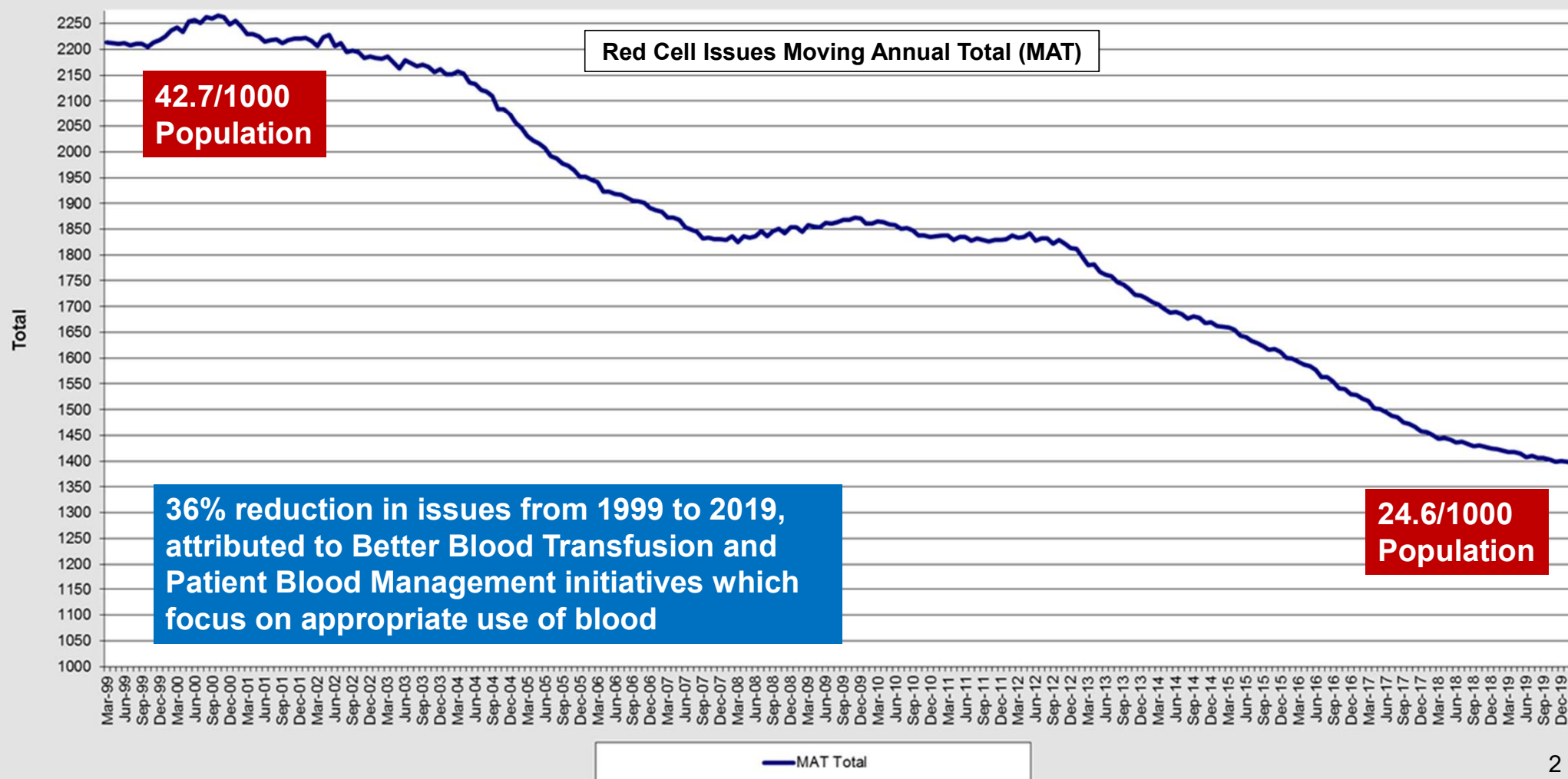


Demand for O D Neg Blood

Board Presentation
23rd July 2020

Catherine Howell
Chief Nurse / Assistant Director – Commercial & Customer Services

Red cell issues over the last 20 years

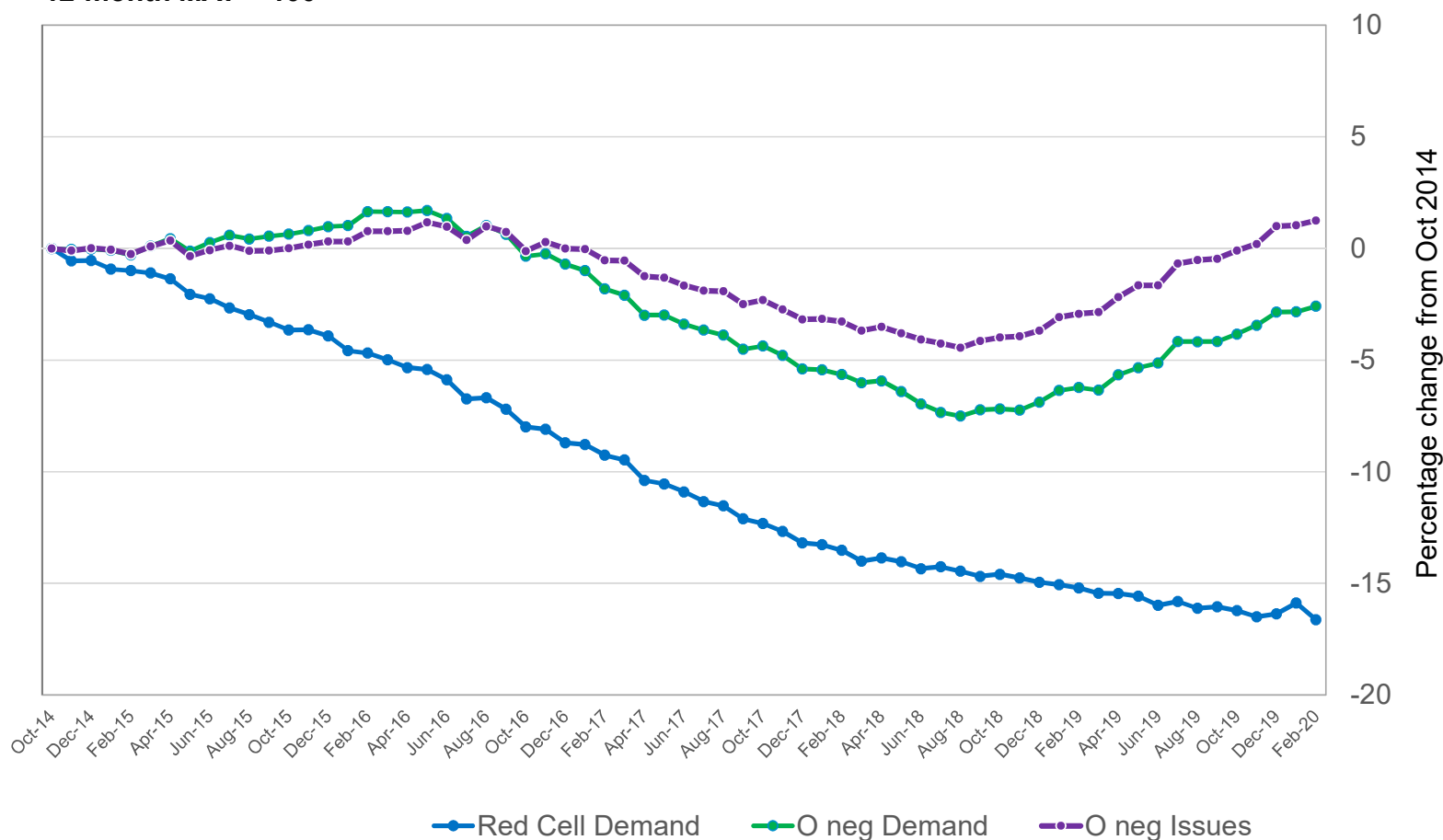


Red cell, O D neg demand & issues



Blood and Transplant

12-month MAT = 100

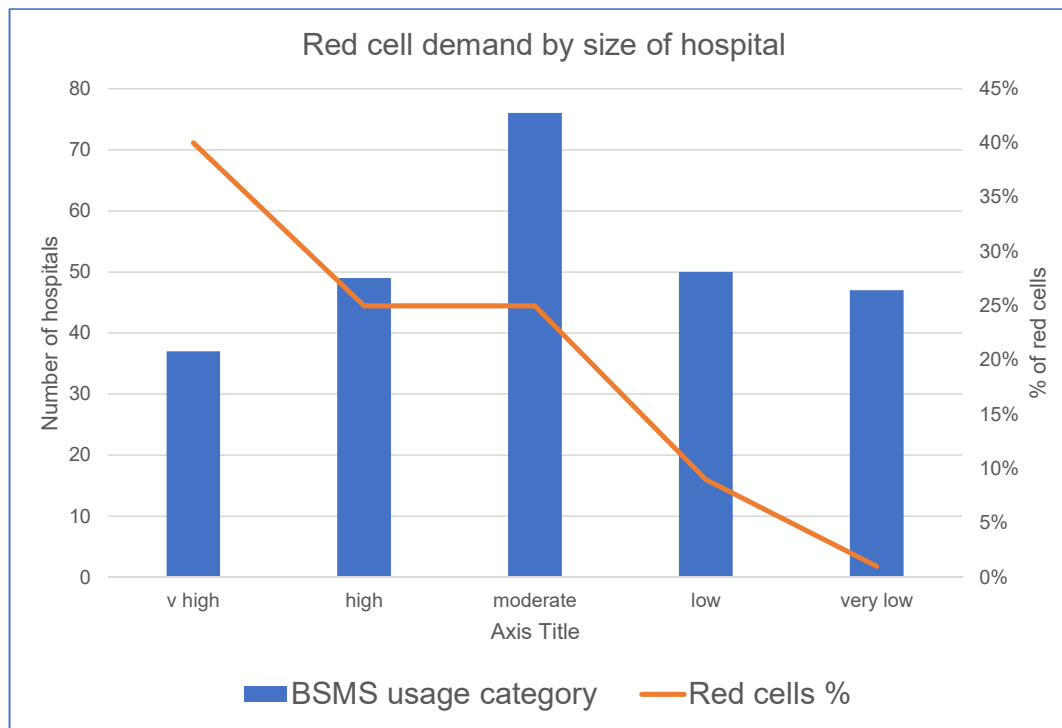


As a 12-months MAT and using as a reference point October 2014 vs. February 2020:

- Total red cell demand has decreased by c.17% (from 1.68 million)
- O neg demand has decreased by just c.3% (from 1.88k) over the same period
- O neg issues are the highest on record, increasing by 1% (from 200k)

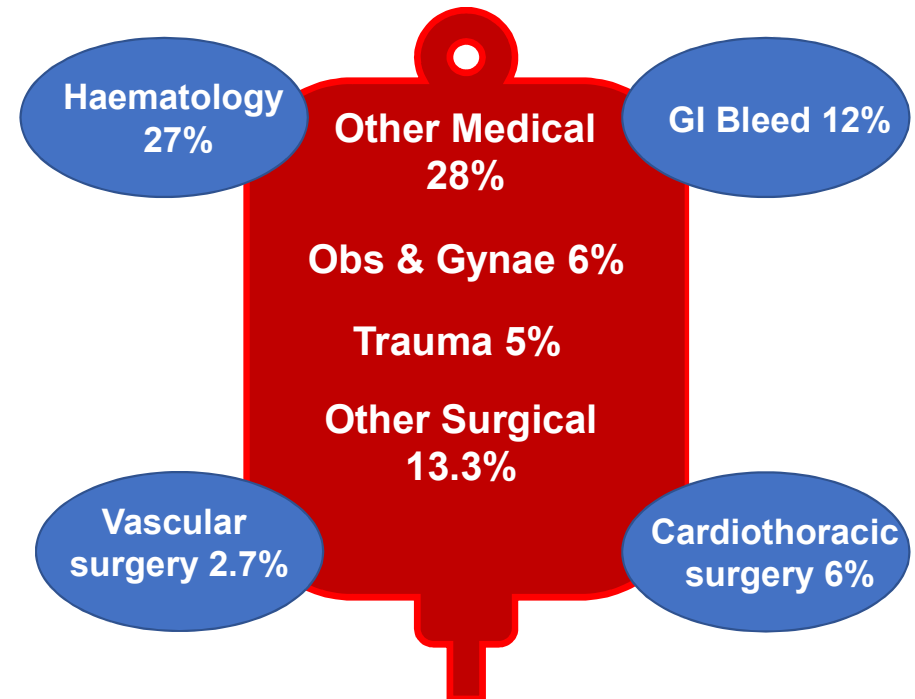
Where do red cells go?

Which hospitals?



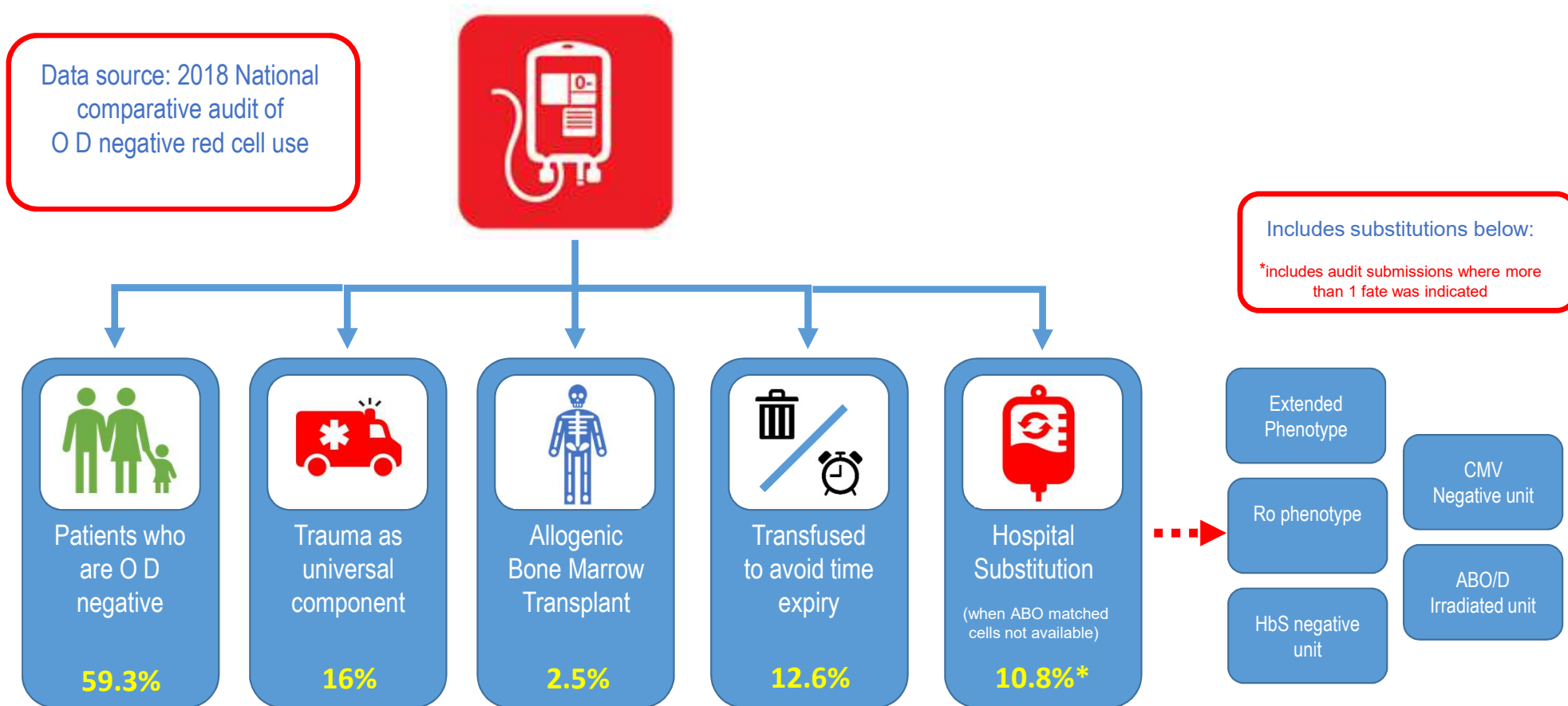
37 'very high' user hospitals account for 40% of red cells

Which clinical specialties? *

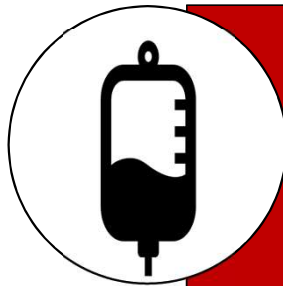


Based on 2014* 'Where does blood go';
but need 'real time' data

Where do O D neg red cells go?



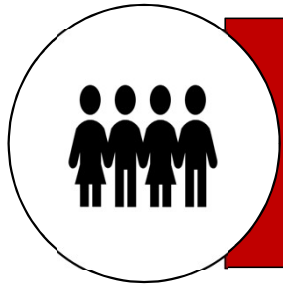
O D Neg – why is demand still increasing?



STOCK HOLDING

Data source:
2018 National comparative audit O D neg

- Transfusion to avoid time expiry at 12.6%; suggests **overstocking**
- **Increased stocking of remote refrigerators** with O D neg red
- **Impact of 29 Pathology Networks**; hub and spoke models; centralised Laboratory Information Management System (LIMS), governance, logistics



STAFFING

**Deskilling, understaffing,
in hospital transfusion labs**

* UK Transfusion Laboratory Collaborative Survey 2017
** 2018 National comparative audit O D neg

- * In 2017, 35.9% (61/170) laboratories reported a **decrease in qualified staff**; 39.2% reported use of locum and agency staff
- ** 10.8% of O D neg red cells used as a **substitution** by hospitals; approximately half could have been met by suitable O D pos RBCs



TRAUMA

**Increase in trauma cases
& use of blood
pre- hospital**

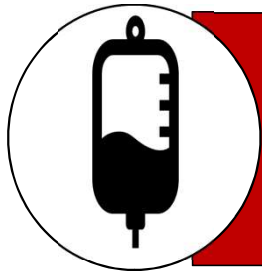
* Trauma Audit & Research Network
** Office of National Statistics

- *2014 - 2018: 37.3% increase in trauma patients, 39% **increase in those requiring blood components**
- **Increase in pre-hospital transfusion** 25 emergency helicopters in England; >12 carrying RBCs 2019; 8 in 2017; only 1 in 2012
- ****Increase in knife crime**; +7% in 2019; +49% since 2011

O D Neg – what actions are we taking?



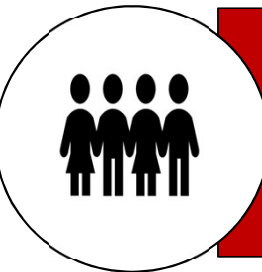
Blood and Transplant



STOCK HOLDING

Targeted work with individual Trusts

- Stockholding
- Wastage management
- Vendor Management Inventory



STAFFING

Education

- Local, regional, national
- Toolkits including apps
- Promotion of alternatives to blood
- Pre-operative assessment initiatives



TRAUMA

Evidence Based Practice

- O D neg guidelines: use of O D pos
- Massive Haemorrhage guidelines and audit
- Guidance for pre hospital transfusion/emergency vehicles
- Systematic Reviews

Case Study

- St Mary's Hospital, London; part of the Imperial College Healthcare NHS Trust

The problem

- Correlation of high component stock levels with high wastage

What we did - bespoke stock review

Results

- Reduction of RBC stock by 42.25% or 68 units in average daily stock holding
- Reduction in time expired units from an average of 43 units to 10 units / month
- Equates to >£4,000 per month saving; >£48,000 per year ongoing savings
- Over the first year, savings of £56,500 were made

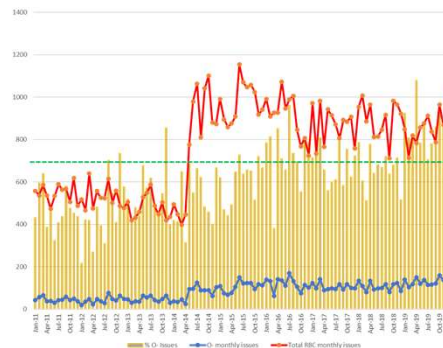
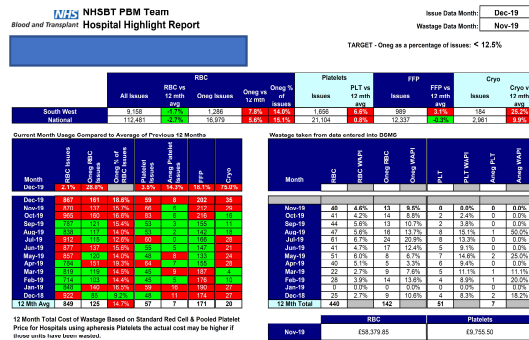
BLOOD
COMPONENTS

"Bringing key
transfusion guidelines
to your fingertips"

What do we discuss with hospitals?



Blood and Transplant

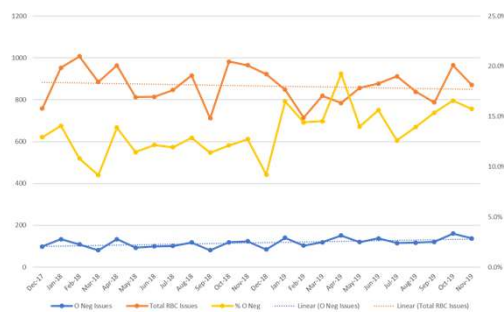


| | | Net Issues | | | | | | | | | | | | |
|-------|---------|------------|-----|-----|----|----|----|-----|-----|-----|-------|-------|--------|--|
| 25.0% | | O+ | O- | A+ | A- | B+ | B- | AB+ | AB- | | Total | % O | Change | |
| | Dec-17 | 223 | 98 | 271 | 52 | 80 | 10 | 10 | 10 | 8 | 758 | 12.9% | -109 | |
| | Jan-18 | 340 | 134 | 304 | 67 | 68 | 22 | 10 | 14 | 8 | 953 | 14.1% | 86 | |
| | Feb-18 | 436 | 109 | 310 | 69 | 56 | 10 | 10 | 7 | 7 | 1007 | 10.8% | 140 | |
| 20.0% | Mar-18 | 344 | 81 | 301 | 77 | 48 | 10 | 18 | 6 | 6 | 885 | 9.2% | 18 | |
| | Apr-18 | 328 | 134 | 321 | 67 | 70 | 10 | 28 | 6 | 964 | 13.9% | 97 | | |
| | May-18 | 240 | 93 | 298 | 87 | 53 | 19 | 16 | 6 | 812 | 11.5% | -55 | | |
| | Jun-18 | 287 | 99 | 263 | 69 | 74 | 6 | 14 | 2 | 814 | 12.2% | -53 | | |
| 15.0% | Jul-18 | 216 | 101 | 262 | 72 | 69 | 9 | 14 | 3 | 846 | 11.9% | -21 | | |
| | Aug-18 | 337 | 118 | 318 | 67 | 42 | 11 | 15 | 8 | 916 | 12.9% | 49 | | |
| | Sep-18 | 247 | 81 | 226 | 62 | 69 | 4 | 20 | 2 | 711 | 11.4% | -156 | | |
| 10.0% | Oct-18 | 364 | 119 | 304 | 82 | 61 | 20 | 19 | 13 | 982 | 12.1% | 115 | | |
| | Nov-18 | 369 | 123 | 304 | 86 | 58 | 12 | 9 | 4 | 965 | 12.7% | 98 | | |
| | Dec-18 | 381 | 85 | 279 | 83 | 70 | 15 | 4 | 5 | 922 | 9.2% | -55 | | |
| | Jan-19 | 284 | 140 | 283 | 59 | 56 | 17 | 7 | 2 | 848 | 16.5% | -19 | | |
| | Feb-19 | 235 | 103 | 231 | 61 | 63 | 10 | 7 | 4 | 714 | 14.4% | -153 | | |
| 5.0% | Mar-19 | 253 | 119 | 271 | 72 | 74 | 11 | 13 | 6 | 819 | 14.5% | -48 | | |
| | Apr-19 | 286 | 151 | 190 | 59 | 76 | 10 | 5 | 7 | 784 | 19.3% | -83 | | |
| | May-19 | 313 | 120 | 266 | 80 | 53 | 9 | 10 | 6 | 857 | 14.0% | -10 | | |
| | Jun-19 | 334 | 137 | 251 | 63 | 69 | 12 | 8 | 3 | 877 | 15.6% | 10 | | |
| 0.0% | Jul-19 | 338 | 115 | 265 | 87 | 65 | 5 | 33 | 4 | 912 | 12.6% | 45 | | |
| | Aug-19 | 275 | 117 | 276 | 54 | 75 | 20 | 16 | 5 | 838 | 14.0% | -29 | | |
| | Sep-19 | 296 | 121 | 213 | 52 | 85 | 8 | 10 | 2 | 787 | 15.4% | -60 | | |
| | Oct-19 | 314 | 160 | 322 | 70 | 62 | 16 | 15 | 6 | 965 | 16.6% | 98 | | |
| | Nov-19 | 326 | 137 | 261 | 73 | 52 | 8 | 10 | 3 | 870 | 15.7% | 3 | | |
| | Average | 311 | 116 | 275 | 70 | 65 | 12 | 14 | 5 | 867 | 13.5% | | | |

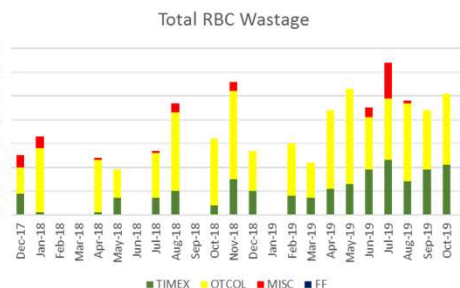
PBM & BSMS reports (specifically around presentation of hospital data)

Historical demand/issue profile per hospital

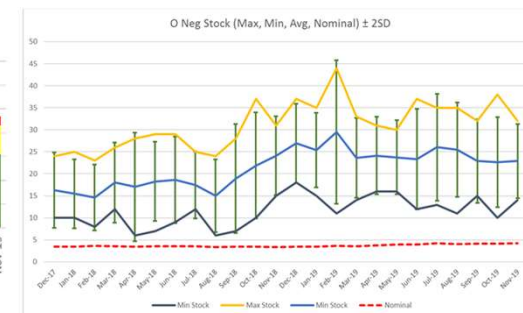
Using focused datasets to isolate current trend change



Graphically demonstrated to show trends



Wastage analysis (broken down for wastage codes)



Analysis of stockholding data per blood group against demand

Next Phase - A System Approach

- Actions required to deliver further improvements in O D neg use require a system wide, strategic approach
- Transfusion 2024 - catalyst for mapping out next phase for even better blood use
- Publication pending anticipated in September 2020

National Blood Transfusion Committee and NHS Blood and Transplant

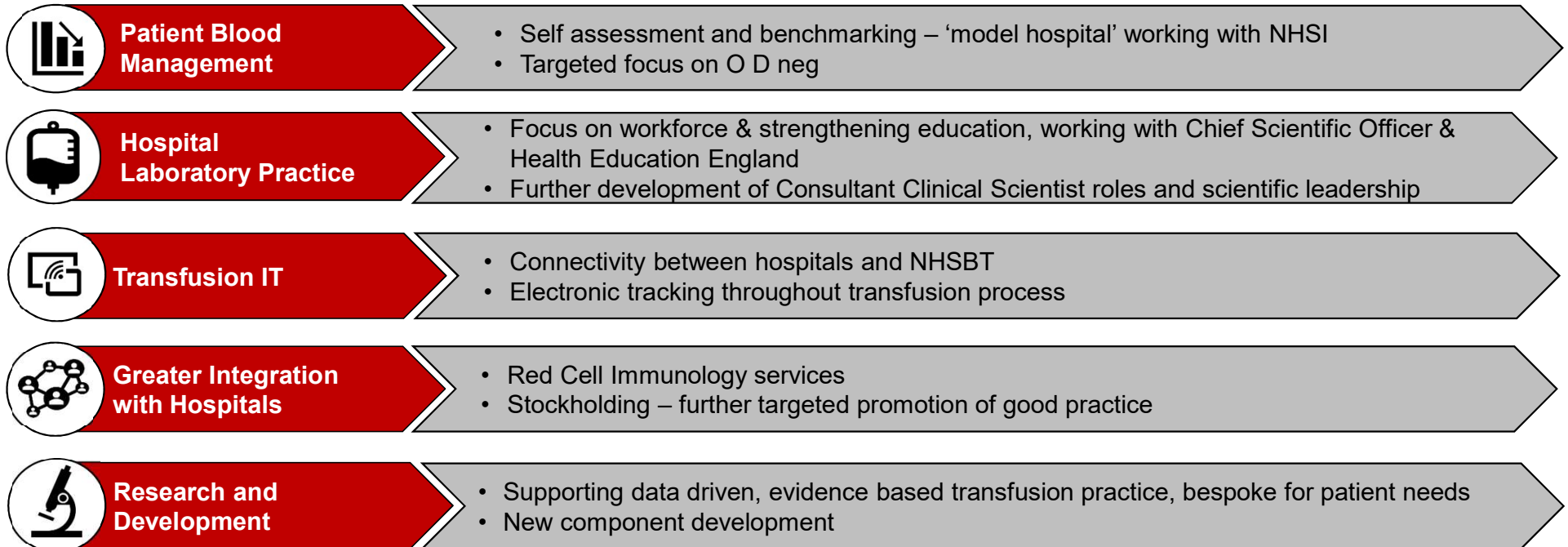


Transfusion 2024

Setting a 5-year strategy for clinical and laboratory transfusion practice



Tuesday 26 March 2019 at the Royal College of General Practitioners, London



Delivering Transfusion 2024



Patient Blood Management



Hospital Laboratory Practice



Transfusion IT



Greater Integration with Hospitals



Research and Development

Investment in PBM resource

- By comparison with other programmes, the NHSBT PBM resource is small; activity to support demand management is only part of these diverse roles
- Expand and strengthen bespoke approach to working with targeted hospitals to improve laboratory stock management
- Strategic review of the structure, governance and deliverables of the National Comparative Audit Programme
- Investment in the Blood Stocks Management Team

Investment in integration

- Integrate systems to improve efficiency of the blood supply chain to enable:
 - monitoring the appropriate use of blood & benchmarking clinical practice
 - sharing of real-time data
 - Improvement in hospital blood stock management

Research programme – ‘Big data’

- Use of ‘Big data’ to support research into what characteristics of donors and blood components are key to improving patient outcomes e.g. for patients requiring chronic transfusion support

Transfusion 2024 presentation to NHSBT Board in September 2020

Strategic Response: Investment and Deliverables