IMPROVING SAFETY FOR PATIENTS RECEIVING A BLOOD TRANSFUSION

This is a summary: the full paper can be accessed at nursingtimes.net

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Transfusion errors are often due to inadequate pre-transfusion checks. Correct and appropriate patient observations during transfusion are critical. An integrated care pathway can remind staff of these checks and observations and provide a systematic way of ensuring documentation is accurate and care is evidence based.

PLANNING AN IMPROVEMENT

In 2003 and 2005 our hospital took part in the national comparative audit of transfusion practice, organised by NHS Blood and Transplant. These entailed recording 40 transfusion episodes, looking specifically at the practice of nurses at the bedside. There was little difference between the results of the two audits. They both showed wide variation in what was happening at ward level and that unsafe practices were still occurring.

The audits also highlighted inconsistency in recording the correct observations and, in some cases, poor management of suspected transfusion reactions.

We looked at ways to improve transfusion practice across our trust to:

- Improve and maintain patient safety;
- Ensure the correct checks and observations are made in order to prevent errors and spot transfusion-related reactions at an early stage;
- Improve the documentation of blood transfusion episodes.

After the 2003 audit one recommendation was to introduce an integrated care pathway (ICP) in order to address some of these issues. Unfortunately this did not happen due to lack of a transfusion practitioner to implement it.

PATHWAY TRIAL

As the 2005 audit showed lack of improvement in practice, the newly formed transfusion team decided to trial the ICP on the cancer day unit before attempting to make any further revisions.

The initial sample size was 40 patients. Nursing and medical staff were trained to use the new documentation and encouraged to do so wherever possible for adult patients attending for blood transfusion. They were asked to complete feedback forms to assess the ICP for ease of use and its advantages and disadvantages against current documentation.

To assess how well the ICP had been completed, the medical notes of patients known to have received a blood transfusion during the audit period were examined retrospectively. The new ICP was found in 26 case notes but not in the remaining 14. This in itself showed that the problem of retaining a permanent record of a transfusion was not simple to address. It later transpired that some ICPs had been ‘borrowed’ by other staff to look at or test but had not been returned.

Staff feedback indicated that the ICP was a good idea but that the documentation was too long. It also became apparent that some boxes were too small to write in. This was an important lesson, because a common complaint about documentation is that once completed, it can be illegible.

We were also aware that completion of documentation can be in inverse proportion to its length – the longer the document, the less will be filled in. Common themes from staff in other areas shown the ICP were:

- We would not have time to complete it;
- It is longer than ICPs for more complex procedures.

REVISION OF IDEAS

The team reconsidered the main purposes of blood transfusion documentation:

- To allow space to record a prescription, observations and evidence of the transfusion;
- To keep all data relating to the transfusion together as a permanent legal record;
- To provide information that guides staff on how to prescribe, check and administer blood components safely;
- To guide staff in recognising and managing acute transfusion reactions.

Taking all these points into consideration, we moved from a true ICP towards a record of transfusion, since the main purpose of the documentation was to provide a permanent legal record of the transfusion episode.

The second draft transfusion ‘ICP’ was designed as a single A4 sheet printed on both sides. The first page is mainly for medical staff to complete – the patient’s details, pre-transfusion haemoglobin level, reason for transfusion, special blood requirements, previous reactions and the prescription.

British Committee for Standards in Haematology (1999) guidelines stipulate that...
BACKGROUND

The greatest risk from blood transfusion is receiving the wrong blood, which is almost exclusively due to human error and, in particular, failure to complete the proper checks before commencing the transfusion.

National comparative audits of transfusion practice (NHS Blood and Transplant, 2005; 2003) have shown wide variation in ward-level practice and that unsafe practices were still occurring.

Reports from Serious Hazards of Transfusion (Stainsby et al, 2005; 2003) consistently show that transfusion errors often happen due to a failure to carry out proper bedside pre-transfusion checks.

Failure to observe the patient correctly during transfusion can mean that early signs of an acute transfusion reaction go unnoticed. By the time that more obvious signs – such as dyspnoea or profound tachycardia – become apparent, it may be too late to prevent major morbidity (McClelland, 2007).

The rationale for transfusion should always be recorded in the medical notes. This serves a number of purposes: it alerts the doctor to consider the benefits to the patient against the potential risks of transfusion; it helps to ensure the transfusion is appropriate and justified; and it ensures that other members of the team are aware a transfusion is planned or has taken place. We knew from reviewing medical notes that this guideline is rarely followed.

The new transfusion record allows prescribing doctors to tick relevant boxes and reminds them to check the pre-transfusion haemoglobin level.

The second page of the transfusion record is mainly for nursing or theatre staff administering the blood components. It covers pre-transfusion checks of the patient and blood, observations prior to and during the transfusion, and recognition and early management of acute transfusion reactions.

As our previous audits had shown, correct and appropriate observations may not always occur during transfusion. For some staff this can be because they have rarely taken part in administration of blood or have out-of-date knowledge of the observations required to identify an acute reaction at an early stage. There is now an extensive programme of transfusion training that emphasises correct patient identification and observations during transfusion.

RE-AUDIT

Following the redesign the new transfusion record was taken back to the cancer day ward. Initial feedback was positive, particularly that it was user-friendly, shorter and clearer. The staff were asked to start using the new documentation for all patients undergoing transfusion.

Twenty random records were audited retrospectively to see if the document:

- Was correctly filed in the patient’s medical notes;
- Was correctly and legibly completed;
- Showed evidence that the correct pre-transfusion checks and observations were undertaken and appropriate care was provided during the transfusion.

Evidence from this second audit showed that the new document was being used far more effectively to record the patient’s experience of transfusion. All 20 documents were found in the correct patients’ medical notes, correctly completed, legible, signed and providing appropriate evidence.

A second ward asked to be included in the trial of the new transfusion record and staff were trained in its use. Feedback was again positive, in particular that the documentation was clear and that it was easy to find the information on the form.

The document, which can be seen on nursingtimes.net, has now been rolled out to most areas of the hospital and introduced in a slightly amended format for paediatric patients. It is also used by our surrounding community hospitals and our local private hospital, to which we supply blood. Staff have said they found it easier to remember the correct checks and observations.

FURTHER DEVELOPMENTS

The transfusion record is not appropriate for use in massive haemorrhage, when many units of blood and other components may be required as the space is inadequate and it is difficult to determine quickly how much has already been given. We have therefore worked with one of the anaesthetists to produce a transfusion record for these circumstances. This new documentation will enable anaesthetists to see at a glance the quantities of various blood components already transfused.

The new transfusion record also includes advice on which blood samples are needed and when, contact numbers for transfusion staff, information on using cell salvage to reduce the amount of blood required or to ‘buy time’ and what to consider before using specialised products, such as Factor VIIa and Factor VIII. We hope it will be available to trial in the next few months.

REFERENCES


