Are we using blood transfusion resources appropriately on EAU in a busy University hospital?

Salford Royal NHS
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Aims

Stable patients with anaemia frequently attend the Emergency Assessment Unit (EAU). They may require transfusion or treatment of reversible causes. Current dogma suggests that a restrictive transfusion strategy should be implemented in stable, non-bleeding patients with anaemia[1+2]. The intention herein is to evaluate our compliance with national guidelines.

Methods

We included stable patients (no signs of active bleeding) admitted to EAU with anaemia who received blood transfusion over a period of 6 months (n=34).
Exclusion criteria included haemodynamic instability, active bleeding and haematology patients requiring long-term transfusion.
Patients divided into two groups according to their target haemoglobin (as per NHS National blood transfusion committee indications codes) [1]. We asked, was the decision to transfuse appropriate? And if so, was the number of units transfused appropriate?
Using Quality Improvement (QI) methodology, questionnaire based survey was conducted pre and post intervention to assess the knowledge of the medical staff on EAU. This was followed by 3 months review to assess improvement.

Results

In the pre-intervention stage, 48% of patients with a target Hb of 70-90g/L, were appropriately transfused. However 73% of these patients were not transfused an appropriate number of units (Figure1)
In patients with a target Hb of 80-100g/L, 82% of decisions to transfuse were appropriate. However 56% of these patients were not transfused an appropriate number of units. No cases of under-transfusion were found (Figure1).

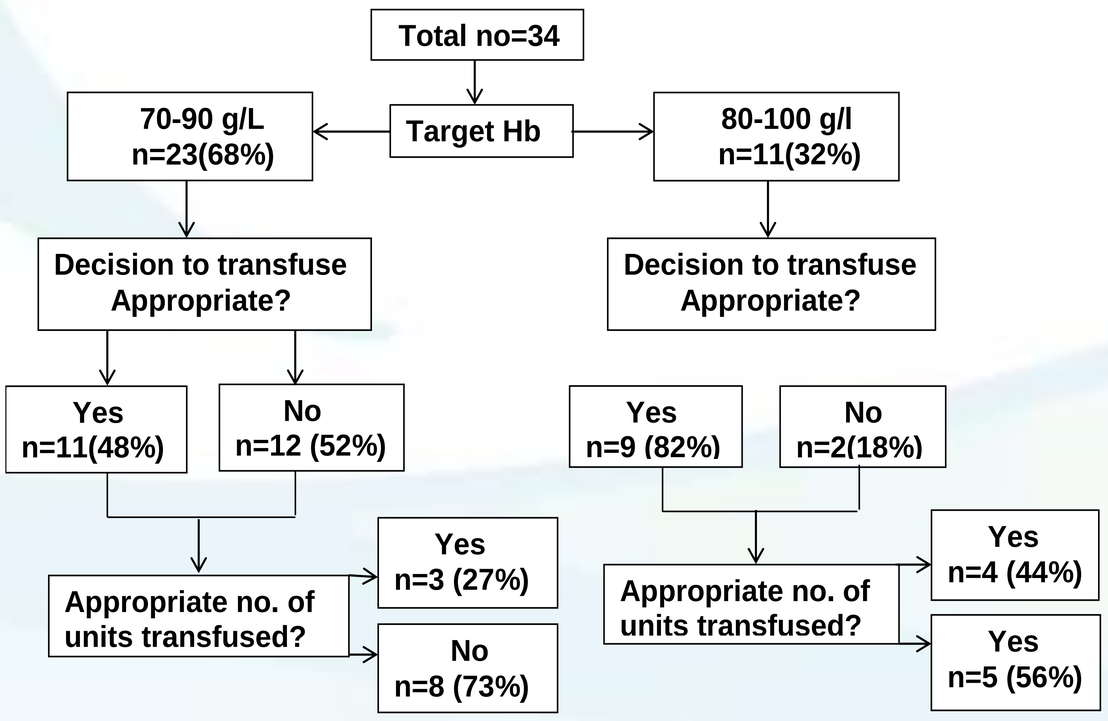

Figure 1. Diagram illustrating target haemoglobin concentrations and appropriateness of transfusion in the study population pre intervention.

Results continued

In the post-intervention stage in comparison, there were 67% of patients with a target Hb of 70-90g/L deemed appropriate for transfusion and 67% were transfused the appropriate number of units.
In patients with target Hb of 80-10g/L, 100% patients were appropriately transfused and all of them received the correct number of units (Figure2).
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We focused in our Quality Improvement project (QIP) on delivering education sessions to medical staff on EAU and displayed posters.
Our results showed improvement in the awareness of the latest national guidance and the appropriateness of the blood transfusion which reflected positively on minimising the number of unnecessary blood transfusion but also the number of units transfused when it was deemed necessary (Figure2).

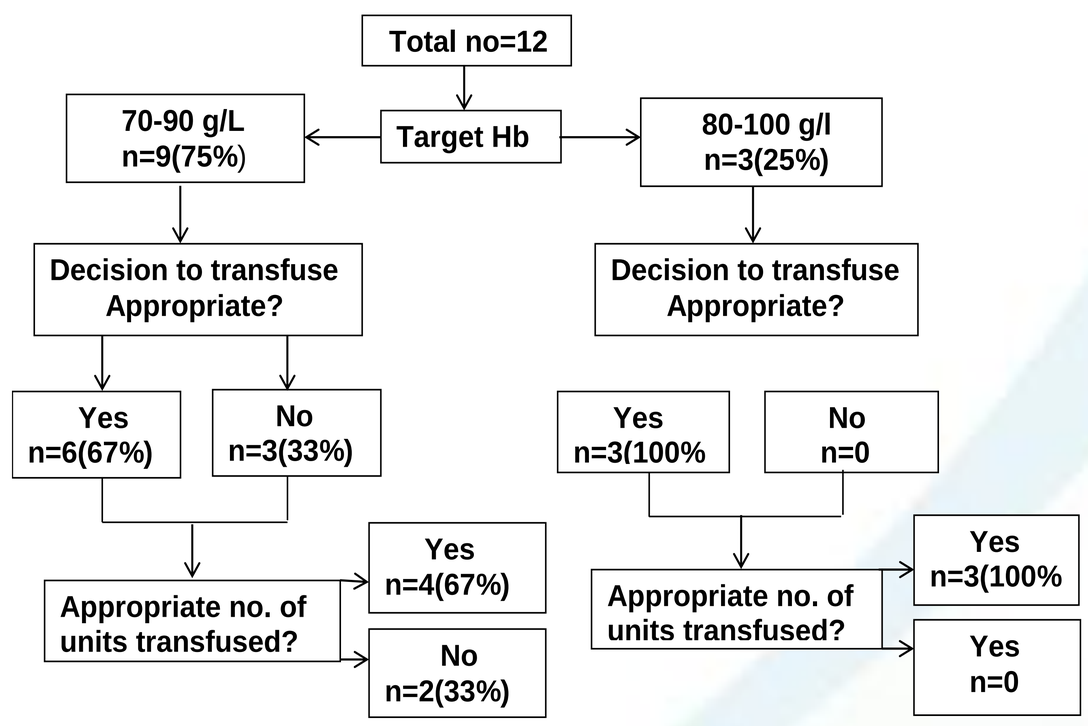

Figure 2. Diagram illustrating target haemoglobin concentrations and appropriateness of transfusion in the study population post intervention

Conclusion

Our study showed that there is a culture of liberal blood transfusion on EAU which is incongruent with national guidelines. Physicians are not aware of the latest national indication codes for transfusion. After discussion with our local Hospital Transfusion Committee (HTC) and clinical effectiveness committee, we have updated our local transfusion guidelines to encourage restrictive transfusion when appropriate. We will carry on with the improvement by rolling out a continual education programme not just on EAU but also across the Trust.

References

1. NICE. Blood Transfusion. NICE Guideline (NG24). 2015
2. Carson JL, Carless PA, Hebert PC. Transfusion thresholds and other strategies for guiding allogeneic red blood cell transfusion. Cochrane Database Syst Rev. 2012;4:CD002042.