IMPROVING BLOOD TRANSFUSION DOCUMENTATION IN A NEONATAL UNIT

Salisbury NHS
NHS Foundation Trust

Background

- Most neonatal transfusions are carried out on low birth weight premature infants treated on Neonatal Intensive Care Units/ Neonatal Units. Documentation that can provide a clear audit trail is an important part of the transfusion pathway (Norfolk 2013, p.32, 120).
- Care bundles are also increasingly popular as a means of using clinical governance to ensure consistency in patient care and to manage risk. They are defined as a collection of processes needed to effectively and safely care for patients undergoing particular treatments with inherent risks, such as blood transfusions. Several interventions are bundled together and when combined significantly improve patient care outcomes (Robb et al 2010).

Aim

- It was identified that this Neonatal Unit did not have a standardised blood transfusion documentation form. We decided to produce a combined transfusion, prescription and monitoring chart (care pathway). This can then be used to record the information in one place and to provide a clear audit trail.
- The development of a standardised transfusion document in Wessex Neonatal Units has the potential to reduce errors by clinical staff moving between neonatal units/hospitals.

Methods

Blood Transfusion Chart - Neonatal Unit

ADRESSOGRAPH	Salisbury NHS – NHS Foundation Trust
Current weight:	Parents informed/consented: Y / N

Checklist	Unit 1	Unit 2	Adverse Reactions
IV access flushed			Tachycardia
Blood CMV negative, leukocyte depleted, irradiated			Tachypnoea
Check blood for leaks, clots, bubbles, damage			Pyrexia
Expiry			Rash
ABO compatibility			Restlessness
Rhesus compatibility			Dyspnoea
Check ID next to baby with labels, drug chart and blood bag			Haematuria
Send card to Blood Transfusion by internal post			
Record blood transfusion in baby notes			
Has single blood spot been taken?			

Prescription

UNIT 1	Blood Product		Please peel off and affix transfusion label here	Given by
	Indication	Date/Time		
	mls	mls/kg		
	Signature			
UNIT 2	Blood Product		Please peel off and affix transfusion label here	Given by
	Indication	Date/Time		
	mls	mls/kg		
	Signature			
UNIT 3	Blood Product		Please peel off and affix transfusion label here	Given by
	Indication	Date/Time		
	mls	mls/kg		
	Signature			

Diuretics if indicated

Furosemide:	Has it been prescribed on drug chart?	Y/N	Has it been given?	Y/ N

Blood Transfusion Chart - Neonatal Unit

UNIT 1

BP, Temp, HR, RR; 39, 37, 35, 34, 200, 180, 160, 140, 120, 100, 80, 60, 40, 20, 0

Mean BP
SatsO2%
Blood Glucose
Notes

UNIT 2

BP, Temp, HR, RR; 39, 37, 35, 34, 200, 180, 160, 140, 120, 100, 80, 60, 40, 20, 0

Mean BP
SatsO2%
Blood Glucose
Notes

Phase 1:

Research was undertaken on existent blood transfusion guidelines/charts implemented in practice within the Wessex Neonatal Network.

Preceptees were asked to submit/share their blood transfusion documents. All the documents obtained were then analysed in order to assess which method and layout would fulfil the needs of this unit.

A care bundle design was chosen in order to enable all the processes involved in a blood transfusion to be combined together in the same document.

Phase 2:

The production of a dedicated blood transfusion chart underpinned by the Trust's current blood transfusion policy and guideline. The document produced included key information on the three elements of a blood transfusion:

Pre-transfusion: A checklist of the key elements to be carried out before initiating the blood transfusion in order to ensure reason for transfusion, safe administration/practice, and correct prescription;

During transfusion: list of possible adverse reactions that may occur throughout the transfusion. Neonates require regular visual observation/continuous monitoring, an observation chart combining all elements as well as the interval regularity was incorporated into the document in accordance with Trust Policy;

Post transfusion: checklist of documentation required post transfusion.

Staff Awareness Training Programme

This pilot document was then disseminated to all staff through the unit's staff communication/changes folder and daily handover. All staff were asked to comment and suggest ideas for improvement and any other issues arising that needed to be addressed to improve compliance with the bundle.

Phase 3:

In December 2014 a trial of the chart was commenced with a sample of nursing and medical staff on four infants requiring a blood transfusion. The sample used on this trial was small as a Local Neonatal Unit. Throughout the trial period staff evaluated on the three different elements and ease of use of the chart and further changes were then made following feedback.

Outcome

- Changes were made to the document and after evaluation a finalised version was produced.
- In order to measure staff compliance with use of the document an audit was carried out at the end of the trial. This audit assessed all the elements of the care bundle: pre-transfusion checklist was fully carried out and completed, units to transfuse were correctly prescribed and signed by two trained members of staff, all observations were documented as per guideline and all final checklists were completed with transfusion documented in the patient's notes. The audit figures obtained post trial period showed 100% compliance from staff with the use of the new documentation form.
- In March 2015, the finalised version was presented at the Neonatal Governance meeting where it was ratified and approved to be added as an appendix to the Trust Neonatal Blood Transfusion Guideline. The blood transfusion chart is now in use in the unit.

References:
1. Norfolk, D. (ed). *Handbook of Transfusion Medicine*. 5th edition. Norwich: TSO information and publishing solutions, 2013. Available from: http://www.transfusionguidelines.org.uk/transfusion-handbook [Accessed: 28 May 2015]
2. Robb J, Jarman B, Suntharalingam G,Higgens C, Tennant R and Elcock K (2010) *Using Care Bundles to reduce in-hospital mortality: quantitative survey*. British Medical Journal 340 (1234) 861-863.
3. Gray A, Illingworth J. *Right blood, right patient, -right time: RCN guidance for improving transfusion practice*. London: Royal College of Nursing, 2013. Available from: http://www.rcn.org.uk/__data/assets/pdf_file/0009/78615/002306.pdf [Accessed: 21 March 2015]

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