A Multidisciplinary Approach to Improving the Process of Routine Blood Delivery to Level 3 Theatres, RVH

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Safety & quality

Aim

To improve the timely provision of Red Blood Cells (RBC's) for scheduled patients in Level 3 Theatres, RVH.

Rationale

Observational evidence and near miss / actual incidents led to a system review to ensure RBC's are in-situ in time for schedule surgery.

Problems identified

- Surgical wards – ad hoc recording of blood requirements on theatre list – *(figure 4)*
- Only 32% of lists had a dedicated blood requirement column - *(figure 5)*
- Quality and accuracy of information on theatre list submitted to theatres - 13% lists were handwritten - *(figure 6)*
- Timescales of list arrival in theatres varied greatly – not facilitating smooth and timely communication with Blood Bank and therefore the provision of RBC's - *(figure 3)*
- Admin staff had to check RBC's requirements with each theatre
- Blood Bank staff did not action main list until after 9am
- Collection of RBC's from Blood Bank mainly occurred mid-morning - *(figure 3)*

Patient safety concern

Some surgical cases commenced before RBC units were available in the satellite fridge or delayed until RBC's arrived

Staff comments pre QI

Figure 1

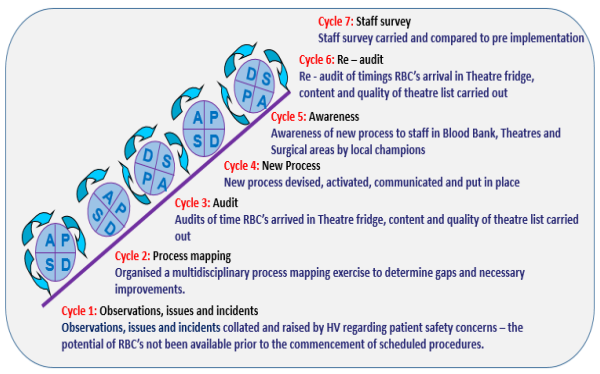


Figure 2

Driver Diagram

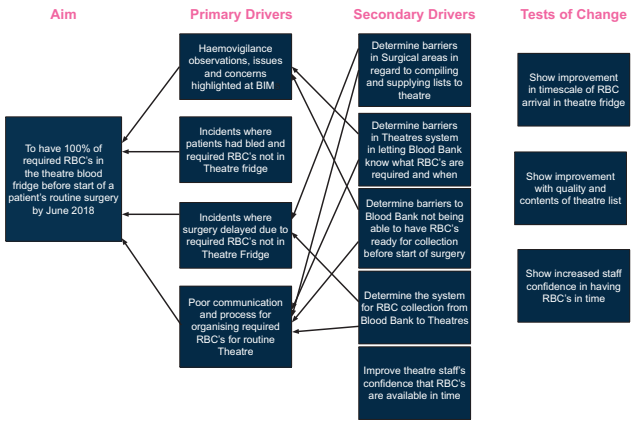
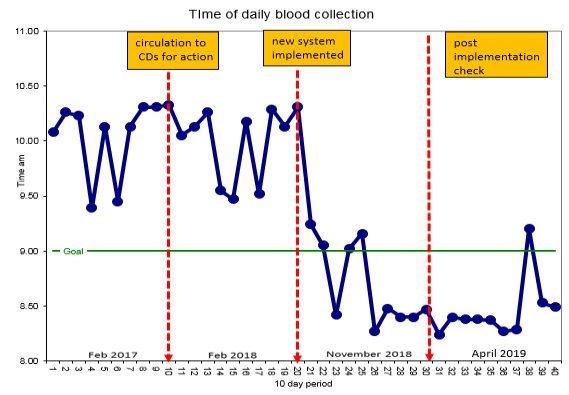


Figure 3



Daily bulk delivery of RBC's for scheduled patients arrives to the required Theatre satellite fridge on average – 1hrs and 35 mins earlier since implementation of the new process.

Other improvements post QI

Figure 4

Percentage discrepancy between RBC requirements indicated by Surgical wards on Theatre lists s verses actual requirements advised by Theatre to Blood Bank

Date	Fractures	Vascular	General	Thoracic	Neuro	Overall
19 – 29 Sept '17 Pre QI	18 %	14%	7%	18%	59%	21%
7-18 Jan '19 Post QI	1% ↑	9% ↑	0% ↑	52% ↓	14% ↑	15% ↑

Figure 5

Percentage number
List than had a dedicated RBC requirement column

Date	Overall
19th- 29th Sept 2017 Pre QI	32%
7th – 18th Jan 2019 Post QI	76% ↑

Figure 6

Percentage number
List that were handwritten on submission to Theatres

Date	Overall
19th- 29th Sept 2017 **Pre QI**	13%
7th – 18th Jan 2019 **Post QI**	0% ↑

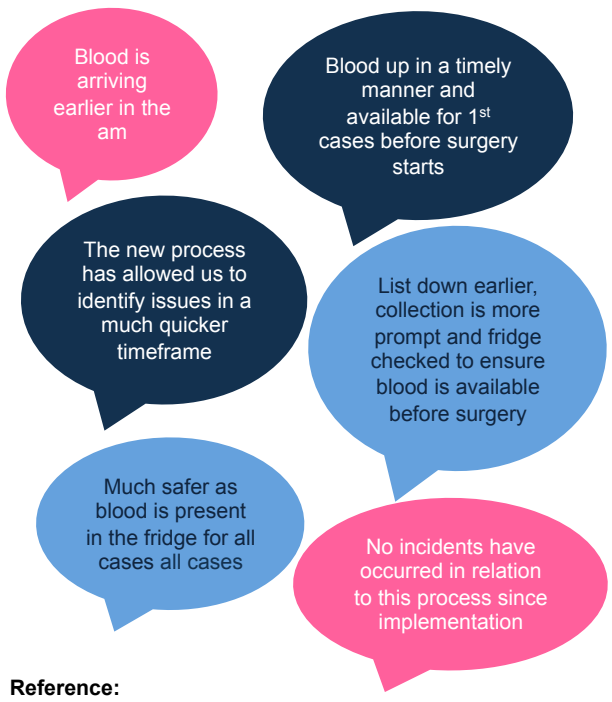
Change results

- Standardised theatre list template used. 0% of list now handwritten – (figure 6)
- 76% of list have now a dedicated blood requirement column - *(figure 5)*
- Request that theatre lists are submitted by 5pm day prior to surgery
- Documented and structured process between Theatres and Blood Bank to highlight patient's crossmatch / Group and Hold requirements with any unexpected issues addressed accordingly
- Earlier daily bulk collection of RBC units and also return of previous day's units - *(figure 3)*
- Before every scheduled case commences nurse **must** checks the satellite fridge to ensure RBC units are available

End result

RBC's are now routinely in the satellite Theatre fridge prior to every patient's scheduled surgical procedure

Staff comments post QI



Reference:
WHO Guidelines for Safe Surgery (2009)