

# TRANSFER OF BLOOD COMPONENTS WITH PATIENTS

## A 6 MONTH RE-AUDIT OF PRACTICE

### Background:

In 2013 the East of England Regional Transfusion Committee agreed to conduct an audit of the transfer of blood components with patients following concerns expressed about temperature control, traceability and procedures. The audit was conducted from 1<sup>st</sup> July to 31<sup>st</sup> December 2013.

A re-audit was proposed in 2017 because several regional hospitals are now sharing clinical services and some of the smaller hospitals no longer offer some specialisms. The audit was conducted across the same time frame.

### Method:

The same method was used for both audits; regional transfer documents used to communicate between hospitals, were also sent to the RTC administrator who logged details of the transfers. Some clinical details on the patients were requested but not always available. For the purposes of this report, an "incident of transfer" relates to an occasion in which blood components were transferred with a patient between hospitals.

All 18 NHS Trusts in the East of England were engaged with this audit although some were not involved in any incidents of transfer.

### Results:

#### Transfer incidents and fate of components

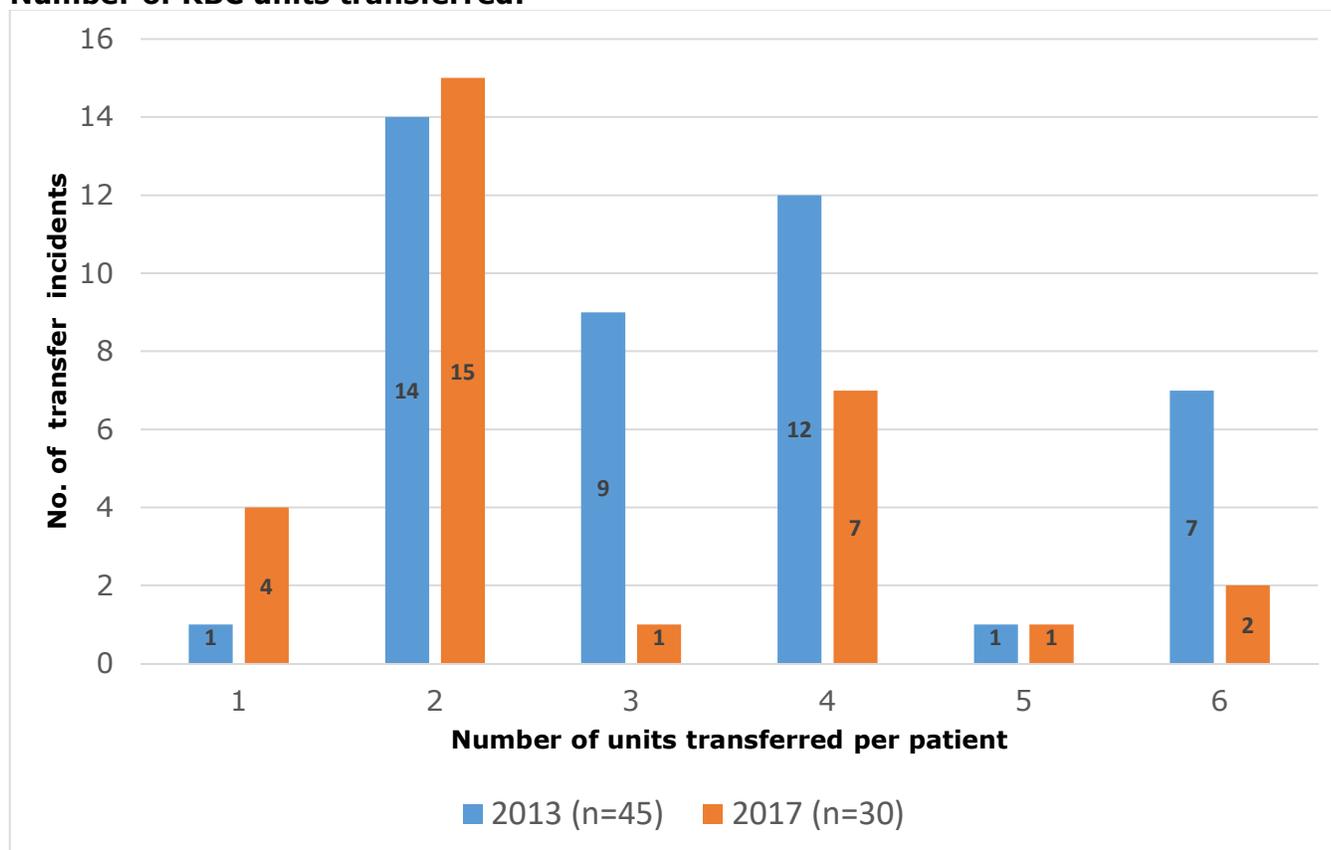
<b>Audit period 1<sup>st</sup> July – 31st December</b>	<b>2013</b>	<b>2017</b>
Total incidents of transfer	45	30
Total red cells transferred	148	82
Total FFP transferred	24	10

<b>Fate of components (% of total)</b>	<b>2013</b>	<b>2017</b>
Red cells transfused en route	9.5%	21.9%
Red cells into stock	38.5%	36.6%
Red cells wasted	34.5%	31.7%
Red cells fate unknown	17.6%	9.8%
FFP transfused en route (% of total)	16.7%	80.0%
FFP wasted	45.8%	20.0%
Other (into stock or fate unestablished)	37.5%	0

In 2013 only RBC and FFP were transferred; in 2017 two units of platelets and one of cryo were transferred with patients and all wasted or fate unknown.

In both years, most of the fate unknown units were transferred to out of region hospitals where lines of communication are not as good as those within the region.

**Number of RBC units transferred:**



In 2013 the average number of RBC units transferred per patient was 3.3; in 2017 it was 2.7

**Age of patients with whom components were transferred**

Patient age group	2013	2017
Neonate	1	2
<16	1	3
16 -30	3	6
31 -50	8	1
51 - 70	10	3
>70	5	10
unknown	18	5

**Patients transfused en route as a % of total transfers with components**

<b>Patients transfused en route</b>			
<b>2013</b>	<b>%</b>	<b>2017</b>	<b>%</b>
6	13.0%	10	33.3%

**Clinical scenarios of transfused patients**

**2013**

<b>Clinical scenario</b>	<b>Component transfused</b>	<b>No of cases</b>
Trauma	RBC & FFP	1
Trauma	RBC only	1
Trauma	FFP only	1
Neonate	FFP	1
Cardiac: post-op ischaemia	RBC	1
Neurological: subdural haematoma	RBC	1

**2017**

<b>Clinical scenario</b>	<b>Component transfused</b>	<b>No of cases</b>
Trauma	RBC & FFP	2
Haemothorax	RBC	1
Neonate	RBC	1
ECMO	RBC	1
Cardiac failure	RBC	1
ARDS	RBC	1
Unknown	RBC	2
Unknown	RBC & FFP	1

**Discussion:**

- In 2017 50% of transfers were with the regionally recommended 2 units of RBC. In 2013, it was 32%.
- In 2013 25% of transfers involved 5 – 6 units of RBC; in 2017, it was 10%. Of these, one patient, a trauma case, was transfused with 4 units plus 4 units of FFP en route. In both other cases all 6 units were put into stock at the receiving hospital.
- In 2013, 82% of all transfers were within the East of England, and all went to either Addenbrooke’s or Papworth, the 2 tertiary centres in the region. In 2017, 77% of transfers (23/30) were between regional hospitals. Of these 13 went to Addenbrooke’s and 6 to Papworth. 5 transfers were between regional district general hospitals.

- The hospitals most commonly sending components with patients were West Suffolk and Queen Elizabeth, King's Lynn and the reason for transfer was usually specialist care not provided by the sending hospital. The most common reason for transfer to Addenbrooke's was trauma; heart and chest problems were the most common reasons for transfer to Papworth.
- In 2017 6 transfers (20%) were to London hospitals. There was one transfer from outside the region to Papworth, the same as in 2013.
- One case included in the 2017 audit involved blood not properly packed and without paperwork. Another case noted during the audit period, but not included, involved an unknown amount of blood sent in a bag with no lab involvement.

### Conclusions:

- Despite the fact that some regional hospitals are now sharing services there was a 33% reduction in the reported instances of transfer of blood components with patients.
- In addition, there was a 45% reduction in the total number of red cells transferred and a 58% reduction in the number of FFP units
- Even though there were less incidents of transfer and less units transported, more components were transfused to patients en route.
- Use of the regional transfer form has improved but is still not universal. It's use by all hospitals should be encouraged.
- There continues to be actual and anecdotal evidence of the transfer of blood with patients without laboratory knowledge but it is impossible to determine how widespread this practice might be.
- The results of this re-audit show that there has been a considerable improvement to practice since 2013 but increased clinical engagement would enhance the process.

### Recommendations:

- Following regional guidance on the transfer of blood with patients is recommended as is use of the EoE RTC Transfer of Blood documents. This will ensure that all relevant information about the patient and the accompanying blood products is communicated to the receiving hospital, assist both hospitals with traceability and reduce wastage.
- It is important that only blood components intended for en route transfusion accompany patients except in cases of rare antibodies or special requirements.
- Engagement in this process with clinical teams should be strongly encouraged to prevent transfer of blood with patients without transfusion laboratory knowledge and the inevitable resulting waste of blood products.

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