

REPORT OF BLOOD SAFETY REVIEW

11th February 2010

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We would also like to thank all chief executives, managers and members of staff who contributed to the review for their co-operation.

Finally, we would particularly like to thank all patients and members of the public who took the time to provide their view of the services and share their experiences.

The Review Team

The Review Team consisted of an expert panel from across the United Kingdom and Northern Ireland and included lay representation:

Table 1: The Independent Review Team

Name	Title	Organisation
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Kieran Morris	Deputy Medical Director	NI Blood Transfusion Service
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Paul Nixon	Pharmacist Inspector	RQIA
Elaine Connolly	Senior Quality Reviewer	RQIA
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Sarah Riley (observer / reviewer)	Senior Quality Officer (Evidence)	Postgraduate Medical Education and Training Board, London
Shirley Murray (reviewer for independent healthcare facilities)	Regional Haemovigilance Co-ordinator	Belfast Health and Social Care Trust
David Stewart (facilitator / reviewer)	Medical Director and Director of Service Improvement	RQIA
Hilary Brownlee (project manager / reviewer)	Project Manager	RQIA
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Table 2: Professional Advisors to the Review Team

Name	Title	Organisation	
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Shirley Murray	Regional Haemovigilance Co-ordinator	Belfast Health and Social Care Trust	

1. Context for the Review

The Regulation and Quality Improvement Authority (RQIA) is a non-departmental public body, established with powers granted under the Health and Personal Social Services (Quality, Improvement and Regulation) (Northern Ireland) Order 2003. It is sponsored by the Department of Health, Social Services and Public Safety (DHSSPS) and is responsible for assessing and reporting on the availability and quality of health and social care services in Northern Ireland and encouraging improvements in the quality of those services.

The Health and Personal Social Services (Quality, Improvement and Regulation) (Northern Ireland) Order 2003 places a statutory duty of quality on Health and Social Care (HSC) organisations, and requires the RQIA to encourage continuous improvement in the quality of care and services throughout all sectors in Northern Ireland.

The Regulation and Quality Improvement Authority (RQIA) was commissioned by the Department of Health, Social Services and Public Safety (DHSSPS) to carry out a review of the implementation in trusts and independent hospitals of DHSSPS Circular HSC (SQSD) 30/2007 dated 13 June 2007 and the addendum 02/08 dated 8 July 2008 (Appendix 3). These circulars relate to the *National Patient Safety Agency (NPSA) Notice 14: Right Patient Right Blood.* (Appendix 4). The circulars require provider organisations to:

- 1. Agree to and start to implement an action plan for competency based training and assessment for all staff involved in blood transfusions. It is anticipated that all actions are completed by 30 January 2009;
- 2. Ensure that the compatibility form (or equivalent) and patient notes are *not* used as part of the final check at the patient's side;
- 3. Systematically examine local blood transfusion procedures using formal risk assessment processes;
- 4. Carry out an appraisal of the feasibility and relevance of using:
 - (a) barcodes or other electronic identification and tracking systems for patients, samples and blood products;
 - (b) photo-identification cards for patients who undergo regular blood transfusions; and
 - (c) a labelling system of matching samples and blood for transfusion to the patient concerned.

This report presents the findings of the review of Health and Social Care Trusts, on the implementation of this initiative together with the progress made in implementing the actions listed in the DHSSPS Circular 6/03 Better

Blood Transfusion - Appropriate use of blood (Appendix 5) which has been key to improving blood transfusion practice in Northern Ireland.

2. Background

Over 3 million units of blood components are used in the UK each year - 60,000 of these in Northern Ireland. Blood is given regularly and routinely for the treatment of chronic disorders, pre and post operatively, and in emergency situations.

The Northern Ireland Blood Transfusion Service (NIBTS) is responsible for collecting, testing and distributing all blood and blood components in Northern Ireland. It operates within the Blood Safety and Quality Regulations (2005) that set out specific requirements for the collection, processing, testing and distribution of blood and blood components. The services provided by the NIBTS are not included in this review. Hospitals in the Health and Social Care Trusts are responsible for ordering and managing their supplies of blood and blood components in a safe and effective environment. Some hospitals have responsibility for securing blood components for patients who are having care and treatment in independent healthcare facilities. Both the NIBTS and the trusts are aware of the risks involved in all aspects of blood management and work has been ongoing to identify areas where process and practice could be improved.

In 1991 the Clinical Resource and Efficiency Support Team (CREST) issued a set of guidelines for the safe, effective and appropriate use of blood – Better Use of Blood in Northern Ireland – Guidelines for Blood Transfusion Practice. These guidelines were recommended to all trusts at that time. Since then, due to an increasing awareness of the need to use blood only when it is essential, a small group of physicians, haematologists and transfusion medicine specialists revisited the guidelines and re-issued them in January 2001. In 2006 an integrated plan for the management of blood shortages was published by DHSSPS in which trusts were required to develop contingency plans to conserve and restrict usage of blood.

CREST guidelines were updated in March 2009 by the Guidelines and Audit Implementation Network (GAIN) with the production of "Better Use of Blood in Northern Ireland" guidelines for blood transfusion practice.

3. HSS Circular HSS MD 6/03: Better Blood Transfusion

An extensive programme of actions to improve and support blood transfusion in Northern Ireland was introduced as a HSS Circular 3/99: Better Blood Transfusion, following the presentation of the findings of a survey of NHS trusts in England and Wales at the Chief Medical Officer's conference in 2001.

The findings of the survey indicated that the key areas for improvement related to staff training, the availability of hospital transfusion practitioners, locally approved protocols, audit of blood transfusion practice, the use of autologous blood transfusion and the provision of written information to patients on blood transfusion.

The HSS Circular 3/99: Better Blood Transfusion, was supplemented in 2003 by a new programme of actions in HSS Circular MD 6/03: Better Blood Transfusion. In order to co-ordinate and monitor the progression of these actions by trusts the Northern Ireland Regional Transfusion Committee (NITRC) was established in September 2003 by the Chief Executive of the Northern Ireland Blood Transfusion Service (NIBTS).

The authority and resources to take forward the necessary actions to improve blood transfusion practice in trusts were provided by the **Hospital Transfusion Committees (HTC)** which were established in 2003. The DHSSPS Circular 3/99: Better Blood Transfusion set out objectives for HTCs that focused on promoting best practice through review and improvement in local protocols based on national guidelines, leading on multi-professional audit, promoting education and training of all clinical, laboratory and support staff involved in blood transfusion, participating in and reporting to the NIRTC, participating in regional and national blood transfusion committees and consulting with patient representative groups.

The HSS Circular MD 6/03: Better Blood Transfusion required trusts to establish **Hospital Transfusion Teams (HTT)**. As a minimum this team should consist of the lead consultant for transfusion in the Trust, a hospital transfusion practitioner or equivalent and the Blood Bank manager.

A key element of the work of the HTT is to ensure timely feedback to blood users on lessons learnt from serious adverse transfusion events and near misses and to participate in the Serious Hazards of Transfusion scheme (SHOT) which is a confidential enquiry process for the reporting of serious complications of blood transfusion and near miss events in the UK. Timely reporting to the Medicines and Healthcare products Regulatory Agency (MHRA), the UK Competent Authority for blood safety, using the Serious Adverse Blood Reactions and Events SABRE system is also a requirement.

Haemovigilance Practitioners were appointed to Trusts and are members of the HTT. They work with clinicians and managers to take forward and implement the actions to meet the objectives. Although the implementation of a programme of training and competency based assessment for all clinicians who are involved in blood transfusion was not an element of their job

descriptions, this however has become a time consuming element of haemovigilance practitioners' work since the NPSA Safer Practice Notice (14): Right patient, Right Blood.

There are currently 11 (9.3 whole time equivalent) haemovigilance practitioners in Northern Ireland.

The work that has been undertaken by the trusts in implementing the programme of actions set out in the circular has been a key element in achieving regional improvements in blood transfusion services in Northern Ireland and, as such, has been taken into account in this review.

4. National Patient Safety Agency (NPSA) Safer practice Notice 14: Right patient, Right Blood (2006)

In 2007 the DHSSPS reviewed and endorsed the *National Patient Safety Agency (NPSA) Safer Practice Notice 14: Right Patient, Right Blood (2006)* for implementation by the Health and Social Care Trusts.

This was part of a broad national initiative to be taken forward through the National Blood Transfusion Committee in England and Wales, the Serious Hazards of Transfusion (SHOT) scheme and the National Patient Safety Agency. The timescale for implementation of the recommendations was January 2009.

Table 3: Timeline of actions taken to improve blood transfusion services in Northern Ireland (June 2002 - January 2009).

Date	Event
January 2001	Clinical Efficiency Support Team. Better Use of Blood in Northern Ireland - Guidelines for Blood Transfusion Practice: January 2001 (revised 1991 guidelines).
June 2002	HSS Circular MD 6/03 Better Blood transfusion - Appropriate use of Blood (replaced previous circular HSS 3/99).
April 2003	Secure membership and functioning of the Hospital Transfusion Committee (HTC).
June 2003	Secure composition and functioning of the Hospital Transfusion Team (HTT).
June 2003	Participation in the Serious Hazards of Transfusion (SHOT) scheme.
September 2003	Implementation and monitoring of blood transfusion policies.
September 2003	Education and documented annual training on blood transfusion policies administered to all healthcare staff involved in blood transfusion.
September 2003	NIRTC established.
September 2003	Clinical multi-disciplinary audit of Blood transfusion and Continuing Professional Development (CPD) programmes.
September 2003	Participation in the Blood Stocks Management Scheme.
March 2005	Deadline for appointing haemovigilance practitioners to support the implementation and monitoring of the blood transfusion policy.
September 2006	DHSSPS - Integrated plan for the management of blood shortages.
November 2006	CMO letter regarding appropriate use of blood.

Date	Event
March 2007	NPSA Safety Notice 14: Right patient Right Blood endorsed by DHSSPS.
May 2007 - March 2008	RPA (Amalgamation of trusts).
September 2008	Initial date for compliance with NPSA Safety Notice 14: Right patient Right Blood.
January 2009	Deadline for completion of competency assessment by staff who are involved in blood transfusion.
March 2009	CREST guidelines for blood transfusion practice updated by GAIN with production of "Better Use of Blood in Northern Ireland."
March - June 2009	RQIA review of compliance with NPSA Safety Notice 14: Right patient Right Blood

The Approach to Improving Blood Safety in Great Britain

A similar approach to improving blood transfusion practice was taken in England and Wales when, in November 2007, the Chief Medical Officer issued the Health Service (HSC) Circular HSC 2007/001: Better Blood Transfusion - Safe and Appropriate Use of Blood, that set out a programme of actions for the NHS to improve on the safety and effectiveness of blood transfusion. In England and Wales the period for implementation of the NPSA recommendations has been extended to 2010 whereas in Northern Ireland the target for implementation was January 2009.

In Scotland, the performance of each NHS board was assessed against national standards for transfusions that were established in 2006. The findings of the NHS QIS (Quality Improvement Scotland) that were published in 2008 in the National Overview Report indicated that further work needed to be done to ensure that only staff who have had training in blood transfusion are responsible for transfusion. There were also patient identification issues in relation to exclusion of gender by Boards in the minimum data set. These areas are being followed up by the NHS QIS Clinical Governance Support Unit with the support of the Scottish National Blood Transfusion Service (SNBTS) with an update to be published in 2010.

5. Blood Use Trends in Northern Ireland

A key objective of the HSS Circular MD 6/03: Better Blood Transfusion is to ensure the appropriate use of blood and to avoid the unnecessary use of blood in clinical practice. In order to assess the use of blood in clinical practice a major audit of red cell use in Northern Ireland for 2004 - 2006 was undertaken by the NIRTC. The results of this audit showed that a considerable proportion of blood use in Northern Ireland was judged to be inappropriate. Of the 1220 cases reviewed, 19% of transfusions were deemed to be inappropriate and 29% were classified as over-transfusion episodes.

As a result of the findings of this audit a 20 point plan was developed for implementation across a variety of areas - local reports were circulated with presentation of local and national data, regional education programmes were delivered and previous CREST guidelines were updated which included the introduction of updated transfusion thresholds.

Implementation of the action plan resulted in a reduction of the reported inappropriate use of blood cases from 19% in 2004/06 to 9% in 2008. Overtransfusion episodes had also been reduced from 29% to 19% in 2008. Patient exposure to blood products in 2007/08 was reduced by 22% when compared with exposure in 2003/04.

The NIRTC continues to implement further initiatives to improve the appropriateness of clinical blood transfusion using a process of continuous audit. One such initiative is the Anaemia Project in which 800 cases of patients with anaemia on hospital admission / in hospital were audited in detail during 2006 - 2008. The preliminary findings show that 24% of transfusions could have been avoided. Implementation of a regional action plan to reduce the incidence of inappropriate transfusions is in progress.

Other work is in progress to reduce the use of blood components as follows:

- audit of immunoglobulin for appropriateness of use;
- standardisation of a blood transfusion policy and blood ordering forms, and
- the development and implementation of a regional bloodless pathway.

6. Risks of blood transfusion as set out in SHOT Reports

It is a mandatory requirement that all serious events, incidents and reactions relating to blood and blood components are reported to the Medicines and Healthcare products Regulatory Authority (MHRA) and it is recommended they are reported to the Serious Hazards of Transfusion (SHOT) scheme.

These incidents are analysed by SHOT and the subsequent recommendations made, form the major component of annual reports. From 1996 the SHOT scheme has been collecting information from all hospitals across the UK on adverse incidents involving blood. Reports are published annually that highlight areas of concern. Not all incidents are recognised, reported locally or indeed forwarded to SHOT so the true incidence is likely to be higher than those highlighted in their official reports. The frequency and severity of these problems highlights that there must not be complacency when dealing with blood safety.

The most recent annual report (2008) showed that of the 1040 reported incidents across the United Kingdom (UK) there were 477 incidents of incorrect or inappropriate blood component transfused (IBCT), which showed an increase in the number of reported errors with the previous year's figures of 323 IBCT cases. Of the 477 incidents, there were 139 handling and storage errors and 76 cases of inappropriate and unnecessary transfusion. This leaves 262 true IBCT events.

The IBCT incidents reported to SHOT for 2007 and 2008 are presented in Table 4 within six sub-categories.

Table 4: Summary of IBCT results

(Source: Serious Hazards of Transfusion Annual Report 2008 covering the whole of the United Kingdom)

Type of IBCT event	No. in 2007	No. in 2008
Administration of wrong blood	24	47
Wrong blood in tube	7	5
Special requirements not met	76	100
Special requirements not met - other t Laboratory related cases	17	17
Laboratory errors (excluding special requirements not met)	40	91
Miscellaneous IBCT	0	2
Separate Categories		
Inappropriate and unnecessary transfusion	50	76
Handling and storage errors	118	139

The United Kingdom report described a large number of cases in which there were process failures but there were also cases where protocols were disregarded and an "offhand" attitude to bedside checking was noted. The reported number of patients who had received blood and components without any prescription had increased in 2008. Blood was being prescribed following a decision based on incorrect results or poor or absent clinical reasoning.

These cases were in addition to the transfusion of patients who had no identification.

The key message and main recommendations from the report relate to standardisation of practice across the UK - the national inconsistency of standards is a cause for great concern as some hospitals and trusts may not be achieving optimal patient safety. The first three major recommendations relate to the standardisation of practice across the UK in haemovigilance participation, laboratory IT systems and competency assessment.

- 1. Awareness of criteria for reporting adverse events and reactions
- 2. A national specification for transfusion laboratory IT systems
- 3. Competency assessment and standardised, transferable competency certification of all staff involved in transfusion

A further three recommendations relate to the process of the administration of blood to patients.

- 4. Discontinue use of the compatibility form for checking patient identification
- 5. Ensure adequate observation of patients receiving transfusion
- 6. Develop a supportive culture for hospital staff involved in transfusion

Further information on the work of SHOT may be found on the website: www.shotuk.org

7. The Review Methodology

RQIA established an Independent Review Team including lay representation, to carry out this review.

The review process had four key phases:

- completion by all trusts of an audit of competency based assessment in partnership with haemovigilance practitioners in each Trust and RQIA;
- completion by all trusts of a self-assessment questionnaire of the clinical structures, processes and training in place for blood transfusion against the recommendations made in the NPSA Patient Safety Notice14: "Right patient, right blood" and the DHSSPS Circular HSC (SQSD) 30/2007 Better Blood Transfusion - Appropriate use of blood. The criteria used in this self-assessment was developed by RQIA;
- validation visits to the trusts by the Review Team, which included meetings with staff and visits to wards and departments;
- report production and publication.

8. Audit of Competency Based Assessment

All trusts participated in an audit of all red cell transfusion episodes carried out from 00.00hrs Monday 9 March 2009 to 23:59hrs on Sunday 15 March 2009. This audit was carried out in partnership between RQIA and haemovigilance practitioners in each trust.

The main aim of this audit was to gain an awareness of the extent to which relevant staff members involved in the blood transfusion episodes had been successfully assessed against national blood transfusion competencies. These were developed by NPSA in conjunction with Skills for Health (SfH) to ensure that individuals involved in the blood transfusion process have sufficient knowledge and skills to competently participate in the activity. The competencies have been grouped into four main topic areas:

- 1. Obtaining a venous blood sample for pre transfusion sampling
- 2. Organising a request for a blood component for transfusion
- 3. Collecting a blood component for transfusion
- 4. Preparing and administering a transfusion of blood components

The standard data collection tool, which was developed by RQIA, was used in the main by haemovigilance practitioners to collect data on each step in the blood transfusion episode in accordance with the four NPSA competencies.

The table below indicates which competencies are relevant to which profession (although it is acknowledged that this varies across trusts).

Table 5: Competencies Relevant to each Profession

Profession	NPSA Competencies				
Piolession	1	2	3	4	
Nursing	√	✓	✓	✓	
Medical	✓	✓		✓	
Porters			✓		
Healthcare Assistant			✓		
Phlebotomist	✓				

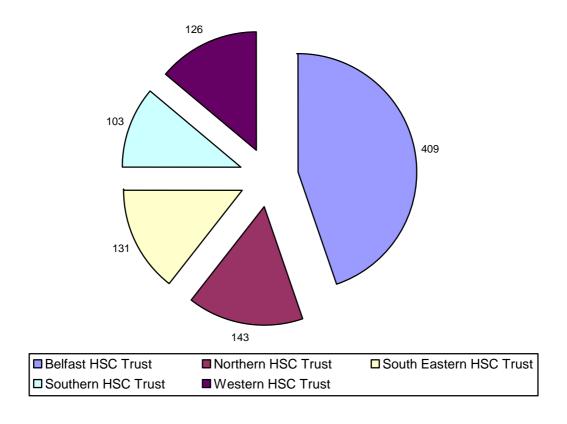
Results of Audit Findings

There was a total of 912 reported red cell transfusion episodes in the trusts during the seven days of the audit. These episodes were audited in detail. The breakdown by trust is shown in Table 7 and illustrated in Figure 1.

Table 6: Total Number of Transfusion Episodes per Trust

Trust	Total Number of Transfusion Episodes
Belfast HSC Trust	409
Northern HSC Trust	143
South Eastern HSC Trust	131
Southern HSC Trust	103
Western HSC Trust	126
Total	912

Figure 1: Total Number of Transfusion Episodes per Trust



Limitations of the Audit

This audit was undertaken to provide a snapshot of the level of compliance with the four competency areas by the trusts in Northern Ireland. Currently in Northern Ireland there is no standardised format for recording compliance with competency assessment during blood transfusion episodes. As a result, the method of collecting and analysing information during this audit varied across the trusts. In addition, trusts took different approaches to completion of the audit which will have impacted on the recorded compliance. For example, the Southern and Belfast trusts made the decision to record that each competency was not achieved if the signature was illegible as the person involved could not be positively identified. This was seen as an opportunity for improvement and to put action plans in place to change relevant documentation to facilitate sections for printing and signature. Other trusts

took additional steps with the aim of finding out the identity of the practitioner in this situation. The findings therefore cannot be directly compared between trusts. The Review Team, however, consider that the findings from this audit and the additional explanatory information provided by trusts sets out a very useful overview of compliance.

Competency 1: Obtaining a venous blood sample for pretransfusion sampling

The findings of the audit indicate a high level of compliance with Competency 1 in the Northern Trust (95.8%) and the Western Trust (97.6%), as shown in Table 8.

The Belfast Trust had the lowest recorded level of assessed compliance with Competency 1. Only 69.6% of staff who had obtained blood samples during the audit period had completed training and had been successfully assessed as competent to obtain a venous blood sample for pre-transfusion sampling.

Additional information provided by the Belfast Trust would indicate that in 33 instances the names of medical staff who had obtained the venous samples had not been entered onto a training database.

Accessibility of training records in respect of this competency is an issue for all trusts, particularly for the Belfast Trust, where there is a problem with clinical staff not keeping records updated. The Western Trust had the highest compliance in this area, with only two recorded instances where the training records for staff were inaccessible.

Within the South Eastern Trust the figures that were captured included six episodes which related to a staff member from another Trust.

Table 7: Percentage Compliance with Competency Assessment Criteria 1 per Trust

Official per frust					
Trust	Staff Name Identified	oun right of the property		Training Record Accessible	
Belfast HSC Trust (409)	95.8% (392)	92.1% (377)	69.6% (285)	86.5% (354)	
Northern HSC Trust (143)	100% (143)	87.4% (125)	95.8% (137)	90.2% (129)	
South Eastern HSC Trust (131)	94.6% (124)	95.4% (125)	88.5% (116)	88.5% (116)	
Southern HSC Trust (103)	95.1% (98)	94.1% (97)	88.5% (91)	88.5% (91)	
Western HSC Trust (126)	100% (126)	93.6% (118)	97.6% (123)	98.4% (114)	

Competency 2: Organising a request for a blood component for transfusion

The Belfast Trust reported non-compliance with Competency 2 on the Belfast City Hospital and Royal Victoria Hospital sites due to the lack of a system for recording. It is anticipated that an electronic blood collection request will be introduced in the near future. Nurses and porters have been trained in relation to Competency 2 but they cannot complete the competency assessment until the electronic system is in place.

The current blood component request documentation used in the South Eastern Trust does not contain a field for the signature of the requesting person, therefore it was recorded that the names of staff were not identified on request forms and there were no legible signatures on the forms. Patient details were available in all instances and all staff members (100%) involved in requesting components for transfusion were competency assessed and their training records were accessible.

Assessment of Competency 2 is not applicable in some areas within the Western Trust where a blood collection form is not used. Patients' notes are used to identify the patient prior to collecting blood but this was not audited.

In two hospitals within the Northern Trust an amended blood collection form is in use that was not audited.

Within the areas where completion of assessment in this competency is required, the accessibility of training records ranged from 83.4% in the Northern Trust, to 100% in the South Eastern Trust

Table 8: Percentage Compliance with Competency Assessment 2
Criteria per Trust

Trust	Staff Name Identified	Staff Signature Legible	Patient Details	Competency 2 Complete	Training Record Accessible
Belfast HSC Trust (409)	8.8% (36)	8.8% (36)	11.4% (47)	7.8% (32)	7.8% (32)
Northern HSC Trust ¹ (115)	88.6% (102)	86.9% (100)	99.1% (114)	83.4% (96)	83.4% (96)
South Eastern HSC Trust ² (131)	N/A	N/A	100% (131)	100% (131)	100% (131)
Southern HSC Trust (103)	100% (103)	94.1% (97)	100% (103)	85.4% (88)	85.4% (88)
Western HSC Trust ³ (93)	97.8% (91)	97.8% (91)	97.8% (91)	94.6% (87)	94.6% (87)

¹ Competency Assessment 2 is applicable at the Mid-Ulster Hospital and Whiteabbey Hospital however documentation at the time of the audit did not have an area for detailing the

organiser so this information was not collected in time for the audit. Since the audit this document was amended to include same. The number of applicable episodes is 115.

 $^{^{\}rm 2}$ 'Staff Member Name Identified' and 'Staff Member Signature Legible' are not applicable in the South Eastern Trust.

 $^{^3}$ Competency Assessment 2 is not applicable at the Erne Hospital and Healthcare at Home. The number of applicable episodes is 93.

Competency 3: Collecting a blood component for transfusion

As with the previous competency, the Belfast Trust reported non-compliance with Competency 3 on the Belfast City Hospital and Royal Victoria Hospital sites. It is anticipated that the electronic blood tracking system, as noted in the previous section, will be introduced in the near future. The Belfast Trust reported that they have met the requirements of Blood Safety and Quality Regulations 2005 (BSQR) in terms of the recording of blood collection.

In Musgrave Park Hospital the blood component is removed from the hospital blood bank by the bio-medical scientist (BMS) and is given to the porter. This situation is the same in Altnagelvin Hospital, Monday to Friday 9.00am - 5.00pm. BMS staff who are involved in collecting blood component for transfusion are not assessed as per the NPSA competencies as they are inspected and accredited in accordance with Clinical Pathology Accreditation (CPA) and the Medicines and Healthcare products Regulatory Agency (MHRA) requirements, therefore competency 3 is not applicable in this instance.

The South Eastern Trust achieved full compliance in respect of accessibility of training records of competency 3 assessment, with the Northern Trust achieving 99.3%. The compliance rate for the remaining trusts were 90% in the Southern Trust and 92% in the Western Trust.

Table 9: Percentage Compliance with Competency Assessment 3
Criteria per Trust

Trust	Staff Name Identified	Staff Signature Legible	Patient Details	Competency 3 Complete	Training Record Accessible	Signed for in Clinical Area
Belfast HSC Trust (409)	80.6% (330)	6.1% (25)	8.5% (35)	7.5% (31)	15.8% (65)	81.6% (334)
Northern HSC Trust (143)	99.3% (142)	97.9% (140)	99.3% (142)	99.3% (142)	99.3% (142)	98.6% (141)
South Eastern HSC Trust (131)	100% (131)	100% (131)	100% (131)	100% (131)	100% (131)	100% (131)
Southern HSC Trust (103)	100% (103)	98% (100)	100% (103)	91.2% (94)	90% (93)	92.2% (95)
Western HSC Trust ⁴ (126)	99.2% (125)	96% (121)	97.8% (91)	99.2% (125)	92% (116)	97.8% (91)

⁴ 'Patient Details' and 'Signed for in Clinical Area' are not applicable at the Erne Hospital and Healthcare at Home. The number of applicable episodes is 93.

Competency 4: Preparing and administering a transfusion of blood components

Table 10 shows that the South Eastern Trust achieved 100% compliance with this competency in respect of the first member of staff who carries out patient identification checks at the patient's bedside, with 100% of training records accessible.

The Northern Trust and Western Trust achieved 97.9% and 98.4% compliance respectively with Competency 4. Training records were not always available, with 95.8% accessibility in the Northern Trust and 92% in the Western Trust.

The Southern Trust achieved the lowest level of compliance with this competency (62.1%) due to the fact that the trust had made a decision that if the signature was illegible the person involved could not be positively identified, as previously stated in the limitations of the Audit statement (pp17).

The database in the Belfast Trust was not up to date which resulted in a discrepancy between the training record and the database record of staff who have completed the competency - the number of staff whose names are entered on the training records (367) exceeds the number of staff who are recorded on the database (309) as having successfully completed the competency assessment. The explanation for this discrepancy was that not all information had been submitted at the time of the audit.

In relation to the second check at the patient's side, there is no clear pattern across the trusts regarding compliance with the training and completion of Competency 4 assessment.

There is no requirement for a second check to be carried out for home transfusion episodes in the Belfast, Northern, South Eastern and Western trusts.

In hospitals, a second check is required to be carried out at the patient's side. Compliance with Competency 4 ranged from 48.5% in the Southern Trust to 96.5% in the Western Trust. The remaining trusts achieved compliance of between 74.8% and 95.8%.

Table 10: Percentage Compliance with Competency Assessment 4
Criteria per Trust

Trust	First Staff Name Identified	First Staff Signature Legible	First Staff Competency 4 Complete	First Staff Training Record Accessible
Belfast HSC Trust (409)	99.2% (406)	96.3% (394)	75.5% (309)	89.7% (367)
Northern HSC Trust (143)	100% (143)	90.9% (130)	97.9% (140)	95.8% (137)
South Eastern HSC Trust (131)	100% (131)	100% (131)	100% (131)	100% (131)
Southern HSC Trust (103)	85.4% (88)	65% (67)	62.1% (64)	62.1% (64)
Western HSC Trust (126)	100% (126)	80.1% (103)	98.4% (124)	92% (116)

Trust	Second Staff Name Identified	Second Staff Signature Legible	Second Staff Competency 4 Complete	Second Staff Training Record Accessible
Belfast HSC Trust (409)	96% (393)	93.6% (383)	74.8% (306)	82.8% (339)
Northern HSC Trust ⁵ (121)	100% (121)	93.3% (113)	95.8% (116)	90.9% (110)
South Eastern HSC Trust ⁶ (123)	96.7% (119)	96.7% (119)	95.1% (117)	95.1% (117)
Southern HSC Trust (103)	83.4% (86)	55.3% (57)	48.5% (50)	48.5% (50)
Western HSC Trust ⁷ (116)	100% (116)	56% (65)	96.5% (112)	89.6% (104)

⁵ 'Second Checker is not applicable for Home Transfusions. The number of applicable episodes is 121.

The findings of the audit have been taken into account in consideration of performance against the criteria set out in Section 9.

⁶ 'Second Checker is not applicable for Home Transfusions. The number of applicable episodes is 123.

⁷ Second Checker is not applicable for Home Transfusions. The number of applicable episodes is 116.

9. Findings of the Review Team - HSC Trusts

Introduction

The findings in this chapter are based on:

- the evidence submitted by the trusts along with completed self-assessment questionnaires of the clinical structures, processes and training in place for blood transfusion against the recommendations made in the NPSA Patient Safety Notice14: "Right patient, right blood" and the DHSSPS Circular HSC (SQSD) 30/2007 Better Blood Transfusion Appropriate use of blood. The criteria used in this self-assessment was developed by RQIA
- the findings of the audit of competency based assessment, and the observations made by the members of the Review Team during the validation visits to the trusts.

The Review Team made an assessment of each trust's level of achievement using the achievement scale (Table11) in progressing the implementation of the recommendations made in the NPSA Safer Practice Notice 14: Right Patient - Right Blood and the DHSSPS Circular HSC (SQSD) 30/2007 Better Blood Transfusion - Appropriate use of blood.

Table 11: Achievement Scale

Level of Achievement	Definition
Unlikely to be Achieved	The action is unlikely to ever be achieved.
Not Achieved	The action is likely to be achieved in full but after June 2009. For example, the trust has only started to develop a policy and implementation will not take place until after June 2009.
Partially Achieved	Work has been progressing satisfactorily and the trust is likely to have achieved the actions by June 2009. For example, the trust has developed a policy and will have completed implementation throughout the trust by June 2009.
Substantially Achieved	A significant proportion of action has been completed to ensure the trust performance is in line with the recommendations. For example, a policy has been developed and implemented but a plan to ensure practice is fully embedded has not yet been put in place.
Fully Achieved	Action has been completed that ensures the trust performance is fully in line with the recommendation. For example, a policy has been developed, implemented, monitored and an ongoing programme is in place to review its effectiveness.

9.1 Action Plan

Criterion 1 An action plan to implement requirements of the National Patient Safety Agency - Safer Practice Notice: 14 Right Patient - Right Blood is in place.

This has been fully achieved

Each trust has developed an action plan to implement the requirements of DHSSPS Circular HSC (SQSD) 30/2007 and a significant programme of action has taken place to implement the requirements of the circular.

The next challenge for trusts is to put in place arrangements to sustain and mainstream the initiative. The Review Team considers that it would be useful for trusts to develop an updated action plan to take this forward.

Review Team Overall Assessment of Section 9.1: Action Plan

Revie	w Team's Asse	ssment of LE	VEL OF ACHI	EVEMENT	
5	1. Unlikely to be achieved	2. Not achieved	Partially achieved	 Substantially achieved 	<u>5. Fully</u> achieved

REC 1 Trusts should develop action plans to put in place sustainable long term arrangements for delivering a programme of training and competency assessment for all staff involved in blood transfusions as set out in Circular (SQSD) 30/2007.

9.2 Staff Training and Assessment

Criterion 2 There is an action plan for the provision and uptake of competency based training and assessment for all staff involved in blood transfusions.

This has been substantially achieved

All trusts have developed plans to implement programmes of competency based training and assessment. The members of the Review Team recognise the scale of the challenges which had to be overcome to enable this criterion to be achieved and commend trusts on the work which has been undertaken.

Some trusts reported particular difficulties in gaining the support of some senior medical staff in taking forward the action plan. The need for the programme of training and competency assessment in what was regarded by some senior medical staff as a safe area of clinical practice was questioned.

The number of staff potentially involved in blood transfusion required trusts to recruit and train a large pool of assessors and then put in place systems to release staff for training and assessment. Trusts reported that there was a degree of confusion about some staff groups as to whether they should be included in the programme, for example, laboratory staff are already subject to other regulatory requirements. There was not a clear system regionally to resolve such policy issues.

Criterion 3 Observed competency assessments that reflect local requirements and resources are carried out by identified key assessors.

This has been fully achieved

All trusts established programmes to recruit assessors and train them using the NI framework for assessor training. In order to achieve the challenging timescale for implementation, trusts had to recruit a large number of assessors. The Review Team met assessors across Northern Ireland who reported positively on their training and experience in carrying out the role.

In several settings such as community hospitals and mental health facilities assessors advised the Review Team that, while they were enthusiastic about the process, they had actually been seldom (or in some cases never) required to carry out the role. In addition some assessors reported that they would very rarely observe or take part in a live transfusion event in their particular ward setting.

The Review Team consider that it would be useful for trusts to carry out an assessment of the number of assessors required when the programme moves into the next phase, to maintain high quality competency assessment.

Approaches to ensure that all assessors have the opportunity to observe or take part in live transfusion episodes, to retain their skills, should be considered.

Criterion 4 Identified assessors have been trained and assessed as competent to carry out these assessments.

This has been substantially achieved

Trusts reported that the initial timescale to complete the programme meant that there was a major effort to recruit assessors and this resulted in dependence on identifying volunteers to take on the role. In some locations, for example in the Western Trust, the process relied on a very significant input from haemovigilance staff to carry out competency assessment. The Belfast Trust and Northern Trust reported variable levels of success in recruiting doctors as assessors. In the Southern Trust the HTT had identified and trained all assessors and had competency assessed all medical staff prior to the review visit.

The Review Team considers that it would be useful for all trusts to review their policies and procedures for selecting assessors when determining the approach they will adopt for the long term maintenance of the programme.

Criterion 5 An accurate record of successful competency assessment (within the last three years) is documented in the personnel record of each member of staff, and is also held on a database, by staff group.

This has been partially achieved

The Review Team found that the establishment and maintenance of systems to accurately record competency assessment status was a major challenge. In particular, the lack of IT systems to support this function resulted in a variety of ad hoc local solutions. This has created difficulties for members of the teams who manage the programme to have accurate up to date figures, for the roll out of the programme. Review Team members were shown good examples of local manual and spreadsheet databases in clinical areas that were visited in all trusts. There was evidence of clear ownership by ward managers of the uptake of assessment by nursing staff. Within the Western Trust clerical support had been resourced to set up and maintain a database of successful competency assessment for nursing and medical staff; this has been working effectively, however it was uncertain if this could be maintained. Recording competency assessment of portering staff had been built into ongoing recording systems in the South Eastern Trust and Belfast Trust.

Trusts informed the Review Team that there are a number of regional systems being considered for recording the delivery of staff training. The issues identified were not considered unique to blood safety but were relevant

to other areas of required training. For medical staff there was a strongly expressed view across all trusts that there needed to be a regional solution for recording training undertaken by junior doctors.

The Review Team was advised that there were some differences in the competencies being assessed in different areas for particular staff groups, for example junior doctors are assessed in Competencies 1 and 4 in some hospitals but only in Competency 1 others. This can reflect the different operational arrangements, for example, where nursing staff may be involved in collecting blood in some hospitals but not in others. Junior doctors who rotate between units may not hold all the required competency assessments for a unit they may join. In this instance, the Review Team is of the opinion that a regional training requirement for blood transfusion should be established for junior doctors.

Criterion 6 There are arrangements in place to ensure that only staff who have been currently assessed as competent are involved in the relevant area of blood transfusions.

This has been partially achieved

The audit of competency based training demonstrated a high degree of compliance with this criterion but there were a number of transfusions given where there was not full compliance. The audit highlighted poor compliance with competency assessment by second checkers. Trusts have advised staff to refrain from being involved in transfusion unless they have been trained and competency assessed. The Review Team welcomes the regional initiative to implement a new blood request form which requires the person completing the form to state that they have been trained and assessed. This statement could be included on the blood and blood component prescription and transfusion record forms for other steps in the transfusion process.

Review Team Overall Assessment of Section 9.2: Staff Training and Assessment

Review	w Team's Asses	ssment of LE	VEL OF ACHI	EVEMENT	
3	Unlikely to be achieved	2. Not achieved	3. Partially achieved	Substantially achieved	5. Fully achieved

REC. 2	When implementing significant regional initiatives DHSSPS and HSB should consider the establishment of a formal joint project structure to resolve policy issues, and to ensure harmonised arrangements across the Health and Social Care system.
REC. 3	Trusts should review the arrangements for the selection and skills retention of assessors, to ensure the maintenance of a successful long term blood safety programme.
REC. 4	DHSSPS and HSC organisations should review systems for recording training and competency assessment and implement regional solutions where appropriate, including for doctors in training.
REC. 5	NIRTC and NIMDTA should agree and implement a common list of competencies to be assessed for doctors in training in relation to blood safety.
REC. 6	NIRTC should consider the inclusion of appropriate 'opt in' clauses on blood and blood component prescription and transfusion record forms which would require practitioners to sign that they have been trained and competency assessed when participating in the blood administration processes.

9.3 Arrangements for Blood Transfusion and Appropriate Use of Blood

Criterion 7 There is an established, active, multidisciplinary hospital transfusion committee (HTC) that has defined responsibilities and accountability to the Chief Executive/Trust Board via the clinical governance structure.

This has been substantially achieved

All trusts have active committees but some have not yet finalised their new arrangements following the merger of legacy trusts in 2007. Reviewers noted that within the Belfast Trust, it was difficult to arrange for all the relevant multi-disciplinary blood user clinicians to attend committee meetings on a regular basis.

Criterion 8 The HTC meets at least twice yearly.

This has been fully achieved

Criterion 9 The HTC has roles and responsibilities as outlined in HSS Circular (MD) 6/03. These include involvement in multiprofessional audit, training and education, provision of patient information, development and modification of guidelines and standards, and involvement of stakeholders.

This has been substantially achieved

HTCs carry out the broad roles and responsibilities set out in the Circular. Work is still underway in, for example, the Belfast and, South Eastern trusts to harmonise the policies and processes of legacy trusts.

Criterion 10 The HTC, in collaboration with the clinical governance committee, has implemented the action programme set out in HSS Circular (MD) 6/03.

This has been substantially achieved.

Programmes of action have taken place to implement the Circular but the majority of trusts indicated that not all actions have yet been achieved. The Review Team was advised of different arrangements in relation to the relationship with clinical governance systems in different trusts and consider that it would be useful to review these arrangements to ensure that they are appropriate in the light of new post-RPA governance structures in trusts.

Criterion 11 There is a Hospital Transfusion Team (HTT) that comprises identified individuals in a written work plan.

This has been substantially achieved

Hospital Transfusion Teams have played a very active part in the implementation of the programmes of training and competency based assessment. The members of the Review Team were impressed by the commitment and enthusiasm of the team members they met. The drive to achieve the implementation of competency based assessment has impacted on the ability of teams to take forward other initiatives. There are identified gaps in staff in some areas such as Consultant Haematologists in the Western Trust and the Review Team was advised that commitment to HTT work is not always reflected in the work plans of practitioners. The Review Team considers that it would be useful for teams to review and document their work plans to ensure that the competency assessment programme is completed and maintained, in addition to taking forward other initiatives on blood use and blood safety.

Criterion 12 The HTT has support from the following staff: clerical support; management support; data management support.

This has not been achieved

Trusts reported some deficits in the provision of information and administrative support to HTTs with temporary support only available in the Western Trust and Northern Trust. In the Belfast Trust temporary support was provided on a part-time basis, for a three month period, to support training - this support was not provided to the HTT. The Review Team consider that all trusts should review the administrative support available to Hospital Transfusion Teams to enable them to function effectively.

Criterion 13 The HTT reviews all reports of adverse events and near miss incidents relating to blood transfusion and, in response, implements changes in practice, where necessary.

This has been substantially achieved

Members of HTTs advised the Review Team that they actively review reports of adverse events and near misses and report appropriate events to national reporting systems. Learning points are identified but there were not always defined arrangements to follow up on implementation. The Review Team consider that trusts should ensure that there is clarity about the relationship between the role of HTTs in reviewing events and wider trust based incident reporting systems and agreed mechanisms for implementing learning points.

Criterion 14 There are policies and procedures that cover the blood transfusion process from sampling to administration.

This has been partially achieved

Trusts have policies in place but, in the Belfast, South Eastern and Western trusts, legacy trust policies are not yet harmonised. Trusts reported that they were waiting for regional policy guidance, which is being developed by NIRTC. Reviewers recommend that the development and publication of a regional policy to harmonise arrangements across trusts is an area of work that should be given high priority by the NIRTC.

Criterion 15 Local blood transfusion procedures are systematically appraised and assessed in accordance with local risk management frameworks.

This has been partially achieved

Trusts reported varied levels of achievement against this criterion. All trusts had considered risk issues in relation to transfusion but not all had completed a robust systematic appraisal of all polices and procedures. Specific risk issues had been identified and addressed, such as risks associated with the use of collecting blood from the laboratory in the South Eastern Trust and with the policy for wrist bands in the Northern Trust.

Criterion 16 The hospital laboratory participates in a national laboratory accreditation scheme.

This has been fully achieved

Criterion 17 The hospital blood bank participates in a national laboratory accreditation scheme.

This has been fully achieved

Criterion 18 There is a data recording and retrieval system for blood transfusion.

This has been fully achieved

Review Team Overall Assessment of Section 9.3: Arrangements for Blood Transfusion and Appropriate Use of Blood

Review Tea	am's Assessment o	f LEVEL OF AC	HIEVEMENT	
	nlikely to 2. Not achieved achieved	Partially achieved	4. Substantially achieved	5. Fully achieved
				-
REC. 7	Committees to refl	ect changes in tr sion of represent	hip of Hospital Trar cansfusion practice catives of staff carry ce this occurs.	with, for
REC. 8	Committees within	trust clinical go appropriate in	ships of Hospital Tovernance systems the light of new	to ensure
REC. 9	ensure that pro	ogrammes of be maintained i	n addition to takii	ompetency
REC.10			strative support a enable them to	
REC. 11	between the role incidents and wide	of Hospital Tra er incident repor	clarity about the r nsfusion Teams in ting systems and e mplementing learni	reviewing ensure that
REC. 12	NIRTC should price harmonise trust po		opment of policy gransfusion.	uidance to

9.4 Optimum Use of Blood and Use of Effective Alternatives in Clinical Practice

Criterion 19 Protocols endorsed by the HTC are available in the relevant clinical areas, including but not limited to:

- the use of platelets in haemato-oncology practice
- * massive transfusion
- use of red cells in critical care
- peri-operative use of red cells
- management of over anti-coagulation
- management of blood shortages; major incidents.

This has been partially achieved

Trusts reported different positions in relation to the availability of protocols with some in place and some in development. The Review Team considers that all trusts should ensure that they have up to date policies in place, with priority given to policies on massive transfusion and management of blood shortages. Practitioners in the Western Trust felt frustrated by the length of time taken by the governance systems to ratify the trust-wide polices that had been developed by the HTT's and HTC's.

Criterion 20 A stock management system is in place to eliminate excess inventory and reduce waste, supported by an information technology (IT) system.

This has been fully achieved

The overall blood wastage rate in Northern Ireland of 2-4% is within the levels recognised as good practice by the UK blood stocks management scheme. It would be useful to review mechanisms to feedback information to users on usage and wastage rates to encourage good practice in this area.

Review Team Overall Assessment of Section 9.4: Optimum Use of Blood and Use of Effective Alternatives in Clinical Practice

Review	v Team's Asse	ssment of LE	VEL OF ACHI	EVEMENT	
3	 Unlikely to be achieved 	2. Not achieved	3. Partially achieved	Substantially achieved	5. Fully achieved

REC. 13	All trusts should review their position in relation to the
	optimum use of blood and ensure that they have up to date
	protocols in place, with priority given to protocols on
	massive transfusion and management of blood shortages.

9.5 Clinical Management – Pre-transfusion

Criterion 21 The reason for transfusion of blood and blood components is documented in the patient's records.

These records contain evidence of discussion of the alternatives to transfusion, including the option to refuse.

This has not been achieved

Significant gaps were identified in the recording of the reasons for transfusion in patient notes or of evidence of discussion on the alternatives to transfusion in all clinical areas that were visited by the Review Team. In wards where integrated blood transfusion prescription records had been implemented there were favourable reports from practitioners who felt that these forms helped to achieve compliance with this criterion. The Review Team recommend that consideration should be given to implementing these forms across Northern Ireland.

Criterion 22 Leaflets explaining the risks and benefits of, and alternatives to, transfusion are readily available for all patients who may require to be, or have been transfused.

This has been partially achieved

On clinical visits reviewers noted that information leaflets were available in many areas. These leaflets have been produced for use throughout UK and are not specific to health and social care in Northern Ireland. The advantage of using this national version is that they are readily accessible on-line with up to date translated versions in all major languages and also there are paediatric versions. In many instances practitioners did not appear to be aware of this availability when speaking of the frustrations in maintaining supplies of up to date leaflets. In a few instances reviewers noted that information leaflets were available / displayed in clinical areas yet patients who had blood transfusions reported that they had not been offered a leaflet.

Criterion 23 Where pre-transfusion discussion is not possible, e.g. in an emergency, there is a system in place to ascertain, and act in accordance with, the patient's wishes with regard to blood transfusion. This includes compliance with an advance decision document.

This has not been achieved

This criterion has not been set in policy for Northern Ireland, although it is policy in Scotland, and was deemed to be outside the scope of this review. The Review Team observed that, in some trusts, arrangements for advanced

directives were in place and welcomes the development of regional guidance on implementing a bloodless care pathway.

Criterion 24 When pre-transfusion discussion has not taken place, the reasons for transfusion (including the risks and benefits) are discussed with the patient and written information offered retrospectively.

This has not been achieved

This criterion has not been set in policy for Northern Ireland, although it is policy in Scotland, and was deemed to be outside the scope of this review.

In discussion with trust staff, it was noted that there were no clear policies in place in relation to this criterion.

It is accepted by reviewers that this is a difficult area but one that requires further consideration, as a number of the patients who spoke with reviewers would appreciate having this information.

Criterion 25 Blood samples for transfusion purposes are obtained and labelled in accordance with local protocols which are based on national guidelines.

This has been fully achieved

The Review Team was advised of the introduction of a revised regional blood transfusion request form which includes the requirement for a signed declaration by the clinician making the request that they have been assessed in the relevant competency. The Review Team welcomes this development.

Criterion 26 All prescriptions for blood and blood components are signed by the responsible clinician.

This has been fully achieved

All prescriptions are signed, however, the Review Team was advised that, during the audit carried out in March, practitioners experienced significant difficulty in deciphering some of the signatures on forms. It is recommended that forms should provide space for both signature and printed name. Consideration should also be given to the inclusion of the clinician's professional identification number. Junior medical staff in the Belfast Trust and Northern Trust advised the Review Team that they were encouraged to use GMC numbers when recording in notes.

Criterion 27 Blood and blood component prescribing is the responsibility of a qualified medical practitioner.

Review Team's Assessment of LEVEL OF ACHIEVEMENT

2. Not

This has been fully achieved

1. Unlikely to

Review Team Overall Assessment of Section 9.5: Clinical Management – Pre-transfusion

3. Partially

4. Substantially

5. Fully

3	be achiev	ed achieved	achieved	achieved	achieved
REC	. 14 DI	HSSPS and NIRT	C should consid	der developing	g a
		andardised appro ansfusion prescr		_	
REC.	ar av	IBTS and NIRTC strangement is in prailability of up-to ansfusion (include	olace across No o-date patient le	orthern Ireland aflets on bloo	for the d
REC.		IRTC should deve bloodless care p		ıidance on im _l	olementing
REC. 17 DHSSPS and NIRTO regional policy to e pre-transfusion dis information suitabl transfusion, includ		ensure that a pa scussion is retro le to him / her o	itient who has ospectively given n the reasons	not had a ven	
REC	sł in ar	HSSPS in liaison nould review the clude spaces for nd professional id aking the reques	layout of all labe insertion of sig dentification nu	oratory reques nature, printe	st forms to d name

9.6 Clinical Management – Transfusion Episode

Criterion 28 There are arrangements in place to ensure that only staff who have been currently assessed as competent are involved in blood transfusions.

This has been partially achieved

The results of the audit of blood transfusion highlighted generally good compliance for Competency 4, the administration of blood. Differences in the level of compliance for individual trusts reflect, in part, the different approaches taken by trusts during the audit. In some wards, the Review Team was informed that innovative solutions had been developed to ensure that competency assessed practitioners were available on a 24 hour basis, e.g. the provision of training for nurses who would be available to assist in clinical areas during the night where there was not a trained member of staff on duty. Practitioners in Trusts reported that members of staff have been informed that they must be competency assessed before taking part in activities related to blood transfusion. The Review Team welcomes the development of signed declarations on forms, as indicated at Criteria 25 above.

It was of concern to reviewers that a number of trusts reported that they are unable to set up a programme of competency assessment in the collection of blood for staff until blood tracking systems are in place. Therefore this criterion can only be scored as partially achieved.

The Review Team was advised that in some instances, members of staff are being deemed competent in a simulated environment, when they had not seen or taken part in a live event. This is a particular challenge for the Western Trust, where the majority of competencies were undertaken in a simulated environment. The Review team welcomed examples that were described to address this issue, where members of staff from general units were facilitated in observing live transfusion events in specialist units such as haematology.

Criterion 29 Arrangements are in place to ensure that the compatibility form (or equivalent) and patient notes are not used as part of the final check at the patient's side.

This has been fully achieved

In the absence of the opportunity to observe 'live' blood transfusion events during the majority of review visits reviewers accepted verbal confirmation that compatibility forms and patients notes are not used as part of the final check.

It was noted that education sessions in all trusts emphasise that the compatibility report form does not form part of the patient identification check.

However, in some instances it is still used as a permanent record that the transfusion was given and filed in the patient's notes.

Trusts should ensure that this is an area that is closely monitored as the SHOT report indicates that this is still the most common reason for bedside errors occurring.

Criterion 30 Have you assessed the feasibility of using the following ways of reducing misidentification:

- Electronic tracking systems
- Photo ID
- Labelling system (matching patient to sample)

This has been substantially achieved

Trusts advised the Review Team that they had considered the methods of reducing misidentification listed in Criterion 30 but, in general, did not feel they were appropriate at this time. The Belfast Trust reported that a pilot of using Photo ID in one unit was being carried out at the time of the review visits. The Review Team consider it would be useful for trusts in Northern Ireland to keep the possible introduction of such methods under review and consider the outcomes of initiatives in other parts of the United Kingdom. Patient opinions need to be considered as part of this assessment.

A Patient Identification Policy had been implemented in the South Eastern Trust. A number of other trusts indicated that they were at varying stages in implementing a Patient Identification Policy. This is work that should be prioritised.

Criterion 31 There is a minimum data set that is documented for each blood transfusion.

This has been partially achieved

The position varies across and within trusts in relation to this criterion. Units that have adopted integrated transfusion record forms were able to demonstrate better compliance with the criterion. The Review Team recommend that a standardised minimum data set should be agreed and implemented across Northern Ireland.

Review Team Overall Assessment of Section 9.6: Clinical Management – Transfusion Episode

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
3	Unlikely to be achieved	2. Not achieved	3. Partially achieved	Substantially achieved	5. Fully achieved	

REC. 19	Trusts should keep under review alternative methods of patient identification such as Photo ID. Patients' views should be taken into consideration as patient identification policies are developed and reviewed.
REC. 20	NIRTC should establish guidance for trusts on a standardised minimum data set for each transfusion to be documented in clinical notes (e.g. indication for transfusion, amount of blood to be transfused, assessment of the effectiveness of the transfusion and the management of any adverse reactions).

9.7 Reporting of Serious Adverse Events and Near Misses during the Transfusion Process

Criterion 32 Patients are monitored according to hospital transfusion policy and suspected adverse events are immediately discussed with the HTT.

This has been partially achieved

Hospital Transfusion Teams in all trusts advised that they are informed of suspected adverse events which are reported to SABRE. The HTT in the Western Trust has taken a robust approach to managing incidents, within the trust-wide reporting system. The Review Team consider that within the serious adverse incident arrangements, each trust should have a clear documented procedure for the reporting of such incidents to the Hospital Transfusion Team. The relationship of the HTT with the trust governance arrangements should be clearly documented.

Criterion 33 Serious adverse events and near miss incidents are reported on the clinical incident reporting system in accordance with local protocols.

This has been fully achieved

Criterion 34 Reports of serious adverse events or reactions and near miss incidents are submitted to Serious Adverse Blood Reactions and Events (SABRE) and SHOT by the relevant staff.

This has been fully achieved

Criterion 35 There is a mechanism for ensuring feedback to users and lessons learnt.

This has been partially achieved

The Review Team was provided with good examples of feedback arrangements such as the distribution of bulletins on blood safety in the Northern Trust. Examples were given of implementation of learning points, such as changing from hand written request forms to the use of addressographs in the South Eastern Trust. The Southern Trust HTT newsletter has been very useful in providing feedback to staff on blood safety issues. The Review Team consider that all trusts should review their arrangements for ensuring that lessons learnt are implemented and monitored.

Review Team Overall Assessment of Section 9.7: Reporting of Serious Adverse Events and near misses during the Transfusion Process

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
3	1. Unlikely to be achieved	2. Not achieved	3. Partially achieved	Substantially achieved	5. Fully achieved	

REC. 21	Trusts should ensure that there are documented procedures in place for the reporting of blood transfusion incidents to the Hospital Transfusion Team within the adverse incident reporting system. The relationship of the HTT with the trust governance arrangements should be clearly documented.
REC. 22	Trusts should review arrangements for ensuring that lessons learnt from blood safety incidents are disseminated to all staff, and that the implementation of any changes to policy or practice are monitored.

Summary of Recommendations Made in Respect of HSC Trusts

Action Plan (refer to Section 9.1 in the report)

Recommendation 1

All HSC trusts should develop action plans to put in place sustainable long term arrangements for delivering a programme of training and competency assessment for all staff involved in blood transfusions as set out in Circular (SQSD) 30/2007.

Staff Training (refer to Section 9.2 in the report)

Recommendation 2

When implementing significant regional initiatives DHSSPS and HSB should consider the establishment of a formal joint project structure to resolve policy issues, and to ensure harmonised arrangements across the Health and Social Care system.

Recommendation 3

Trusts should review the arrangements for the selection and skills retention of assessors, to ensure the maintenance of a successful long term blood safety programme.

Recommendation 4

DHSSPS and HSC organisations should review systems for recording training and competency assessment and implement regional solutions where appropriate, including for doctors in training.

Recommendation 5

NIRTC and NIMDTA should agree and implement a common list of competencies to be assessed for doctors in training in relation to blood safety.

Recommendation 6

NIRTC should consider the inclusion of appropriate 'opt in' clauses on blood and blood component prescription and transfusion record forms which would require practitioners to sign that they have been trained and competency assessed when participating in the blood administration processes.

Arrangements for Blood Transfusion and Appropriate Use of Blood (refer to Section 9.3 in the report)

Recommendation 7

Trusts should review the membership of Hospital Transfusion Committees to reflect changes in transfusion practice with, for example, the inclusion of

representatives of staff carrying out transfusion in the community, where this occurs.

Recommendation 8

Trusts should review the relationships of Hospital Transfusion Committees within trust clinical governance systems to ensure that these are appropriate in the light of new post-RPA governance structures in trusts.

Recommendation 9

Trust Hospital Transfusion Teams should review work plans to ensure that programmes of training and competency assessment can be maintained in addition to taking forward other initiatives on blood use and blood safety.

Recommendation 10

Trusts should review the administrative support available to Hospital Transfusion Teams to enable them to function effectively.

Recommendation 11

Trusts should ensure that there is clarity about the relationship between the role of Hospital Transfusion Teams in reviewing incidents and wider incident reporting systems and ensure that there are agreed mechanisms for implementing learning points.

Recommendation 12

NIRTC should prioritise the development of policy guidance to harmonise trust policies on blood transfusion.

Optimum Use of Blood and Use of Effective Alternatives in Clinical Practice (refer to Section 9.4 in the report)

Recommendation 13

All trusts should ensure that they have up to date protocols in place, with priority given to protocols on massive transfusion and management of blood shortages.

Clinical Management - Pre-transfusion (refer to Section 9.5 in the report)

Recommendation 14

DHSSPS and NIRTC should consider developing a standardised approach to the use of integrated blood transfusion prescription records across Northern Ireland.

Recommendation 15

NIBTS and NIRTC should ensure that an agreed arrangement is in place across Northern Ireland for the availability of up-to-date patient leaflets on blood transfusion (including specific paediatric versions).

Recommendation 16

NIRTC should develop regional guidance on implementing a bloodless care pathway.

Recommendation 17

DHSSPS and NIRTC should consider the development of a regional policy to ensure that a patient who has not had a pre-transfusion discussion is retrospectively given information suitable to him / her on the reasons for transfusion, including risks and benefits.

Recommendation 18

DHSSPS in liaison with the Regional Pathology Network should review the layout of all laboratory request forms to include spaces for insertion of signature, printed name and professional identification number of the clinician making the request.

Clinical management - Transfusion Episode (refer to Section 9.6 in the report)

Recommendation 19

Trusts should keep under review alternative methods of patient identification such as Photo ID. Patients' views should be taken into consideration as patient identification policies are developed and reviewed.

Recommendation 20

NIRTC should establish guidance for trusts on a standardised minimum data set for each transfusion to be documented in clinical notes (e.g. indication for transfusion, amount of blood to be transfused, assessment of the effectiveness of the transfusion and the management of any adverse reactions).

Reporting of Serious Adverse Events and Near Misses during the Transfusion Process (refer to Section 9.7 of the report)

Recommendation 21

Trusts should ensure that there are documented procedures in place for the reporting of blood transfusion incidents to the Hospital Transfusion Team within the adverse incident reporting system. The relationship of the HTT with the trust governance arrangements should be clearly documented.

Recommendation 22

Trust should review arrangements for ensuring that lessons learnt from blood safety incidents are disseminated to all staff, and that the implementation of any changes to policy or practice are monitored.

10. Findings of the Review Team - Independent Sector

Across Northern Ireland there are eight independent healthcare facilities that provide blood transfusions as follows:

Table 12: Independent Healthcare Facilities in Northern Ireland

Name of Facility	Type of Care	Location
Healthcare at Home	Nursing Agency	Belfast
Foyle Hospice	Hospice	Londonderry
Marie Curie Care Centre	Hospice	Belfast
NI Hospice	Hospice	Belfast
North West Independent	Private Hospital	Ballykelly
Hospital		
St. John's House	Hospice	Newry
The Belfast Clinic	Private Hospital	Belfast
Ulster Independent Clinic	Private Hospital	Belfast

The findings in this chapter are based on evidence submitted by the above listed independent healthcare facilities, and observations made by members of the Review Team during validation visits to the facilities.

Each validation visit included meetings with senior managers and members of multi-disciplinary clinical teams that administer blood transfusions. Further validation was sought through visits to appropriate clinical areas.

10.1 Action Plan

Criterion 1. An action plan to implement requirements of the National Patient Safety Agency - Safer Practice Notice 14: Right Patient - Right Blood is in place.

This has been substantially achieved

A significant programme of action has taken place in all facilities to achieve full compliance with the requirements made in the NPSA Patient Safety Notice14: Right Patient - Right Blood. These actions have been recorded on a variety of locally produced action plans. Reviewers suggest that the template action plan based on risk assessment that has been approved by the Northern Ireland Regional Transfusion Committee (NIRTC) and used by all trusts should be adopted by the independent healthcare facilities. This should ensure that sustainable long term arrangements to enhance the quality and safety of all blood transfusion processes are put in place. It was noted that this template has been effectively applied in the NI Hospice and Ulster Independent Clinic.

Review Team Overall Assessment of Section 10.1 Action Plan

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
4	1. Unlikely to be achieved	2. Not achieved	Partially achieved	4. Substantially achieved	5. Fully achieved	

REC. 1 All independent healthcare facilities should develop an updated action plan (using the template approved by the Northern Ireland Regional Transfusion Committee (NIRTC) that is based on risk assessment to put in place sustainable long term arrangements to enhance the quality and safety of all blood transfusion processes.

10.2 Staff Training and Assessment

Criterion 2 There is an action plan for the provision and uptake of competency based training and assessment for all staff involved in blood transfusions.

This has been fully achieved

All independent healthcare facilities have developed plans to implement programmes of competency based training and assessment. Medical practitioners who are employed in the NI Hospice, Marie Curie Care Centre and Foyle Hospice all provide excellent support in taking forward the action plan.

The challenge for independent healthcare facilities is that, as minimal users of blood components, there may be limited opportunity for clinicians to retain their knowledge and skills in blood transfusion practice. Approaches to ensure that clinicians retain their skills e.g. the provision of annual update refresher training, should be considered.

Criterion 3 Observed competency assessments that reflect local requirements and resources are carried out by identified key assessors. The identified assessors have been trained and assessed as competent to carry out these assessments.

This has been fully achieved

The majority of facilities have recruited assessors from clinical medical and nursing practitioners who have management and / or educational experience.

They have been trained and assessed by haemovigilance practitioners in accordance with the Northern Ireland Assessor Education Framework.

Reviewers would consider that the provision of an 'in-house' assessor as in the North West Independent Hospital would prove to be advantageous to all independent healthcare facilities.

In the North West Independent Hospital haemovigilance practitioners are involved in the planning and delivery of training programmes. Reviewers would encourage all independent healthcare facilities to involve haemovigilance practitioners in the planning and delivery of training programmes to ensure regional Northern Ireland policy is adhered to.

Assessors who spoke with the Review Team reported positively on their training and experience in carrying out the role.

As all independent healthcare facilities are minimum blood product users, approaches to ensure that assessors have the opportunity to observe or take part in live transfusion episodes to retain their skills should be considered.

Criterion 4 An accurate record of successful competency assessment (within the last three years) is documented in the personnel record of each member of staff, and is also held on a database.

This has been substantially achieved

Reviewers were shown good examples of manual and spreadsheet databases to record competency assessment status of clinical staff. These records had been set up and maintained by senior nursing staff and are available to clinicians at ward level. Senior members of staff were very clear about the competencies that the various staff groups were required to have completed and had ensured that competency assessment of porters / drivers had been included in these records.

Criterion 5 There are arrangements in place to ensure that only staff who have been currently assessed as competent are involved in the relevant area of blood transfusions.

This has been fully achieved

In all independent healthcare facilities there are robust measures in place, including the use of temporary desist notices, to ensure that staff who are not currently assessed as competent do not participate in any aspect of blood transfusion. Reviewers welcome the introduction to independent healthcare facilities of the regional initiative to implement revised blood order and blood prescription and transfusion forms that require persons to sign that they have passed competency assessment.

Review Team Overall Assessment of Section 10.2: Staff Training and Assessment

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
4	Unlikely to be achieved	2. Not achieved	Partially achieved	4. Substantially achieved	5. Fully achieved	

REC. 2	Approaches to ensure that clinicians and assessors in independent healthcare facilities have opportunities to observe or take part in live transfusion episodes to retain their skills and the provision of annual update refresher training should be considered.
REC. 3	Independent healthcare facilities should develop local training and assessment programmes in consultation with haemovigilance practitioners.
REC. 4	The provision of in-house assessors should be considered by all independent healthcare facilities.

10.3 Arrangements for Blood Transfusion & Appropriate Use of Blood

Criterion 6 There is a forum for regular discussion of blood transfusion practice with a named link haemovigilance practitioner and the blood bank Chief Biomedical Scientist.

This has been partially achieved

All independent healthcare facilities have effective liaison and working relationships with hospital haemovigilance practitioners that focus on the provision of blood transfusion training and assessment of competence. These arrangements tend to be on an informal basis and are dependent on the good working relationships between the managers of the facility and the haemovigilance practitioner. However, Healthcare at Home has formalised arrangements whereby a representative is on the hospital transfusion committee at Antrim Area Hospital that meets at three to four monthly intervals. The NI Hospice transfusion committee meets bi-monthly and operates within the Corporate Risk Management strategy, to ensure that management of blood products in the hospice meets nationally agreed standards of safe practice.

It was reported that in the North West Independent Hospital a haemovigilance practitioner has agreed to attend meetings to disseminate information to key members of staff.

Reviewers suggest that independent healthcare facilities should establish a forum for regular meetings with trust haemovigilance practitioners and blood bank Biomedical Scientists.

Criterion 7 The clinic has identified an individual who has roles and responsibilities as outlined in HSS (MD) 6/03. These include involvement in multi-professional audit training and education, provision of patient information, development and modification of guidelines and standards and involvement of stakeholders.

This has been fully achieved

Each independent healthcare facility has identified a named individual who has responsibility for multi-professional audit training and education, provision of patient information, development and modification of guidelines and standards. This work is carried out with support from the haemovigilance practitioner.

Criterion 8 There are policies and procedures that cover the blood transfusion process from sampling to administration.

This has been partially achieved

All independent healthcare facilities have blood transfusion policies however, in many instances, these policies have not been reviewed or signed off by the haemovigilance practitioner to ensure compliance with Northern Ireland Regional Transfusion Committee policy. A number of facilities reported that blood safety was on the corporate risk register.

Criterion 9 The hospital blood bank that supplies blood to the facility participates in a national laboratory accreditation scheme.

This has been fully achieved

Criterion 10 There is a data recording and retrieval system for blood transfusion.

This has been partially achieved

Independent healthcare facilities reported different positions in relation to data recording and retrieval system for blood transfusion. The Review Team considers that all independent healthcare facilities should review their positions and ensure that they are co-ordinated with trust processes.

Review Team Overall Assessment of Section 10.3: Arrangements for Blood Transfusion & Appropriate Use of Blood

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
3	1. Unlikely to be achieved	2. Not achieved	3. Partially achieved	Substantially achieved	5. Fully achieved	

REC. 5 The current liaison arrangements that independent healthcare facilities have with trust haemovigilance practitioners and blood bank Biomedical Scientists should be formalised through the development of an in-house forum for regular discussion of blood transfusion practice. REC. 6 Independent healthcare facilities should ensure that Blood transfusion policies and procedures are reviewed by the haemovigilance practitioner to ensure compliance with NIRTC policy and be subjected to systematic risk assessment in all independent healthcare facilities. REC. 7 Independent healthcare facilities should ensure that data recording and retrieval systems for blood transfusion are coordinated with trust processes.

10.4 Optimum Use of Blood and Use of Effective Alternatives in Clinical Practice

Criterion 11 Protocols endorsed by the HTC are available in the relevant clinical areas, including but not limited to:

- the use of platelets in haemato-oncology practice
- * massive transfusion
- use of red cells in critical care
- peri-operative use of red cells
- management of over anti-coagulation
- management of blood shortages; major incidents.

All independent healthcare facilities have robust processes for ratification of protocols / guidelines, however, it was not always evident that haemovigilance practitioners had been involved in the development of blood transfusion protocols / guidelines.

The protocols / guidelines that were made available to reviewers in the Healthcare at Home service have been developed and ratified at a national UK level. Arrangements to ensure that up to date national and local policies are in place should be considered.

Criterion 12 A stock management system is in place that includes policies and procedures on the return of unused units and control of the cold chain.

This has been partially achieved

The Foyle Hospice and Healthcare at Home reported that blood stock is managed by the blood bank that supplies blood to the facility. All other independent healthcare facilities reported that there are stock management systems in place that include policies and procedures on the return of unused units and control of the cold chain. There was little evidence to show how information from trusts on usage of blood is used to reduce the over-ordering of blood (thereby reducing the need to return units) and ensuring cold chain maintenance during transportation of unused units.

Review Team Overall Assessment of Section 10.4: Optimum Use of Blood and Use of Effective Alternatives in Clinical Practice

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
3	1. Unlikely to be achieved	2. Not achieved	3. Partially achieved	 Substantially achieved 	5. Fully achieved	

- REC. 8 All independent healthcare facilities should review their position in relation to optimum use of blood and reduction of wastage of unused blood and make sure they have up to date policies in place that have been reviewed by medical staff and haemovigilance practitioners and are based on regional policy guidance from NIRTC.
- REC. 9 Independent healthcare facilities should ensure that information from trusts on usage of blood is obtained and steps taken used to reduce the wastage of unused blood.

10.5 Clinical Management – Pre-transfusion

Criterion 13 The reason for transfusion of blood and blood components is documented in the patient's records. These records contain evidence of discussion of the alternatives to transfusion, including the option to refuse.

This has been substantially achieved

There was evidence of good clinical record-keeping in respect of blood transfusion episodes throughout the independent healthcare services.

The clinical notes that were reviewed in the NI Hospice and the Foyle Hospice contained particularly good recording of medical discussions with patients regarding the risks and benefits of the prescribed blood transfusion.

Reviewers would suggest that the NI Hospice's integrated prescription transfusion record, designed to capture all aspects of the blood transfusion episode, including discussions with patients, is a model that reviewers would encourage other facilities to adopt.

The palliative care pathway that is used in the Marie Curie Care Centre prompts clinicians to discuss all aspects of planned treatment and care with patients - this includes blood transfusions. This is a process that is being developed in line with good practice on obtaining consent.

Criterion 14 Leaflets explaining the risks and benefits of, and alternatives to, transfusion are readily available for all patients who may require to be, or have been transfused.

This has been fully achieved

The NHS booklet "Will I Need a Blood Transfusion?" is readily available and accessible in all independent healthcare facilities that were visited by the Review Team.

Reviewers would encourage independent healthcare facilities to make use of any regional leaflets that are produced and make use of specific national leaflets, where these are available, for areas such as palliative care.

Criterion 15 Blood samples for transfusion purposes are obtained and labelled in accordance with local protocols which are based on national guidelines.

This has been fully achieved

Criterion 16 Blood and blood component prescribing is the responsibility of a qualified medical practitioner.

This has been fully achieved

Criterion 17 All prescriptions for blood and blood components are signed by the responsible clinician.

This has been fully achieved

Reviewers found evidence that blood transfusion policies and guidelines to meet the requirements of Criteria 15 - 17 are available and accessible in the independent healthcare facilities. The challenge for senior managers in the independent healthcare sector is to assure adherence to the policy.

Reviewers would suggest that it may be appropriate for clinicians in the independent sector to discuss the development of blood ordering and blood prescription and transfusion forms with trust haemovigilance practitioners and blood bank Biomedical Scientists.

Review Team Overall Assessment of Section 10.5: Clinical Management – Transfusion Episode

Review Team's Assessment of LEVEL OF ACHIEVEMENT						
4	1. Unlikely to	2. Not	Partially	4. Substantially	5. Fully	
4	be achieved	achieved	achieved	<u>achieved</u>	achieved	

- REC. 10 Independent healthcare facilities should make use of any regional leaflets that are produced and also specific national leaflets, where these are available, for areas such as palliative care.
- REC. 11 Consideration should be given to rolling out the proposed regional integrated blood ordering and blood prescription and transfusion record across all sectors of independent healthcare.

10.6 Clinical Management – Transfusion Episode

Criterion 18 There are arrangements in place to ensure that only staff who have been currently assessed as competent are involved in blood transfusions.

This has been substantially achieved

Each independent healthcare facility described appropriate blood transfusion arrangements that were in place. The arrangements that were reviewed covered patient identification procedures, through all stages from obtaining a sample of blood, to ordering, collecting and administering the blood.

The discussions were validated by visits to clinical areas where reviewers reviewed blood transfusion documents and spoke with practitioners who had undertaken blood transfusion training and had successfully achieved competency assessment in the relevant areas. Reviewers recommend that consideration should be given to inserting a declaration of competency in appropriate documents.

There was little evidence of a standardised approach to the development of a generic patient identification policy throughout the independent healthcare facilities that were visited. In many instances it was noted that a section on patient identification had been included in the blood transfusion policy.

Hospice staff described the problems that they encounter in relation to patient identification numbers. In a number of instances patients could have three ID numbers (e.g. hospital number, palliative care number and a health and care number).

Criterion 19 Arrangements are in place to ensure that the compatibility form (or equivalent) and patient notes are not used as part of the final check at the patient's side.

This has been fully achieved

Reviewers noted that independent healthcare facilities use trust compatibility forms - which were being revised at the time of the review. Mechanisms were in place to amend the forms to reflect the changes made. Compatibility forms are **not** used as part of patient identification check in any of the facilities visited by reviewers.

The adoption of the 'No wristband - No blood transfusion' policy as observed in all independent healthcare facilities is perceived by reviewers to be safe practice. Reviewers suggest that independent healthcare facilities should undertake a review of all their services (particularly day care) to ensure that patients' wristbands are applied at the 'sampling' stage of any blood transfusion episode.

Criterion 20 Have you assessed the feasibility of using the following ways of reducing misidentification:

- Electronic tracking systems
- ❖ Photo ID
- Labelling system (matching patient to sample)

This has not been achieved

Independent healthcare facilities have not undertaken an assessment of the feasibility of using specified ways of reducing misidentification. Reviewers recommend that independent healthcare facilities should ensure that they are involved in any pilot studies on patient identification systems that trusts may have planned for the future.

Criterion 21 There is a minimum data set that is documented for each blood transfusion.

This has been partially achieved

There is no evidence of a standardised approach to the completion of a minimum data set in independent healthcare facilities. In those facilities that have documented data for each blood transfusion, this information is scanty and is not in a standardised format. It is suggested that this is an area that should be addressed by senior managers in the independent healthcare sector.

Review Team Overall Assessment of Section 10.6: Clinical Management – Transfusion Episode

Review Team's Assessment of LEVEL OF ACHIEVEMENT					
3	Unlikely to be achieved	2. Not achieved	3. Partially achieved	 Substantially achieved 	5. Fully achieved

- REC. 12 Independent healthcare facilities should undertake a review of all their services (particularly day care) to ensure that patients' wristbands are applied at the 'sampling' stage of any blood transfusion episode.
- REC. 13 Consideration is given to the development of a generic patient identification policy that can be cross referenced with the appropriate section of the blood transfusion policy.
- REC. 14 A protocol regarding the use of patient identification numbers should be drawn up.
- REC. 15 Independent healthcare facilities should ensure that they are involved in any pilot studies on patient identification systems that trusts may have planned for the future.
- REC. 16 Each independent healthcare facility should develop a standardised approach to the documentation of data for each blood transfusion episode.

10.7 Reporting of Serious Adverse Events and Near Misses During the Transfusion Process

Criterion 22 Patients are monitored according to the transfusion policy and suspected adverse events are immediately discussed with the haemovigilance practitioner and senior biomedical scientist.

This has been substantially achieved

Criterion 23 Serious adverse events and near miss incidents are reported on the clinical incident reporting system in accordance with local protocols.

This has been fully achieved

Criterion 24 Reports of serious adverse events or reactions and near miss incidents are submitted to Serious Adverse Blood Reactions and Events (SABRE) and SHOT by the relevant staff

This was not scored

The standard operating procedures for the notification of serious adverse and serious reactions are set out for each independent healthcare facility in a Memorandum of Agreement for the provision of blood components by the trust blood bank with the facility.

These procedures have determined that the independent healthcare facility notifies the blood bank manager or haemovigilance practitioner immediately of any serious adverse and serious reactions. Further to investigation, the necessary reports are made to SABRE by the blood bank manager or haemovigilance practitioner.

Reviewers were satisfied that the independent healthcare facilities were working within this agreed framework. There was evidence that systems are in place for monitoring patients during blood transfusion and for recording and reporting clinical blood transfusion incidents. However, the arrangements that are in place for recording reported blood related serious events are not standardised throughout the independent sector and, in some instances, were informal.

Reviewers consider that it would be appropriate for all independent healthcare facilities to review the current arrangements to ensure that there is clarity in the recording of information that has been reported and transferred to the trust blood bank manager or haemovigilance practitioner.

Criterion 24 There is a mechanism for ensuring feedback to users and lessons learnt.

This has been partially achieved

Reviewers found good examples of initiatives that had been set up to ensure lessons have been learned from all clinical incidents including those relating to blood safety. Initiatives noted during the review included the forum that has been established in the Marie Curie Care Centre to feedback outcomes of incidents, including corrective and preventative measures to staff.

The challenge for independent healthcare facilities is to ensure that formal arrangements are made with trusts for sharing information on tracking or trend analysis of all blood transfusion errors within the trust area.

Review Team Overall Assessment of Section 10.7: Reporting of Serious Adverse Events and Near Misses During the Transfusion Process

Review Team's Assessment of LEVEL OF ACHIEVEMENT					
4	1. Unlikely to be achieved	2. Not achieved	Partially achieved	4. Substantially achieved	5. Fully achieved

REC. 17	Independent healthcare facilities should ensure that any
	tracking or trend analysis of blood transfusion errors that
	are carried out in trusts are shared with the facility so that
	effective learning can be disseminated.

Summary of Recommendations Made in Respect of Independent Healthcare Services

Action Plan (refer to Section 10.1 of the report)

Recommendation 1

All independent healthcare facilities should develop an updated action plan (using the template approved by the Northern Ireland Regional Transfusion Committee (NIRTC) that is based on risk assessment to put in place sustainable long term arrangements to enhance the quality and safety of all blood transfusion processes.

Staff Training and Assessment (refer to Section 10.2 of the report)

Recommendation 2

Approaches to ensure that clinicians and assessors in independent healthcare facilities have opportunities to observe or take part in live transfusion episodes to retain their skills and the provision of annual update refresher training should be considered.

Recommendation 3

Independent healthcare facilities should develop local training and assessment programmes in consultation with haemovigilance practitioners.

Recommendation 4

The provision of in-house assessors should be considered by all independent healthcare facilities.

Arrangements for Blood Transfusion & Appropriate Use of Blood (refer to Section 10.3 of the report)

Recommendation 5

The current liaison arrangements that independent healthcare facilities have with trust haemovigilance practitioners and blood bank Biomedical Scientists should be formalised through the development of a forum for regular discussion of blood transfusion practice.

Recommendation 6

All independent healthcare facilities should ensure that blood transfusion policies and procedures are reviewed by the haemovigilance practitioner to ensure compliance with NIRTC policy and be subjected to systematic risk assessment.

Recommendation 7

Independent healthcare facilities should ensure that they are involved in trust processes for data recording and retrieval system for blood transfusion.

Optimum Use of Blood and Use of Effective Alternatives in Clinical Practice (refer to Section 10.4 of the report)

Recommendation 8

All independent healthcare facilities should review their position in relation to optimum use of blood and reduction of wastage of unused blood and make sure they have up to date policies in place that have been reviewed by medical staff and haemovigilance practitioners and are based on regional policy guidance from NIRTC.

Recommendation 9

Independent healthcare facilities should ensure that information from trusts on usage of blood is obtained and steps taken used to reduce the wastage of unused blood.

Clinical Management – Pre-transfusion (refer to Section 10.5 of the report)

Recommendation 10

Independent healthcare facilities should make use of any regional leaflets that are produced and make use of special leaflets such as haemato-oncology in palliative care.

Recommendation 11

Consideration should be given to rolling out the proposed regional integrated blood ordering and blood prescription and transfusion record across all sectors of independent healthcare.

Clinical Management – Transfusion Episode (refer to Section 10.6 of the report)

Recommendation 12

Independent healthcare facilities should undertake a review of all their services (particularly day care) to ensure that patients' wristbands are applied at the 'sampling' stage of any blood transfusion episode.

Recommendation 13

All independent healthcare facilities should consider developing a generic patient identification policy that can be cross referenced with the appropriate section of the blood transfusion policy.

Recommendation 14

Each independent healthcare facility should draw up a protocol regarding the use of patient identification numbers.

Recommendation 15

Independent healthcare facilities should ensure that they are involved in any pilot studies on patient identification systems that trusts may have planned for the future.

Recommendation 16

Each independent healthcare facility should develop a standardised approach to having document data for each blood transfusion episode.

Reporting of Serious Adverse Events and Near Misses During the Transfusion Process (refer to Section 10.7 of the report)

Recommendation 17

Independent healthcare facilities should ensure that tracking or trend analysis of blood transfusion errors carried out in trusts are shared with the facility so that effective learning can be disseminated.

11. Commentary and Policy Implications

It is clear to the Review Team the trusts and independent healthcare facilities in Northern Ireland have good operational control of blood transfusion and compliance with NPSA Patient Safety Notice14: "Right patient, right blood" is substantially achieved. This is a very significant achievement given the challenges which were required to be overcome and deadlines to be met. There is much good work evidenced on the part of transfusion practitioners, biomedical scientist blood bank staff, hospital transfusion teams and hospital transfusion committees.

The next challenge for all providers is to put in place arrangements to sustain and mainstream the initiative. The recommendations made in this report have been designed to support this process. The Review Team considers that it would be useful for all providers to develop an updated action plan to take this work forward.

Appendix 1: Dates of Visits to HSC Trusts

Date of Visit	Trust	Hospital
20 April 2009	Northern HSC Trust	Antrim Area Hospital Causeway Hospital Mid-Ulster Hospital Whiteabbey Hospital
21 April 2009	Western HSC Trust	Altnagelvin Area Hospital Erne Hospital Tyrone County Hospital
22 April 2009	Southern HSC Trust	Craigavon Area Hospital Daisy Hill Hospital Lurgan Hospital Mullinure Hospital South Tyrone Hospital
23 April 2009	Belfast HSC Trust	Belfast City Hospsital Mater Infirmorium Hospital Musgrave Park Hospital The Royal Group of Hospitals
24 April 2009	South Eastern HSC Trust	Bangor Community Hospital Downe Hospital Lagan Valley Hospital Newtownards Hospital Ulster Hospital

Appendix 2: Dates of Visits to Independent Healthcare Facilities

Date	Name of Clinic / Hospice / Hospital
4 June 2009	Healthcare at Home
5 June 2009	The Belfast Clinic
	Ulster Independent Clinic
5 June 2009	NI Hospice
5 June 2009	St. John's Hospice
5 June 2009	Marie Curie
8 June 2009	NW Independent Hospital
	Foyle Hospice

Appendix 3: Circular HSC(SQSD) 30/2007 and Ad

Safety, Quality & Standards Directorate



An Roinn

Sláinte, Seirbhísí Sóisialta agus Sábháilteachta Poiblí

www.dheeneni.gov.uk

Chief Executives of Health & Social Care Trusts For cascade to: Heads of Blood Banks and

Transfusion Committees Medical Directors

Chief Executive of HSS Boards

Chief Executive of the Northern Ireland Blood Transfusion

Service

Regional Haemovigilance Cor-ordinator

Chief Executive of RQIA

For cascade to: Independent

Hospitals/Hospices/Clinics and relevant Regulated Services

Chief Executive (designate) HSCA Regional Director of Public Health Castle Buildings Stormont Estate Belfast BT4 3SQ Tel: 028 90 520724 Fax: 028 90 520725

Email:

maura.briscoe@dhsspsni.gov.uk

Your Ref:

Our Ref: HSC(SQSD) 30/2007 Date: 13 June 2007

Dear Colleagues

RE: SAFER PRACTICE NOTICE - "RIGHT PATIENT, RIGHT BLOOD"

Introduction

With the formation of the new Health and Social Care Trusts, this provides an opportunity to highlight the contents of the National Patient Safety Agency's Safer Practice Notice Right Patient, Right Blood(14), available on www.npsa.nhs.uk/site/media/documents/2009 0316FEB06 V20 WEB.pdf

The Department endorses the principles outlined in this Notice which was designed to improve the safety of blood transfusions and to promote strict checking procedures at each stage of the blood transfusion process. This Safer Practice Notice is part of a broader national initiative, which is being taken forward collaboratively through the National Blood Transfusion Committee, the Serious Hazards of Transfusion (SHOT) and the National Patient Safety Agency.

The key messages identified in this Safer Practice Notice are applicable to health and social care and independent sector organisations. The NPSA website has a number of electronic resources available which will assist in implementation.

Action

HSC and Independent Sector organisations should have:

Working for a Healthier People



- Agreed to and started to implement an action plan for competency based training and assessment for all staff involved in blood transfusions;
- 2. Ensured that the compatibility form (or equivalent) and patient notes are **not** used as part of the final check at the patient's side;
- Systematically examined local blood transfusion procedures using formal risk assessment processes;
- Bar codes or other electronic identification and tracking systems for patients, samples and blood products;
- Photo-identification cards for patients who undergo regular blood transfusions; and
- Labelling system of matching samples and blood for transfusion to the patient concerned.

All organisations should have an action plan in place by 8 October 2007, with actions completed by 2 June 2008.

Monitoring implementation

Progress towards implementation will be co-ordinated through the Northern Ireland Regional Transfusion Committee.

Organisations need to be aware of this Safer Practice Notice, in order to assist in complying with criteria 5.3.1(f)(9), 5.3.2 and 5.3.3(f) of the *Quality Standards for Health and Social Care* (safe practice in the use of blood and blood products, learning from adverse incidents and implementation of evidence based practice through guidance, for example, NPSA). These Quality Standards underpin clinical and social care governance reviews in health and social care organisations.

Independent sector organisations, where blood transfusions are administered, will also wish to provide evidence to the Regulation and Quality Improvement Authority that implementation is complete by 2 June 2008.

Yours sincerely

Maura Briscoe

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Director, Safety, Quality and Standards Directorate

Working for a Healthier People

Safety, Quality & Standards Directorate



An Roinn

Sláinte, Seirbhísí Sóisialta agus Sábháilteachta Poiblí

www.dhssnsni.gov.uk

Chief Executives of Health & Social Care Trusts For cascade to: Heads of Blood Banks and

Transfusion Committees Medical Directors

Chief Executive of HSS Boards

Chief Executive of the Northern Ireland Blood Transfusion

Service

Regional Haemovigilance Co-ordinator

Chief Executive of RQIA

For cascade to: Independent Hospitals, Hospices,

Clinics and relevant Regulated

Services

Chief Executive, HSC

Castle Buildings Stormont Estate Belfast BT4 3SQ Tel: 028 90 522799 Fax: 028 90 520725

Email:

jim.livingstone@dhsspsni.gov.uk

Your Ref:

Our Ref: HSC(SQSD) 30/2007 SQSD Addendum 02/08 Date:8 July 2008

Dear Colleagues

RE: SAFER PRACTICE NOTICE - "RIGHT PATIENT, RIGHT BLOOD"

Circular HSC (SQSD) 30/07 outlined the actions to be taken by HSC organisations by 2 June 2008.

It is recognised that good progress has been made to date but that additional time will be required in order to complete the training of assessors and to conduct competency assessments appropriately.

To allow for this, the original deadline has now been extended to 30 January 2009. Therefore, the RQIA review of the action taken will be deferred until spring 2009.

Yours sincerely

Dr J F Livingstone

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Director, Safety, Quality and Standards Directorate

Working for a Healthier People

Appendix 4: NPSA Safer Practice Notice 14: Right patient, right blood

The Chief Medical Officer's National Blood Transfusion Committee National Patient Safety Agency

14

Safer practice notice



Notice

9 November 2006

Immediate action	
Action	✓
Update	
Information request	
D-f- NDCA /2006/44	$\overline{}$

Ref: NPSA/2006/14

Right patient, right blood

Blood transfusions involve a complex sequence of activities and, to ensure the right patient receives the right blood, there must be strict checking procedures in place at each stage.

An initiative has been launched that offers a range of long and short term strategies to ensure blood transfusions are carried out safely. The National Patient Safety Agency (NPSA), the Chief Medical Officer's National Blood Transfusion Committee (NBTC) and Serious Hazards of Transfusion (SHOT) have collaborated to develop and evaluate these strategies.¹

Administering the wrong blood type (ABO incompatibility) is the most serious outcome of error during transfusions. Most of these incidents are due to the failure of the final identity checks carried out between the patient (at the patient's side) and the blood to be transfused.

SHOT data have shown that between 1996 and 2004, five patients died as a direct result of being given ABO incompatible blood. ABO incompatibility contributed to the deaths of a further nine patients and caused major morbidity in 54 patients.2

Action for the NHS and the independent sector

By May 2007, all NHS and independent sector organisations responsible for administering blood transfusions in England and Wales should have:

- Agreed to and started to implement an action plan for competency-based training and assessment for all staff involved in blood transfusions.
- 2 Ensured that the compatibility form (or equivalent) and patient notes are not used as part of the final check at the patient's side. They should comply with their blood transfusion policy which stipulates that the final identity check must be done next to the patient by matching the blood pack with the patient's wristband (or identity band/photo identification card).
- 3 Systematically examined their local blood transfusion procedures, using formal risk assessment processes, and appraised the feasibility and relevance
- a bar codes or other electronic identification and tracking systems for patients, samples and blood products (a clinical transfusion management system);
- **b** photo identification cards for patients who undergo regular blood transfusions;
- c a labelling system of matching samples and blood for transfusion to the patient concerned.

- For response by:

 NHS and independent sector organisations responsible for administering blood transfusions in England and Wales
- For action by: · Chief executives
- The NPSA recommends NHS organisations inform:

- Nursing directors

 Medical directors

 Transfusion practitioners
- Clinical governance leads
- staff in England
- · Hospital transfusion committees The NPSA has informed:
- Chief executives/regional directors and clinical governance leads of strategic health authorities (England) and regional offices (Wales)
- · NHS Blood and Transplant
- The Welsh Blood Transfusion Committees
 Healthcare Commission
- Healthcare Inspectorate Wales
- NHS Purchasing and Supply Agency Welsh Health Supplies Royal colleges and professional bodies NHS Direct
- Relevant patient organisations and community health councils in Wales
 • Independent Healthcare Advisory Services
- · Commission for Social Care Inspection
- National Association of Theatre Nur
 National Association of Assistances in Surgical Practice
- Connecting for Health

- Informing Healthcare
 Medicines and Healthcare
 products Regulatory Agency
 NHS Litigation Authority
 Quality Improvement Scotland
 and DHSSPS, Northern Ireland

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Action deadlines for the Safety Alert Broadcast System (SABS)

Deadline (action underway): 22 November 2006

Action plan to be agreed and action started

Deadline (action complete): 1 May 2007

All actions to be completed

Further information about SABS can be found at: www.info.doh.gov.uk/sar2/cmopatie.nsf

Further information on the action points

1 Develop competencies for staff involved in blood transfusions

The NPSA, in collaboration with other key stakeholders, has developed national competencies for obtaining a venous blood sample; organising the receipt of blood/blood products for transfusion; collecting blood/blood products for transfusion; preparing to administer transfusion of blood/blood products to patients; and administering a transfusion of blood/blood products. These competencies are relevant to all clinical staff groups involved in the transfusion process.

Formal assessment of the relevant competencies is required for nurses, midwives, medical staff, phlebotomists, healthcare assistants, porters, operating department practitioners and other staff involved in the blood transfusion process. Assessments should be carried out every three years.

By May 2007, all NHS and independent sector organisations should have drawn up an action plan describing how competency assessments will be carried out and recorded. By May 2008, 50 per cent of all relevant staff should have been formally assessed against these competencies. By November 2009, all initial competency assessments should have been undertaken.

To assist NHS and independent sector organisations in training and assessing the competencies locally, the NPSA has integrated training materials into the existing training programme for blood transfusion that has been developed by the Scottish National Blood Transfusion Service. These training materials (available at www.npsa.nhs.uk and www.learnbloodtransfusion.org.uk) have been developed for use by local trainers and include:

- standard facilitator presentation and speaker notes;
- competency assessment frameworks;
- flow chart for promoting staff engagement;
- · hospital poster to inform staff.

2 Ensure compatibility forms are not used as part of the final patient identity check and that this check is done at the patient's side

All hospitals must ensure that their local procedures incorporate an auditable final patient identification check in accordance with the NPSA's final patient identity check flow chart (see Resource summary on page 4).

Recent SHOT data illustrate that reliance on compatibility forms and checking these against patients' notes has been a significant contributory factor to ABO incompatible transfusions. Analysis of reports received in 2005 indicates that in six of seven cases in which blood administration error resulted in an ABO incompatible transfusion, the blood was checked away from the patient's side using a compatibility form or equivalent.³

3 Formally risk assess local blood transfusion procedures

We recognise that different solutions for checking identity may be appropriate to different local circumstances. We suggest that each NHS or independent sector organisation appraises and assesses, in accordance with local risk assessment frameworks,⁴ the feasibility of the following ways of reducing misidentification:

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a Bar codes or other electronic identification and tracking systems

Bar code technology involving hand-held computers is being used in selected departments in some hospitals to improve safety in sample collection, compatibility testing and blood administration. Bar code technology is also being used in a number of hospitals to monitor and control blood being removed or moved between blood fridges.

Radio-frequency identification technology is also being developed for the same purpose. This uses radio-frequency transfer of data between a reader and a tag.

The NPSA has developed a standard specification for IT tracking systems (Electronic Clinical Transfusion Management System) based on work carried out by the 'Do Once and Share'⁵ blood transfusion project team for Connecting for Health (CfH) and the NBTC. The specification builds on the experiences of users of the different systems currently available and addresses the patient safety risks identified in the transfusion process.

In developing the specification we have sought consensus from key stakeholders and have incorporated the traceability requirements of the Blood Safety and Quality Regulations⁶, including the maintenance of a complete record of all blood components and products, from donor to recipient, for 30 years.

The NPSA's IT specification identifies all the safety and functionality issues that we are currently aware of, and that future systems will need to address. The specification does not, however, provide sufficient detail for manufacturers to develop the systems and software required for the introduction of system-specific IT technology.

The specification is endorsed by both CfH in England and Informing Healthcare in Wales. It is available as a hard copy or can be downloaded from www.npsa.nhs.uk

Next steps

CfH will, with the support of the NPSA, carry out a pilot with one or more acute healthcare organisations (to start by spring 2007) to build on and implement the requirements of the IT specification that will be delivered to Local Service Providers. The NPSA will also work with Informing Healthcare to introduce similar technology to the acute sector in Wales.

b Photo identification cards for patients who undergo regular blood transfusions The National Comparative Audit of Blood Transfusion 2005 found that patients receiving blood or blood products as outpatients or day cases do not always wear wristbands.⁷ Photo identification cards are a sustainable and cost-effective means of identifying patients. They may be used as an alternative to wristbands and have been developed for patients who receive regular blood transfusions as outpatients or day cases.

The procedure gives patients ownership of their own photo identification card and involves the patients themselves in the identification process. Early indications from pilot studies suggest that photo identification cards are very well-received by patients, and are preferable to wearing a wristband, and also promote a feeling of involvement.

The NPSA has produced guidelines for organisations introducing a photo identification system and an information leaflet for patients (see Resource summary on page 4).

c A labelling system of matching blood to the patient

This labelling system is an additional numbering system for blood transfusions to minimise transfusion errors (it is sometimes called the 'red label' system). At the time of sample collection, one label with a unique number is attached to the patient by means of a wristband. Further labels (with the same number) are attached to the sample tube and request form. After compatibility testing, the laboratory print the same label number on the compatibility label attached to the unit of blood. During pre-transfusion checking at the patient's side, the label number on the wristband and the unit of blood are matched.

The system can be adapted to suit local circumstances. Evaluation has shown that although this system has been available for many years, uptake has been limited.8

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Further information on the use of the system can be obtained from South Tyneside NHS Foundation and Maidstone & Tunbridge Wells NHS Trust.⁸

The NPSA has produced a flow chart for organisations interested in introducing the system (see Resource summary below).

Resource summary

Resource	For use by	Audience
Competencies		
Competencies*	Healthcare staff	Healthcare staff
Standard facilitator presentation and speaker notes	Local trainer	Healthcare staff
Competency assessment frameworks	Local trainer	Healthcare staff
Flow chart	Local trainer	Healthcare staff
Hospital poster	Local trainer	Healthcare staff
Final patient identity check		
Flow chart	Healthcare staff	Healthcare staff
Technology		
Electronic Transfusion Management System	CfH, Informing Healthcare, IT manufacturers, NHS IT leads	Local Service Providers, IT manufacturers, NHS IT leads
Photo identification		
Guidelines for photo identification cards	Local implementer	Healthcare staff
Photo identification patient leaflet	Patients	Patients
Labelling system		
Flow chart	Local implementer	Healthcare staff

^{*}The NPSA is currently working towards ensuring that the competencies receive endorsement from Skills for Health.

All the above resources can be downloaded from **www.npsa.nhs.uk**The hospital poster, IT specification and photo identification patient leaflet are also available as hard copies from the NHS response line (08701 555455).

Background information

This project originated from a blood safety stakeholders' workshop held jointly by the NPSA, the NBTC and SHOT at the Royal College of Pathologists in December 2004. The aim of the workshop was to identify effective local solutions to the misidentification of patients receiving blood transfusions. At this workshop, the NPSA announced a target of reducing the number of ABO incompatible transfusion incidents by 50 per cent over three to five years, as measured by the SHOT database.

Analysis of 221 identified errors in 130 ABO incompatible transfusions reported to SHOT between 1999 and 2003 showed that 59 per cent (131) of errors involved collection of the wrong unit of blood from the storage site and/or administration to the wrong patient.

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Safe administration of blood according to British Committee for Standards in Haematology⁹ requires that:

- the patient is identified by a correct wristband (or identity band/photo identification card);
- the patient's identity is confirmed verbally, where possible;
- the patient details on the blood pack label are compared at the patient's side with those on the patient's wristband.

Between November 2003 and April 2006, the NPSA received 41 reports of incidents directly related to identification errors in:

- blood samples taken for transfusion;
- collection of blood from the blood fridge;
- blood administration.

Two of these incidents resulted in the wrong patient receiving the wrong blood.

Reporting incidents

Staff should be encouraged to report patient safety incidents relating to blood transfusions, including near misses, to their local risk management systems and to the hospital transfusion team (consultant haematologist with responsibility for blood transfusion, transfusion practitioner and transfusion laboratory manager), who are responsible for reporting to SHOT. It is essential that all such events are reported to SHOT, using the SABRE electronic reporting system, so that lessons are learned and shared, and the effect of interventions monitored.

Patients' views

The NPSA held a workshop for patients who regularly undergo blood transfusions, and their carers. Key messages from this workshop were:

- it is particularly common for patients' identity not to be checked when they are well known to healthcare staff;
- · patients would like to be more involved in the checking process;
- there is a concern that clinical staff will become over-reliant on the use of technology and not follow manual checking procedures;
- the use of photo identification cards brings all patient information together and the photograph makes identity checking more acceptable to patients.

Additional work

This safer practice notice is part of a wider programme of NPSA work on safer patient identification. Other work includes:

- An NPSA report, Right patient right care, was published in December 2004. It summarises research on manual checking and the use of technology for patient identification (available from www.npsa.nhs.uk).
- A safer practice notice, 'Wristbands for hospital inpatients improves safety', was released in November 2005 and stated that all hospital inpatients should wear wristbands.
- Work is in progress to create a national standard for wristbands that specifies colour, design and which patient details should be included.
- Research has been commissioned, and should be available in early 2007, to observe current practices in bedside identity checking and to recommend a standard process that can be used across the NHS.

The principles of all these solutions are fully supported by a wide range of royal colleges and professional organisations.

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Evaluation

The impact of this notice will be measured using SHOT data and the NPSA will undertake a systematic review of all incidents relating to blood safety reported to the National Reporting and Learning System. The impact will also be evaluated in England though the Safety Alert Broadcast System six months after issue, and in Wales through the Regional Offices of the Welsh Assembly Government. Progress will also be monitored in England through the Regional Transfusion Committees and in Wales through the Blood Implementation Group, as part of the Better Blood Transfusion initiative. 10 In addition, the Healthcare Commission, CNST and Regional Offices in Wales will monitor the implementation of the recommendations in this safer practice notice.

Compliance with the recommendations in this notice will be included in the next National Comparative Audit of Blood Transfusion.

Available support

Regional Transfusion Committees are available as a source of local support for better transfusion practice, and in Wales through the Welsh Assembly Government's Blood Implementation Group. Regional 'Train the trainers' days are also planned for the introduction of competency assessment.

Further details

For further information about the NPSA's work on blood safety, please contact: Joan Russell - Safer Practice Lead National Patient Safety Agency, 4-8 Maple Street, London W1T 5HD Tel: 020 7927 9500 Email: joan.russell@npsa.nhs.uk

Acknowledgments

The NPSA would like to thank the many NHS acute trusts, staff and patients who have contributed to this safer practice notice. This includes organisations who submitted abstracts to the workshop in December 2004, subsequent pilot sites, and regional and local focus groups. Further details can be found at www.npsa.nhs.uk

References

- Stainsby D et al. Reducing adverse events in blood transfusion. *British Journal of Haematology.* 2005; 131: 8-12 Serious Hazards of Transfusion. *Annual reports 2001-02, 2003, 2004*. Available at: **www.shotuk.org** Serious Hazards of Transfusion. *Annual Report 2005* (in press).

- 4 National Patient Safety Agency. Seven steps to patient safety: the full reference guide. (2004). Available at: www.npsa.nhs.uk/sevensteps
- Connecting for Health. Do Once and Share. (2006).
 Office of Public Sector Information. The Blood Safety and Quality Regulations 2005 (The Stationery Office
- ISBN 0110516222). Available at: www.opsi.gov.uk/si/si2005/20050050.htm

 National Blood Service and Royal College of Physicians. Comparative report for blood transfusion in England. (2003);

 National Comparative Audit of Blood Transfusion re-audit of bedside transfusion practice. (2005).

 Right patient, right blood evaluation reports. Available at: www.npsa.nhs.uk
- British Committee for Standards in Haematology, Blood Transfusion Taskforce. Guidelines for the administration of blood components and management of the transfused patient. *Transfusion Medicine*. 1999; 9: 227-238. Available at: www.bcshguidelines.com
- 10 Department of Health. Better blood transfusion: appropriate use of blood. (2002).



This safer practice notice was written in the following context:

to take appropriate professional advice where necessary

It represents the view of the National Patient Safety Agency, which was arrived at after consideration of the evidence available. It is anticipated that healthcare staff will take it into account when designing services and delivering patient care. This does not, however override the individual responsibility of healthcare staff to make decisions appropriate to local circumstances and the needs of patients and

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9 November 2006

Appendix 5: HSS Circular MD 6/03 Better Blood Transfusion, Appropriate use of Blood

Department of Health, Social Services & Public Safety An Roinn Sláinte, Seirbhísí Sóisialta agus Sábháilteachta Poiblí

From The Chief Medical Officer: Dr Henrietta Campbell CB Castle Buildings Upper Newtownards Road BELFAST BT4 3SJ

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HSS(MD) 6/03

Chief Executives of HSS Boards and Trusts

Medical Directors of Trusts for onward distribution to:

• All Consultants

Nursing Directors of Trusts

Chief Executive/Medical Director, Northern Ireland Blood Transfusion Service

Directors of Public Health

Regional Postgraduate Medical Dean

Dean of the Faculty of Medicine, QUB

5 March 2003

Dear Colleague

BETTER BLOOD TRANSFUSION

Please find attached HSS Circular MD6/03 Better Blood Transfusion, Appropriate use of Blood. This circular replaces the previous circular HSS 3/99, Better Blood Transfusion.

This circular may also be accessed on the Department's website www.dhsspsni.gov.uk.

Yours sincerely

DR HENRIETTA CAMPBELL Chief Medical Officer

INVESTOR IN PEOPLE

Better Blood Transfusion

Appropriate Use of Blood

Summary

This Health Service Circular replaces Better Blood Transfusion and sets out a new programme of

- Ensure that Better Blood Transfusion is an integral part of HPSS care
- As part of clinical governance responsibilities, make blood transfusion safer
- Avoid unnecessary use of blood in clinical practice
- Provide better information to patients and the public about blood transfusion

The programme of action should be considered in conjunction with Annex A of this circular that provides further detail on implementation.

There is an expectation that implementation of and compliance with this guidance will be subject to inspection by the Northern Ireland Health and Persona Social Services Regulation and Improvement Authority (NIHPSSRIA), when established.

This circular can also be accessed on the Department's website www.dhsspsni.gov.uk.

A toolkit to assist Trusts is being developed and will be placed on Department's website www.dhsspsni.gov.uk and on the Department of Health's Better Blood Transfusion website and will include access to national guidance, national patient leaflet and examples of good practice.

Rationale

The appropriate use of donor blood and the use of effective alternatives to donor blood are becoming increasingly important public health and clinical governance issues.

- Appropriate blood transfusion is an essential support to many medical treatments and is life-
- Donated blood is a limited resource. As a result of further measures that may have to be taken to reduce the unknown risk of transmission of vCJD by blood transfusion, such as the introduction of a future screening test and limitations on the number of donors, blood supplies may be considerably reduced.
- The safety of blood transfusion is highlighted yearly through the Serious Hazards of Transfusion (SHOT) scheme (a confidential enquiry for the reporting of serious complications of blood transfusion and near miss events in the UK). This scheme has shown that avoidable, serious hazards of blood transfusion continue to occur in Trusts the most common being giving the wrong blood to patients.
- There is continued wide variation in the use of blood (particularly in surgery and surgical specialities) even with the existence of national and local clinical guidelines developed by clinical professionals on the appropriate use of donor blood.

ACTION

- This guidance is addressed to all Trusts providing blood transfusion
- HPSS Trusts should work together to implement the attached action programme
- HPSS Trusts should formally review arrangements for Better Blood Transfusion and the appropriate use of blood at least annually;
- Health Boards should ensure that the HPSS has robust Better Blood Transfusion arrangements (including the implementation of clinical governance arrangements) in accordance with the timetable set out in this Circular

Action

Ensure that Better Blood Transfusion is an integral part of HPSS care

Objective	Action	
Secure appropriate arrangements for Better Block Transfusion and the appropriate use of blood.		By April 2003 Chief Executives of HPSS
	Secure appropriate composition and functioning of a Hospital Transfusion Team (Annex A) including support staffing and resourcing	Chief Executives of HPSS Trusts By June 2003
	Ensure that appropriate blood transfusion policies are in place, implemented and monitored	Chief Executives of HPSS Trusts with Hospital Transfusion Committees and Teams By September 2003
	 Appoint haemovigilance nurses to facilitate the implementation and monitoring of policies 	Chief Executives of HPSS Trusts By March 2004
	Secure appropriate composition and functioning of a Regional Transfusion Team	Chief Executive of NIBTS By September 2003
	Ensure that education and documented annual training on blood transfusion policies are administered to all health care staff involved in the process of blood transfusion and is included in the induction and orientation programmes for new staff	Chief Executives of HPSS Trusts working with Hospital Transfusion Committees and Teams By September 2003
nprove the quality of service rovision through clinical audit nd continuing professional evelopment	clinical multi-disciplinary audit and CPD programmes for HPSS	Chief Executives of HPSS Trusts working with clinical governance leads and Hospital Transfusion Committee and Teams By September 2003
	Scheme Scheme	Chief Executives of HPSS Trusts with Hospital Blood Banks and Hospital Transfusion Teams By September 2003

Make blood transfusion safer

Objective	Action	By whom and d
Improve the safety of the blood transfusion process	 Ensure that policies on patient identification are in place, implemented and monitored throughout the blood transfusion process from prescription, sampling, laboratory testing and issue of blood to collection and administration of blood transfusion 	By whom and when Chief Executives of HPSS Trusts working with clinical governance leads, clinicians, hospital staff, blood transfusion laboratories, Hospital Transfusion Committees and Teams By September 2003
Ensure that information for the	Ensure good hospital transfusion laboratory practice and encourage participation in national laboratory accreditation schemes	Chief Executives of HPSS Trusts working with blood transfusion, Laboratories and Hospital Transfusion Committees. By September 2003
traceability of blood is recorded and retrievable	and retrieval systems for blood transfusion	Chief Executives of HPSS Trusts working with clinical governance leads, Hospital Transfusion Committees and Teams By June 2003
available for monitoring the safety and appropriate use of blood	 Ensure appropriate staffing and IT support to undertake monitoring 	Chief Executives of HPSS Trusts working with clinical governance leads and Hospital Transfusion Committees By June 2003
Ensure that reporting of	Ensure that a minimum dataset (see Annex A) for each transfusion is documented	Hospital Transfusion Committee and Teams working with clinicians By June 2003
serious adverse events related to blood transfusion and near misses is being undertaken	 Ensure that appropriate and timely information is provided to the Hospital Transfusion Team 	Chief Executives of HPSS Trusts working with clinicians, blood transfusion laboratories, Hospital Transfusion Teams By June 2003
	 Ensure timely feedback to blood users on subsequent lessons learnt 	Hospital Transfusion Teams By June 2003
	Ensure participation in the Serious Hazards of Transfusion (SHOT) scheme and that timely reporting is in place	Chief Executives of HPSS Trusts By June 2003

Avoid unnecessary use of donor blood in clinical practice

Objective	Action	D. I
Ensure the appropriate use of blood and use of effective alternatives in clinical practice	Implement existing national guidance (see Annex A) on the appropriate use of blood and alternatives	By whom and when Chief Executives of HPSS Trusts working with clinicians and Hospital Transfusion Committee and Teams
Secure appropriate and cost-effective provision of blood transfusion and alternatives in surgical care	 Ensure that mechanisms are in place for the pre-operative assessment of patients for planned surgical procedures 	By June 2003 Chief Executives of HPSS Trusts working with clinicians and Hospital Transfusion Teams By June 2003
	 Ensure that indications for transfusion are in place, implemented and monitored 	Hospital Transfusion Committees and Teams By June 2003
	 Review and explore the use of effective alternatives to donor blood and the appropriate use of autologous blood transfusion; pre- donation, peri-operative and post-operative cell salvage 	Chief Executives of HPSS Trusts working with clinicians and Hospital Transfusion Committees and Teams By June 2003

Provide better information to patients and the public about blood transfusion

Objective	Action	D
Ensure patients at risk of transfusion are informed of their choices	information is made available	By whom and when Hospital Transfusion Committees working with clinicians and patient groups By June 2003

Monitoring of arrangements for Better Blood transfusion

Objective	Action	By whom and when
Promote the safe and appropriate use of blood and cost-effective alternatives in Trusts	 Ensure that services commissioned are safe and value for money in relation to Better Blood Transfusion 	HPSS Trusts By June 2003
	Ensure that services for Better Blood Transfusion being provided are operating effectively and are part of local performance management arrangements	Health and Social Services Boards By June 2003

Background

The CMOs' Better Blood Transfusion conference was held in October 2001 jointly organised by the National Audit Office, the National Blood Service and the Department of Health and chaired by the UK four Chief Medical Officers. The aim of this multidisciplinary conference was to share views on how clinical blood transfusion practice could be improved with the following aims:

- Ensure that Better Blood Transfusion is an integral part of NHS care
- Make blood transfusion safer
- Avoid unnecessary use of blood in clinical practice
- Provide better information to patients and the public about blood transfusion

A survey of NHS Trusts in England of progress that had been made in blood transfusion practice since the first Evidence-Based Blood Transfusion conference in 1998 was presented at the conference. The results of the survey, presentations and conclusions from the conference workshops can be found on the Better Blood Transfusion website www.doh.gov.uk/bbt2.

The Conference highlighted that more work need to be done in the following areas:-

- Multidisciplinary staff training in the process of blood transfusion
- The availability of Hospital Transfusion Practitioners
- Local approved protocols based on national guidelines for the appropriate use of blood
- Audit of blood transfusion practice
- The use of autologous blood transfusion
- The provision of written information to patients on blood transfusion.

Associated Documentation

ANNEX 1 - Information for Implementation of Better Blood Transfusion:

This Circular has been issued by:

DR HENRIETTA CAMPBELL

the glow

CHIEF MEDICAL OFFICER

ANNEX A

Information for Implementation of Better Blood Transfusion Managing Better Blood Transfusion at Trust level

1. Trusts involved in blood transfusion should establish a Hospital Transfusion Committee (HTC) with the authority and resources to take the necessary actions to improve transfusion An HTC should:

- Promote best practice through local protocols based on national guidelines.
- Lead multi-professional audit of the use of blood components within the Trust, focusing on specialties where demand is high $\epsilon.g.$ certain surgical specialties and
- Audit the practice of blood transfusion against the hospital policy and national
- Provide feedback on audit of transfusion practice and the use of blood to all hospital
- Promote the education and training of all clinical, laboratory and support staff involved in blood transfusion, including the collection of specimens.
- Have the authority to modify and improve existing blood transfusion protocols and to
- Be a focus for local contingency planning for and management of blood shortages.
- Report regularly to the Regional Transfusion Committee, and through them, to the
- Participate in the activities of the Regional Transfusion Committee.
- Consult with local patient representative groups where appropriate.
- Contribute to the development of clinical governance.
- 2. Trusts involved in blood transfusion should implement arrangements for promoting good transfusion practice through the development of an effective clinical infrastructure. Trusts should establish a Hospital Transfusion Team (HTT). As a minimum this should consist of the lead consultant for transfusion in the Trust (with sessions dedicated to blood transfusion), a hospital transfusion practitioner or equivalent (e.g. nurses, biomedical scientists, medical professionals), and the blood bank manager with or without other members of the HTC. There should be identified clerical, technical, managerial and IT support as required, and access to audit and training resources to promote and monitor safe and effective use of blood and alternatives.

The role of the HTT is to:

- Assist in the implementation of the HTCs objectives
- Promote and provide advice and support to clinical teams on the appropriate and safe
- Actively promote the implementation of good transfusion practice
- Be a source for training all hospital staff involved in the process of blood transfusion
- 3. Large Trusts or Trusts with more than one site will need to ensure they have adequate coverage by the hospital transfusion practitioner to ensure that good transfusion practice is implemented in all clinical areas. Further information on the role of the hospital transfusion practitioner is available through the Department of Health's Better Blood Transfusion
- 4. If a HTC or HTT and its members cover more than one Trust, arrangements should be in place to ensure that there is sufficient cross-Trust representation. Trusts should also ensure that there are adequate resources and mechanisms for ensuring the safe, effective and appropriate use of blood at all the Trust sites involved in blood transfusion.
- 5. HTCs should implement good transfusion practice through Trusts' frameworks for clinical governance, and performance and risk management. Senior Trust management should be represented on the HTC and the Chair of the HTC should be a member of either the Trust's

- clinical governance or risk management committee and invited at least annually to present an
- 6. HTCs should engage in a partnership with blood users, blood services and patients to improve the safety and effectiveness of blood transfusion.
- HTCs should participate in the appropriate activities of the Regional and National Blood Transfusion Committees for implementing and monitoring good transfusion practice.

Training and Education

- 8. Trusts should provide regular (annual) documented training in safe and effective transfusion practice for all staff involved in the transfusion process from prescription to final administration and monitoring (including phlebotomists, laboratory staff, porters, nurses and medical staff) in line with national guidelines. Examples of training modules and how they may be accessed will be made available through the Department of Health's Better Blood
- Trusts should review the blood transfusion content of clinical multi-disciplinary audit and CPD programmes for HPSS Trust staff, including the Hospital Transfusion Team
- 10. Trusts should ensure that blood transfusion is included in the induction and orientation

Patient Information

- 11. Trusts should provide timely written information about blood transfusion and its alternatives, wherever possible, to patients at risk of a blood transfusion.
- 12. National leaflets can be used and adapted for local use. An example of these and contacts for local leaflets for special patient groups will be made available through the Department of Health's Better Blood Transfusion website.

Guidelines for Good Practice and Standards

- 13. Trusts should have agreed and disseminated protocols for safe and effective transfusion practice, based on national guidelines and supported by in-house training. Guidelines should include indications for transfusion, the laboratory details to be checked and actioned before and after transfusion, the monitoring required during transfusion, and the documentation
- 14. Trusts should adopt national guidelines for the appropriate use of blood.
- 15. The following guidelines for the safe, effective and appropriate use of blood are recommended to all Trusts. These and additional guidelines, where available electronically, will be linked through the Department of Health's Better Blood Transfusion website.
 - Clinical Resource Efficiency Support Team. Better Use of Blood in Northern Ireland -Guidelines for Blood Transfusion Practice January 2001 http://www.crestni.org.uk
 - Scottish Intercollegiate Guidelines Network. Perioperative Blood Transfusion for Elective Surgery - A national clinical guideline. Number 54. October 2001.
 - The Association of Anaesthetists of Great Britain and Ireland. Blood Transfusion and the Anaesthetist. Red Cell Transfusion. December 2001.
 - British Committee for Standards in Haematology, Blood Transfusion Task Force. Guidelines for the administration of blood and blood components and the management of transfused patients. Transfusion Medicine 1999; 9:227-238. http://www.bcshguidelines.com
- British Committee for Standards in Haematology, Blood Transfusion Task Force. Guidelines for the clinical use of red cell transfusion. British Journal of Haematology 2001; 113:24-31. http://www.bcshguidelines.com/
- The Stationary Office. Handbook of Transfusion Medicine. Third Edition, 2001. https://www.thestationeryoffice.co.uk/nbs/handbook2001/index.htm]
- Joint National Institute of Biological Standards and Control and United Kingdom Blood Transfusion Services guidelines www.transfusionguidelines.org.uk .

Safety

All Trusts that undertake blood transfusion:

- 16. Should participate in the Serious Hazards of Transfusion (SHOT) scheme on the reporting of serious and near miss events. http://www.shot.demon.co.uk
- 17. Should ensure that all patients (including outpatients) receiving a blood transfusion have a patient identification wristband or equivalent, and are monitored during transfusion according
- 18. Should ensure good hospital transfusion laboratory practice and encourage participation in Audit
- All Trusts undertaking blood transfusion should:
- 19. Carry out regular multidisciplinary audit of transfusion practice and regularly feedback the results of audits of transfusion practice and the use of blood to relevant staff and ensure that improvements suggested by audit are put in place.
- 20. Participate in the joint Royal College of Physicians and National Blood Service national comparative audit of the clinical transfusion process and the use of blood and other future

Initial information is available at http://www.doh.gov.uk/bbt2/lettertoce.htm and further information will be made available through the Better Blood Transfusion website.

21. Participate the http://www.blood.co.uk/bsms/body.asp Blood Stocks Scheme.

Monitoring and traceability

- 22. Trusts should ensure that there is routine data recording and collection to enable the traceability and monitoring of the safe, effective and appropriate use of blood. Trusts should review and explore the development of electronic systems for this purpose.
- 23. Trusts should ensure that a minimum dataset for each transfusion is documented in the clinical notes (indication for transfusion, amount of blood transfused, assessment of the effectiveness of the transfusion, and any adverse effects and their management).
- 24. Trusts should ensure that the clinical indication for transfusion is provided on the request

Pre-operative assessments, use of patients own blood and alternatives to blood transfusion

- 25. Trusts should ensure that that there are adequate arrangements for the pre-operative assessment of patients. For planned surgery, the arrangements for pre-operative assessment should permit the diagnosis and correction of anaemia in advance of surgery and optimisation of haemostatic function peri-operatively (including discontinuation of antiplatelet drugs and haematological advice for patients on oral anticoagulation). Most patients undergoing elective surgery should not require transfusion support if their pre-operative haemoglobin level is normal. Formulae are available to calculate individual patient's transfusion requirements depending on the predictable blood loss from the procedure, and patient characteristics. The use of such formulae should allow each surgical team to set its own parameters for transfusion, and allow their use of blood to be audited to these parameters. Further information will be available through the Department of Health's Better
- 26. Trusts should review and explore the use of effective alternatives to donor blood and the appropriate use of autologous blood transfusion. Further information will be made available through the Department of Health's Better Blood Transfusion website

National Initiatives Better Blood Transfusion Conference and Website

27. The website for 'Better Blood Transfusion' has been created to promote the initiative and to share examples of good practice and is in development. This will be further developed and contain tools to assist in implementing Better Blood Transfusion initiative. The current website from the conference can be found at www.doh.gov.uk/bbt2.

Regional and National Transfusion Committees

- 28. The overall objective of the newly established National Blood Transfusion Committee and the Regional Transfusion Committees is to promote safe and effective good transfusion practice in hospitals in accordance with the Better Blood Transfusion initiative and with this circular The committees provide a framework to channel information and advice to hospitals and their transfusion committees on best practice and performance monitoring. The Regional Transfusion Committees support the activities of Hospital Transfusion Committees within Department of Health's Better Blood Transfusion website.
 - The National Blood Transfusion Committee provides national support and advice on national Better Blood Transfusion initiatives
 - Regional Transfusion Committees have a role to engage with HTCs in assisting in the safe and effective use of blood and alternatives to transfusion

Northern Ireland Blood Transfusion Service

 The Northern Ireland Blood Transfusion Service provides support for hospital Transfusion Committees to facilitate implementation of Better Blood Transfusion initiatives.

Recommendations requiring further work

- 30. The need for further work to support the Better Blood Transfusion initiative was highlighted at the CMOs conference. Several of the following areas are already in initial development and will be placed on the Department of Health's Better Blood Transfusion website when
 - Consideration of a national transfusion episode record. Consideration should also be given to the development of a standard format for reporting of transfusion incidents and errors in Trusts. Future examples of these will be available through the Department of Health's Better Blood Transfusion website.
 - Explore the application of new technologies to improve the safety and effectiveness of transfusion practice.
 - Development of electronic systems to improve the safety of the process of transfusion and to monitor the appropriate use of blood. Examples of studies in this area will be made available through the Department of Health's Better Blood Transfusion website.
 - Development of a tool for assessing the 'resources' required to implement Better Blood
 Transfusion at Trust level (e.g. the bed numbers/case-mix/specialties/blood use
 parameters required to help inform the 'critical mass' for an HTC and the make-up in
 'sessional' time of a HTT)
 - Development of national training and aducational materials
- Continued development of patient information leaflets
- Systematic review and research into the clinical and cost-effectiveness of transfusion practice including alternatives to donor blood transfusion

Abbreviations

RTC Regional Blood Transfusion Service SHOT Serious Hazards of Transfusion vCJD Variant Creutzfeld-Jakob Disease	SHOT	Serious Hazards of Transfileion
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