

NHS Shetland

Local Report ~ March 2008

Blood Transfusion

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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.

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ISBN 1-84404-467-X

First published March 2008

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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 Shetland'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 Shetland** on **14 November 2007** can be found in Appendix 3.

2 Summary of findings

2.1 Overview of local service provision

Shetland is an island group situated north of mainland Scotland and has a population of around 21,880¹. Many of the population live in the town of Lerwick, although a significant proportion live in rural areas.

Local NHS system and services

Shetland NHS Board has the same functions as mainland NHS boards. It is responsible for improving the health of the local population and for the delivery of the healthcare required. The NHS board provides strategic leadership and has overall responsibility for the efficient, effective and accountable performance of the NHS in Shetland.

At the time of the review visit, NHS Shetland provided acute and specialist services throughout its division: Gilbert Bain Hospital, Lerwick, provides acute care and Montfield Hospital, Lerwick, provides care for the elderly. There are ten health centres and one community health partnership (CHP) which provide a range of primary care dentistry, pharmacy and optician services. There is also a community mental health service available.

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

There are two hospital blood banks accommodated within Gilbert Bain Hospital, one stock blood bank which is located in the laboratory and one issue blood bank located in a separate area of the laboratory close to the accident and emergency (A&E) department. NHS Shetland's blood bank stocks are agreed and supplied by Aberdeen and North East Scotland SNBTS (NEBTS), based in Aberdeen.

In the 12 months prior to the review visit to NHS Shetland, 271 red blood cell units consisting of: 111 O RhD positive, 60 O RhD negative, 95 A RhD positive and five B RhD negative units had been transfused. One unit of platelets and one unit of fresh frozen plasma cryoprecipitate were also transfused during this period.

The NHSScotland Better Blood Transfusion Programme (BBTP) is supported by a regional transfusion practitioner on an ad hoc basis through the SNBTS. A hospital trained nurse assists delivery of blood transfusion training in-house.

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>

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

NHS Shetland has a multidisciplinary hospital transfusion committee (HTC), which was formed in 1998 and is accountable to the clinical governance co-ordinating group (CGCG). The HTC has recently undergone a series of changes in chair representation resulting in the group not meeting as regularly as in the past to oversee all aspects of blood transfusion. However, a new chair person is now in post, terms of reference for the committee have been developed and the committee had reconvened in October 2007.

At the time of the review visit, the HTC did not have a dedicated transfusion practitioner as a member of the group. This role is currently provided by a registered nurse and the review team encouraged the board to prioritise securing transfusion practitioner representation onto the committee.

There was clear evidence of multidisciplinary audit being undertaken throughout NHS Shetland. The board has a conducting audit and disseminating procedure in place which is a step by step guide for staff undertaking audit. A clinical governance support team (CGST) further provides audit and clinical governance education sessions for staff participating in audit. Fact sheets on audit issues can also be accessed and downloaded from the CGST intranet site. The CGCG oversees all audit activity. The board provided clear documentation which confirmed audit findings are disseminated to stakeholders and other interested parties. However, the review team acknowledged that, in the absence of a dedicated blood transfusion practitioner participating in audit and implementing the BBTP training, meeting this standard criterion remained a challenge for the board.

A hospital trained nurse promotes and delivers the BBTP. The nurse is a member of the HTC and provides updates on training activity at the HTC meetings. In the absence of lead clinician support and a dedicated blood transfusion practitioner to support implementation of the BBTP, the review team recognised and commended the training achievements to date.

Adverse and near miss incidents relating to blood transfusion practice are reported and managed in accordance with local protocols across NHS Shetland. There are good procedures in place to provide feedback on lessons learned and evidence of changes in practice being implemented in response to identified incidents.

NHS Shetland has a robust traceability system in place which ensures that every unit of blood or blood component received into the laboratory is traceable. A standard operating procedure (SOP) supports staff in the management of unmistakable traceability. Information on this process is stored for the recommended 30 years.

Staff engaged in the blood transfusion process within NHS Shetland are trained to establish and maintain patient identification at every stage of the blood transfusion

process. However, at the time of the review visit, staff did not include recording patient gender on identification details at every stage of the blood transfusion process. The requirement to include gender on patient name bands and for the board to develop a risk-assessed form of identification were recommended by the review team.

NHS Shetland has a policy to support emergency blood management arrangements (EBMA).

Clinical management – pre-transfusion

Audit data presented to the review team highlighted that discussion between the clinician and the patients regarding blood transfusions were not routinely recorded in the patients' notes. A new nursing care plan is being developed which includes a section for recording transfusion discussion with patients. Staff were confident that implementation of the care plan will address this issue.

Leaflets explaining the risks and benefits of, and alternatives to, transfusion are attached to the patient's care plan. A wide range of leaflets are available in wards and in the A&E department and there is good access to translation services when required.

In emergency situations where pre-transfusion discussion is not possible, staff would endeavour to establish the identity of the patient by checking their personal belongings and making enquiries with accompanying family or friends. Hospital notes would also be checked for advance directives to ensure that individual choices in respect of blood transfusion options are respected.

Prescriptions for blood and blood components are adequately detailed and signed by a qualified practitioner.

Clinical management – hospital transfusion laboratory

All transfusion laboratories within NHS Shetland are accredited by the Clinical Pathology Accreditation (UK) Ltd (CPA) and are compliant with the requirements of the Medicines and Healthcare products Regulatory Agency (MHRA).

NHS Shetland has a competency-based training and assessment system in place and training records are maintained.

Blood stock management is controlled using the SNBTS laboratory system and there is an SOP in place to support the maintenance of emergency use O RhD negative blood. Units of O RhD negative blood are rotated regularly and expiry dates tracked.

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

The blood transfusion trainer is responsible for the BBTP continuing education programme. Local training is delivered through one-to-one sessions or staff can access the elearning materials through the OrasGold™ online recording and assessment system which supports flexible learning within NHSScotland. At the time of the review visit, only three members of staff had not received BBTP theoretical training. The review team commended the board for its training plan and for its achievement in training such a high number of medical staff, particularly when there had been difficulties securing lead clinician and transfusion practitioner support.

The transfusion request form was noted by the review team to be well designed, particularly in relation to the large space available for writing information such as the community health index (CHI) number as part of the data set information.

NHS Shetland did not have a patient identification policy in place at the time of the review visit. Evidence showed that the required minimum data set including gender was not recorded on all transfusion documentation. The board was encouraged by the review team to introduce a policy that included gender as part of the minimum data set.

Patients are monitored for any adverse events or reactions during and after the transfusion process. However, the review team noted inconsistencies in the guidance used by staff and recommended the board update its blood transfusion procedure document to reflect current practice and avoid confusion.

There are reporting systems in place across NHS Shetland for reporting near miss incidents and events to Serious Hazards of Transfusion (SHOT) and Serious Adverse Blood Reactions and Events (SABRE) with mechanisms to provide feedback on lessons learned to staff.

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 Shetland

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: Not met

NHS Shetland has a multidisciplinary hospital transfusion committee (HTC) which was established in 1998. The group has recently undergone a succession of chair resignations which has resulted in the committee not meeting as often as required in the past few years. However, it was noted that the consultant anaesthetist has recently been appointed as chair of the group and the committee had reconvened in October 2007. The review team was informed that the terms of reference for the committee have been updated to reflect current practice, and a standing item on the new agenda includes the date of next meeting to support membership attendance. The medical director sits on both the HTC and the clinical governance committee.

At the time of the review visit, NHS Shetland did not have a dedicated blood transfusion practitioner as an active member of the HTC. A hospital trained nurse provides the role of in-house blood transfusion staff trainer and provides feedback on NHSScotland Better Blood Transfusion Programme (BBTP) Level 1: Safe Transfusion Practice training activity to the HTC. The review team encouraged the board to prioritise a review of its regional transfusion practitioner and lead clinical support arrangements as soon as possible to ensure that adequate transfusion practitioner time and support is made available to assist with delivery of the BBTP and participation in multidisciplinary audit.

At the time of the review visit, NHS Shetland did have a clear reporting and accountability structure in place to ensure that minutes of committee meetings are issued to the clinical governance co-ordinating group and clinical governance committee, the chief executive control assurance group and the board.

The review team considered the board not to have met this standard criterion as there was insufficient HTC activity over the past few years.

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

NHS Shetland participates in multidisciplinary audit. Audit activity is overseen by the CGCG. This group is responsible for reviewing the yearly ongoing audit and survey list which records audit activity and highlights potential projects. The list is updated quarterly and the CGCG meets every 6 weeks to discuss and consider audit progress and proposals.

The board has formal procedures in place for conducting audits and disseminating results within NHS Shetland. A clinical governance support team (CGST) has introduced educational sessions for staff on audit and clinical governance practices and has an intranet site which contains fact sheets on a variety of issues relating to carrying out an audit. The review team was informed that completed audit reports are available on request from either the project lead or from the CGST. The audit and survey list is available to staff via the intranet, and contains a brief summary of audit findings and actions planned. This list is routinely distributed to the clinical governance committee.

The review team did, however, acknowledge that the absence of a dedicated transfusion practitioner participating in multidisciplinary audit and in promoting the education and training of all clinical and support staff involved in blood transfusions to be a considerable challenge for the board in supporting the meeting of this standard criterion.

The review team concluded that the HTC minutes did not demonstrate that the existing blood transfusion protocols and changes in practices, as a result of audit, were being considered and implemented on a regular basis.

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

STATUS: Not met

The review team was informed that NHS Shetland's HTC considered appointing a hospital transfusion team (HTT) to lead the implementation of BBTP. However, due to limited staffing resources within the board, the HTC members agreed to undertake the role of the HTC and the HTT. At the time of the review visit, NHS Shetland did not have a dedicated blood transfusion practitioner in post, however, a nominated hospital staff nurse undertakes the role of trainer and is responsible for ensuring all staff involved in the blood transfusion process are BBTP trained. The staff nurse provides updates on BBTP training figures at HTC meetings. The review team noted that, as regular HTC meetings had not been taking place, it was unable to

confirm that there was effective collaboration between the HTC and the clinical governance function for implementation of the BBTP.

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

At the time of the review visit, board staff informed the review team of the new draft incident reporting procedures in place. The incident reporting, investigation and management policy clearly details the actions required by staff to effectively record, investigate and manage adverse or near miss incidents across NHS Shetland. The board uses an incident reporting form (IR1) to record all clinical and non-clinical incidents prior to initial review by the risk and incident co-ordinator and escalation to the HTC chair.

All incidents and feedback are documented in the quarterly board-wide incident report which is circulated to various heads of departments for dissemination to their staff, CGCG, health and safety committee and standing committees for clinical governance and the controls assurance group. As part of BBTP training, staff are aware of the incident reporting procedures to follow. It was also noted that Serious Adverse Blood Reactions and Events (SABRE) and Serious Hazards of Transfusion (SHOT) are a standing item on HTC agendas.

The review team was reassured that NHS Shetland has a robust incident reporting system in place which includes implementing changes in practice where necessary.

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 Shetland

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 Shetland has a standard operating procedure (SOP) in place to provide staff with guidance on blood transfusion traceability. The SOP is part of the NHS Shetland blood transfusion procedures document. The board use a 'bag and tag' system which issues a traceability label from the pre-transfusion stage. The label is tracked throughout the journey of the blood until its return to the laboratory to confirm transfusion of the blood to the patient. The returned section of the traceability label is electronically scanned and the information securely stored both in paper and electronic form for the recommended period of 30 years. The review team commended NHS Shetland on its traceability system. NHS Shetland undertakes annual audit of its laboratory services which includes monthly blood transfusion traceability.

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 Shetland

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, NHS Shetland did not have a patient identification policy. Board staff reported that on admission, adult patients are issued with an identity wristband which contains surname, forename, date of birth and community health index (CHI) number. For neonatal infants requiring a transfusion, two identification bands (one each to be applied to the wrist and ankle) detail the sex of the infant, the mother's name, weight and time of birth. However, it was noted that neonatal infants would only receive a blood transfusion in an emergency situation.

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 review team was informed that NHS Shetland does not transfuse day patients. Adult patients requiring a blood transfusion are admitted to hospital and have a single identity wristband applied that includes the minimum data set (excluding gender). Neonatal infants and children would only receive a blood transfusion in an emergency situation and the midwife would be responsible for preparing two identification bands (one each to be applied to the wrist and ankle) that include the sex of the baby, mother's name and information relating to the birth. Identity details would be confirmed with either the mother or father or an accompanying relative before application. At the time of the review visit, NHS Shetland did not have a risk-assessed form of identification policy.

The review team encouraged NHS Shetland to develop a formal procedure and include this in its annual audit action plan.

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: Met

NHS Shetland has guidelines for health professionals on advance statements about medical treatment which outline the procedures for staff to follow when a patient informs them of their wishes not to be transfused. The procedure involves recording the discussion with the patient and ensuring a copy of the documentation is placed in the front of the patient's clinical notes. On admission, all medical and nursing staff would be informed of the existence of an advance directive should one be available. In cases where the patient is admitted to hospital unconscious, or is unable to confirm their own identity, accompanying family or friends would be consulted to establish the patient's identity and any known special considerations. There are clear step by step guidelines in place for patients who wish to write an advance directive. Audit of blood transfusion prescriptions confirmed compliance with patient specific transfusion requirements.

NHS Shetland's CGCG considered the introduction of distinctive wristbands for individuals with specific needs or requirements, however, it concluded that it would follow the new National Patient Safety Agency (NPSA) guidance for wristband identification when available. The board reported that the new administration system, which is to be implemented at the end of the year, will further assist positive patient identification as the system will provide printed wristbands.

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: Met

The NHS Shetland blood transfusion procedures document includes a section relating to identification of patients admitted via the accident and emergency (A&E) department. The procedure clearly states that if the identity of a patient cannot be confirmed because they are unconscious then the blood transfusion request form must include the A&E number, location and also the sex of the patient.

There is a board-wide policy in place for staff to use which details how to access the wide range of interpretation services available.

Standard 1d: Core Principles

Standard Statement

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

NHS Shetland

Essential Criterion

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

STATUS: Not met (insufficient evidence)

At the time of the review visit, staff reported that NHS Shetland had agreed a membership for its emergency blood management arrangements (EBMA) group. However, it had not formally met since its establishment, as there had not been an occasion where emergency blood was required. Staff reported that prior to the formation of the EBMA group, the HTC and the chief executive or their deputy would meet to discuss EBMA as part of their remit.

The blood transfusion procedures document details the EBMA and the review team was informed that NHS Shetland has been assured by the SNBTS that emergency blood supplies will be made available when required. Blood shortages across the board would be identified and actioned by the laboratory services staff responsible for monitoring blood stocks.

The review team concluded that there was insufficient evidence available at the time of the visit to confirm compliance with HDL(2005)25 recommendations.

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 Shetland

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

A re-audit of the blood transfusion prescription standards in September 2007 highlighted that documented evidence of a discussion explaining the reason for possible issues associated with, or alternatives to, blood and blood products for transfusion had not always been recorded in the patient's notes. However, staff reported that the introduction of a new nursing care plan, which includes a section for recording details of transfusion discussions with the patient, is due to be implemented, and it is envisaged that this will improve written evidence.

NHS Shetland informed the review team that it is continuously looking at alternatives to transfusion and patient wishes were noted to be respected.

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

A selection of national patient leaflets relating to blood transfusion: Receiving a Transfusion, Information for Patients and Relatives; Preventing Rhesus Disease in Your Baby: Information for Pregnant Women with Rhesus Negative Blood; and Red Cell Transfusion, Information for Doctors and Nurses are freely available and accessible in hospital wards and departments throughout NHS Shetland. Patient information leaflets are also attached to individual patient care plans.

Throughout NHS Shetland, staff can make local requests to have leaflets translated and printed in a specific language if required, via the CGST who would search for what was required or commission a translation if the leaflet was not currently available. There is good access to a wide range of interpreting services available through locally registered translators or the 24-hour Language Line provider. In addition, the Red Cross Emergency Multilingual Phrasebook is a useful tool used by staff to support patients who do not speak English or those with communication difficulties.

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: Met

NHS Shetland has a range of policies in place to support blood transfusion arrangements. In emergency situations, for example when a patient may be admitted to hospital unconscious, A&E staff ensure that measures are taken to try and establish the identity of the patient, by checking their personal belongings and asking any accompanying family or friends to confirm their identity. Hospital notes are also checked for advance directives. Staff reported that there have been very few occasions when pre-transfusion discussion has not taken place with patients in NHS Shetland. It was noted that staff are respectful and compliant with any known patient advance statements for preferred treatment options.

No formal complaints arising from non-compliance with advance decisions had been received by NHS Shetland staff since the introduction of the complaints procedure in April 2005.

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 acknowledged that staff recognise the importance of offering patients retrospective discussions regarding blood transfusions. The board recognises the need to introduce a policy which addresses documenting in the patient's medical notes that a post transfusion discussion had taken place. The review team was informed that the next review of the blood transfusion procedures document will include this as part of its update.

The review team encouraged the board to develop a separate policy to address this issue.

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 Shetland

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 routinely taken by hospital staff trained in this procedure following the NHS Shetland guidelines for taking blood and completion of transfusion request forms. Patient identification is checked prior to blood collection and labelling of the container by asking the patient to identify himself/herself and crosschecking the details on the patient's admission identification band.

The blood transfusion request form is completed and signed and it was noted that addressograph typed labels can be used, although all relevant identity details need to be present. The blood container is handwritten. The review team noted that, while the blood request form contains the required minimum data set including gender, at the time of the review visit, gender was not included in the minimum identification data set for the admission identification band and, therefore, positive patient identification could not be established through crosschecking.

Standard 2c: Clinical Management – Pre-Transfusion

Standard Statement

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

NHS Shetland

Essential Criteria

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

STATUS: Met

A blood transfusion prescription standards re-audit carried out in September 2007 confirmed full compliance with this standard criterion. The review team encouraged the board to implement the new updated prescription forms that are used across NHSScotland.

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: Met

The blood transfusion prescription standards re-audit undertaken in September 2007 confirmed that the blood and blood component prescriptions specify: blood components to be administered; number of units to be transfused; duration of transfusion; any special requirements; and any special instructions.

Standard 3a: Clinical Management – Hospital Transfusion Laboratory

Standard Statement

Laboratory operations comply with current regulatory requirements.

NHS Shetland

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: Met

NHS Shetland is accredited by Clinical Pathology Accreditation (UK) Ltd (CPA) and is fully compliant with the Medicines and Healthcare products Regulatory Agency (MHRA) requirements. The board also has a service level agreement (SLA) in place with the Aberdeen and North East Scotland SNBTS (NEBTS).

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

STATUS: Met

The review team was informed that NHS Shetland has a formal training programme in place. BBTP Level 1: Safe Transfusion Practice. The BBTP elearning materials are accessed through the OrasGold™ online recording and assessment system which supports flexible learning within NHSScotland is available to all staff and supported by one-to-one training which is provided by the in-house staff blood transfusion trainer. Only fully qualified staff are permitted to work in the blood bank areas, and all biomedical scientists are trained and assessed in laboratory procedures relating to blood transfusion by the regional transfusion centre. Individualised records of training which include competency levels are documented and maintained.

The review team acknowledged the good competency-based training and assessment systems in place, and those being considered for implementation across NHS Shetland as being a strength of the board.

Standard 3b: Clinical Management – Hospital Transfusion Laboratory

Standard Statement

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

NHS Shetland

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: Not met

The NHS Shetland blood transfusion procedures document includes guidelines for optimising blood use and minimising wastage (maximum surgical blood ordering schedule and blood and component therapy in massive blood loss). However, at the time of the review visit, it was noted that whilst an emergency blood management group (EBMG) had been established, this group had not yet formally met because there had not been an occasion in NHS Shetland when emergency blood had been required for some time. Blood wastage rates are monitored and reported to the SNBTS. NHS Shetland is establishing a formal procedure for reporting wastage rates to the HTC.

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

STATUS: Met

Board staff reported that the SNBTS blood stock management team had agreed appropriate levels of blood to be supplied and maintained within NHS Shetland. The senior biomedical scientist manages the blood stock level on a daily basis (week days only) and provides SNBTS with an electronic report on stock status. The board has an information technology (IT) system in place to support monitoring and control of all stock levels that provides a full audit trail of all units entered onto the system. The review team noted that there is clear guidance contained in the blood transfusion procedures document for the issue and management of O RhD negative blood units for emergency use.

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

STATUS: Met

NHS Shetland provided good evidence to demonstrate that laboratory staff are actively involved in multidisciplinary local and national audit projects. Laboratory audit findings are submitted to the HTC and outcomes are disseminated to appropriate staff groups.

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 Shetland

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: Met

In the absence of lead clinician and transfusion practitioner support, the appointed in-house staff nurse is the blood transfusion trainer taking responsibility for implementing the BBTP. The staff nurse reports BBTP training activity to the HTC. The review team commended the training achievements to date and acknowledged the high number of staff (including medical staff) who had undertaken the BBTP theoretical training. At the time of the review visit, there were only a very small number of staff who required BBTP training and a date to complete staff training had been identified.

The BBTP training programme is delivered locally through either one-to-one sessions or staff can access BBTP elearning materials through the OrasGold™ online recording and assessment system for both Level 1 and 2 Safe Transfusion Practice modules. Staff training needs are identified as part of the personal development plan and authorised by line management and there is an NHS Shetland staff development policy.

Staff reported that due to the small staffing numbers involved in the blood transfusion services provided across NHS Shetland, laboratory staff were able to ensure that only BBTP trained staff participate in the blood transfusion process.

Individual staff training records are maintained and information on staff training is shared annually with the blood transfusion practitioner in NHS Highland.

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

STATUS: Not met

At the time of the review visit, the board did not include gender on all transfusion documentation as part of the minimum identification data set and there was no formalised patient identification policy in place. The review team acknowledged that NHS Shetland undertakes audit of completeness of transfusion documentation, but encouraged the board to develop an identification policy and to ensure this includes recording gender on all documentation as part of the required minimum data set.

The review team further commended the board on its newly designed blood transfusion request form which allows adequate space to include the patient's CHI number.

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 Shetland

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

At the time of the review visit, there were no audit data available to confirm compliance with this standard criterion. However, staff reported that a new core nursing care plan had recently been developed and implemented board-wide. The care plan, in conjunction with the blood transfusion procedures document, details the process for monitoring patients receiving a blood transfusion. Staff reported that, for each unit of blood transfused, the patient's temperature, pulse, and respirations are taken every 15 minutes for the first 30 minutes and then hourly thereafter until completion of the transfusion. In the event of a suspected adverse reaction, the infusion would immediately be stopped, the hospital transfusion laboratory informed and details of the reaction would be documented in the patient's notes.

The review team highlighted an inconsistency between the blood transfusion core nursing care plan and the blood transfusion procedures document in relation to the action required in cases where an adverse reaction occurred. The blood transfusion procedures document states that the drip rate of the blood transfusion should be slowed rather than stopped and the nursing care plan, which details the correct procedure, states that the transfusion should be stopped immediately. The review team recommended that the blood transfusion procedures document be updated as a matter of priority to reflect the correct practice and avoid confusion.

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

STATUS: Met

NHS Shetland has a formal incident reporting system in place and staff follow the guidance as detailed in the incident reporting, investigation and management policy. Blood transfusion incidents are recorded on IR1 forms and reported to appropriate managers, ward sister or head of department. An incident grading system is used to determine the urgency of the investigation and copies of all IR1 forms relating to blood transfusion are shared with the HTC committee for discussion. All incidents are investigated and actioned.

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

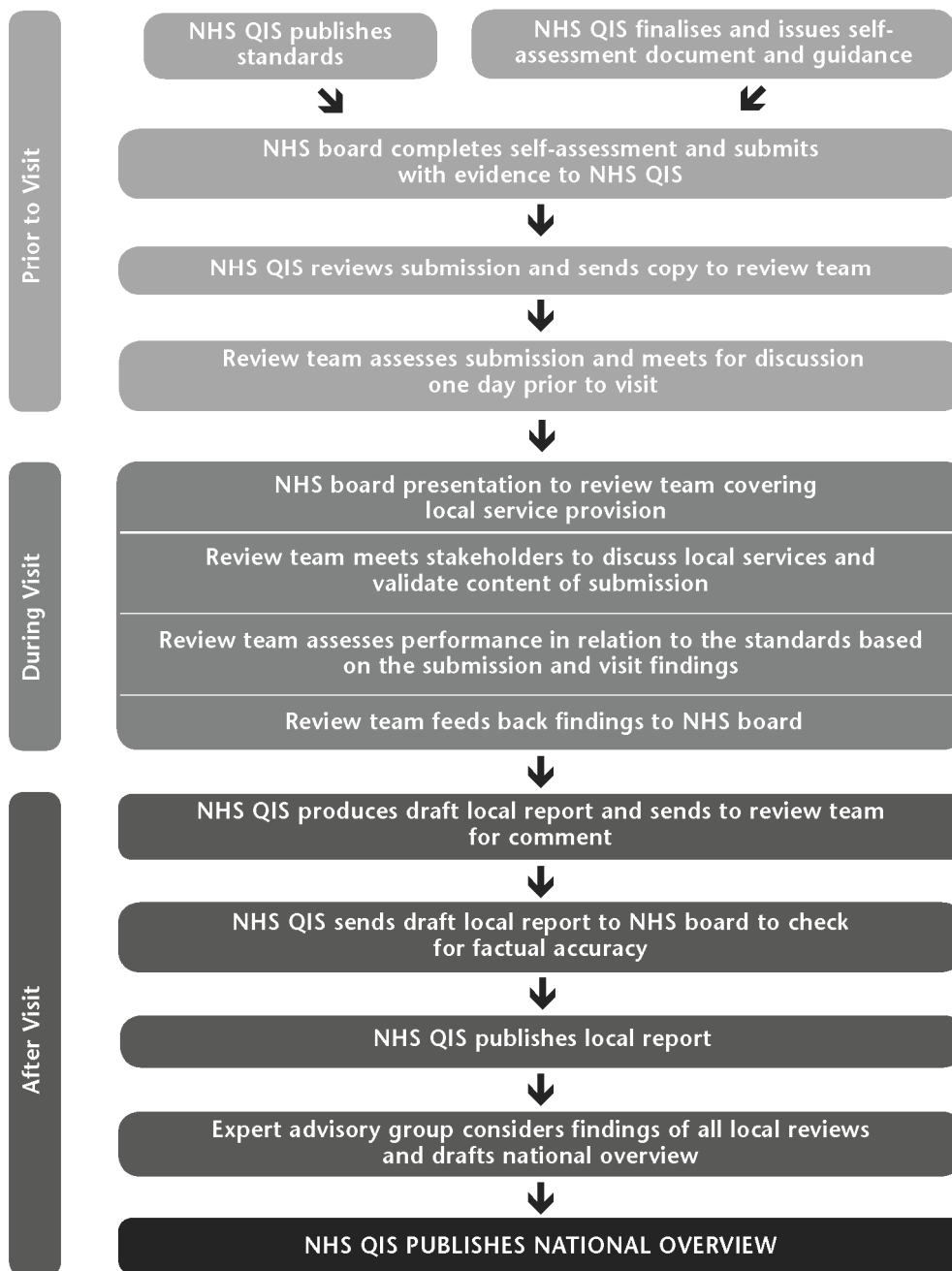
The NHS Shetland incident reporting, investigation and management policy clearly describes the procedures for reporting and recording serious adverse blood incidents and events. In the event of a serious incident occurring, the laboratory staff would be informed immediately of the incident and an IR1 form would be completed and forwarded to the risk management co-ordinator for investigation. The head of laboratory services is responsible for reporting and escalating to SABRE or SHOT as appropriate.

Appendix 1 – Glossary of abbreviations

Abbreviation

A&E	accident and emergency
BBTP	Better Blood Transfusion Programme
BCSH	British Committee for Standards in Haematology
CGCG	clinical governance co-ordinating group
CGST	clinical governance support team
CHI	community health index
CHP	community health partnership
CPA	Clinical Pathology Accreditation (UK) Ltd
EBMA	emergency blood management arrangements
EBMG	emergency blood management group
HTC	hospital transfusion committee
HTT	hospital transfusion team
IT	information technology
MHRA	Medicines and Healthcare products Regulatory Agency
MSBOS	maximum surgical blood ordering schedule
NEBTS	Aberdeen & North East Scotland, SNBTS (NEBTS)
NHS QIS	NHS Quality Improvement Scotland
NPSA	National Patient Safety Agency
SABRE	Serious Adverse Blood Reactions and Events
SHOT	Serious Hazards of Transfusion
SLA	service level agreement
SNBTS	Scottish National Blood Transfusion Service
SOP	standard operating procedure

Appendix 2 – Review process



Appendix 3 – Details of review visit

The review visit to NHS Shetland was conducted on 14 November 2007.

Review team members

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Team Leader

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.

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