NHS
Blood and Transplant

# National Comparative Audit of Blood Transfusion

## 2018 Audit of the Management of Major Haemorrhage
### Interim Report

## NHS Lothian

**Introduction**

This is an interim report for the 2018 audit of the Management of Major Haemorrhage. It provides you with feedback on 7 audit standards and it is intended to give you a head start should you wish to look at how well you did.

This interim report is devised using data as submitted to the audit, so missing data is counted as a "No" response. Although this presents you with the worst possible scenario, the auditor inputting the data was unable to provide data, so you cannot be sure that the standard was met in the absence of data, however likely it might be that the standard was met. These data will be reported again in the main report, but will be cleaned and adjusted as necessary, so what is written here may change.

The data not used in this interim report will be analysed over the coming weeks to enable us to offer an opinion about the care given to your patients. Guidance on the management of major haemorrhage is very sparse and is often incomplete, which means that there is a wide variety of practice, some of which will be outside agreed best practice and amenable to improvement. For the main report we will offer a view on how each of your audited patients was managed, suggesting ways in which practice could change. The national dataset will help in the development of new guidance, or of improvements to that which already exists.

After most standards is a section, ***Potential actions for you to consider,*** for you to record your ideas on what you might be able to do locally to improve practice. Shortly before we issue the main report, you will have to opportunity to contribute your ideas and offer inspiration to others about how they might tackle the problems you have encountered. Anything you are willing to share with us will be included in a "Quality Improvement Supplement" in the main report.

At the time of analysis there were 885 cases from 162 sites

**Your site contributed data on 11 patients**

**How to use this report**

These data are based on the audit answers provided. It might be that practice looks poor in certain parts of the audit, whereas in reality it is better than it looks. This comes about as an artefact of audit – the auditor was unable to locate the data, so could not provide it. So in this report, we are only seeking to *imply* that there might be room for improvement.

If performance against any particular standard is not as high as you would expect, consider first if that is because the auditor was unable to find the data. That in itself is an important finding, because we should all maintain adequate health care records so we can demonstrate the quality care when required to do so.

It could be that performance against the standard was dictated by local procedures and policy or clinical circumstances. If, for example, Tranexamic Acid use appears low, it might be that using TxA is not yet fully embedded in practice, or it could be that in the particular circumstances of any given patient, the use of TxA was not appropriate or not possible, due to the dynamic pace of major haemorrhage.

Hence we suggest that if any results are lower than you would expect, then taking time to satisfy yourself that there are adequate reasons for non-compliance could prove fruitful.

Of course, this brief snapshot only gives a random picture of quality, but if performance is low in this random sample of patients, then it might be low for other major haemorrhages. To further investigate the level of quality, there are 2 approaches you could take: *Service Delivery Problems* and *Care Delivery Problems*

*Service Delivery Problems* occur when our operating systems are not well-designed and paradoxically serve to hinder the delivery of good care. An example might be not having enough Group O Positive blood in satellite fridges, so Group O negative is taken and given to women over 50 or men. Changing the stockholding should lead to reduced inappropriate use of O neg blood.

*Care Delivery Problems* occur when the systems and procedures facilitate good practice, but the healthcare professional does not act accordingly. This could be because of lack of access to supplies, lack of training, lack of knowledge, or simply changed behaviour in pressured situations.

Distinguishing between the 2 types of delivery problems prevents us asking our colleagues to do better when they cannot in the presence of a poorly-designed system, or recognises that our colleagues need further support to help them better manage major haemorrhage.

**Standards**

These standards have been created by the audit project group based on existing recommendations and key practice points.

**Managing clinicians obtain blood samples for group and screen, full blood count and clotting tests (including fibrinogen)**

***Results***

*Criterion 1: A group and save blood sample is sent to the laboratory if a valid sample is not already held in the laboratory.*

Nationally, for 780/885 (88%) a group and save blood sample was either sent to the laboratory or there was already a valid sample in the laboratory

**Your site: a group and save sample was available for 10/11 (91%) of audited patients**

*Criterion 2: Hb and platelet count are performed to assist in managing the major haemorrhage.*

Nationally 802/885 (90.6%) of patients had both these tests performed

**Your site: Both tests were performed for 10/11 (91%) patients**

*Criterion 3: Clotting tests are performed to assist in managing the major haemorrhage.*

Nationally 690/885 (78%) of patients had clotting tests performed

**Your site: Tests were performed for 11/11 (100%) patients**

***Potential actions for you to consider***

*Results for criterion 2 suggest that it would be worthwhile looking again at the use of testing to support decision making during major haemorrhage management, to discover reasons why testing may be overlooked, should that be the case.*

**For patients whose blood group is A, B or AB, Group O RhD negative red blood cells are not used in women over 50 years of age, and group O RhD positive red blood cells are used in men.**

Gender and blood group was known for 414 men and 429 women, giving a sample of 843 patients

Rationale
The main reason for processing Group & Save samples is to move patients to group specific blood as soon as possible so group O blood is prioritised for emergency use.

***Results***
*Criterion 4: Group A, B or AB women aged over 50 are not given group O RhD negative red cells*

Nationally, 160/429 (37%) women were aged over 50. Of these, 92 were either blood group A, B or AB. Of these, 35 (38%) were given Group O Negative red cells when they could safely have been transfused with Group O positive red cells
**Your site : 1/6 (17%) women aged over 50 was given Group O Negative red cells**

*Criterion 5: Men should get group O RhD positive red cells*

Nationally, 219/414 (53%) men were either blood group A, B or AB. Of these, 80 (36.5%) were given Group O Negative red cells when they could safely have been transfused with Group O positive red cells

**Your site : 1/5 (20%) of your male patients was not given red cells of the appropriate blood group because they were transfused with O negative red cells**

***Potential actions for you to consider***
*You could feedback your results to congratulate teams on helping to conserve the use of O neg stocks for those who cannot have an alternative, and help to discover why patients are not being switched to their own group, where that occurs.*

**During major haemorrhage in trauma settings RBC and FFP are given in a 1:1 ratio**

***Results***

*Criterion 6: During major haemorrhage in trauma settings RBC and FFP are given in a 1:1 ratio*

Nationally, 140/885 (16%) of major haemorrhages occurred in a trauma setting. For 18/140 (13%) cases, the ratio of transfused red cells to FFP was 1:1. Ratios ranged from 0.25:1 to 3.5:1

**Your site : 2/11 (18%) of your major haemorrhages occurred in a trauma setting. None were transfused in a 1:1 ratio**

**Tranexamic Acid is used in trauma patients as an initial 1G Intravenous bolus followed by 1G as an infusion**

***Results***

Nationally, 140/885 (16%) of major haemorrhages occurred in a trauma setting. Of these 117/140 (84%) patients were given tranexamic acid.

51/117 (43.5%) met the standard by being given an initial 1G IV bolus followed by an 8-hour infusion

**Your site : 0/2 (0%) trauma patients were given a 1 Gram Intravenous bolus followed by a 1 Gram infusion over 8 hours.**

***Potential actions for you to consider***

*NICE guideline NG39, 1.5.4 advocates: Use of intravenous tranexamic acid as soon as possible in patients with major trauma and active or suspected active bleeding*
*You should satisfy yourself that there are adequate clinical reasons for not using Tranexamic Acid in your trauma patients.*

**Tranexamic Acid is used in non- trauma patients**

***Use of Tranexamic Acid in women with post-partum haemorrhage***

Rationale
The *woman* trial showed that Tranexamic Acid versus a placebo reduces mortality and therefore it should be given to all women with post-partum haemorrhage

***Results***
Nationally, 212/885 (24%) patients were women who had suffered post-partum haemorrhage. Of these, 132/212 (62%) were given Tranexamic Acid.

**Your site : You had no women who experienced post-partum haemorrhage.**

***Use of Tranexamic Acid in non-trauma and non-PPH patients***

***Results***
Nationally, 533/885 (60%) of major haemorrhages occurred in a non-trauma setting, excluding those PPH cases already discussed . Of these 284/533 (53%) patients were given Tranexamic Acid.
**Your site : 3/9 (33%) non-trauma, non-PPH patients were given Tranexamic Acid**

***Potential actions for you to consider***
*Studies show that when administered to medical, elective, and emergency surgical patients, tranexamic acid can reduce bleeding and transfusion requirements. Current evidence suggests no increase in thromboembolic complications associated with tranexamic acid use. You should satisfy yourself that there are adequate clinical reasons for not using Tranexamic Acid in your non-trauma patients.*

**Dates and times that blood transfusions started are recorded in patient care records**

***Results***
Nationally, for 751/885 (85%) patients, the date and time of the first red cell transfusion was recorded. 564 patients were given FFP, and date and time of the transfusion was recorded for 425/564 (75%) of those.
**Your site : For 11/11 (100%) patients, the date and time of the first red cell transfusion was recorded, and 11/11 (100%) had the date and time of their first FFP transfusion recorded**

***Potential actions for you to consider***
*It could be that the person auditing the care was unable to find the date and time of transfusion, but it is also possible that these details are not recorded. You should satisfy yourself that your systems facilitate the capture of these details and audit further practice, investigating why these details are not captured if this occurs again.*

**When a Major Haemorrhage Protocol is activated, it is stood down as soon as is reasonably practicable**

Rationale
*Stepping down MHP is a good practice and allows for appropriate use of resources*

***Results***
Nationally, the Major Haemorrhage Protocol was activated during the care of 712/885 (80%) patients, but the protocol was stood down in only 350/712 (49%) of activations.
**Your site : The protocol was activated for 6/11 (55%) of your patients, and was stood down for 3 of them**

## References

NG39. Major trauma: assessment and initial management. https://www nice org uk/guidance/ng39/chapter/Recommendations-for-research. 2016.

NNIfHaC. Blood transfusion. NICE guideline [NG24] Available at: https://wwwniceorguk/guidance/ng24. November 2015.

Mavrides E, Allard S, Chandraharan E, Collins PG, L., Hunt B, Riris S, et al. Prevention and management of postpartum haemorrhage. BJOG. 2016;DOI: .10.1111/1471-0528.14178.

Hunt BJ, Allard S, Keeling D, Norfolk D, Stanworth SJ, Pendry K, et al. A practical guideline for the haematological management of major haemorrhage. Br J Haematol. 2015;170(6):788-803.

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