

NHS Dumfries & Galloway

Local Report ~ *August 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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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 Dumfries & Galloway'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 Dumfries & Galloway** on **16 April 2008** can be found in Appendix 3.

2 Summary of findings

2.1 Overview of local service provision

Dumfries & Galloway is situated in south-west Scotland and has a population of around 148,030¹. The majority of the population live in towns and villages, of which Dumfries is the largest in the region, although a significant proportion live in rural areas.

Local NHS system and services

Dumfries & Galloway 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 Dumfries & Galloway.

Further information about the local NHS system can be accessed via the website of NHS Dumfries & Galloway (www.show.scot.nhs.uk/dghb).

The board's blood bank is located within Dumfries & Galloway Royal Infirmary (DGRI), Dumfries, with a satellite laboratory in the Galloway Community Hospital (GCH), Stranraer. Blood and blood components are supplied to DGRI by the West of Scotland SNBTS (Clinical Directorate) hospital transfusion laboratory based at Gartnavel General Hospital, Glasgow. DGRI supplies blood and blood components to GCH and the other four community hospitals: Moffat Hospital, Castle Douglas Hospital, Kirkcudbright Hospital and Newton Stewart Hospital.

In the 12 months prior to the review visit, approximately 5,000 red cell units, 300 plasma units and 300 platelets units were transfused at the DGRI and a further 250 red cell units were transfused in the community hospitals.

The NHSScotland Better Blood Transfusion Programme (BBTP) is assisted by a part-time transfusion practitioner supported by a team of trainers in the clinical areas.

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 Dumfries & Galloway has recently re-structured its hospital transfusion committee (HTC) and has ensured multidisciplinary membership with a revised set of terms of reference. Membership includes key staff groups from DGRI and GCH. The HTC chair also sits on the board's healthcare governance committee (HGC). The review team noted the significant work of the short-life working group towards compliance with the blood transfusion standards and its accomplishment of identifying those areas where the board required to undertake additional work.

Although there has been limited resource for audit activity, which has been driven by the transfusion practitioner, this has led to improvements in blood transfusion service provision. The board has piloted an integrated care pathway (ICP) for blood transfusion in adults and, following review of its use, and modification to further support compliance with the blood transfusion standards, will be implemented across NHS Dumfries & Galloway. A hospital transfusion team (HTT) has been established and will first meet in May 2008. One of its priorities will be to review recently collected audit data and make recommendations for the HTC to agree procedural improvements. The HTT will also prioritise the list of audits proposed by the transfusion practitioner and review the blood transfusion related nursing and midwifery procedures. The review team encouraged the board to bring all the key elements into a single blood transfusion policy.

The HTC, in collaboration with the clinical governance committee, implements the BBTP and has agreed to make the BBTP Level 1: Safe Transfusion Practice training mandatory, for those individuals involved in the blood transfusion process, from October 2008. The HTC reviews adverse events and near miss incidents relating to blood transfusion and initiates corrective and preventative measures. The review team noted the robustness of the incident management system. The HTC is currently revising its emergency blood management arrangements and the review team encouraged the board to set a date for a table-top exercise to test those arrangements.

NHS Dumfries & Galloway uses the SNBTS 'bag and tag' system and the Blood Track™ Courier system 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. Traceability compliance is consistently at 100%.

The minimum identification data set (surname, forename, sex, date of birth and unique number) is not used consistently throughout the blood transfusion process as gender is not always included. Audit has found that the full data set was not always being recorded on the wristband or on the prescription form. This is being addressed by the introduction of a barcoded wristband system and ICP for transfusion. The board has recognised the requirement to develop a board-wide patient identification policy.

Clinical management – pre-transfusion

At the time of the review visit, NHS Dumfries & Galloway had developed an ICP document for blood transfusion which was being piloted in selected areas across the board. However, the ICP document does not include a specific area to record transfusion discussions with patients regarding alternatives to transfusion and their option to refuse blood products. This issue will be addressed at the next meeting of the ICP short-life working group prior to presentation at the HTT and HTC meetings.

There is a wide range of leaflets and information for patients explaining the risks and benefits of blood transfusion available in the majority of clinical areas, and on the board's intranet site. The provision of information and consent was reported to be documented in the hospital notes, although the board was unable to provide evidence to support this practice at the time of the review. There is good access to translation services when required.

The review team was informed that in emergency situations when pre-transfusion discussion is not possible, medical staff respond in the best interests of the patient, initially checking their personal belongings to establish identity as timely as possible. Any advance directives or known individual choices are respected. However, it was noted that there is no formal structure in place to ensure, retrospectively, that a patient is informed that a transfusion has taken place. The review team acknowledged the commitment of a staff member within the board to address this area of work.

A draft report from a small audit showed that not all prescriptions for blood and blood components are adequately detailed and signed by a qualified practitioner. Staff reported that full implementation of the ICP within NHS Dumfries & Galloway would assist compliance with this standard criterion.

Clinical management – hospital transfusion laboratory

Laboratory operations in DGRI and GCH comply with current regulatory requirements. Competency-based training and assessment systems are in place and training records are well maintained.

Standard operating procedures are in use in the laboratory to optimise blood use and minimise wastage. At the time of the review visit, the maximum blood ordering schedule was being reviewed.

The blood stock management system assists to eliminate excess inventory and reduce waste. The Blood Track™ Courier system controls timed access to the blood fridges for collection and return of blood units using a barcoded swipe. Training in the use of Blood Track™ has raised awareness of the need to return unused blood to a fridge within 30 minutes of its removal and has assisted with reduction of wastage. The review team encouraged the board to add blood wastage to the HTC's agenda and commended 'cold-chain' control measures within DGRI and for transport of blood to GCH and the other community hospitals.

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

The review team was aware of a strong BBTP training culture within NHS Dumfries & Galloway. The transfusion practitioner is supported by a team of trainers with a trainer in each of the community hospitals. A high proportion of staff involved in the blood transfusion process have participated in the BBTP continuing education programme, although the consultant staff and laboratory staff are under represented. Completion of BBTP Level 1 training is being made mandatory and should ensure that all staff groups are made aware that positive patient identification against the blood and blood component and any accompanying documentation is required at every stage of the clinical transfusion process.

Audit of bedside practice for those patients receiving a transfusion has found that not all monitoring observations are being recorded during and after transfusion. Introduction of the ICP should help achieve improved compliance.

Serious adverse blood reactions and serious adverse events and near miss incidents are reported appropriately on the clinical incident reporting system and to the relevant authorities.

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 Dumfries & Galloway

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 Dumfries & Galloway established a hospital transfusion committee (HTC) several years ago which meets every 3 months. However, the attendance has not always been multidisciplinary and the chair was not fixed. At the time of the review visit, the medical director for acute services had recently been appointed as HTC chair and he confirmed, to the review team, his commitment to the HTC and to its multidisciplinary membership. The HTC chair also sits on the board's healthcare governance committee (HGC) and reported that the newly revised HTC terms of reference, including extended membership, had been agreed by the HGC. However, the review team did not see clear evidence of the HTC's accountability to the board via the clinical governance structure and recognised the challenge for the board to maintain multidisciplinary membership of the HTC.

In preparation for the review visit, the HTC and a short-life working group met monthly. The working group included the acting lead clinician for blood transfusion, the transfusion practitioner, the general manager for laboratories, the senior biomedical scientist (BMS) based at Dumfries & Galloway Royal Infirmary (DGRI) hospital transfusion laboratory and the board's quality manager. The adverse incident manager and a clinical governance facilitator were also included in the membership. The review team noted the significant work done by the group towards compliance with the blood transfusion standards and its accomplishment of identifying those areas where additional work was needed.

The community hospitals are represented at the HTC by the senior nurse manager, based at Galloway Community Hospital, who reported that she had adequate time to dedicate to the HTC and the communication of its activities to the other community hospitals. The review team encouraged the board to ensure representation from the West of Scotland Blood Transfusion Service (WOSBTS) at the HTC meetings and to consider introducing a standing agenda to include traceability, blood wastage rates, audit, and policies and procedures.

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

In 2005, NHS Dumfries & Galloway participated in the National Comparative Audit of Clinical Bedside Practice, funded by the NHSScotland Better Blood Transfusion Programme (BBTP). As a result, the transfusion practitioner cascaded the audit findings to key stakeholders and transfusion trainers and agreed a list of recommendations to reduce the risk of a wrong unit of blood being given or the risk of a patient suffering an unobserved transfusion reaction. This list included the implementation of a blood transfusion integrated care pathway (ICP) which was supported by the HTC. A short-life working group was set up to design the pathway and a pilot form was tested in selected clinical areas within DGRI in 2006/2007. The findings from the pilot are being reviewed and the form will be updated and introduced across the NHS board area. The review team highlighted this work as a strength of the blood transfusion service.

Limited resource has been available for the conduct of audit related to blood transfusion and the review team found minimal evidence of the HTC driving forward changes in practice as a result of audit findings. Such work has been led by the transfusion practitioner, assisted by the clinical audit support team. The foundation year tutor has also been supportive in identifying junior doctors to collect audit data and the associate nurse director arranged for nursing staff to participate in the data collection phase of the most recent wristband audit.

Staff reported that the board recognised the need for the HTC to set priorities within the audit programme which has been prepared by the transfusion practitioner. A hospital transfusion team (HTT) has been established and will review the most recent audit findings and agree recommendations to be presented to the HTC which will then agree corrective and preventative actions. The HTT will first meet in May 2008.

Training and education is a standing item on the HTC's agenda and it has agreed to make the BBTP Level 1: Safe Transfusion Practice training mandatory, for those individuals involved in the blood transfusion process, from October 2008, with each individual's training required to be revalidated every 2 years.

The review team found limited evidence of the HTC's involvement in the development, ratification and dissemination of blood transfusion guidelines and protocols. Staff reported that the HTC had recognised the need for a unified blood transfusion policy and that review of nursing and midwifery procedures would be included in the HTT work plan.

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

STATUS: Met

The HTC has been working towards meeting the BBTP objectives and key performance indicators and the review team recognised that the restructured HTC and the establishment of an active HTT would assist with this. The team noted that strengthened links with the HGC would further assist with the 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

All adverse events and near miss incidents related to blood transfusion are reported using a paper-based system to the adverse incident manager who informs the transfusion practitioner and involves them in the investigation of the event and subsequent development of an action plan. The transfusion practitioner would address any training needs with the individuals involved in the event/incident and the adverse incident manager gives them personal feedback on the outcome of the investigation, when possible. If trends are identified, a safety practice notice would be issued and the board plans to introduce an anonymised adverse event bulletin for board-wide issues. Staff reported that the paper-based system did not lend itself to good sharing of learning and anticipated that this would improve with the introduction of Datix (an electronic risk management reporting system).

The transfusion practitioner informs the HTC of adverse events and co-ordinates the reporting of serious adverse events and near miss incidents to relevant national bodies.

Monthly reports on all incidents, by department, are distributed to individual departments to share learning from across the NHS board area at their department meetings. Reports are also copied monthly to the quality improvement working group (QIWG) which monitors action plans developed as a result of adverse events and incidents. The QIWG is a subcommittee of the HGC which oversees the work of the QIWG.

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 Dumfries & Galloway

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

A 'bag and tag' system has been implemented in the blood transfusion department of DGRI. When a unit is allocated to 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. Staff reported that 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 the patient received the component. The data on the returned labels is checked for completeness and entered into the computerised system that records the fate of each component. The returned labels are stuck to the back of the relevant blood request form and both sides of the form are electronically scanned for long-term storage. The paper copies are not retained. The satellite transfusion laboratory at Galloway Community Hospital (GCH), Stranraer, keeps the labels indefinitely for units used locally, and does not scan the forms. All other community hospitals return labels to DGRI.

Instances of incomplete label information or non-return would be brought to the attention of the relevant ward/department by laboratory staff and an escalation process is in place if non-compliance continues. The review team highlighted the 100% compliance records which were being achieved in NHS Dumfries & Galloway.

In DGRI and GCH the Blood Track™ Courier system is also in use which provides an audit trail from the point of collection of a unit until its return to the blood bank. Only staff who have been trained to use Blood Track™ are permitted to collect and return blood to the blood bank fridge, controlled by personalised swipe cards. Use of someone else's card is a disciplinary matter. In the case of removal of emergency blood stocks from fridges, the swipe card system can be overridden. This rings an alarm in the laboratory and all such alarms are investigated.

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 Dumfries & Galloway

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

All those staff who have received BBTP Level 1 training have been made aware of the importance of positive patient identification, and identification checks are included in the relevant nursing and midwifery procedures and laboratory standard operating procedures. However, not all transfusion related documentation requires the minimum identification data set (surname, forename, sex, date of birth and unique identification number) to be used at all times. Specifically, several forms and the blood sample bottles used do not allow for the inclusion of gender. Audit has found that the full data set was not always being recorded on the wristband nor on the prescription form.

As part of the national project promoting the use of the Community Health Index (CHI), NHS Dumfries & Galloway has been piloting the use of barcoded wristbands which are to be introduced throughout the NHS board area. This will help address compliance with 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 audit conducted as part of the National Comparative Audit of Clinical Bedside Practice in 2005 found that not all patients in DGRI were wearing wristbands. A follow-up prospective study conducted in 2008 found that there had been a significant improvement in the numbers of inpatients and day patients who were wearing a wristband. Staff reported that the requirement to develop a patient identification policy had been recognised by the board. The review team noted the challenge for the board to ensure that all patients wear a wristband.

There is no formal risk-assessed alternative to a wristband, should it become inaccessible, such as under hospital drapes in surgery. Staff reported that this will be addressed in the patient 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: Met

Staff reported that a white sticker is used on the front of the patient notes to alert practitioners to the presence of an advanced directive which should be reviewed before clinical procedures including transfusion. The directive itself is securely placed inside the front cover of the notes and the admission and emergency department information systems are updated accordingly.

An NHS Dumfries & Galloway policy for the treatment of patients who refuse transfusion of blood and blood products (including Jehovah's Witnesses) has been drafted for approval at the next HTC meeting. At the time of the review visit, this draft policy did not include a section on an alert system, although staff reported that the introduction of a clinical alert sheet at the front of the patient notes had been discussed by the patient records review group as part of a risk assessment of patient documentation. Staff reported that the inclusion of an alert in the barcode on the wristband was also being considered.

Patient information leaflets on Advance Directives (Living Wills) are available in communal areas.

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 Dumfries & Galloway procedure for registering an unknown patient on admittance to accident and emergency (A&E) at DGRI generates a unique identifier which is added to the wristband along with patient gender. The review team encouraged the board to formalise this into a protocol or include in the draft patient identification policy.

A language identification card, directory of local interpreters and a 24 hour translation service are available to support communication and establish patient identification details where appropriate.

Standard 1d: Core Principles

Standard Statement

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

NHS Dumfries & Galloway

Essential Criterion

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

STATUS: Met

Emergency blood management arrangements (EBMA) are established within NHS Dumfries & Galloway. When the hospital transfusion laboratory is notified of reduced national blood stocks by the SNBTS, contact is made with the consultant haematologist with responsibility for transfusion (or their named deputy) who then activates the arrangements which initiate an information cascade and a meeting of the emergency blood management group is convened. At the time of the review visit, the EBMA were being updated to reflect the change in the chair of the HTC and other key staff. Staff reported that a table-top exercise of the operational aspects of the EBMA would be conducted.

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 Dumfries & Galloway

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 (insufficient evidence)

At the time of the review visit, NHS Dumfries & Galloway was developing systems to ensure that patients are informed of the reasons for blood transfusion, risks and benefits and options to refuse. Staff reported that an ICP document for blood transfusion, which is in its final stages of development, has been piloted in three areas across the NHS board. The ICP document contains a tick box to prompt staff to provide patients with a leaflet explaining blood transfusion and to obtain verbal consent, however, it does not include a specific area to document the discussion regarding option to refuse. The review team was further informed that a draft ICP document for pre-assessment of surgical patients is also in development. This document contains a free text box area which can be used by staff to record transfusion discussions. The review team encouraged the board to consider modifying the ICP to include transfusion discussion, alternatives to, and the option to refuse blood products. This issue will be raised with the ICP manager and the HTC at its next meeting.

The provision of information and consent was reported to be documented in the hospital notes, although the board was unable to provide evidence to support this practice at the time of the review.

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

Nationally produced information leaflets are widely available in the majority of clinical areas and in the outpatient department within DGRI. Staff reported that patients attending surgical pre-assessment clinics are provided with relevant information by medical staff, and nursing staff take responsibility to ensure that patients have been offered information. This is then documented in the hospital

notes. In addition, the ICP documentation used in the pilot areas provides a prompt to ensure patients are offered appropriate blood transfusion information.

Across NHS Dumfries & Galloway, patient information leaflets are electronically available on the board's intranet. Leaflets can also be provided to accommodate patients who have communication difficulties or who do not understand English as a first language. A directory of interpreters is accessible on the local intranet. The review team was further informed that the board has identified a need to develop additional information to support patients with learning difficulties and this issue is to be taken forward and incorporated into board policy.

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

Staff reported that, in an emergency situation, where pre-transfusion discussion is not possible, medical staff will respond to the situation in the best interest of the patient. Nurses work in collaboration with external agencies in an attempt to identify the patient as soon as possible. There is an opportunity within A&E to identify any advance directive through the NHSScotland Emergency Department Information System if this information has been entered previously. Alternatively, the patient would be searched for any medical alerts on arrival at the hospital.

A representative from the surgical directorate is taking this issue forward to strengthen the existing arrangement around pre-transfusion discussion in accordance with the patient's treatment preferences.

NHS Dumfries & Galloway has recorded no formal complaints or adverse events as a result of non-compliance with advanced directives.

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)

At the time of the review visit, there was no formal structure in place within NHS Dumfries & Galloway to ensure that a patient is retrospectively informed that a transfusion had taken place. Staff are aware of the importance of offering patients retrospective information regarding blood transfusion, although there was no documented evidence available to the review team to confirm compliance with this standard criterion. However, it was reported that a member of staff has expressed interest in taking this area of work forward. The proposed audit plan includes

arrangements to address the distribution and use of blood transfusion leaflets, and documented recordings of transfusion discussions and advance directives within Jehovah's Witness casenotes.

The review team acknowledged, as a strength of the board, its staff member's commitment to take forward retrospective transfusion discussions.

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 Dumfries & Galloway

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

Local protocols for taking and labelling blood samples for transfusion purposes are in place and are clear and concise. However, they do not include gender as part of the minimum identification data set. This gap has been identified by the board and is being addressed. Protocols clearly state that staff should not pre-label sample tubes or use addressograph labels when taking a blood specimen. The review team noted the senior phlebotomists' involvement in training all new and existing staff to ensure that consistent practice is undertaken in accordance with board policies.

The review team considered the board to have failed to meet this standard criterion because of the challenge to positively identify a patient in the absence of gender being included on all documentation relating to blood transfusion and on the patient identification wristband.

Standard 2c: Clinical Management – Pre-Transfusion

Standard Statement

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

NHS Dumfries & Galloway

Essential Criteria

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

STATUS: Not met

Draft audit data provided to the review team at the time of the visit confirmed that almost all prescriptions for blood and blood components were signed by a qualified practitioner. However, the evidence also highlighted that the small percentage of prescriptions that were not signed were from areas not using the pilot ICP documentation. Staff reported that it is routine practice for two nurses to check that the prescription sheet is fully completed before administering a blood transfusion. Areas not using the ICP documentation use the standard NHS Dumfries & Galloway intravenous fluid charts. Results from the recent draft prescription audit are to be discussed at the next HTT and HTC meetings and action agreed.

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

A draft report from a small audit of the prescription of blood and blood components undertaken in January–February 2008 found that not all prescriptions fully specified the blood components to be administered, the number of units to be transfused, the duration of the transfusion, any special requirements and any special instructions. However, it was reported that implementation of the ICP across the NHS board area would assist compliance with this standard criterion.

Standard 3a: Clinical Management – Hospital Transfusion Laboratory

Standard Statement

Laboratory operations comply with current regulatory requirements.

NHS Dumfries & Galloway

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

Clinical Pathology Accreditation (UK) Ltd (CPA) has accredited the laboratories in DGRI and GCH and the Medicines and Healthcare products Regulatory Agency (MHRA) has issued a letter of compliance to NHS Dumfries & Galloway. A mock MHRA inspection had been conducted in 2007 and the findings were being addressed.

It was noted by the review team that SNBTS had not provided an up-to-date technical agreement for the provision of blood components to NHS Dumfries & Galloway. The review team encouraged the board to progress this.

NHS Dumfries & Galloway commissions services for NHS patients from BMI Ross Hall Hospital, Glasgow, and Abbey Carrick Glen Hospital, Ayr. There are monitoring arrangements in place to assure that these services are compliant with all standards of care as set by both the Care Commission and NHS Quality Improvement Scotland. BMI Ross Hall Hospital is accredited by CPA and complies with MHRA requirements. Abbey Carrick Glen Hospital is supplied with blood from Crosshouse Hospital, Ayr, which also complies with current regulatory requirements.

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

STATUS: Met

NHS Dumfries & Galloway trainee BMSs in the department of haematology and blood transfusion receive in-house competency-based training which is assessed and recorded in individual competency logs. The department also participates in the National External Quality Assurance System. Registered BMSs update their competencies every 2 years. Trainees and registered BMSs are invited to complete the theoretical BBTP Level 1 training accessed through the OrasGold™ online recording and assessment system. Information on the uptake of OrasGold™ training and competency achieved can be accessed from the laboratory.

Staff from the laboratories at DGRI and GCH are rostered in to the DGRI laboratory in order to maintain their blood transfusion laboratory competencies. Witness audits are also part of the laboratory quality management system.

The review team noted the comprehensiveness of the competency-based training and assessment systems.

Standard 3b: Clinical Management – Hospital Transfusion Laboratory

Standard Statement

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

NHS Dumfries & Galloway

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 (insufficient evidence)

At the time of the review visit, the maximum surgical blood ordering schedule (MSBOS) was under review, although a draft was not available to the review team. Staff reported that the review was started as some non-compliances with the schedule had been identified. The 'old' MSBOS is available on the intranet and in the pocket-sized DGRI doctor's handbook. Staff are aware that these will need to be updated when the revised MSBOS is agreed.

The major acute blood loss protocol is also included in the handbook and staff reported that this section also needed to be updated. If a woman in the Cresswell Maternity Unit required a transfusion of more than 4 units of blood, an investigation would be conducted. Staff reported that 2 units of O RhD negative blood were available in a satellite fridge in the Cresswell Maternity Unit for use in an emergency. If the O RhD negative units are removed from this fridge, an alarm is sounded in the hospital transfusion laboratory.

The review team noted that the version of the major incident plan submitted as evidence was overdue for review.

EBMA were being revised at the time of the review visit. See standard criterion 1d.1 on page 16.

There was limited evidence of the HTC considering blood wastage rates. Staff reported that wastage rates were monitored by laboratory staff on receipt of the WOSBTS monthly summary of blood component transactions with hospitals. Staff reported that wastage rates would only be raised at the HTC if they were likely to affect the supply of blood from SNBTS following the initiation of EBMA (at the time of the review visit this was if the wastage rate was more than 5%). The review team encouraged the board to add blood wastage as a standing item on the HTC agenda.

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

STATUS: Met

Blood stocks are monitored on a daily basis and the laboratory information technology system can be used to monitor blood stocks held in GCH and the other community hospitals to ensure effective stock rotation. Daily deliveries of blood and blood components can be made to the community hospitals using validated transport boxes and temperature loggers. Staff reported that an intranet temperature alarm was being considered for installation in fridges remote from DGRI. The review team identified as a strength the cold chain control and monitoring in use.

In DGRI and GCH the Blood Track™ Courier system is in use. Only staff who have been trained as Blood Track™ couriers are permitted to collect and return blood to the blood bank fridge, controlled by personalised swipe cards. This has resulted in better awareness of the need to use red cell units within 30 minutes of collection from the fridge and has contributed to a reduction in blood wastage. In the case of removal of emergency O RhD negative blood stocks from fridges, the swipe card system can be overridden. This rings an alarm in the laboratory and all such alarms are investigated. The review team recognised the investment in the Blood Track™ Courier system as a strength of NHS Dumfries & Galloway's blood transfusion service.

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

STATUS: Met

Hospital transfusion laboratory staff assist the transfusion practitioner with audit related to blood transfusion. They were involved in the National Comparative Audit of Overnight Red Blood Cell Transfusion and in the retrospective audit of prescription documentation. They are also involved with the current review of the MSBOS.

The review team noted good evidence of effective collaboration across 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 Dumfries & Galloway

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

A BBTP training needs analysis was conducted in 2003 and training agreements are in place in the majority of clinical areas. At the time of the review visit, a review of the analysis was being planned. The transfusion practitioner delivers face-to-face training and provides details of and promotes OrasGold™. Training is also delivered to nursing students at the University of the West of Scotland. The review team were aware of a strong BBTP training culture within NHS Dumfries & Galloway.

There is a team of trainers who assist with training delivery and a trainer is present in each of the community hospitals. Training figures for nurses, midwives, operating department practitioners and phlebotomists across NHS Dumfries & Galloway are at the BBTP target level or above. Foundation Year 1 doctors receive BBTP Level 1 training as part of their induction and 100% attendance has been achieved. However, uptake of training is low in the consultant staff group. At the time of the review visit, not all laboratory staff had completed the training.

To address this, the HTC has agreed that it will be mandatory for all staff groups to complete BBTP Level 1 training using OrasGold™ from October 2008. Each individual's training will be revalidated every 2 years. The medical director for acute services will approach specialty team leads and the postgraduate education manager to determine which doctors should be included in this mandatory training. Staff reported that consideration was being given to including a check on this in annual appraisals. The review team identified that achieving full compliance with mandatory training was a challenge for the board.

In addition to BBTP training, all nursing and midwifery staff who may have to collect blood from the DGRI blood bank or GCH laboratory have attended Blood Track™ Courier training. An identification number and barcoded swipe card is issued after a competency assessment by the transfusion practitioner or one of the cascade trainers. This ensures that untrained staff cannot collect blood.

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

STATUS: Not met

Not all blood transfusion documentation in use throughout NHS Dumfries & Galloway prompts for the recording of the minimum data set. Staff reported that any discrepancy identified at a patient's bedside would be checked with the laboratory and transfusion would not take place until clarified.

The proposed introduction of an ICP for transfusion of blood and blood components should help address this.

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 Dumfries & Galloway

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

The nursing and midwifery procedure for the administration of blood and blood components state that, for every unit transfused, temperature, pulse, respiratory rate and blood pressure should be recorded before the start of transfusion. Temperature, pulse and respiration should then be recorded 15 and 30 minutes after the start, hourly until the transfusion is complete then every 4 hours for the next 24 hours. The piloted ICP requires the same baseline measurements as the nursing and midwifery procedure, although after the start of transfusion, temperature, pulse and respiratory rate are prompted at only 15 minutes and one hour. The procedure and ICP also detail the clinical management required in case of adverse events or reactions. Any transfusion reaction would be recorded as a variance in the ICP. Guidance is also included in the doctors' handbook.

The audit of bedside practice conducted in NHS Dumfries & Galloway as part of the National Comparative Audit of Blood Transfusion in 2005 identified that post-transfusion observations were not always being recorded. NHS Dumfries & Galloway participated in a further National Comparative Audit of Overnight Red Blood Cell Transfusion in 2007 which also identified that the 15 minute observations were not always being recorded. The findings of this audit are to be discussed at the next HTC with a recommendation to reduce the number of overnight transfusions. The review team recognised that achievement of compliance with this standard criterion was a challenge for the board.

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

STATUS: Met

Any serious adverse events and near miss incidents are reported on an incident form which is passed to the adverse incident manager and copied to the transfusion practitioner if related to blood transfusion. Immediate action will be taken to ensure

the patient's safety and this will be recorded on the form. Investigation will be conducted as appropriate and there is a standard operating procedure in the DGRI laboratory for the investigation of transfusion reactions.

The review team noted the robustness of the incident management system.

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

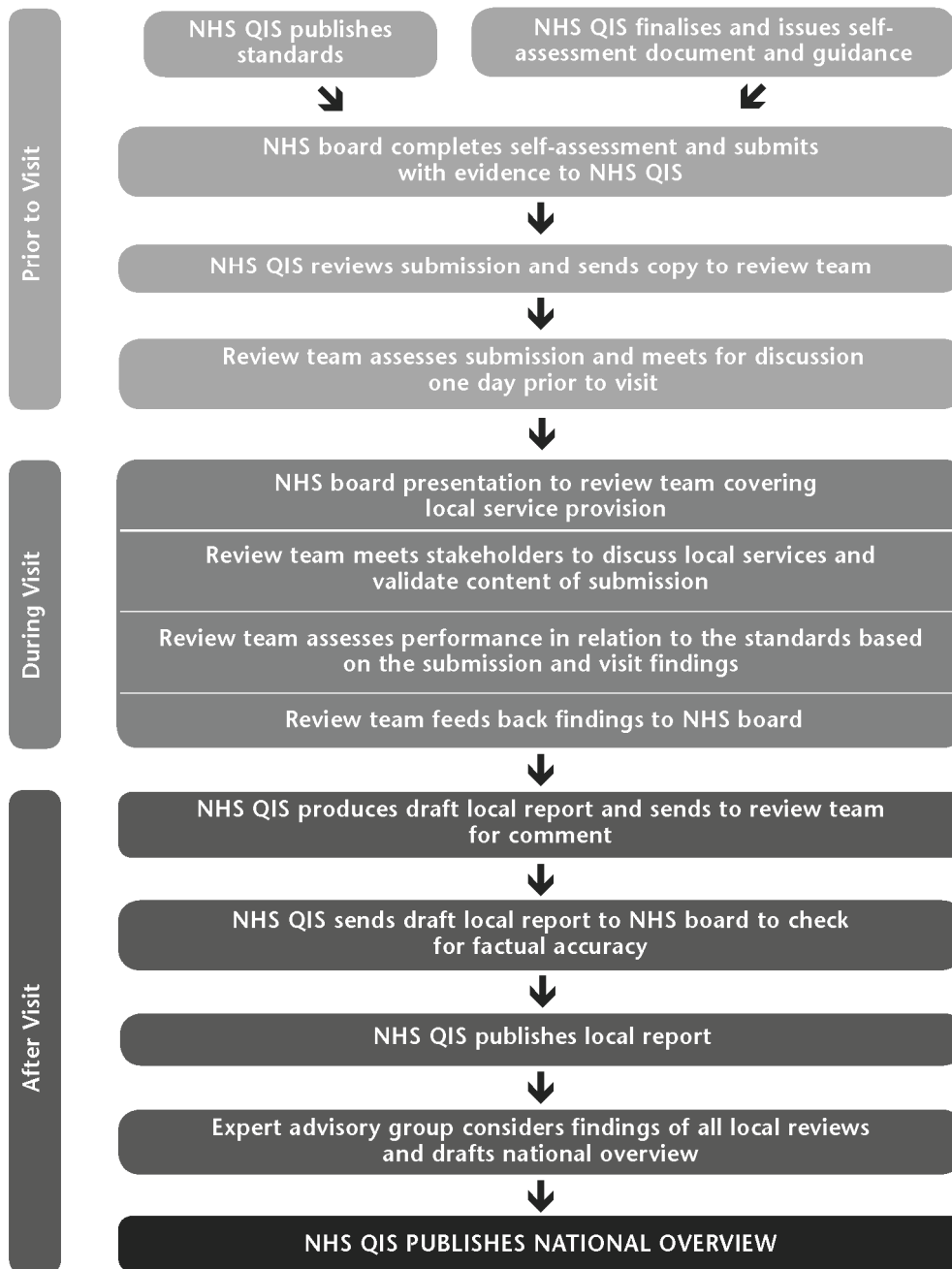
There is a formal process for reporting serious adverse events and reactions and near miss incidents within NHS Dumfries & Galloway. The adverse incident manager informs the local blood bank team which is responsible for completing the relevant online section of the Serious Adverse Blood Reactions and Events (SABRE) system and selects the reporting option for the Serious Hazards of Transfusion (SHOT) initiative as appropriate. The adverse incident manager is notified that this has been done.

Appendix 1 – Glossary of abbreviations

Abbreviation

A&E	accident and emergency
BBTP	Better Blood Transfusion Programme
BCSH	British Committee for Standards in Haematology
BMS	biomedical scientist
CHI	Community Health Index
CPA	Clinical Pathology Accreditation (UK) Ltd
DGRI	Dumfries & Galloway Royal Infirmary
EBMA	emergency blood management arrangements
GCH	Galloway Community Hospital
HGC	healthcare governance committee
HTC	hospital transfusion committee
HTL	hospital transfusion laboratory
ICP	integrated care pathway
MHRA	Medicines and Healthcare products Regulatory Agency
MSBOS	maximum surgical blood ordering schedule
NHS QIS	NHS Quality Improvement Scotland
QIWG	quality improvement working group
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 Dumfries & Galloway was conducted on 16 April 2008.

Review team members

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Project Officer

Mrs Joanne Hendry

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.

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