019/20	1,384.6	1,356	1,414	-2.2%	-2.2%	24.5
2020/21	1,344.6	1,299	1,390	-5.0%	-2.9%	23.7
2021/22	1,304.6	1,241	1,368	-7.9%	-3.0%	22.8
2022/23	1,271.1	1,188	1,354	-10.2%	-2.6%	22.1
2023/24	1,242.9	1,138	1,347	-12.2%	-2.2%	21.4

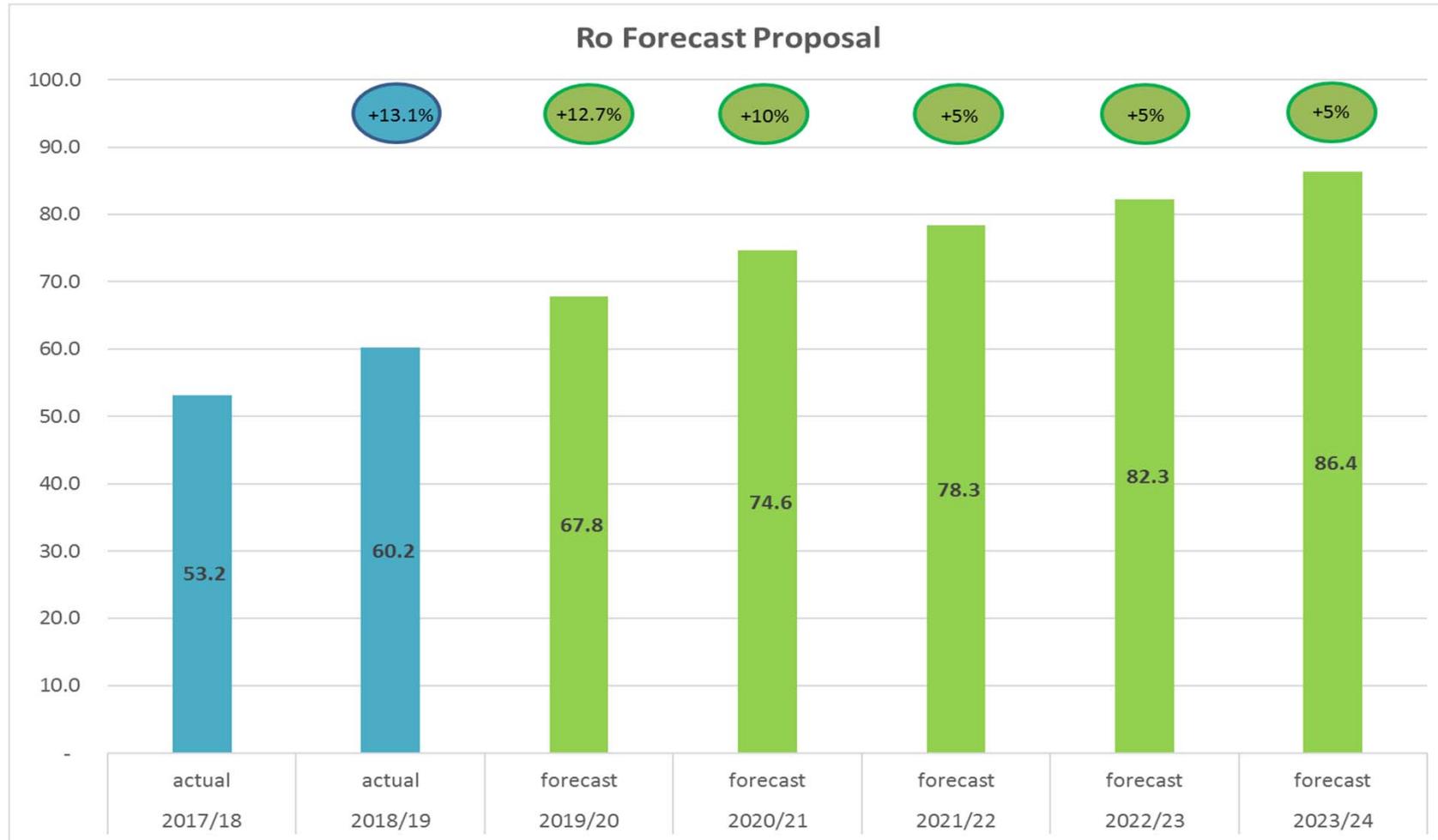
- Red cell demand to continue to decline c.2-3% p.a. to 21.4 RBC / 1000 pop by 2023-24
- 50% confidence interval implies by 2023-24 demand could be between 1.15m and 1.35m
- Main uncertainty is the assumption that inappropriate use of red cells will continue to decline at the same rate as in the last 5 years

## O neg and B neg long term demand forecast

Year	O neg Forecast (k)	% O neg Total	B neg Forecast (k)	% B neg Total	Total Forecast (k)
2019/20	175.2	12.7%	28.1	2.0%	1,384.6
2020/21	173.4	12.9%	27.0	2.0%	1,344.6
2021/22	171.9	13.2%	26.0	2.0%	1,304.6
2022/23	171.3	13.5%	25.1	2.0%	1,271.1
2023/24	171.3	13.8%	24.2	1.9%	1,242.9

- O neg increases from 12.7% of total demand in 2019/20 to 13.8% in 2020/24.
- Proposed forecast sees B neg remain stable at c.2% of total demand.

# Ro 5-year demand Forecast



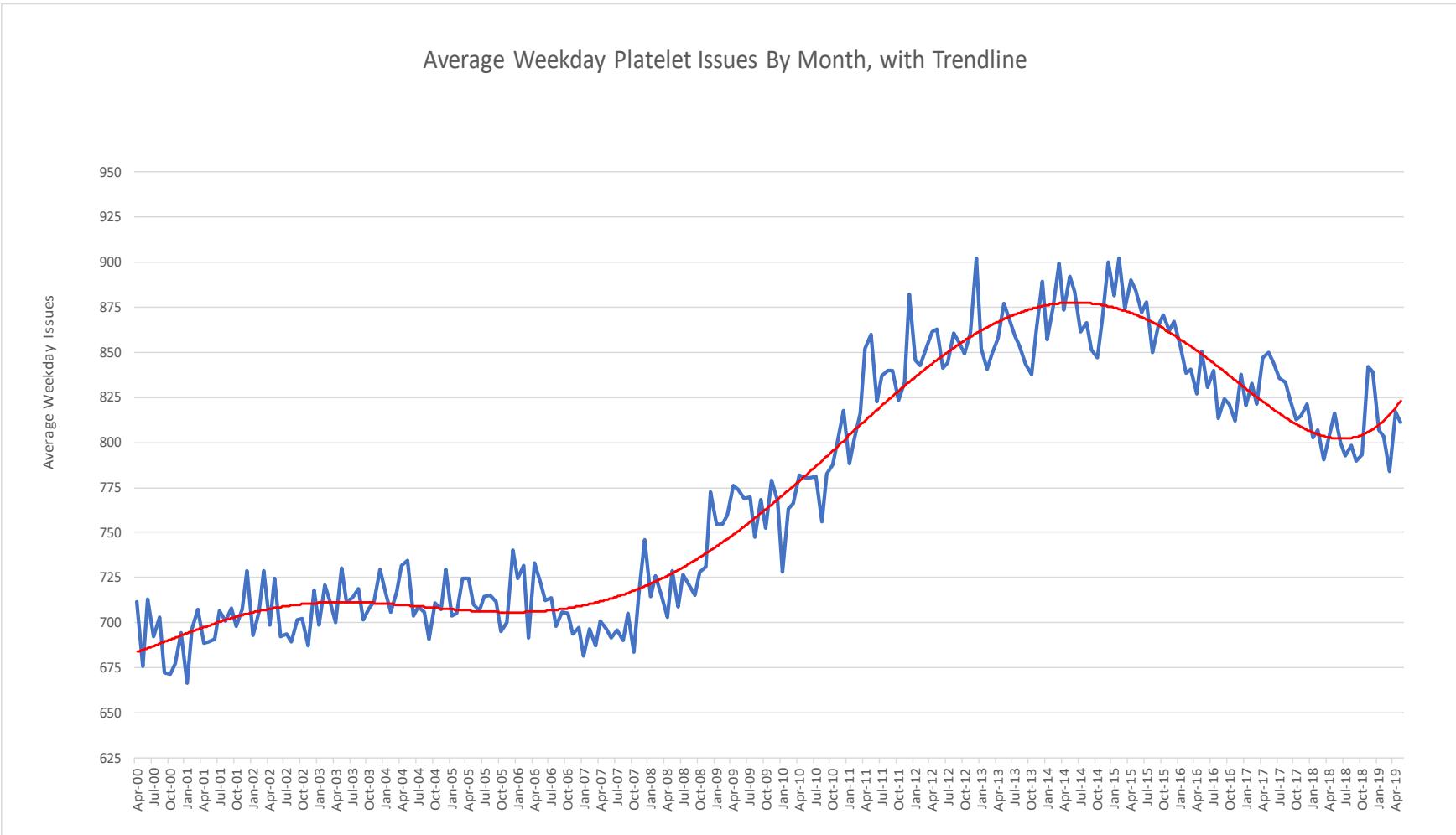
- Ro demand continues to grow over the next five years - reaches 86.4k by 2023/24.
- Assumptions provided by clinical / CS team (different from statistical model)
- Need this segmenting to determine the true black donor challenge

## Demand – Platelets

Demand curve flattening also ?

NHS

Blood and Transplant



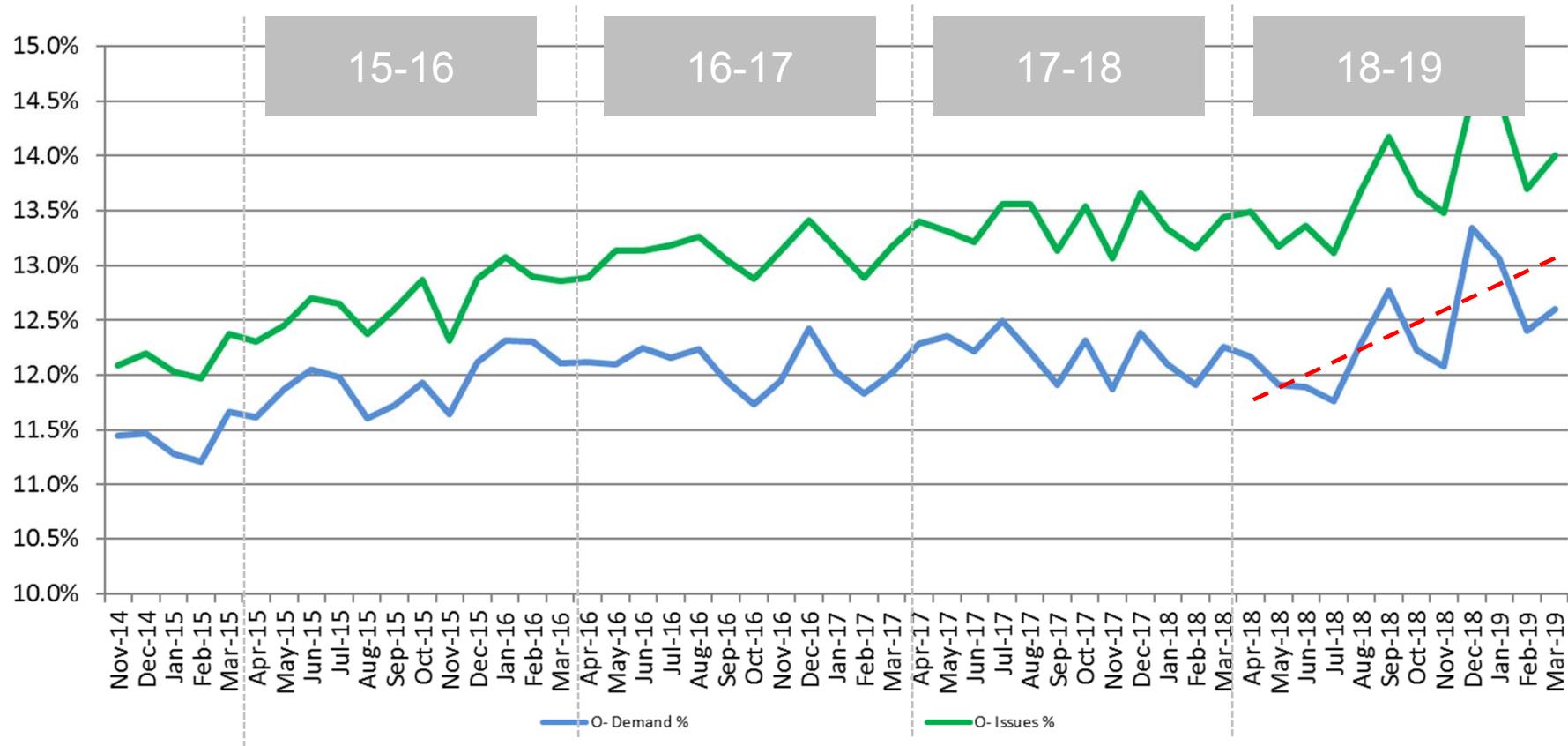
## Platelet 5-year forecast

Financial year	Non-HLA forecast	HLA Forecast	Platelet overall Forecast (in K)	50% prediction interval - low	50% prediction interval - high	% change from 2018/19	Year on Year change	PLT / 1000 pop
2018/19 (actual)	233.9	19.2	253.1	NA	NA	NA	NA	4.5
2019/20	232.4	19.7	252.0	240.0	264.0	-0.7%	-0.7%	4.5
2020/21	228.4	20.1	248.5	225.0	272.0	-2.4%	-1.7%	4.4
2021/22	225.1	20.7	245.8	211.0	281.0	-3.8%	-1.4%	4.3
2022/23	222.6	21.3	243.9	197.0	290.0	-4.8%	-1.1%	4.3
2023/24	218.0	21.6	239.5	181.0	298.0	-6.8%	-2.1%	4.2

- Demand forecast implies decline of 1-2% every year for the next 5 years
- 50% confidence interval is wide with demand for platelets + / - 50k.
- A neg demand over 5-years is flat at 15.5% of the total demand.

# O neg demand as % of total red cell demand

O Neg (% of total Demand/Issues)



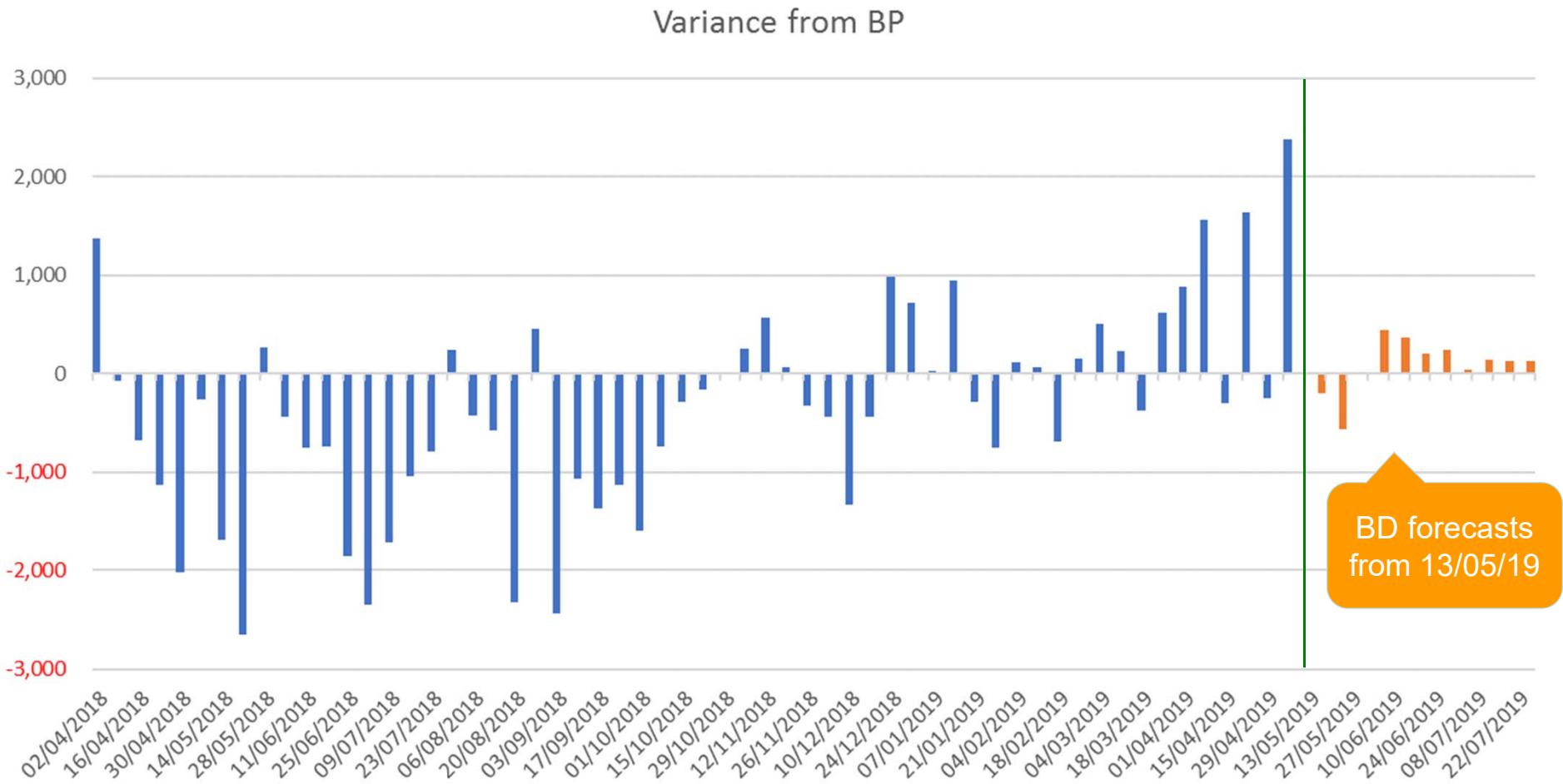
- Sharp rise in April prior to Bank Holiday
- May (to date) back at 12.6%
- Current forecast is 12.7% .....but may need to revise if trend continues
- Level of increase, and the noise, is potentially unsustainable for collection and management of safe stock levels

# Weekly collection variance from plan

NHS

Blood and Transplant

Actual and forecast



BD forecasts  
from 13/05/19

- Below plan for the last two weeks of May but then exceeds plan June-July.
- Positive variances are forecast to be lower than experienced in April-May and will be reduced by the revised business plan.

# 11 week red cell stock forecast

Based on BD collection forecast and new issues forecast

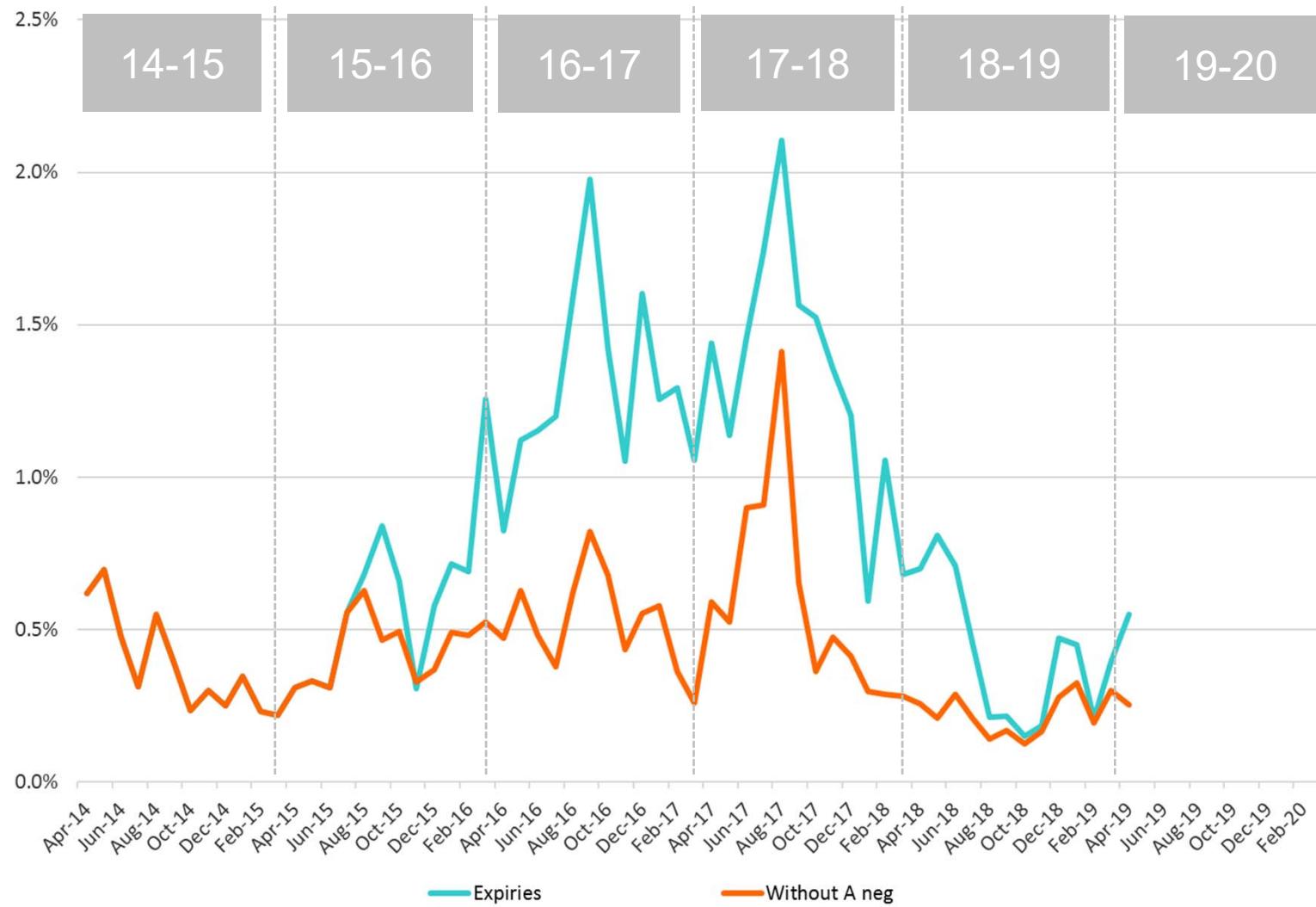


Blood and Transplant

Date	A-	A+	B-	B+	O-	O+	AB-	AB+	Total
13/05/2019	10.8	8.8	5.9	8.0	5.4	6.8	6.5	11.4	7.7
20/05/2019	10.6	8.8	5.7	7.9	5.1	6.8	6.4	11.7	7.6
27/05/2019	10.6	8.9	5.4	7.8	4.8	6.8	6.2	12.2	7.6
03/06/2019	10.6	9.0	4.9	7.6	4.4	6.8	5.7	12.7	7.5
10/06/2019	10.5	9.1	4.6	7.5	4.4	6.8	5.6	13.1	7.6
17/06/2019	10.4	9.2	4.3	7.3	4.6	6.8	5.5	13.4	7.6
24/06/2019	10.3	9.2	4.0	7.1	4.7	6.8	5.4	13.7	7.6
01/07/2019	10.2	9.3	3.7	7.0	4.8	6.8	5.2	14.2	7.6
08/07/2019	10.0	9.3	3.4	6.8	4.9	6.7	5.0	14.5	7.5
15/07/2019	9.9	9.3	3.1	6.5	4.9	6.6	4.9	14.8	7.5
22/07/2019	9.7	9.4	2.8	6.3	5.0	6.6	4.7	15.1	7.5

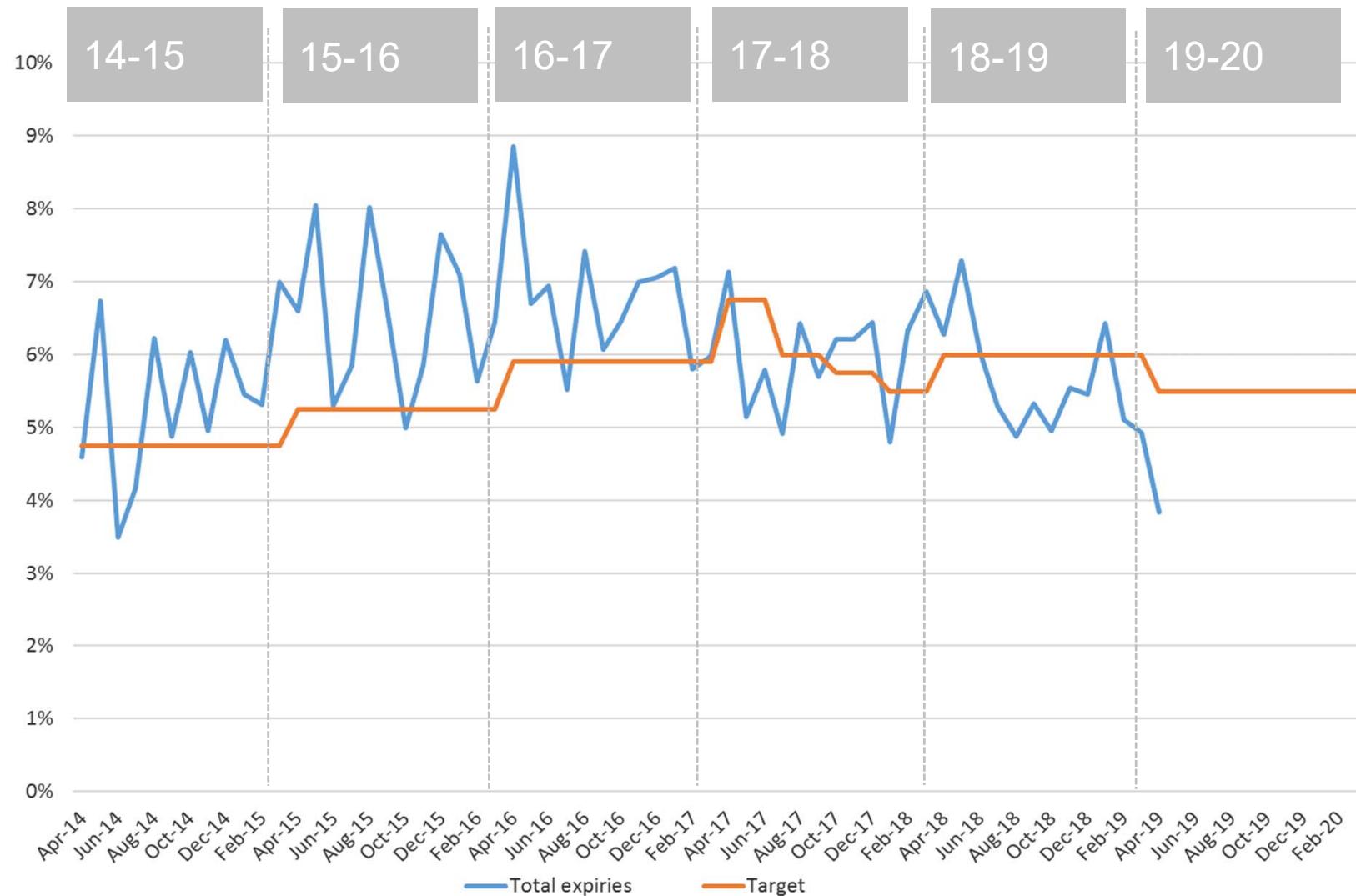
- BD to revise planning mix towards O neg, B neg and AB neg
- A pos and AB pos collection to be reduced or stocks in excess (expiries)

# Red Cell expiries



- Overall expiries remain below the revised target level 0.55% vs. 1.0%
  - Without the excess A neg, expiry rate is 0.26%, lower than the 0.30% in March

## Platelet expiries



- At 3.84% - below the revised target level of 5.5%
- Lowest since July 2014

# Cord blood issues improving

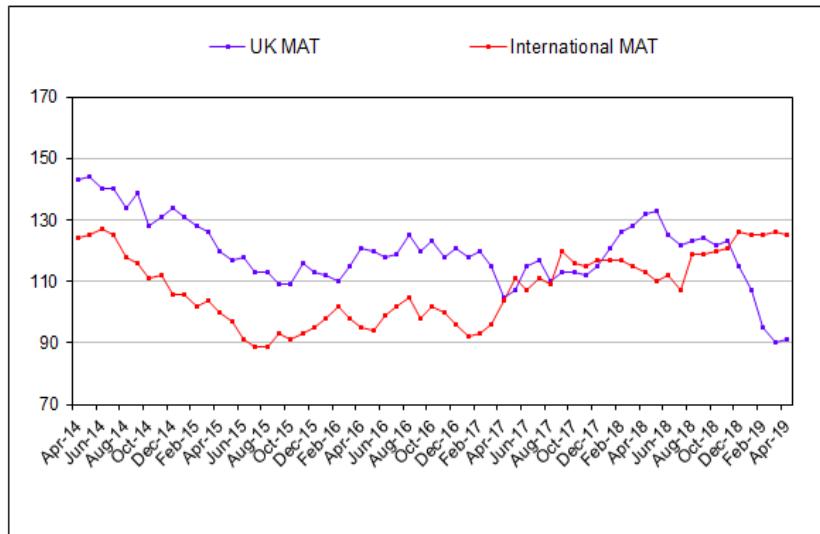
..... but remain well below strategic expectations

UK BBMR provisions remain low following the sharp fall in November

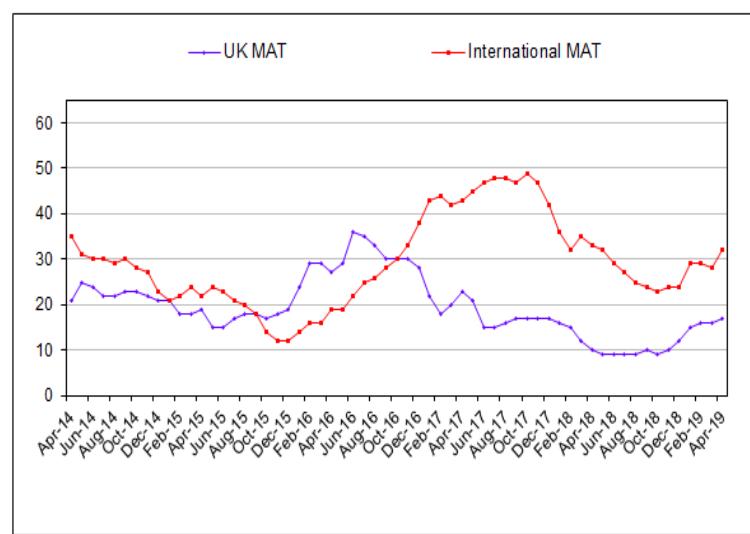
UK Stem Cell Forum meeting in July to consider a new UK blood stem cell strategy



41. Adult donor provisions : UK and International - MATs



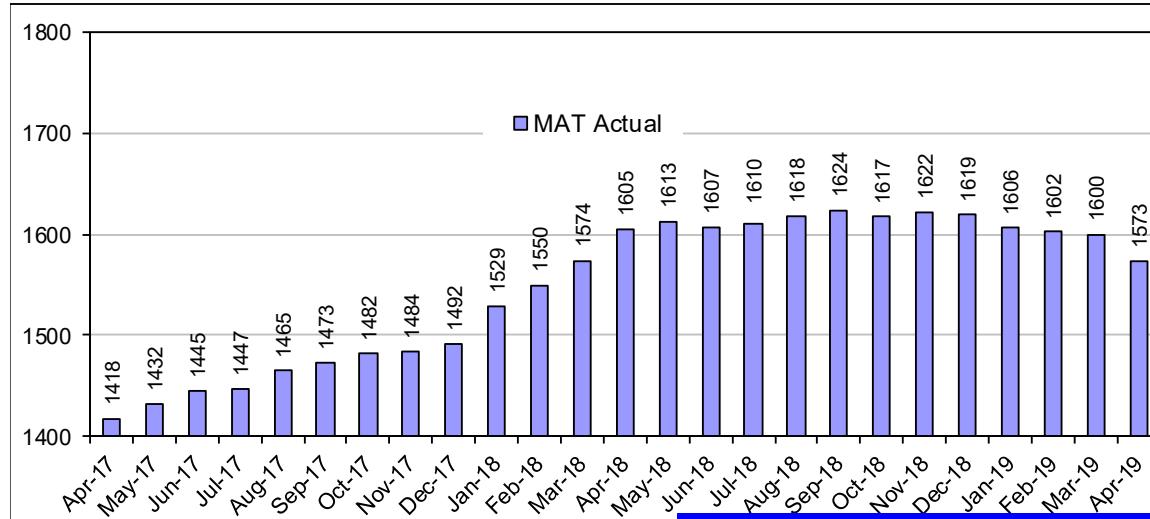
42. Issue of cord blood units : UK and International - MATs



# ODT - deceased donors and transplants

Very low activity in April – MATs both declining sharply

**45. MAT number of Deceased Organ Donors**



**46. MAT number of Deceased Donor Organ Transplants**

