

An Audit of Out-of-Hours Transfusions Across Two Hospital Sites

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Background

Blood transfusion outside of core working hours is associated with an increased risk of adverse events and should be avoided unless clinically essential.

- Fewer available trained staff in both the laboratory and clinical areas - often with multiple competing demands on their time and attention - increases risk of errors.
- Fewer doctors means potential delay obtaining a medical review if there is an adverse reaction.

A UK National Comparative Audit in 2008 suggested 32% of out-of-hours transfusions were not justified.

We audited the appropriateness of out-of-hours transfusions over a one month period across two hospital sites within our Trust.

Method

Data relating to transfusions commencing between 20:00 and 08:00 in April 2019 were collected from electronic patient records, the laboratory information management system and the BloodTrack® transfusion management system.

Patients on high dependency or intensive care units were excluded, as were patients on the Haematology ward, where supportive transfusions are often commenced before 08:00 for pragmatic reasons.

Results

67 components were transfused overnight to 56 patients – 11 patients received more than one component in the same overnight period.

- 61 units of red cells
- 3 units of FFP
- 3 pools of platelets

The indications for red cell transfusion are shown in Figure 1.

The median pre-transfusion Hb was 68 g/l, range 46-86 g/l. 11 (21%) patients showed evidence of haemodynamic instability (defined as systolic BP < 90mmHg or HR > 100 or a clear drop in BP from normal baseline).

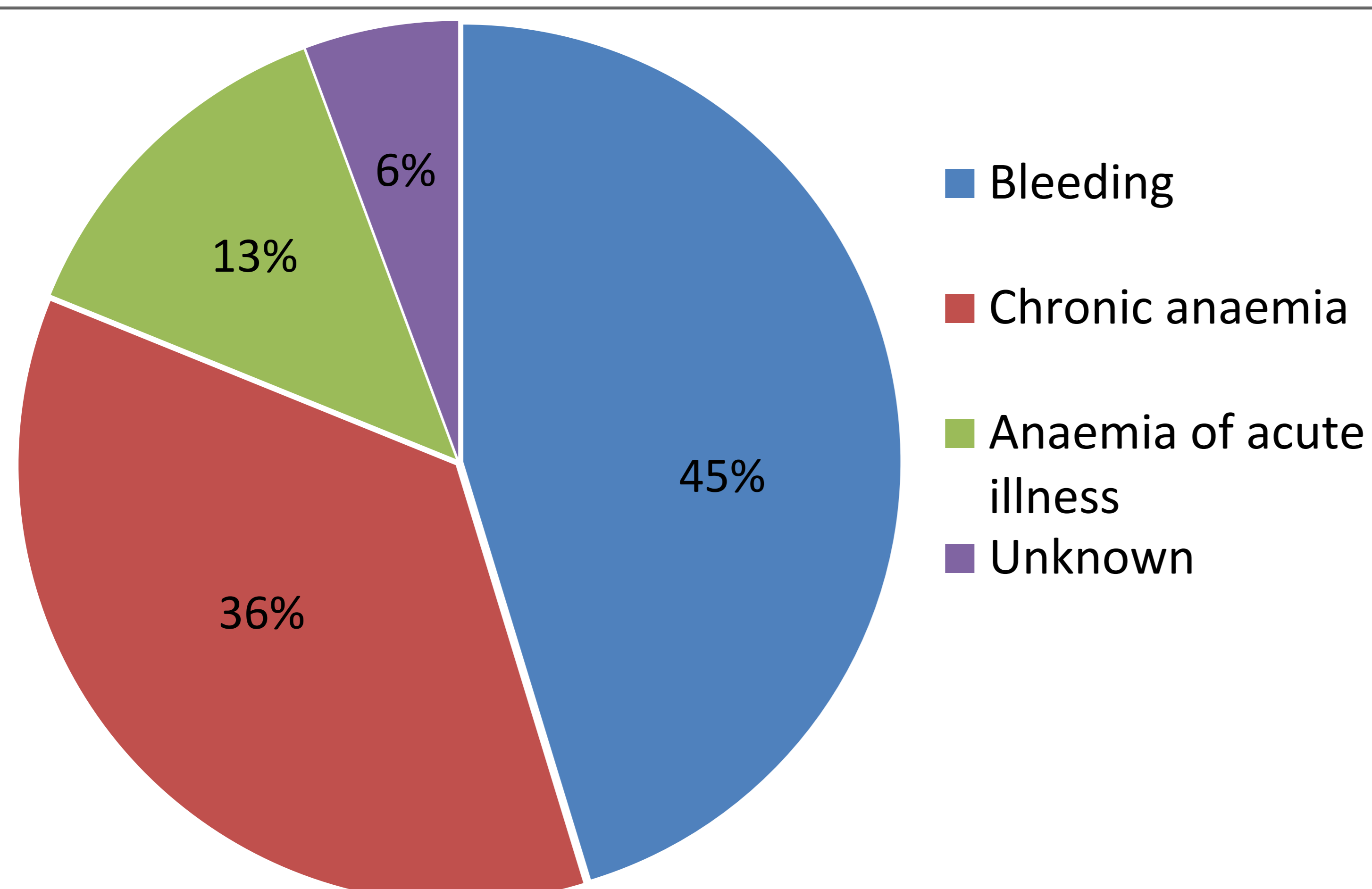


Figure 1: Indications for out-of-hours transfusion

Appropriateness of transfusions

Transfusions were classified as appropriate if there was either an acute clinical need or a pragmatic reason (e.g. to facilitate discharge).

Overall, 68% of patients had a justifiable reason for out-of-hours transfusion (figure 2).

In 8 patients (15%), a blood transfusion was completely inappropriate as these had chronic iron deficiency anaemia with no haemodynamic instability. The lab would normally challenge these requests, but may feel less confident to do this at night when a Transfusion Practitioner or Haematologist is not available for support.

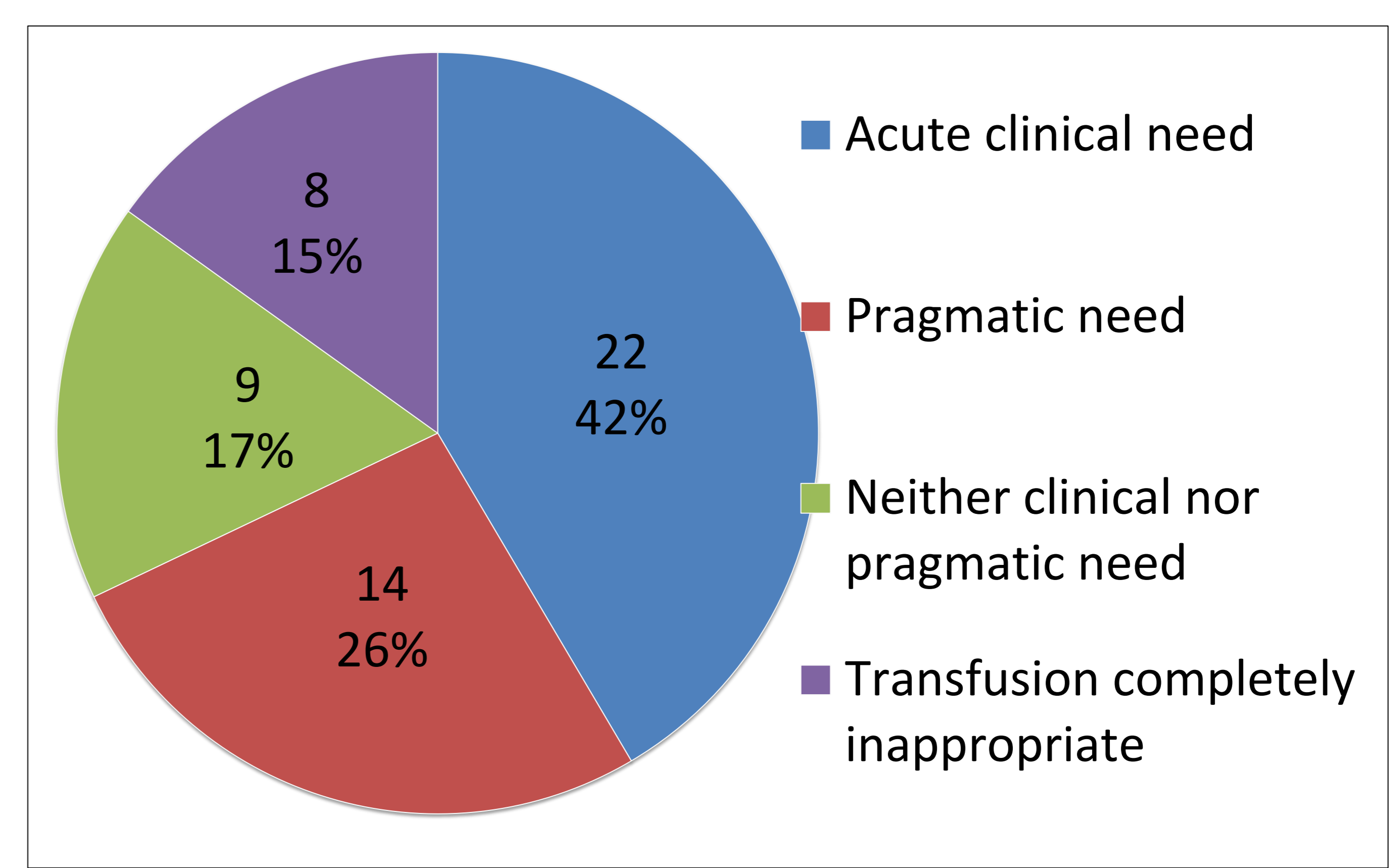
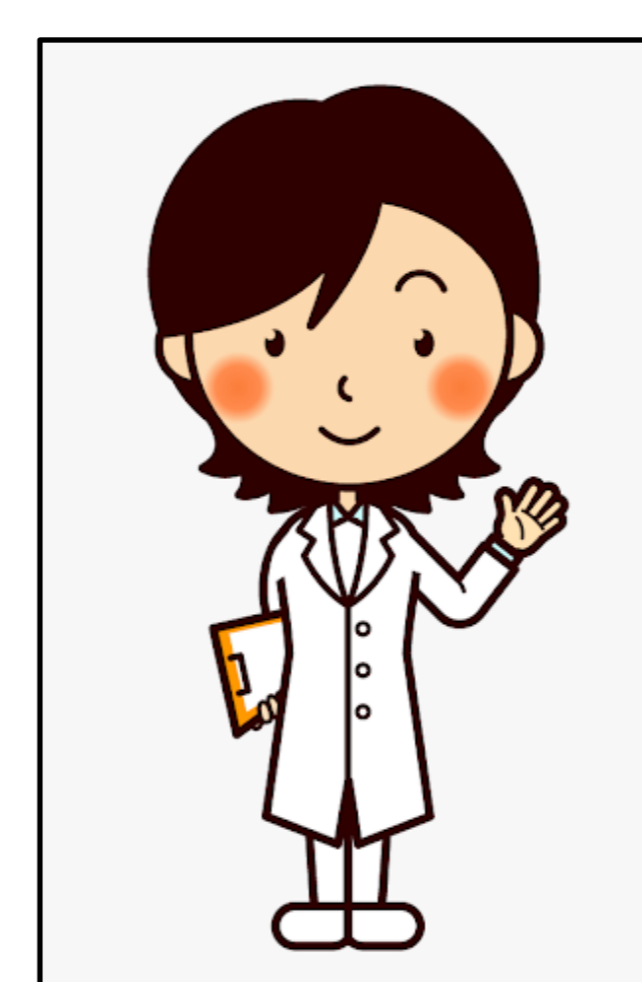


Figure 2: Appropriateness of out-of-hours transfusion

Conclusions and recommendations

In our local cohort, the proportion of overnight transfusions given with no clear reason (32%) was identical to the national average in the 2008 National Comparative audit.

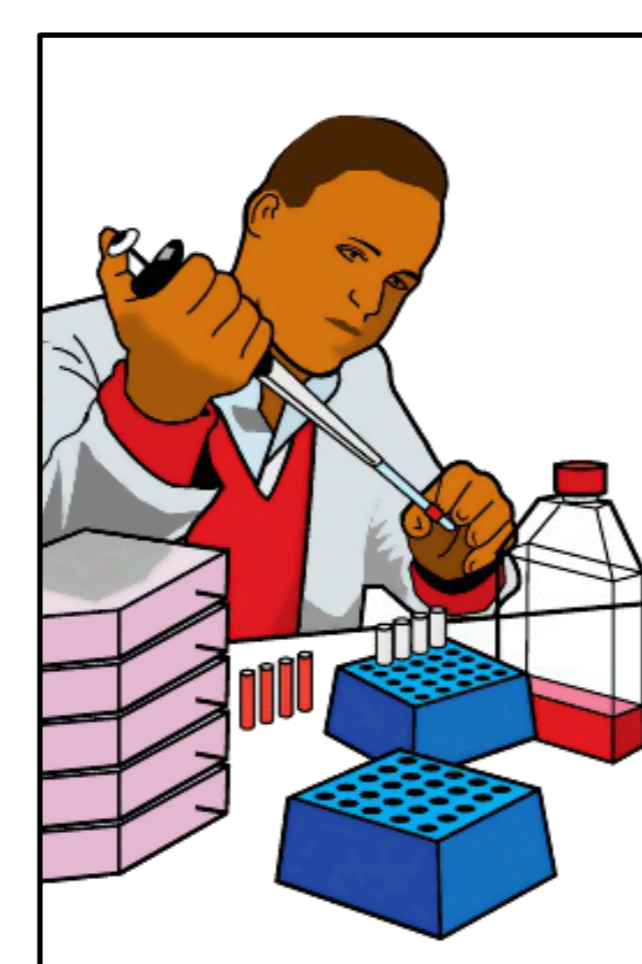
Cross-professional education to target staff at all stages in the transfusion process has potential to improve practice.



Doctors requesting and prescribing blood products should be clear whether transfusion is required urgently overnight or can be given electively the next day. This must be communicated to laboratory and nursing staff.



Nurses are the final gatekeepers in the transfusion process and should be empowered to question decisions to transfuse overnight.



Laboratory staff should feel able to challenge transfusion requests. This must be supported with clear SOPs, including specific guidance about overnight transfusions.