NHS Quality Improvement Scotland

NHS Highland

Local Report ~ *February 2008*

Blood Transfusion

NHS Highland

Local Report ~ *February 2008*

Blood Transfusion

NHS Quality Improvement Scotland (NHS QIS) is committed to equality and diversity. We have assessed the performance assessment function for likely impact on the six equality groups defined by age, disability, gender, race, religion/belief and sexual orientation. For this equality and diversity impact assessment, please see our website (www.nhshealthquality.org). The full report in electronic or paper form is available on request from the NHS QIS Equality and Diversity Officer.

Revision:
Page 25 revised in May 2008

ISBN 1-84404-463-7

First published February 2008

Information contained in this report has been supplied by NHS boards/NHS organisations, or taken from current NHS board/NHS organisation sources, unless otherwise stated, and is believed to be reliable on publication.

www.nhshealthquality.org

Contents

1	Setting the scene	5
2	Summary of findings	6
3	Detailed findings against the standards	11
Appendix 1 – Glossary of abbreviations		29
Appendix 2 – Review process		30
Appendix 3 – Details of review visit		31

1 Setting the scene

NHS Quality Improvement Scotland (NHS QIS) was set up by the Scottish Parliament in 2003 to take the lead in improving the quality of care and treatment delivered by NHSScotland. NHS QIS does this by setting standards and monitoring performance, and by providing NHSScotland with advice, guidance and support on effective clinical practice and service improvements.

The Scottish National Blood Transfusion Service (SNBTS) is responsible for collecting, processing, storing and supplying all blood and blood components in Scotland and NHS boards are responsible for ordering and managing their supplies in a safe and effective manner. The Scottish Executive introduced a programme of work to improve and support transfusion practice in Scotland and, as a consequence, NHS QIS appointed a project group to develop clinical standards for blood transfusion practices. The project group developed four standards, covering: core principles; clinical management – pre-transfusion; clinical management – hospital transfusion laboratory; and clinical management – blood and blood component collection, administration and monitoring. The Clinical Standards for Blood Transfusion were published in September 2006. These include details of the project group which set the standards and are available on request from NHS QIS or can be downloaded from the website (www.nhshealthquality.org).

About this report

This report presents the findings from the peer review of **NHS Highland's** performance against the blood transfusion standards.

The review process has three key phases: preparation prior to the visit; the visit; and the report production and publication following the visit. (See flow chart in Appendix 2 for further detail.) During the visit, each multidisciplinary review team assesses performance using the categories 'met', 'not met' and 'not met (insufficient evidence)', as detailed below.

- '**Met**' applies where the evidence demonstrates the standard and/or criterion is being attained.
- '**Not met**' applies where the evidence demonstrates the standard and/or criterion is not being attained.
- '**Not met (insufficient evidence)**' applies where no evidence is available for the review team, or where the evidence available is insufficient to allow an assessment to be made.

A final category '**not applicable**' is used where a standard and/or criterion does not apply to the NHS board under review.

Each review team is led by an experienced reviewer, who is responsible for guiding the team in their work and ensuring that team members are in agreement about the assessment reached. Membership of the review team visiting **NHS Highland** on **20 September 2007** can be found in Appendix 3.

2 Summary of findings

2.1 Overview of local service provision

Highland covers a large geographical area situated in the north and west of Scotland and has a population of around 306,701[1]. The city of Inverness is the largest urban area in the region, although most of the population live in rural areas which may be remote, including islands.

Local NHS system and services

Highland NHS Board is responsible for improving the health of the local population and for the delivery of the healthcare required. It provides strategic leadership and has responsibility for the efficient, effective and accountable performance of the NHS in Highland.

At the time of the review visit, NHS Highland provided acute and primary care services through a single operating division, Direct Health Services. This comprised one specialist services unit providing acute care, based at Raigmore Hospital, Inverness, and four community health partnerships (CHPs).

Each CHP covers a geographical area (Argyll & Bute, North, Mid and South East Highland) and is a way of organising non-acute care where an NHS board maximises its ability to support integration across health services and with other agencies such as social services.

Following the dissolution of NHS Argyll & Clyde on 31 March 2006, the administrative boundaries of NHS Greater Glasgow and NHS Highland altered to allow them to take over the responsibility for managing the delivery of health services in relevant parts of the Argyll & Clyde area. NHS Highland's extension covers the area of Argyll & Bute Council. The Argyll & Bute CHP commissions a significant element of secondary services from NHS Greater Glasgow and Clyde.

Further information about the local NHS system can be accessed via the website of NHS Highland (www.show.scot.nhs.uk/nhshighland/).

There are four NHS hospital blood banks within NHS Highland based in Caithness General Hospital, Wick; Belford Hospital, Fort William; Lorn & Islands District General Hospital, Oban, and the North of Scotland SNBTS (Clinical Directorate) hospital transfusion laboratory (NBTS) based at Raigmore Hospital.

The blood banks in Caithness General Hospital and Belford Hospital receive blood and blood components from the NBTS hospital blood bank. The blood bank in Lorn & Islands District General Hospital receives its blood and blood components from the West of Scotland SNBTS (Clinical Directorate) hospital transfusion laboratory (WOSBTS), Glasgow.

[1] General Register Office for Scotland. Mid-2006 Population Estimates Scotland: Population Estimates by Age and Sex and Administrative Area. First published on 26 April 2007. Revised 27 July 2007. Available from: http://www.gro-scotland.gov.uk/files

Each blood bank supplies its own hospital as well as the NHS Highland community hospitals in their CHP area.

NHS Greater Glasgow and Clyde blood banks in Inverclyde Royal Hospital, Greenock, and the Royal Alexandra Hospital, Paisley, receive blood and blood components from the WOSBTS and supply these to NHS Highland hospitals. Inverclyde Royal Hospital supplies Dunoon Hospital and Victoria Hospital, Rothesay, while the Royal Alexandra Hospital supplies Islay Hospital.

Approximately 8,000 red cell units were used throughout NHS Highland in the 12-month period before the review visit.

The NHSScotland Better Blood Transfusion Programme (BBTP) is supported by one transfusion practitioner who works across all sites where blood transfusion takes place within the Argyll & Bute CHP area and another transfusion practitioner who covers all other sites where blood transfusion takes place in the North Highland Boundary (ie North, Mid and South East Highland CHP areas). These are further assisted by a network of local trainers across NHS Highland.

2.2 Summary of findings against the standards

A summary of the findings from the review is presented in this section. A detailed description of performance against the standards/criteria is included in Section 3.

Core principles

Across NHS Highland there are four active multidisciplinary hospital transfusion committees (HTCs). The HTCs are an integral part of the local arrangements and there are communication and accountability structures in place. The North Highland and the Lorn and Islands District General Hospital HTCs report to NHS Highland, and the Inverclyde Royal Hospital and Royal Alexandra Hospital HTCs report to NHS Greater Glasgow and Clyde. At the time of the review visit, the board reported that it was working on a strategy to further strengthen communication and the sharing of information between the two NHS boards.

There was evidence of audit activity undertaken across the board region. The transfusion practitioners lead the programme of blood transfusion audit, and findings are discussed at the HTC meetings and shared with appropriate staff groups. The review team was unable to confirm the HTCs active involvement in multi-professional audit, but noted its commitment to promoting education and training for staff involved in providing hospital blood transfusion.

Adverse and near miss incidents relating to blood transfusion practice are reported and managed in accordance with local protocols. There are good procedures in place to provide feedback to staff on lessons learned from incidents reported.

NHS Highland uses a 'bag and tag' system to ensure every unit of blood component received into the laboratory can be traced to its recipient or to its final fate if not transfused. Compliance checks with this practice are regularly undertaken.

At the time of the review visit, a new NHS Highland patient identification policy was out for consultation. The revised policy includes the use of gender which is not currently used. In addition to the use of surname, forename, date of birth and hospital number to establish patient identity, a unique Transfusion (T) number to further support patient identification during every stage of the blood transfusion process is in use in the North Highland boundary area.

Clinical management – pre-transfusion

The review team was informed that an audit undertaken in NHS Highland found that patients' records did not always contain evidence that the reasons for transfusion of blood or blood components, including alternative treatment options, had been explained and discussed with the patient. Staff reported that the policy in use is currently being updated and includes the need for retrospective discussion with patients who are unable to sign consent for a blood transfusion at the time of admission. The review team encouraged the board to consider standardising documentation in relation to pre-transfusion discussion.

There is a range of leaflets and information available for patients explaining the risks and benefits of blood transfusion. Leaflets are accessible in all ward areas.

At the time of the review visit, there was no formal policy in place to support compliance with advance decision documents in situations when pre-discussion with patients had not been possible. Staff reported that a draft advance directive policy had been in place for some time, but was not yet finalised and approved. The review team encouraged the board to implement the policy as soon as possible and ensure it makes specific reference to blood transfusion.

Blood samples for transfusion are labelled in accordance with local procedures which are based on the British Committee for Standards in Haematology (BCSH) national guidelines.

Blood and blood components are routinely prescribed and signed by a qualified practitioner.

Clinical management – hospital transfusion laboratory

All transfusion laboratories providing a service to NHS Highland have achieved compliance with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements. In addition, at the time of the review visit, the NBTS laboratory had received full Clinical Pathology Accreditation (UK) Ltd (CPA) and Lorn & Islands District General Hospital transfusion laboratory had conditional CPA accreditation. Caithness General Hospital does not have CPA accreditation although Belford Hospital has applied for CPA accreditation.

NHS Highland has a competency-based training and assessment system. The review team commended the quality of the board's training documentation.

There are good procedures in place to optimise blood use and minimise wastage across NHS Highland. Wastage rates are monitored by the SNBTS laboratory at Raigmore Hospital and discussed at the HTC meetings.

Standard operating procedures are in place for blood stock management and include the use of emergency O RhD negative blood units. The review team recognised as a strength of the service the board's achievement of 100% compliance with traceability using the bag and tag system.

NHS Highland is in the process of implementing the Blood Audit Release System (BARS) to support the collection and traceability of blood products which was recognised as a challenge for the board.

Clinical management – blood and blood component collection, administration and monitoring

There was good evidence of comprehensive training being delivered to a variety of appropriate staff groups across NHS Highland. Only staff who have completed the mandatory BBTP Level 1: Safe Transfusion Practice training actively participate in the clinical transfusion process. Training is provided by the transfusion practitioners, and blood transfusion link trainers, and records of education are maintained. The review team noted as a challenge for the board the need to engage consultant-level

staff groups in the online theoretical competency-based training programme, and also noted that action was being taken to address this.

Recording the minimum data set to positively identify the patient on all transfusion documents is currently a challenge for the board. A new patient identification policy is under development.

Staff are aware of the need to observe and monitor patients' vital signs during the time of receiving a blood transfusion, and there are policies in place to support staff to recognise transfusion reactions and to report adverse incidents. However, an audit of the completeness of documentation relating to transfusion observations found that not all areas were compliant with the policy. The transfusion practitioner is providing further training as a means of addressing this issue.

The review team acknowledged the robust incident management systems and the mechanisms in place to provide feedback on lessons learned to relevant staff groups.

3 Detailed findings against the standards

Standard 1a: Core Principles

Standard Statement
There are systems in place supporting clinical governance to ensure safe, effective and appropriate blood transfusion.

NHS Highland

Essential Criteria

1a.1: There is an established, active, multidisciplinary hospital transfusion committee (HTC) that has defined responsibilities and accountability to the chief executive/NHS board via the clinical governance structure.

STATUS: **Met**

The Lorn & Islands District General Hospital, Oban, has an established hospital transfusion committee (HTC) which also represents Mid Argyll Hospital, Lochgilphead, and Campbeltown Hospital. The Lorn & Islands HTC reports to the multidisciplinary North Highland Boundary HTC which represents all transfusion sites in the North, Mid and South East Highland CHP areas. The North Highland Boundary HTC has defined responsibilities and accountability to the NHS Highland board via the NHS Highland clinical governance committee.

Representatives of Dunoon Hospital and Victoria Hospital, Rothesay, participate on the Inverclyde Royal Hospital's HTC and representatives from Islay Hospital participate on the Royal Alexandra Hospital's HTC. Both of these HTCs report to the NHS Greater Glasgow and Clyde clinical governance committee. It was reported that formal links between these HTCs and the NHS Highland clinical governance committee were being explored. Further integration is planned by copying the minutes from the NHS Greater Glasgow and Clyde HTC meetings to NHS Highland's Argyll & Bute CHP clinical governance and risk management group.

1a.2: The HTC has roles and responsibilities as outlined in MEL(1999)9 and HDL(2003)19. These include involvement in multi-professional audit, education and training, development and modification of guidelines and protocols, and involvement of stakeholders.

STATUS: **Not met (insufficient evidence)**

Within the North Highland Boundary area, the transfusion practitioner leads a rolling programme of audit activity which includes a detailed observational and record keeping audit of transfusion records. The audit tools used are those developed by the Better Blood Transfusion Programme (BBTP). Also, an anonymous self-assessment questionnaire on blood transfusion has been completed by ward nursing staff in

Raigmore Hospital, Inverness, and Caithness General Hospital, Wick, and the results from this were used to identify training needs related to blood transfusion. Reports from these audits are presented to relevant clinical governance groups and to the North Highland Boundary HTC. Staff reported that these audits would be repeated following further education and improvement in subsequent audit findings is anticipated.

In the Argyll & Bute CHP area, the transfusion practitioner is in the process of introducing an audit programme with the support of link trainers. It was reported that the BBTP audit tools will be used and the findings presented to the relevant HTC.

Whilst it was clear to the review team that audit data were being reported to the HTCs in relation to NHS QIS blood transfusion standards, it was not clear to the team whether the HTCs took a lead in multi-professional clinical audit of other aspects of the blood transfusion process.

Blood transfusion training and education is a standing item on the agenda for each HTC and regular updates on training are presented by the transfusion practitioners.

The HTCs are involved in the development of policies and procedures related to blood transfusion as part of NHS Highland's overall clinical policy development process.

1a.3: The HTC, in collaboration with the clinical governance committee, implements the NHSScotland Better Blood Transfusion Programme (BBTP).

STATUS: **Met**

A local BBTP team within the North Highland Boundary meets every month to progress the objectives of the BBTP in terms of safe, efficient and effective transfusion practice. The local team is chaired by the transfusion practitioner for that geographical area and membership includes the lead clinician identified for the BBTP and specialists from the North of Scotland Blood Transfusion Centre (NBTS). The local team report their activity to the North Highland Boundary HTC and to the NBTS clinical services committee.

Within the Argyll & Bute CHP area, the transfusion practitioner for the area attends the relevant HTCs (Lorn & Islands, Royal Alexandra Hospital and Inverclyde Royal Hospital) to report BBTP progress. The clinician nominated to lead with the BBTP in the Argyll & Bute CHP area is a member of the Royal Alexandra Hospital's HTC.

1a.4: The HTC reviews all reports of adverse events and near miss incidents relating to blood transfusion and, in response, implements changes in practice where necessary.

STATUS: **Met**

Within the North Highland Boundary of NHS Highland reports of adverse events and near miss incidents relating to blood transfusion are reported to and logged by the NBTS. The NHS Highland incident management policy and procedures are also followed to ensure that all relevant staff and patients are informed of the incident and that appropriate corrective action is taken. Each incident is also followed up individually by NBTS staff in conjunction with the North Highland Boundary transfusion practitioner. The North Highland Boundary HTC agenda includes incident reports as a standing item.

All clinical and non-clinical incidents related to blood transfusion are reported according to the NHS Highland incident management policy and procedures. Non-clinical incidents are also reported to the relevant hospital transfusion laboratory and their own local incident protocols and procedures are followed. Review teams are convened to investigate any serious incident and involve staff resident to the location of the incident and the transfusion practitioner for the Argyll & Bute CHP area. Reports on blood transfusion incidents are reported to the relevant HTC that would agree corrective action to be taken to avoid similar incidents in the future. An update on incidents and actions taken is also presented to the Argyll & Bute CHP clinical governance and risk management group which monitors incident reports occurring in their geographical area.

Lessons learned from incidents related to blood transfusion are reported to each operating unit on a quarterly basis and these are included in an NHS Highland quarterly clinical governance newsletter. It was reported that the clinical governance support team have developed an intranet site which will include information on lessons learned from all incidents.

The NBTS and West of Scotland Blood Transfusion Centre (WOSBTS) share learning nationally via all other Scottish National Blood Transfusion Service (SNBTS) laboratories.

Standard 1b: Core Principles

Standard Statement
The NHS board has a system in place to ensure that every unit of blood component received into the hospital transfusion laboratory can be unmistakably traced to its recipient, or to its final fate if not transfused.

NHS Highland

Essential Criterion

1b.1: There is a validated system to ensure that evidence of unmistakable traceability is generated, stored and accessible for 30 years.

STATUS: **Met**

NHS Highland has a validated 'bag and tag' system in place in each of its transfusion laboratories and the same system is in use in the NBTS and WOSBTS laboratories. Every unit of blood component received into the blood transfusion laboratories is identified with a donation number. When a component is required for a patient, a paper tag is printed from the laboratory computerised system which includes patient identifying information and two traceability labels, each label contains the donation number. The tag always accompanies the unit of blood component until it is transfused or returned to the laboratory if unused. If transfused, one label from the tag is signed and placed in the patient's notes and the other is completed and returned to the hospital transfusion laboratory to confirm which patient received the component. The data from the return labels is entered into the password protected computerised system that records the fate of each component.

Compliance checks are conducted regularly within each transfusion laboratory.

Standard 1c: Core Principles

Standard Statement
There is a robust system in place to establish patient identification details and maintain this at every stage of the clinical transfusion process.

NHS Highland

Essential Criteria

1c.1: The minimum identification data set (surname, forename, sex, date of birth and unique identification number, eg Community Health Index [CHI]) is used at every stage of the clinical transfusion process to positively identify the patient.

STATUS: **Not met**

At the time of the review visit, the minimum data set in use across NHS Highland included forename, surname, date of birth and hospital number. In addition, in the North Highland Boundary hospitals and hospice, a unique Transfusion (T) number is included on the patient wristband, blood sample tube and blood transfusion request form. Individual self-adhesive labels bearing this unique 'T-number' form part of the blood transfusion request form and are peeled off the form and attached to the patient wristband and sample tube at the time of collection of the sample and completion of the request form. The T-number is subsequently on the compatibility label of the blood packs crossmatched for that patient and on the blood component compatibility report and blood component collection form. This additional identification system which requires verification against the patient's wristband was noted by the review team as an example of good practice.

Staff reported that a new identification policy had been drafted which would apply across NHS Highland. This new policy, which was in the process of consultation at the time of the review visit, includes the use of gender as part of the minimum identification data set at every stage of the transfusion process. While the board uses the four unique identifiers as described in the British Committee for Standards in Haematology (2004), the omission of gender at each stage of the transfusion process means the board has narrowly failed to meet this standard criterion.

1c.2: All patients must be identifiable at all times. Inpatients and day patients must wear an identification wristband. If the wristband becomes inaccessible for any reason, an alternative, risk-assessed form of identification is adopted immediately.

STATUS: **Not met**

The identification policies in use across NHS Highland include the requirement to ensure that patients wear a wristband if they are to receive a blood transfusion.

At the time of the review visit, there was no formal risk-assessed approach documented for managing situations where a wristband was inaccessible and the review team encouraged the board to consider including this in the newly drafted identification policy.

1c.3: There is a system (eg distinctive wristbands) to alert qualified practitioners to patients who have specific transfusion requirements, including the wish to not be transfused.

STATUS: **Not met**

Staff reported that a policy is being drafted which will include a standard consent form that allows for refusal of blood transfusion. At the time of the review visit, there was no specific policy on identification of patients who have made an advance directive specifying their wish to not be transfused. Staff reported that, in their experience, such patients would make their wishes known to staff.

The NBTS has a written procedure for patients with special transfusion instructions and staff are made aware of these through the use of a red 'transfusion problem' label attached onto the front cover of the patient notes. This alert is used where patients have been investigated and found to have developed a transfusion reaction which might have some relevance at the time of any future transfusion episode.

In the Argyll & Bute CHP area, there is an alert form and sticker included in the patient notes which identify that a patient has an advance directive.

1c.4: For patients whose identity cannot be confirmed (eg unconscious patients or patients with communication difficulties), a minimum of gender and one unique identifier (eg accident and emergency number or CHI number) is essential for positive patient identification.

STATUS: **Not met**

There are systems used in Raigmore Hospital and Caithness General Hospital which enable generation of a unique number for patients whose identity cannot be confirmed. Gender is not routinely included. In the Argyll & Bute CHP area, if unconscious patients are admitted to accident and emergency, they receive a unique number, although there is no written policy to document this. Interpretation and translation services are available within NHS Highland and staff in Raigmore Hospital have received training on how to communicate to patients with learning disabilities.

The review team encouraged the board to standardise and document its system to include gender for patients whose identity cannot be confirmed, as required by this standard criterion.

Standard 1d: Core Principles

Standard Statement
The NHS board has a strategy for management of blood shortages.

NHS Highland

Essential Criterion

1d.1: Emergency blood management arrangements (EBMA) are established as defined in HDL(2005)25.

STATUS: **Met**

In the North Highland Boundary, there is an established emergency blood management group. Its chair is the chair of the North Highland Boundary HTC. This group has executive authority to manage the documented emergency blood management plan which is activated by NHS Highland's medical director.

In the Argyll & Bute CHP area, the emergency blood management arrangements (EBMA) for the Clyde Division of NHS Greater Glasgow and Clyde are followed. These arrangements include the convening of the emergency blood planning group which is chaired by the medical director of NHS Greater Glasgow and Clyde.

Standard 2a: Clinical Management – Pre-Transfusion

Standard Statement
The decision to transfuse is made following consideration of the potential risks and benefits of, and the alternatives to, transfusion. Where possible this is discussed between the clinician and patient (or their legal guardian) in advance of transfusion.

NHS Highland

Essential Criteria

2a.1: The patient's records contain evidence that the reason for transfusion of blood or blood components has been explained and discussed with the patient. This includes discussion of valid alternatives to transfusion and the option to refuse.

STATUS: **Not met**

Informal feedback from a sample of patients who had received a transfusion has shown that the majority of those patients were aware of the reason for their transfusion. However, audit of the patients' notes demonstrated that the reasons for transfusion were not always documented and that notes of discussion between the clinician and the patient about alternatives to transfusion were not always present. Completeness of the patient notes, as identified by audit, was variable across NHS Highland and the review team encouraged the board to standardise documentation of the pre-transfusion discussion.

2a.2: Leaflets explaining the risks and benefits of, and alternatives to, transfusion are readily available for patients who may require to be, or have been transfused.

STATUS: **Met**

The national patient information leaflets: Receiving a Transfusion: Information for Patients and Relatives; Red Cell Transfusion: Information for Doctors and Nurses; and Preventing Rhesus Disease in Your Baby: Information for Pregnant Women with Rhesus Negative Blood, are readily available from ward managers. Each hospital adds a label to leaflets providing a local contact name. Copies of these leaflets are sourced from NHS National Services Scotland and the publications are available from them in large print, Braille (English only), audio tape and in different languages. Interpretation and translation services are also available throughout NHS Highland.

As part of their BBTP training, staff are encouraged to use the leaflets and it was reported that leaflets are to be made available on the NHS Highland intranet, although this is not always readily accessible for all staff groups.

2a.3: Where pre-transfusion discussion is not possible (eg in an emergency) there is a system, compatible with the patient's clinical needs, to investigate and act in accordance with the patient's treatment preferences. This includes compliance with an advance decision document.

STATUS: **Not met**

There is no formal NHS Highland policy for identifying patients who might have an advance decision document and no centralised repository for any advance directives.

In the Argyll & Bute CHP area, there is an alert form and sticker included in the patient notes which identify that a patient has an advance directive.

Staff reported that work on a draft policy had been abandoned as a result of the complexity of associated legal issues. At the time of the review visit, the admissions system did not allow a search for such information, although it would indicate any special treatment plans that had been entered for known patients. No adverse events or patient complaints have arisen from non-compliance with advance decisions.

The review team encouraged the board to continue its work on an advance directive policy with specific reference to blood transfusion and to consider including an alert in the proposed pilot study of bar-coded wristbands.

2a.4: When pre-transfusion discussion has not taken place, the reasons for transfusion (based on risks and benefits) are discussed with the patient and written information offered retrospectively.

STATUS: **Not met (insufficient evidence)**

The review team could not determine from the evidence available whether retrospective discussion on the reasons for transfusion had taken place with patients. Staff reported that audit against this criterion had not been possible as it was difficult to identify from a patient's notes whether they had been unconscious at the time of their blood transfusion.

Standard 2b: Clinical Management – Pre-Transfusion

Standard Statement
Positive patient identification at the time of sampling and the use of a minimum identification data set on samples and request forms is essential for pre-transfusion testing and blood component requests.

NHS Highland

Essential Criterion

2b.1: Blood samples for transfusion purposes are obtained and labelled in accordance with local protocols, which are based on national guidelines.

STATUS: **Not met**

Blood samples for transfusion purposes are obtained and labelled in accordance with local protocols and supplementary training materials, although they do not include gender as part of the minimum identification data set. The protocols and training materials emphasise the importance of obtaining identification information directly from the patient and prohibit pre-labelling of sample tubes.

The review team commended the use of the T-number system (as described in standard criterion 1c.1) and noted that this was also in use by GPs and in community hospitals that have been provided with wristbands and the uniquely numbered blood transfusion request forms.

Standard 2c: Clinical Management – Pre-Transfusion

Standard Statement
Blood and blood component prescribing is the responsibility of a qualified practitioner.

NHS Highland

Essential Criteria

2c.1: All prescriptions for blood and blood components are signed by a qualified practitioner.

STATUS: **Met**

Audit throughout NHS Highland has demonstrated that prescriptions for blood and blood components are being signed by a qualified practitioner.

2c.2: Blood and blood component prescriptions specify: blood component to be administered; number of units (millilitres in paediatric patients) to be transfused; duration of transfusion; any special requirements; and any special instructions.

STATUS: **Not met**

All blood and blood component prescription forms in NHS Highland have space to specify the blood component to be administered, the number of units, the duration of transfusion and any special requirements or instructions.

Audit of the completeness of the forms identified that, in the Argyll & Bute CHP area, the dedicated prescription forms were not always being used and the time of transfusion was not always specified. In the North Highland Boundary, audit of the completeness of prescriptions demonstrated compliance with this standard criterion.

Standard 3a: Clinical Management – Hospital Transfusion Laboratory

Standard Statement
Laboratory operations comply with current regulatory requirements.

NHS Highland

Essential Criteria

3a.1: All transfusion laboratories within the NHS board are accredited by Clinical Pathology Accreditation (UK) Ltd (CPA) or equivalent and are compliant with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements.

STATUS: **Not met**

The NBTS transfusion laboratory in Raigmore Hospital is accredited by the Clinical Pathology Accreditation (UK) Ltd (CPA). At the time of the review visit, the Lorn & Islands District General Hospital transfusion laboratory had recently been assessed for CPA accreditation and conditional status is in place until the certificate is received. Belford Hospital has applied for CPA accreditation and is awaiting an inspection date. Caithness General Hospital transfusion laboratory is not CPA accredited. The operations of all these laboratories are accepted as in general compliance with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements.

The NHS Greater Glasgow and Clyde transfusion laboratories in Inverclyde Royal Hospital and the Royal Alexandra Hospital are both accredited by the CPA and are compliant with MHRA requirements.

3a.2: Competency-based training and assessment systems are in place and training records are maintained.

STATUS: **Met**

All transfusion laboratory staff throughout NHS Highland, the Royal Alexandra Hospital and Inverclyde Royal Hospital participate in structured training programmes which are competency-based. Assessment systems are in place and training records are maintained in each laboratory area. The review team commended the quality of the laboratory training documentation.

Standard 3b: Clinical Management – Hospital Transfusion Laboratory

Standard Statement
Procedures are in place to optimise blood use and minimise wastage.

NHS Highland

Essential Criteria

3b.1: Protocols endorsed by the HTC are in place, including but not limited to: the maximum surgical blood ordering schedule (MSBOS); massive blood loss; major incidents; and emergency blood management arrangements.

STATUS: **Met**

Procedures are in place throughout NHS Highland to optimise blood use, and blood wastage is monitored by the NBTS and reported to each HTC. Maximum surgical blood ordering schedules are in use in the North Highland Boundary and Argyll & Bute CHP area and protocols for blood management in response to major haemorrhage are followed.

NHS Highland has recently formalised an NHS Highland major incident plan, with Raigmore Hospital as the control hospital. The NHS Highland major incident plan has been integrated with the NBTS major incident plan. Each of the peripheral/support hospitals in NHS Highland has a similar major incident and major emergencies plan tailored to local geography and facilities.

EBMA are described in standard criterion 1d.1.

3b.2: There is a stock management system to eliminate excess inventory and reduce waste, supported by an information technology (IT) system.

STATUS: **Met**

Standard operating procedures are in place to cover the maintenance of all blood bank stocks across NHS Highland and transfer of stocks between hospital transfusion laboratories. This supports efficient use of stocks and full traceability of all units. NBTS use the SNBTS national clinical information technology (IT) system (PROGESA) and other IT systems are in use in the other blood banks. It was reported that a commercially available barcode blood audit release system (BARS) will be introduced to blood fridges in the North Highland Boundary by the end of 2007. The review team identified that this implementation would be a challenge for the board.

Due to the unique geography of the board, contingency stocks are needed in some areas as the time taken for transport of blood and blood components can be considerable. Emergency stocks of O RhD negative blood are held in hospitals

throughout NHS Highland, although none is held in Islay Hospital or the Dunaros Community Hospital, Isle of Mull.

3b.3: In collaboration with clinical specialties, laboratory staff participate in audit of transfusion issues.

STATUS: **Met**

NHS Highland laboratory staff participate in the regular schedule of audit activity including traceability. Lorn & Islands District General Hospital reported 100% traceability for the 12 months prior to the review visit and this was commended by the review team.

Standard 4a: Clinical Management – Blood and Blood Component Collection, Administration and Monitoring

Standard Statement
Positive patient identification is performed against the blood component and any accompanying documentation at every stage of the clinical transfusion process.

NHS Highland

Essential Criteria

4a.1: Only staff who have completed the BBTP continuing education programme (or equivalent) appropriate to their role can participate in the clinical transfusion process.

STATUS: **Not Met**

NHS Highland's policy is that only staff who have undertaken the BBTP Level 1: Safe Transfusion Practice training may be permitted to handle blood products. However, the proportion of staff that had been trained in some outlying areas was not at a high enough level to ensure that only trained personnel were rostered to cover blood transfusion.

A rolling training programme is in place which is led by the transfusion practitioners who maintain registers of staff trained, staff requiring re-training every 2 years and staff yet to be trained. The mandatory training can be delivered in face-to-face sessions, with a self-directed learning pack or using the interactive e-learning website. Internet access is problematic in some areas of Argyll & Bute and the review team encouraged the board to ensure that all staff and GPs could access the internet at all reasonable times. There are trained transfusion trainers in all areas of NHS Highland and a very high proportion of nursing, medical, ancillary and relief staff have completed the training. Each individual who has received training completes a questionnaire to assess their theoretical knowledge and an achievement certificate is issued if individuals achieve a pass. A clinical practical competency has also been developed and is documented.

The consultant-level staff group has the lowest proportion of trained staff and the board medical director has written to all consultants to encourage them to complete the online training. The consultant haematologists have completed training. Staff reported that inclusion of a check on participation in BBTP training will be trialled as part of the annual appraisal system for consultants.

Tailored training sessions are delivered to phlebotomists and porters, and training materials have been prepared for the introduction of the BARS system in the North Highland Boundary. In outlying areas, GPs deliver the training, and online training is actively promoted through initiatives such as the open learning centre in Dunoon which the board is considering to duplicate in Bute.

The review team commended the extent and quality of the training programme to date.

4a.2: The minimum identification data set is recorded on all transfusion documentation (see standard criterion 1c.1).

STATUS: **Not met**

Audit of completeness of the minimum data set on all blood transfusion documentation found that a unique identification number was not being recorded in all cases. Staff reported that the introduction of new label printers into all areas across NHS Highland should lead to better compliance with this criterion.

At the time of the review visit, gender was not being recorded on all blood transfusion documentation. Staff reported that a new identification policy had been drafted which would apply across NHS Highland. This new policy, which was in the process of consultation at the time of the review visit, includes gender as part of the minimum identification data set for use at every stage of the transfusion process.

Standard 4b: Clinical Management – Blood and Blood Component Collection, Administration and Monitoring

Standard Statement
Patients are monitored for any adverse events or reactions during and after the transfusion process as clinically indicated.

NHS Highland

Essential Criteria

4b.1: Patients are monitored according to hospital transfusion policy and any untoward events (including suspected adverse reactions) are immediately clinically managed and promptly reported to the HTL.

STATUS: **Not met**

Policies are in place across NHS Highland for monitoring of patients following a blood transfusion and the monitoring charts in use clearly describe transfusion reactions and the action to be taken should such a reaction occur. In the North Highland Boundary, the NBTS is notified of any reaction and issues a transfusion reaction form for completion by the medical officer responsible for the patient.

Audit of the completeness of the documentation of observations on the monitoring charts identified that the observations at 15 minutes post transfusion were not consistently being recorded in the Argyll & Bute CHP area. This was further identified as a re-training issue and is being addressed by the transfusion practitioner.

4b.2: Serious adverse events and near miss incidents are reported on the clinical incident reporting system in accordance with local protocols.

STATUS: **Met**

A robust clinical incident reporting system is followed in NHS Highland, and all serious adverse events and near miss incidents related to blood transfusion are followed up in accordance with local protocols. The review team noted that there was clear evidence of learning from these events and involvement of all relevant staff.

4b.3: Reports of serious adverse events or reactions and near miss incidents are submitted to Serious Adverse Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative by the relevant staff.

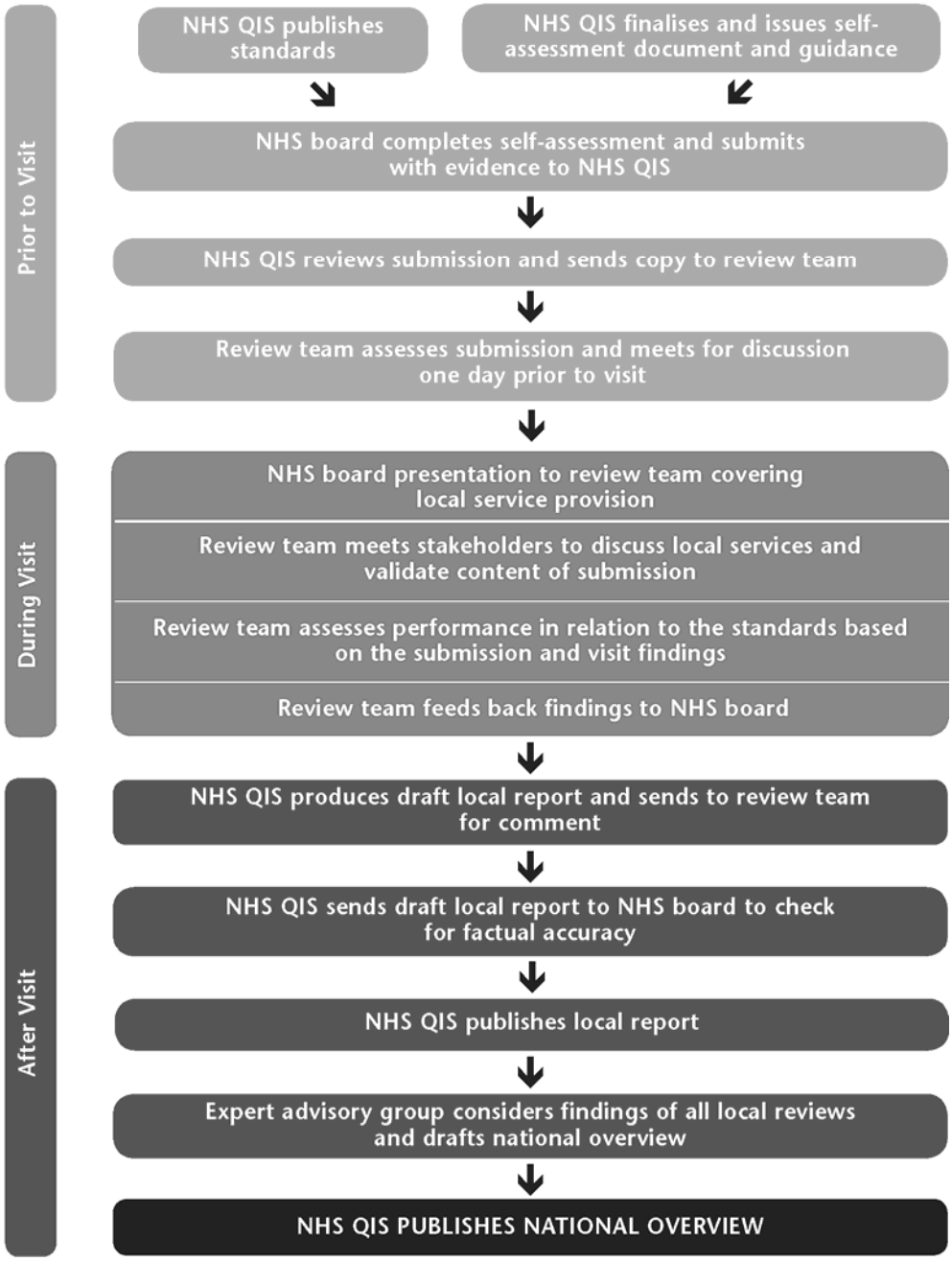
STATUS: **Met**

There are designated individuals in each transfusion laboratory with the responsibility to report serious adverse events or reactions and near miss incidents to Serious Adverse Blood Reactions and Events (SABRE) and the Serious Hazards of Transfusion (SHOT) initiative.

Appendix 1 – Glossary of abbreviations

Abbreviation	
BARS	Blood Audit Release System
BBTP	NHSScotland Better Blood Transfusion Programme
BCSH	British Committee for Standards in Haematology
CHP	community health partnership
CPA	Clinical Pathology Accreditation (UK) Ltd
EBMA	emergency blood management arrangements
GP	general practitioner
HTC	hospital transfusion committee
HTL	hospital transfusion laboratory
IT	information technology
MHRA	Medicines and Healthcare products Regulatory Agency
MSBOS	maximum surgical blood ordering schedule
NBTS	North of Scotland Blood Transfusion Service
NHS QIS	NHS Quality Improvement Scotland
SABRE	Serious Adverse Blood Reactions and Events
SHOT	Serious Hazards of Transfusion
SNBTS	Scottish National Blood Transfusion Service
WOSBTS	West of Scotland Blood Transfusion Service

Appendix 2 – Review process



Appendix 3 – Details of review visit

The review visit to NHS Highland was conducted on 20 September 2007.

Review team members

Mr Ian Stephenson (Team Leader)
National Pathology Manager, BUPA Hospitals

Mr Kenneth Jones
Public Partner, Lothian

Mrs Betty Kyle
Senior Biomedical Scientist, NHS Lanarkshire

Mr Ron Marsh
Public Partner, Grampian

Dr Stephen Rogers
Consultant Haematologist, NHS Fife

Ms Lynn Stout
Transfusion Practitioner, NHS Grampian

Ms Jane Wilson
Ward Manager, NHS Lanarkshire

NHS Quality Improvement Scotland Staff

Mrs Morag Kasmi
Senior Project Officer

Dr Avril MacLennan
Project Officer

Ms Angela Sutherland
Project Officer (Observer)

During the visit, members of the review team met with consultant and nursing staff, transfusion laboratory staff, transfusion practitioners and support staff from across the NHS board area.

The composition of each team varies, and members have no connection with the NHS board they are reviewing. Both of these factors facilitate the sharing of good practice across NHSScotland, and ensure that each review team assesses performance against the standards rather than make comparisons between one NHS board and another. The team remit does not include reviewing the work of individual healthcare professionals, variations in practice (and potential quality) within a service will be encountered and subsequently reported.

You can read and download this document from our website.
We can also provide this information:

- by email
- in large print
- on audio tape or CD
- in Braille, and
- in community languages.

NHS Quality Improvement Scotland

Edinburgh Office
Elliott House
8-10 Hillside Crescent
Edinburgh EH7 5EA

Phone: 0131 623 4300
Textphone: 0131 623 4383

Glasgow Office
Delta House
50 West Nile Street
Glasgow G1 2NP

Phone: 0141 225 6999
Textphone: 0141 241 6316

Email: comments@nhshealthquality.org
Website: www.nhshealthquality.org