A summary of major haemorrhage alert calls within a large district general hospital.

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Introduction

There are various definitions of major haemorrhage including:

- Loss of more than one blood volume within 24 hours (around 70 mL/kg, >5 litres in a 70 kg adult)
- 50% of total blood volume lost in less than 3 hours
- Bleeding in excess of 150 ml/min [1]

Major haemorrhage accounts for a significant proportion of morbidity and mortality of surgical patients[2].

Prompt identification and rehearsed protocols are known to improve patient outcome [3].

The aim of this analysis is to quantify the frequency and acuity of the blood loss incidents occurring at East Surrey Hospital.

Method

This poster presents part of a review of all major haemorrhage calls raised at East Surrey Hospital during 2017. These were identified as either 'adult massive blood loss' (MBL) or 'obstetric haemorrhage' at the time of incident.

The data analysed consisted of the log of calls received by switchboard, expanded using the Transfusion Laboratory incident documentation and the patients transfusion history to create a more detailed record of each episode.

The definitions of major haemorrhage are arbitrary to this review as the data is not precise. For this analysis it is considered that four or more components transfused from the time of the call until stand-down is major haemorrhage.

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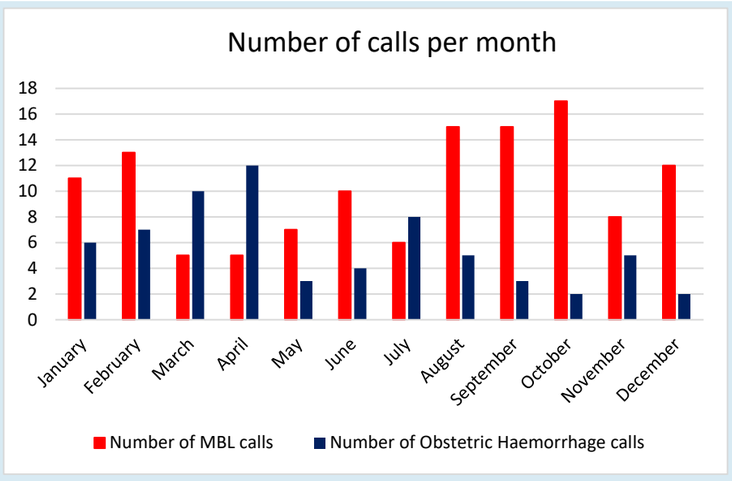
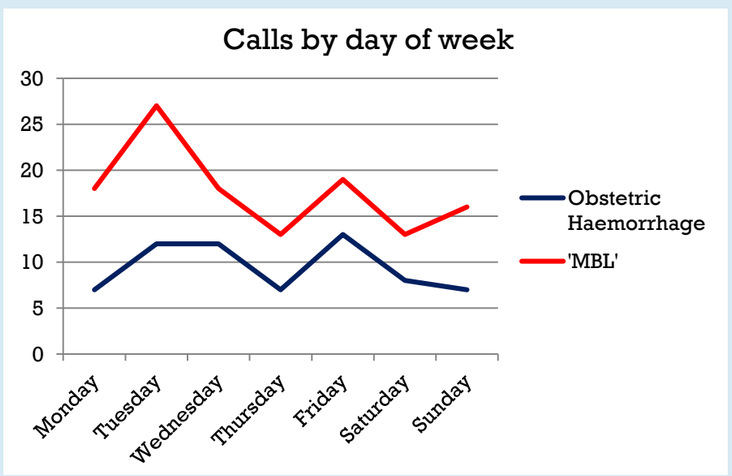
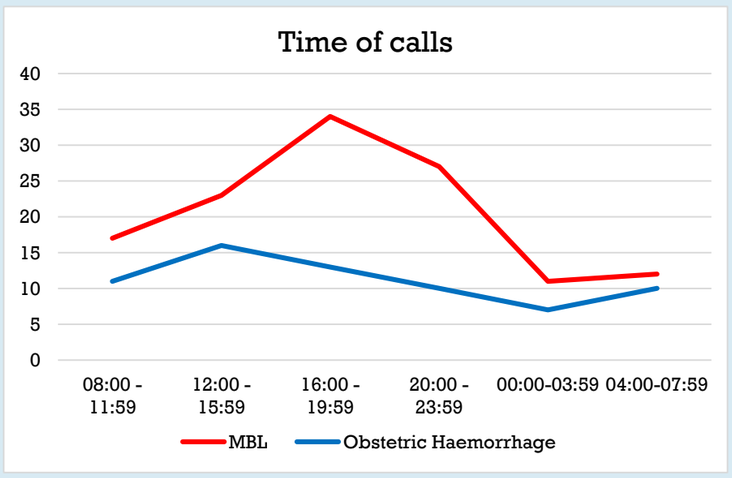
Results

197 major haemorrhage alert calls received by switchboard:
6 duplicate calls / no information available removed from analysis
67 Obstetric Haemorrhage calls
124 Adult Massive Blood Loss calls:
67 MBL calls with blood transfusion as result of alert
8 MBL calls with blood issued but not transfused
49 MBL calls with no blood issue request

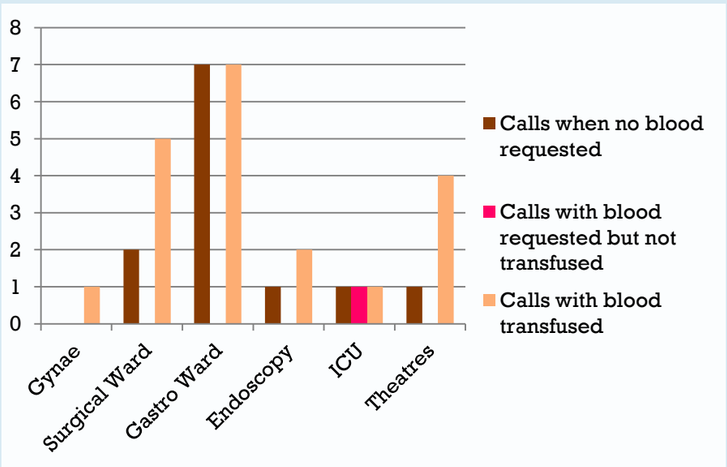
Summary of calls to switchboard

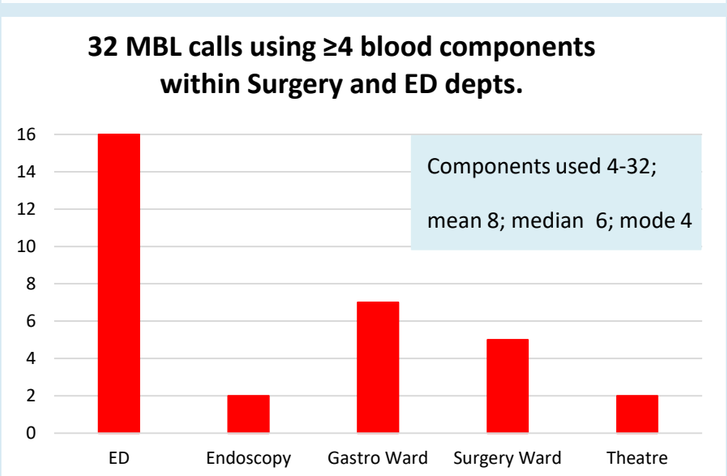






Calls from Surgery Division





Discussion

- The prevailing assumption is that the alerts are used to summon the team, regardless of whether the incident is 'true' major haemorrhage. This is supported by the high number of calls made without blood subsequently being issued. This is considered to be an apt use of the system. That there was a single incident within the surgical division when blood was issued but not transfused, and only six calls were excluded due to lack of information/duplication, is suggestive of appropriate triaging.
- There was a small spike in calls in August/September/October, which may be due to inexperience of new staff. This finding will be compared with future audits to clarify.
- There was an increase in calls during twilight hours - a possible reflection of reduced staffing and worth further investigation.
- 'True' major haemorrhage, while not frequent, occurred in patients within the surgery division.

Conclusion

- Case reviews are important, but a general overview such as this is also needed to facilitate discussion, planning and teaching.
- The importance of communication between the laboratory and the clinical areas cannot be underestimated. The alert system being used to summon the team and not to obtain blood quickly versus the many occasions of blood being required urgently could create confusion about the procedure to follow.
- For the 2018 audit, the feasibility of recording of additional information such as use of tranexamic acid and cell salvage is being trialled.

References

1. Norfolk D (ed) (2013) Handbook of Transfusion Medicine (5th edn.) TSO.
2. Klein AA et al (2016) AAGBI guidelines: the use of blood components and their alternatives. Anaesthesia 71(7) 829-842.
3. Hunt B J et al (2015) A practical guideline for the haematological management of major haemorrhage. British Journal of Haematology 170 (6) 788-803.